

## Friends of the Randell Research Center

December 2012 • Vol. 11, No. 4

### Research Resumes on Useppa Island

by Karen Walker and Bill Marquardt

**In late November**, we will return to Useppa Island to resume work in deposits that accumulated there about 3,000 years ago. This work is co-sponsored by the Florida Museum of Natural History's Randell Research Center (RRC), the Useppa Island Historical Society, and the Useppa Inn and Dock Company. We are grateful to Tim Fitzsimmons and Garfield Beckstead of Useppa Island for providing the logistical assistance, lodging, and boat transportation that makes this work possible, and to David and Judy Nutting for permission to work on their property.

This work will continue a project initiated in March, 2012, when Useppa residents joined with volunteers from the RRC and archaeologists from the Florida Museum to explore part of Useppa's Southern Ridge (known locally as the "South Knoll").

One of the most common questions that Useppa passers-by asked us in March was, "Why are you digging at this particular place?" Well, it is not the oldest deposit on Useppa, nor are we finding extraordinary artifacts, but we do think the deposits left there by ancient Native Americans may help us fill in gaps in our understanding of climate changes and how the Indian people adapted to them. This, to us, is quite exciting.

Although we had the opportunity in 2006 to study a cut-away of Archaic midden on nearby Lot III-17 (again thanks to the generous support of David Nutting), that was a salvage project (see *RRC News*, March 2007: [www.flmnh.ufl.edu/rrc/RRC\\_Vol6\\_No1.pdf](http://www.flmnh.ufl.edu/rrc/RRC_Vol6_No1.pdf)). We documented what remained after the destruction of a portion of an archaeological midden. After drawing and photographing the cut-away portion, we excavated a small (50 x 50 cm) area for the purpose of zooarchaeological analysis, which showed that large numbers of oysters, scallops, surf clams, and sea urchins were eaten, supplemented by quahog clams, stone crabs, conchs and whelks, and a few other mollusks. Fish remains included those of herring, shad, grunt, pigfish, and mullet, indicating a use of nets by the Southern Ridge fishermen. Shells of surf clams were analyzed isotopically, with results suggesting that water temperature was unusually high. The sea urchins, surf clams, and stone crabs point to a barrier-island collecting strategy, and high ratios of crested oyster (a small species requiring very salty waters) to eastern oyster (the kind that we eat) indicate collecting from oyster bars in high-salinity waters. This situation differs significantly from what people of other time periods experienced at Useppa (for example, compared



Excavations in Useppa's Southern Ridge, March 2012. Pictured (left to right) are John Turck, Ellen Turck, and Bill Marquardt. (Photo by K. Walker).

to the people who lived on Calusa Ridge about 1,000 years earlier). Our current hypothesis is that the 3,000-year-old midden in Useppa's Southern Ridge represents a time of warm climate and high sea level that corresponds with similar records in the southeastern United States and throughout the greater Atlantic climatic system. In contrast, the Calusa Ridge people most likely lived during a cooler time when the surrounding waters were fresher (less saline) and probably lower. In addition to archaeologists, climate scientists are interested in these ancient differences in environmental conditions.

Around 3,000 years ago, eastern North America was going through a period known to archaeologists as the "Late Archaic-Early Woodland Transition." Different effects were felt in different parts of North America, but for about 300 to 400 years it was a time of warmer climate and higher sea levels in the Southeast. Archaeologists know this period as the heyday of the Poverty Point culture in Louisiana, during which elaborate earthworks were built and trade increased significantly between people of many regions. Some have suggested a connection between those cultural developments and an exceptionally favorable climate. We want to know if these global climatic changes affected Useppa and southwest Florida, and we believe that Useppa's Southern Ridge may hold important clues. 

# A Tour of the Islands of Pine Island Sound: A Geological, Archaeological, and Historical Perspective

## Part 3 in a series: Useppa Island — Geology & Archaeology

by Denége Patterson

**The ridges of Useppa** are among the oldest and highest land masses in Pine Island Sound. Shell middens dating as early as 6,000 years ago are superimposed on high sand ridges that accumulated during the Pleistocene epoch (about 2.5 million to 12,000 years ago).

