



**Vol. 25 No. 10**

**November 2009**

## **November 18: Greg Mount on the Belle Glade People: Long Distance Traders in the Okeechobee Region**

Greg Mount will discuss trade networks of the Belle Glade people as evidenced from selected sites in the Okeechobee region during his talk at the November 18 SWFAS meeting at the Bonita Springs Community Hall. The talk will begin at 7:30 p.m., come at 7 for refreshments and to socialize with fellow SWFAS members.

He was the Project Manager of the Boyer Survey of Lake Okeechobee which received national and international media attention. Mount's research interests include historic archaeology, pre-Columbian exchange networks, underwater archaeology, geographical information systems and archaeological applications and remote sensing/digital image analysis.



Mount is currently pursuing a Ph.D in Geosciences at Florida Atlantic University where he is also a research fellow. His M.A. in Anthropology is from Florida Atlantic; he earned a Certificate in Geographical Information Systems (GIS) from FAU; his B.A. in Anthropology is from William Paterson University in New Jersey.

His M.A. thesis was on "Prehistoric Trade Networks in the Lake Okeechobee Region: Evidence from the Ritta Island and Kreamer Island Sites." Other presentations include "The Prehistoric Occupants of Lake Okeechobee" (2009 Statewide Historic Preservation Conference); "The Belle Glade People: Prehistoric Traders of Palm Beach County (presented as part of 2009's Florida Archaeology Month); "Fort Center, an Archaeological Site in the Fisheating Creek Wildlife Management Area;" "A Preliminary Report of the Boyer Survey of Lake Okeechobee" and "The Boyer Survey, an Archaeological Investigatoin of Lake Okeechobee," (paper presented at the 2007 Florida Maritime Heritage Preservation Conference).

Submitted technical reports include "Marine Shell Artifacts Recovered During the Boyer Survey of Lake Okeechobee" and "Interpreting Long Distance Trade: Results of the Artifact Analysis of Ritta and Kreamer Islands," among others.

For the past three years, he has been woking as a Para-Professional under the supervision of the Palm Beach County Archaeologist. He has assisted in all aspects of governmental Cultural Resource Management, including public outreach, historic tax exemptions, Register of Historic Places Nominations and Palm Beach County Historic Resource Review Board.

Geophysical fieldwork has taken him into Everglades National Park and to Caribou and Kanokolus Bogs in Orono, Maine. Archaeological field work has included serving as Project Manager for a number of Jupiter-based projects. He is also a Master Scuba Diver Trainer for a Fort Lauderdale-based dive firm and has completed almost 1,500 dives in various environments..

## Digital Archaeology: Seeing the Unseeable

By Jack Harvey

Several great advances in science have happened because of the invention of a new tool allowing us to see something we couldn't see before. The microscope and telescope are examples. Both were invented by Dutch eyeglass makers whose children found unexpected toy-like uses for the spectacles they were selling to restore failing eyesight. The microscope and telescope didn't merely improve vision; they eventually showed us things we didn't know existed.

The Dutchman van Leeuwenhoek greatly improved the toy microscopes and discovered single-celled *animalcules*, creating the groundbreaking field of microbiology. He saw things no human eye had ever seen.

Galileo learned of the Dutch toy telescopes and also greatly improved them. He was the first human to see the moons of Jupiter. This view, one that no human eye had ever seen, demoted our planet from the center of the universe. These tools opened doors we didn't know existed, disclosing trails untrod.

There are other tools that let us see things we know about but normally can't see. The bones and internal organs in our bodies were well known to the ancients through cadaver dissection. The x-ray allowed us to see inside our living flesh, revolutionizing healthcare. Radar and sonar are also in this category, detecting ships and aircraft through fog and clouds in darkest night, or submarines lurking beneath waves.

As invented, none of these tools used digital technology. Radar and sonar didn't even show images of the



*Moons of Jupiter first seen by Galileo*

detected craft. But around the middle of the 20<sup>th</sup> century, computer science showed how to greatly augment the simple analog radar and sonar systems by using "side-scanning" or "synthetic apertures" – terms far beyond the scope of this scribble.

Oceanography research ships began using this new digital technique to explore the ocean floor in far greater detail than ever before. Digital processing of sonar blips produced actual images of valleys, plains and mountain ranges as though the oceans were drained and photographed from high above. Suddenly the full extent and detail of the Atlantic mid-ocean ridge became apparent and the longest mountain range on the planet was discovered.

