



Vol. 26 No. 6

July 2010

Tour of Fort Center Excavations on Friday, July 16

Instead of a July meeting in Bonita Springs, SWFAS members are invited to participate in a Public Day at Fort Center on Friday, July 16, 2010, from 10 a.m to 3 pm., hosted by The Florida Public Archaeology Network (FPAN) Southwest Regional Center, in conjunction with SWFAS and the Clewiston Museum.

Fort Center, an important Belle Glade archaeological site on Fisheating Creek near Lake Okeechobee in Glades County, was first excavated in the late 1960s, and written about in a well-known volume by William H. Sears in 1982.

Dr. Victor Thompson of Ohio State University, who is conducting an undergraduate field school at Fort Center, will lead tours for the public along with project team members. Thompson's excavations mark the first time in decades that the site has been subject to excavation.

In addition to site tours, FPAN will have archaeological information and activities available. The Clewiston Museum in downtown Clewiston will also be open for visitors as part of our Fort Center Public Day.

The Fort Center site is managed by Florida's Fish and Wildlife Commission and is located off of SR-78 north of Moore Haven at the Fisheating Creek parking access. Please note that the site is located in a wooded and undeveloped natural area, so proper attire (long pants, sturdy shoes), sun and rain protection, and a water supply are strongly recommended during your visit. Restroom facilities, a parking area, and picnic shelters can be found at the entrance. The Clewiston Museum is located off of SR-80 in downtown Clewiston. No reservations are required.

The Florida Public Archaeology Network is a statewide program dedicated to protecting and preserving the state's fragile cultural resources and involving the public in the study of our past. The Town of Fort Myers Beach Mound House hosts the Southwest Regional FPAN Center, which serves Charlotte, Collier, Glades, Hendry, and Lee Counties.

For more information, contact the Florida Public Archaeology Network's Southwest Regional office at 239/765-0202 ext. 153, or online at www.flpublicarchaeology.org.

It's a mile-and-a-half walk to the Fort Center site

Those who visited Fort Center with SWFAS back in 2006 will remember that it is a long walk -- about a mile-and-a-half, much of it without shade -- from the parking lot to the site. Steve Archer is working on a way to shuttle those who might have trouble walking but that is not yet confirmed and may not work out. If you have concerns about the walk, please call or e-mail Steve. He's on vacation this week but will be available the week of July 12 at 239/765-0202 ext. 152; Cell: 239/322-6421 (sarcher@fortmyersbeachfl.gov). If you want to talk to someone this week, please call Matt Schuld, 239/765-0202 ext. 153 (matt@fortmyersbeachfl.gov).

Also, if any SWFAS members want to volunteer to help with the event, please give Steve or Matt a call or e-mail.

***There will be NO SWFAS meeting or newsletter in August.
The next meeting will be in September.***

Lee County's Conservation 20/20 Considers Leeland Lake

Lee County's Conservation 20/20 to consider keeping Leeland Lake on their acquisition list

On July 8th, the Conservation 20/20 program will be formally reviewing its list of properties to be acquired. One property under consideration is **Leeland Lake**, the only known natural sinkhole in Lee County.

Leeland Lake, located in Lehigh Acres, is surrounded by development, but the sinkhole itself is intact. No archaeological investigations have occurred there to date, but there is every reason to suspect that significant archaeological resources dating to the end of the last great glaciation (10-14,000 years ago) may be present.

Because this sinkhole is much like neighboring sinkholes, Little Salt Spring and Warm Mineral Springs, archaeologists around the state suspect that Late Pleistocene people may have used Leeland Lake as they used these neighboring sinkholes. Archaeological exploration of Little Salt Spring and Warm Mineral Springs has revealed artifacts dating back 10-12,000 years ago. The rarity of Paleoindian sites



makes this opportunity potentially every important.

Why did the Paleoindians utilize sinkholes? At the end of the last great glaciation, conditions were drier. The sea levels were much lower and the nearest gulf waters were as much as 100 miles west of the current coastline. Water tables were lower and surface waters were limited. Therefore, a sinkhole would have served, it is thought, as an oasis, providing freshwater which was not as abundant as it was to become.

The Conservation 20/20 program is a county program to purchase and protect lands for conservation. The Conservation 20/20 mission is:

“To acquire properties of environmental significance, restore those lands to their natural state and condition, manage them in an environmentally acceptable manner and provide public recreational opportunities that are compatible with protecting the natural resources.”

It is believed that Leeland Lake is unique as Lee County's only known sinkhole. Additionally, it can provide environmental information about the earliest portions of Lee County's prehistory as well as serve as a way to educate the public about it. Because of the high likelihood of archaeological resources at Leeland Lake, this property is of particular importance to archaeologists.