The earliest record of humans on Useppa dates to about ten thousand years ago when Late Paleo-Indian people used an off-white chert stone point on the west side of a ridge in the north-central part, deposited before the landform was even an island. At that time, Useppa's sand hills harbored upland plants and animals that were well adapted to conditions much cooler and drier than today's.

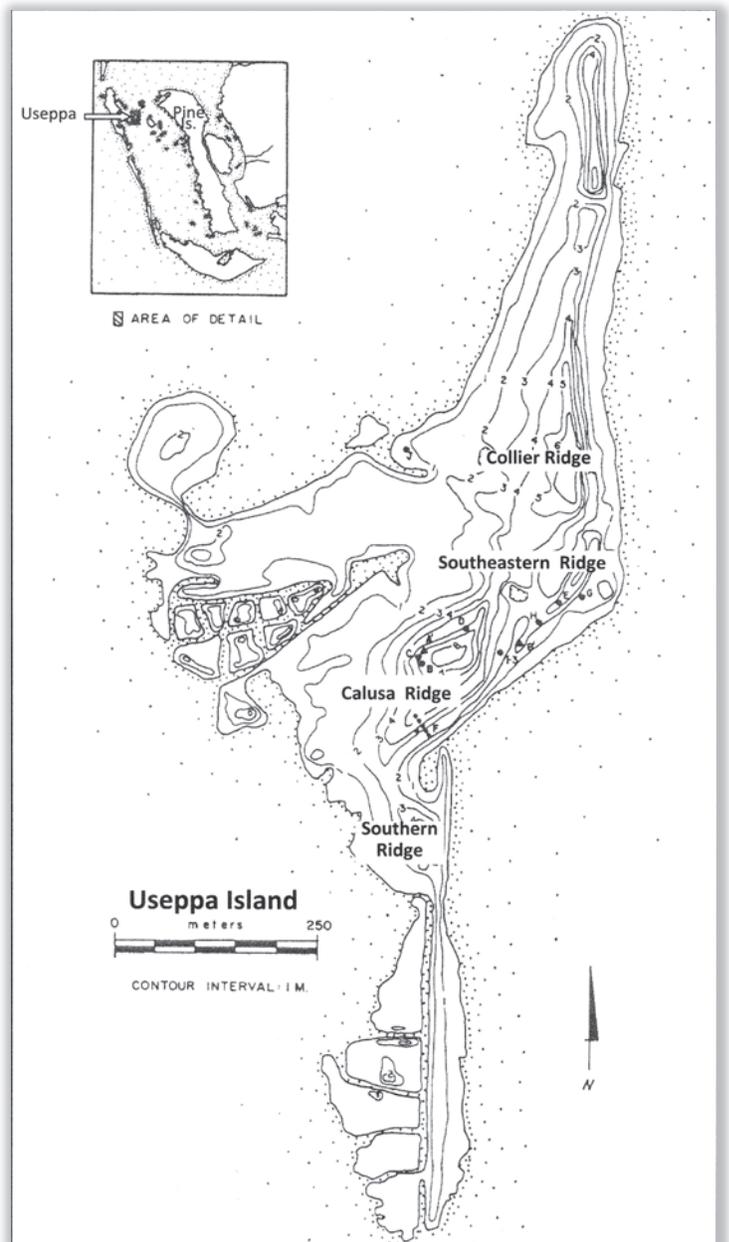
Useppa is located just east of Cayo Costa, a barrier island. Approximately one-and-a-quarter miles long and a half-mile wide, Useppa became an island during a warm, wet period from about 5000 to 3000 B.C., when Earth's melting ice sheets contributed to rising sea levels that flooded Pine Island Sound.

In 1947, when a human burial was exposed by the excavation for a tennis court near the Collier Inn, State Archaeologist John Griffin wrote prophetically that Useppa Island appeared to offer "good prospects" for providing a full picture ranging from the earliest periods of occupation to modern historic times. Archaeologists from the Florida Museum of Natural History have conducted numerous studies on the island since 1979, including during the current year. As Griffin predicted, these studies have shown that many ancient periods are represented: Late Paleo-Indian (8000–6500 B.C.), Middle Archaic (5000–2000 B.C.), Late Archaic (2000–1200 B.C.), Terminal Archaic (1200–500 B.C.), Caloosahatchee I and II periods (500 B.C.–A.D. 1200), and the modern historic era.