Other digital techniques discovered magnetic patterns in the rocks of the ocean floor that showed that its age increased steadily the farther it is measured from the mid-ocean ridge. The young ridge was thus identified as a spreading center where new seafloor was being created. This discovery in

turn exposed the slow movement of continental tectonic plates and that Africa and South America were once joined. The new view revolutionized the sciences of geology and paleontology.

The two earth-shakers, the microscope and telescope, have also benefitted greatly from digital techniques. The digital scanning electron microscope continues to expand new worlds first glimpsed by van Leeuwenhoek. Nearly all astronomical telescopes are now digital. The Hubble Space Telescope has no eyepiece into which an astronaut peers. This digital camera produces only numbers, as do the space-borne Chandra X-ray Observatory and the Spitzer Infra-red Telescope. Only number torrents come down to earth-based computers producing images of the unseeable cosmos.

Amazing magnification is not the only visualization that digital processing offers. Stock and commodity market price charts and graphs were once painstakingly produced by draftsmen,

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### SWFAS Newsletter by E-Mail

If you're online, you can get the SWFAS newsletter (with color photos!) sent to you as a PDF via e-mail. Many SWFAS members have already made the switch -- it saves quite a bit on printing and postage costs.

You can preview the last issue at <http://www.explorationsinc.com/swfl-archaeology/index.html>

If you would like to get the newsletter by e-mail, please note it on the sign-in sheet or let Charlie Strader, Theresa Schober or Karen Nelson know at the next meeting.

## Two Local Events This Weekend

### Collier County Old Florida Festival

Come to the Collier County Museum in Naples for the Old Florida Festival, featuring Indians, Pioneers, Soldiers, Crafts, Food, Music and Fun for the whole family. Admission is \$5 adults.

The Collier County Museum is located at 3301 E. Tamiami Trail. The Old Florida Festival will be held from 10 a.m. - 5 p.m. on Saturday, Nov. 7 and Sunday, Nov. 8.

### American Indian Arts Celebration at Ah-Tah-Thi-Ki

The Seminole Tribe of Florida is holding the 12 Annual AIAC at the Ah-Tah-Thi-Ki Museum from Friday, Nov. 6 through Sunday, Nov. 8.

Scheduled events include the Seminole Stomp Dancers, the Yellowbird Apache Dancers, an Alligator Wrestling Show, Critter Show plus star search and Casper and the 602 Band. Admission is \$9 adults (which includes admission to the museum). Friday hours are from 9 a.m. - 5 p.m.; Saturday and Sunday from 10 a.m. - 5 p.m. For more information, visit [www.semribe.com/calendar/Downloads/AIAC2009.pdf](http://www.semribe.com/calendar/Downloads/AIAC2009.pdf).

### Coming Up at SWFAS

- December 5 -- Details are still being finalized for the December SWFAS picnic.
- January 20, 2010 -- Ann Cordell, Florida Museum of Natural History

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## Crystal River & Hopewell Interaction at October SWFAS

### *Hopewell Interaction: The Crystal River Site and Gateways to Interregional Contact and Trade*

*By Steve Archer*

Richard Estabrook spoke at the SWFAS meeting on October 21. Rich is the Director of the Central Regional Center of the Florida Public Archaeology Network (FPAN), located at Crystal River. He presented history and findings of the Crystal River site and its surroundings, examining the meaning of "Hopewell" and how Crystal River and other coastal Florida sites relate to this famous archaeological culture and temporal horizon best known from the American Midwest, named after the Hopewell site in Ohio.

The Crystal River site, located three miles inland from the coast, on the north shore of the spring-fed Crystal River, fits many of the classic "Hopewell" definitions, although the term has been hesitantly used in Florida. Hopewell-influenced societies have earthworks and burial mounds, elaborate burial practices, exchange exotic goods, and are frequently distinguished by specific local practices within broader regional traditions. All of these traits are evident at Crystal River.

Crystal River has a distinguished history of archaeological excavation and interpretation, first by Clarence Bloomfield Moore in the early part of the twentieth century, and later by noted archaeologists Gordon Willey and Phillip Phillips. Initially the site was presumed by Moore to be of the Mississippian period, but Moore, and subsequent archaeologists could not identify any Safety Harbor (the local version of Mississippian) components. It has since become clear that the site is of Middle Woodland age and was likely long abandoned by the Mississippian period.

In the 1950s and 1960s, Ripley Bullen did some of the most significant excavation at Crystal River, and he was also the main force behind preserving the site in its present form as a State Park. Unfortunately, all of Bullen's field notes

and any manuscripts he may have written are lost, making association between artifacts and context challenging.