The July 8th meeting is scheduled for 4 p.m. at 1500 Monroe Street (Lee County Public Works/Community Development building) in Downtown Fort Myers in the first floor conference room. This property faces stiff competition, but no other property under consideration has such extraordinary archaeological potential. The public is welcome to attend and comment.



Southwest Florida Archaeological Society
PO Box 9965, Naples, FL 34101
239-597-2269

June 21, 2010

Lynda Thompson
Conservation 20/20 Program Coordinator
Lee County Division of County Lands
P.O. Box 398
Fort Myers, FL 33902

RE: Leeland Lake Property

Dear Ms. Thompson:

I am writing on behalf of the Southwest Florida Archaeological Society in support of the Leeland Lake property. We would like to see this property remain on the list of properties pursued by the Conservation 20/20 program.

We are greatly interested in the potential archaeological value of this site. Because it resembles nearby Little Salt Spring and Warm Mineral Springs, both of which contain early archaeological components, we feel this site holds *significant* archaeological potential. There are very few sites like these two nearby examples and their significance to our understanding of the earliest Floridians is great.

Therefore, even though this site has never been investigated archaeologically, we remain greatly interested and concerned about its future. As the only known natural sinkhole in Lee County and with its relative close proximity to known significant sites with similar features, we urge the Conservation 20/20 program to include this parcel in its list of properties to purchase.

If you have any questions, please do not hesitate to contact me at 239-246-3125.

Sincerely,

Annette L. Snapp, Ph.D.
President, Southwest Florida Archaeological Society

Koski on Little Salt Spring in June

By Steve Archer

Steve Koski spoke at the SWFAS meeting in Bonita Springs on June 16. Koski, of the University of Miami and the site manager at Little Salt Spring, presented an overview of the Little Salt Spring site and two Middle Archaic compound artifacts recently recovered from the spring.

Little Salt Spring, now surrounded by the city of North Port, was investigated in the early 1970s by Carl Clausen, Florida's first state marine archaeologist, who set up the Little Salt Spring research facility in 1975.

The spring has three major physical divisions: a 40-foot deep sloping basin, a ledge at 90 feet deep, and the bottom of the spring which is approximately 250 feet deep.

The basin contains Paleoindian and Middle Archaic components, the 90-foot ledge appears to represent the water level at 12,000 years ago and contains Paleo components, while the bottom has environmental data spanning 25,000 years.

Koski described the mapping and excavation of preserved pine and oak stakes -- some dating back as far as 11,500 years ago -- around the basin feature, and speculated on the various possible explanations for the patterning of the stakes.



The two artifacts that were the subject of his talk were a bone "handle" with remnants of a wood shaft, and an object sometimes described as a "banner stone" or atlatl weight. Microfossil remnants in the second object enabled identification of the source material from which it was made as Ocala limestone. The artifacts were dated to 7980-7800 BP and 7950 to 7790 BP respectively.

Koski concluded his talk by describing the future directions at Little Salt Spring, including facilities improvement, exotic vegetation removal, and building plans for a new research facility.

Digital Archaeology: Photo Math

By Jack Harvey

Photoshop, a trademarked software product of Adobe Systems, Inc. has become so successful that it's now a slang verb: *to photoshop*. Actually as old as photography itself, *trick photography* was the slang for the first part of the 20th century. For entertainment, photos were usually edited in the darkroom to remove or add things or people, or juxtaposition entertaining combinations. The movie *King Kong* is a classic example. The giant ape didn't actually climb the Empire State Building carrying Ann Darrow, but the adrenalin in our blood was real. *Visual effects* is Hollywood's name for the movie version of trick photography and it rates an academy award.

So why should archaeologists use tricky or entertaining technology? Simply because it allows easy desktop preparation of professional-quality illustrations for technical publication. Eliminating distracting backgrounds or adding overlaid descriptive text and pointers isn't trickery. Archaeologists frequently use PowerPoint to aid their talks so why not use a computer to illustrate their publications?

The advent of personal computers and software like Photoshop has put this technology in the hands of every digital camera owner. Whereas previously it was film camera and darkroom tricks such as double exposures, dodging and retouching, now it all happens on the computer monitor screen controlled by mouse and keyboard. And although Adobe Photoshop is fairly expensive software, freeware image editing programs (GIMP, Paint.Net, Pixia) are readily



Advanced mathematics clarifies a digital camera photo of an archaeological object with damaged surfaces.

available on the Internet.