Middle Archaic people occupied Useppa during spring and summer. Their artifacts were found in the lower strata of Calusa Ridge. They left behind chert waste flakes (debitage), mollusk shells, fishing net-mesh gauges made of clam shells—sized to make nets that would catch large numbers of small schooling fish—and bits of charred wood from pine trees.

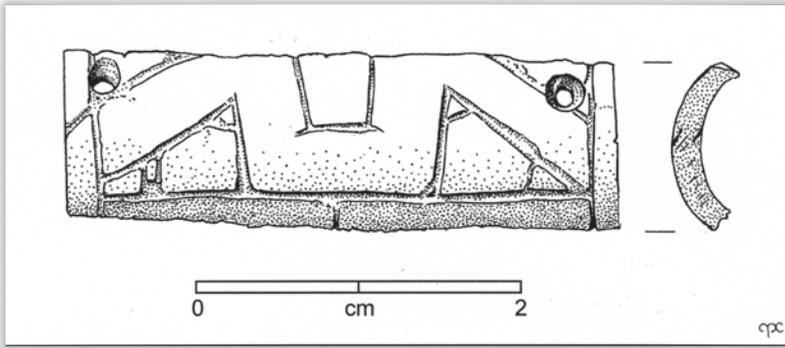
By the latter part of the Middle Archaic, the people who visited Calusa and Collier ridges used mangrove and seagrape rather than pine for their firewood, and subsisted on sharks, rays, and other high-salinity species. A burial from this period was discovered on the east side of Collier Ridge: a juvenile male buried in a semi-flexed position, with quahog clam shells dating to 2600 B.C. above and below the burial. The burial of a male between 15 and 22 years old was uncovered on Calusa Ridge. Tests revealed that this young man died around 2400 B.C. Carvings on an incised deer bone pendant were consistent with the artistic style of others from Archaic-period sites throughout Florida and as far north as the St. Johns River.

During the Late Archaic (2000 B.C.–1200 B.C.), several sites in Pine Island Sound were occupied, among them Useppa, Calusa Island and Howard Mound in Bokeelia, and Galt Island in St. James City. On Useppa, Calusa Ridge was abandoned but the Southern Ridge and Collier Ridge near the eastern shore continued to be occupied. Ceramics were used



Map of Useppa Island. (Drawing by W. Marquardt.)





This Late Middle Archaic deer-bone pendant recovered from Calusa Ridge is strikingly similar to Archaic-period carvings found as far north as the St. Johns River. (Drawing by M. Clark.)

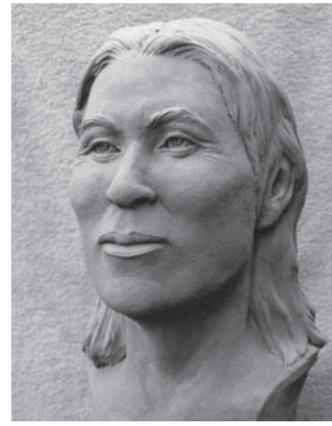
shell tools occurred in the eighth century A.D. During the ninth century, mollusk shells in the later, upper part of the ridge revealed a diet from high-salinity waters while habitation at Pineland slowed to a standstill, probably due to lowered sea levels in the harbor that led to depleted fish resources close to Pine Island. During the succeeding periods (A.D. 1200–1700), Pineland and other sites prospered again, but Useppa was apparently abandoned. It remains a mystery why Useppa fell out of favor.

Useppa Island is listed on the National Register of Historic Places because of its significant pre-columbian archaeological sites. *The Archaeology of Useppa Island*, edited by William Marquardt, provides in-depth information about the geology, archaeology, and history of Useppa. To order, use the form in this newsletter or look for it in the book shop at the Randell Research Center. 

on Useppa for the first time during this period. Fiber-tempered pottery of a kind first made in northeastern Florida was used, as were steatite (soapstone) vessels. Sand-tempered plain pottery was in use by 1200 B.C. Diet consisted of saltwater fish and mollusks, along with edible plants such as mastic berry, hackberry, prickly pear, seagrape, grasses, greens, and acorns.