Crystal River is home to some unusual features. The site includes one of the few conical mounds in Florida, part of a central burial mound complex of remarkable design. Initially thought to be a series of expansions, dates from the "additions" around the central mound show the various tiers of the complex to have been built simultaneously. Rich also pointed out the notable Stelae 1, a rock-carving depicting a face with some possible Hopewellian traits; its origins remain unclear.

Rich interprets Crystal River as a "Gateway Community," using Charles Fairbanks' concept -- a community relying on long-distance trade with a hinterland on one side and trade contacts on the other. Exploring the obvious, but surprising connections between a site in coastal Florida with a culture based in the Midwest, Rich focused on this movement of goods northward and southward as a key to the puzzle. Copper-embossed plates, hematite and quartz plummet, and steatite pipes are all evidence of exotic materials traded down into Florida. Holding up a large whelk shell, Rich asserted that such mollusks, as well as possibly salt and bone pins were Florida valuables heading northward in exchange.

Rich also pointed to Crystal River's neighboring sites of Roberts Island and Buzzards Island, which were occupied at the same time as Crystal River. He sees these sites as evidence that this "Gateway Community" was likely much more extensive than a focus on discrete "sites," separate from one another, might make it seem.

Rich also reviewed some of the interesting and varied public programming that FPAN sponsors at Crystal River, including moonlight, torch-lit tours, and extended an invitation up to visit the preserve to all! More information is available at [www.flpublicarchaeology.org](http://www.flpublicarchaeology.org).



## Digital Archaeology -- from Page 3

but are now generated by computers accessing exchange databases, and flashed to the world by cable channel CNBC. Our home computers do the same. Turning mind-numbing number heaps to images is done because our eyes are usually the fastest route for information to reach our brains. The Florida Anthropologist already prints computer generated bar charts that summarize dig data in a glance. Making unseeable data seeable is golden.

An x-ray shows not only what we want to see inside things, but also everything before or behind, blending all into an often confusing blur. Tomography (CT or "cat" scanning) digitally peels off the surrounding blur displaying only parts of interest in three dimensional images. It can show a blemish on a living kidney surface or the sex of a wrapped mummy.

A related technology is the MRI scan that uses intense magnetic fields and radio waves to detect hydrogen atoms and digital processing to form high contrast images of soft

tissues missed by x-rays. Magnetic Resonance Imaging is also far beyond the scope of this scribble but it may show chemical details of fossils and artifacts that x-rays and dissection cannot see.

Galileo wasn't expecting to see moons circling Jupiter when he pointed his new telescope at it but when he did, everything changed. Will some future archaeologist discover totally unexpected anthropological phenomena when exploring a new digital technology?

Future parts of this story will explore several ways current digital technology may help archaeologists see the unseeable. One of these comes to us from the construction industry, which also benefits from seeing the unseeable. The same digital processing magic that imaged spreading center ridges beneath the ocean a half-century ago can show objects in the soil before backhoes dig.

Send suggestions for topics to: [jakharve@earthlink.net](mailto:jakharve@earthlink.net)

### About SWFAS

#### *The Directorate:*

*President - Theresa Schober  
1st VP - Tom Franchino  
2nd VP - James Oswald  
Recording Secretary - vacant  
Treasurer - Charlie Strader  
Membership Secretary - Charlie Strader*

#### *Trustees:*

*Rebecca Austin, Jean Belknap, John Beriault, Liz Clement, Alison Elgart, Betsy Perdichizzi, Annette Snapp, Jack Thompson*

#### *SWFAS Committees:*

*Field - John Beriault  
Lab - Jack Thompson  
Hospitality - volunteer welcome!  
Newsletter - Karen Nelson*

*If you would like to join SWFAS, please address your check to: The Southwest Florida Archaeological Society; P.O. Box 9965; Naples, FL 34101*

*Dues are: Individual - \$20; Sustaining - \$50; Family - \$35; Student \$15*

#### *Learn more about SWFAS at:*

***<http://www.explorationsinc.com/swfl-archaeology/index.html>***

*Board meetings are usually held prior to the regular meeting on the third Wednesday of the month at the Bonita Springs Community Hall at 27381 Old U.S. 41 (by the banyan tree). All are welcome. Board meetings begin at 6 p.m. Regular meetings begin at 7:30 (with coffee served at 7).*

## November 2009 Newsletter

**The Southwest Florida Archaeological Society**  
**P.O. Box 9965**  
**Naples, FL 34101**