During the Caloosahatchee I period (500 B.C.—A.D. 500), the occupation of Useppa was intensive, evidenced by a rapid accumulation of midden material over a broad area. Similar accumulations during this period also occurred on Burgess Island, Cabbage Key, Josslyn Island, Galt Island, Big Mound Key, and Pine Island. During the IIA period (A.D. 500–800), occupation was less intensive, but Collier Ridge was used as a burial place.

Beginning after A.D. 700 and continuing during the early part of the Caloosahatchee IIB period (A.D. 800–1200), Useppa's shell middens in the area of the Southeastern Ridge increased in size. In 2006, UCLA graduate student John Dietler conducted a ten-week archaeological dig on the lower part of the ridge, exposing lightning whelk tool debitage in sufficient quantity to suggest that mass production of



Facial reconstructions of a woman and a man based on the crania of burials found on Collier Ridge, Useppa Island dating to about A.D. 600–800. (Sculptures and photographs by forensic artist Betty Pat Gatliff; plaster casts by Robert Leavy.)

## New and Renewing Friends of the RRC

August 16, 2012 through October 31, 2012

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

### Sustaining Members

(\$5,000–\$19,999)

Tim & Judith Sear

### Sponsoring Members

(\$500–\$999)

Sondra & Richard Talley (in memory of Joyce Mutz)

### Contributing Members

(\$100–\$499)

Robin C. Brown

Donald A. Cyzewski

Kim Gibbons

E. L. Roy Hunt

Jerald T. Milanich

Rod & Maureen Monroy

John C. & Glenda L. Sirmans

Larry Slick

Randal L. Walker

Norris Williams

### Family Members

Boca Grande Historical Society

B. J. Brown

Guy P. Fischer

Jim & Valerie Fors

Stephen & Marion Hall

Bill & Rosemarie Hammond

Pete & Phyllis Kolianos

Carol Mahler

Jacob & Arlene Miller

Helmut & Hildegard Nickel

Gina Poppell

Karl & Cecy Rice

Kim & Kris Sears

Herbert Seidel

Ceel Spuhler

Ilene Safron Whitesman

David & Debra Williamson

Bill & Ann Wollschlager (in memory of Joyce Mutz)

### Individual Members

Gwenyth F. Berry

Beverly Brazill

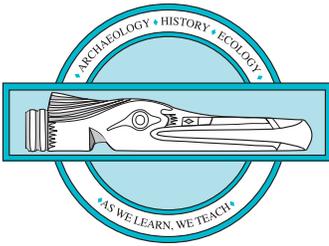
Lou Franks

Dee Hohimer

Lona E. Meister

Ed Winn





## Randell Research Center

PO Box 608  
Pineland, FL 33945-0608

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

Forwarding Service Requested

## In Brief

by Bill Marquardt

### Parlor Chats Celebrate Pineland's 110th Birthday

On October 9, Bill Marquardt gave the first in a series of four parlor chats focusing attention on the 110th anniversary of the establishment of the original Pineland Post Office (and the "Pineland" name). This series is co-sponsored by the RRC and the Museum of the Islands (MOTI). The next parlor chat will take place on December 4, 2012, featuring Gladys Schneider, who will give a presentation entitled, "Lonely Outpost or Settler's Paradise?" Gladys is a founding member of MOTI and an expert in historical architecture. She encourages participants to bring their questions, ideas, and information. Refreshments and door prizes will be available. Please register in advance at 239-283-2062. The chat will be held at the historic Ruby Gill House, located at 7450 Pineland Road. Admission is free for members of Friends of the RRC and Museum of the Islands, and \$5 for non-members. And mark your calendars: the third and fourth chats are scheduled for February 5 and April 9, 2013.

### Arts and Attractions Grant

The RRC has received a grant of \$14,520 from the Southwest Florida Community Foundation's Arts and Attractions program. The funds will be used to enhance exhibits and teaching materials in the RRC classroom and to help restore the boardwalk leading to the Smith Mound on the Calusa Heritage Trail. RRC volunteer Linda Potter received the check on behalf of the RRC at an awards ceremony on November 7, and planning for project implementation has already begun.

### Milanich is featured speaker on Calusa Heritage Day (March 9, 2013)

The featured speaker this year is Dr. Jerald T. Milanich. His lecture will be entitled, "The Calusa Indians amid Latitudes of Controversy: Charting Juan Ponce de León's 1513 Voyage to Florida." Ponce de León first made landfall on the east coast of Florida in 1513, reaching southwest Florida a few weeks later. The Calusa Indians are the only Floridians whose interactions with Ponce are documented. Milanich is Curator Emeritus at the Florida Museum of Natural History, a contributing editor for *Archaeology* magazine, and the author of more than twenty books describing the Indian societies of the Americas and their interactions with Europeans during the colonial and post-colonial periods. See [www.flmnh.ufl.edu/rrc/events.htm](http://www.flmnh.ufl.edu/rrc/events.htm) for more information.

### Cruise to Pineland!

What better way to learn about the ancient and modern fishing cultures of Pine Island Sound than to get out on the water? Captiva Cruises offers this lunch and eco-heritage cruise on Tuesdays beginning November 27. The Cruise leaves Captiva at 10 am and returns to Captiva at 3 pm. Cost is \$45/Adult, \$35/Child (includes tour).

Departing from McCarty's Marina on Captiva Island, the cruise arrives at Pineland in time for lunch at the charming 1926 Tarpon Lodge. Along the way passengers get an up-close look at historic fish houses of Pine Island Sound and learn about commercial fishing through the years and the fishing cultures from the indigenous Calusa, to Spanish Cuban ranchos, to the Punta Gorda Fish Company, and to the spectacular tarpon and sport fishing of today. After lunch, passengers walk across the street, where an RRC educator guides them on a short hike to the top of one of the pre-Columbian mounds of the ancient Calusa. Here they learn more about these remarkable fishing people who achieved artistic excellence, engineering sophistication, and political power. For more information, call 239-472-5300 or visit [www.captivacruises.com/sched\\_cruises.html#eco](http://www.captivacruises.com/sched_cruises.html#eco).

**SAVE THE DATE**  
Eighth Annual  
**CALUSA**  
**HERITAGE DAY**  
at the Randell Research Center  
Pineland, March 9, 2013

## RRC News

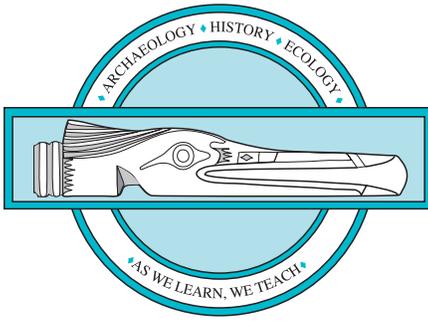
Editor: Bill Marquardt  
Writers: Bill Marquardt  
Denege Patterson  
Karen Walker

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



**UF** UNIVERSITY of  
**FLORIDA**

Send questions or comments to:  
Randell Research Center  
PO Box 608  
Pineland, FL 33945-0608  
Telephone: (239) 283-2062  
Fax: (239) 283-2080  
Email: [randellcenter2@rancercenter.comcastbiz.net](mailto:randellcenter2@rancercenter.comcastbiz.net)  
Website: [www.flmnh.ufl.edu/RRC/](http://www.flmnh.ufl.edu/RRC/)



# Friends of the Randell Research Center

Pineland, Florida • December 2012  
 Phone 239/283-2062  
 Email: randellcenter2@rancercenter.comcastbiz.net

*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,

William H. Marquardt  
 Director  
 Randell Research Center



*Please check the membership level you prefer, and send this form with your check payable to U. F. 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 and 10% discount on children's programs
- Contributor (\$100-\$499):** The above + annual honor roll listing in newsletter + 20% 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

**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