Digital cameras (and scanners) don't produce "photos" in film camera sense – they produce long *number lists* describing an image. An actual visible image never exists until these numbers get to the camera monitor screen, the computer monitor or a printer. Consider an edit such as cropping an image to concentrate on the interesting subject. The computer simply eliminates all the numbers describing useless parts of the image you want to cut off. And since the numbers specify the amount of light at each tiny spot (pixel), mathematics can be used to adjust the lighting! Your image editing program does the math for you in response to your direction to lighten or darken the image. It will add, subtract, multiply or divide all those millions of numbers to achieve the edit you want, which you see instantly. Removing a

Continued on Page 5

A Tall Ship For St. Augustine: Building a Caravel

From the St. Augustine Archaeological Association (SAAA) February 2010 newsletter

by Dr. Sam Turner, Director of Archaeology, Lighthouse Archaeology Maritime Program

As we approach 2013, the 500th Anniversary of the discovery of Florida, and 2015, the 450th Anniversary of the founding of St. Augustine, many ideas about activities and projects to mark these milestones have been discussed by members of the *St. Augustine 450 Community Corps*. This is the citizen organization formed to begin planning for the 450th Anniversary of St. Augustine's founding. One of these ideas has gained early traction and support. This is the proposal that an effort should be organized to build, in St. Augustine, a tall ship representative of Florida's and St. Augustine's unique and ancient maritime history.

There are many reasons the idea has merit. Since its founding in 1565, residents of the nation's oldest port have been building boats and small ships for their many needs. The connection between St. Augustine and the sea is a critical aspect of St. Augustine's fascinating past and the antiquity of this port city makes it the oldest center of boat and ship building in North America.

At the same time, the skills and joinery techniques of what was for millennia the most complex form of human engineering in wood are in peril of being lost. All but a few boat-building programs and manufacturers have turned from wood as a building material and gone to fiberglass or aluminum. These vanishing skills and joinery techniques are a unique part of our cultural heritage and worthy of study and preservation. Building a tall ship in St. Augustine in full public view will not only help us study, practice, and preserve these skills and joinery, doing it in the public view will go a long way to educating the general public about the crucial role these skills played in St. Augustine's past and its ever present connection with the sea.

But what sort of a ship should be built and how does one go about organizing such a venture? A ship representative



Illustration from SAAA newsletter, courtesy of Texas A & M University

of the discovery of Florida and the founding of the settlement at St. Augustine was considered the ideal. One that was also easily recognizable by the public was an added consideration. The craft selected for the project was a Spanish caravel.

Caravels played a prominent role in the official discovery of Florida in 1513. Juan Ponce de León's three-ship fleet of discovery had two caravels, the *Santiago* and the *Santa María de Consolación*. Fifty-two years later, at the very end of the caravel's principal period of use, Pedro Menéndez crossed the Atlantic with a fleet of ships that included the caravel *San Antonio* among others. Separated from him by bad weather, the *San Antonio* was taken by French corsairs before it could land its troops and supplies in Florida. The caravel also has a certain amount of public recognition stemming from the fact that two of Columbus's ships, the *Niña* and the *Pinta*, were caravels.

These craft are also relatively small and therefore have less cost associated with construction, operation, and maintenance, a fact of considerable importance in today's economy. Furthermore, building the vessel here rather than farming it out to a builder out of state will contribute to our local economy and permit us to keep these valuable shipbuilding skills here in St. Augustine.

The construction of a caravel

also provides other opportunities. Recent marine archaeological finds have provided archaeologists with considerable information on joinery and methods used in 16th century ship and boat construction. Building a 16th century caravel is a beautiful opportunity to conduct experimental archaeology, working out the manner and method of executing the joinery and assembly of the ship through the act of replicating construction methods and joinery.

But there is much more to the project than simply building a caravel. Part of the project's mission is public education. Building in full public view will provide an unsurpassed venue for public archaeology and education. Visits by groups of local school children will give them a greater appreciation for the boat building trade that many of their ancestors and relatives, many of them still living, until recently practiced as a livelihood to support their families in St. Augustine.

Careful consideration also needs to be given to the mission of the ship once it has been built. As a vessel representative of the age of discovery, it will showcase the height of maritime technology at the time of Florida's discovery and the founding of St. Augustine. It will serve as a hands-on venue for education where school children may come and see how block and tackle were used to move yards and

Caravel -- continued from left

sails, the mechanical advantages of a windless, how rudders work, as well as how sailors and navigators lived aboard for long periods of time with relatively few comforts.

Off the dock, the vessel will serve as a sail training ship with a specialty course for students in maritime archaeology programs. Such courses will give these students a greater understanding of how sailing vessels work, essential skills necessary in their operation, and how life proceeds on board such a craft. This will broaden their appreciation and understanding of sailing ships in general and help them more accurately interpret the archaeological remains of shipwrecks they may excavate and study in the future. The vessel will also serve as an ambassadorial ship for the port of St. Augustine traveling to ports in Florida where it will also serve to educate. The vessel will be an iconic symbol of the 500th Anniversary of the discovery and the 450th commemoration of the founding of St. Augustine, supporting heritage tourism in a tasteful and accurate manner.

So how to begin the project? Essential to all ship-building projects is a good supply of appropriate building timber. This kind of timber is not carried by Home Depot or even specialty lumber-yards and must be procured in the local community and milled especially for the project. In this case, we have chosen to build out of woods that are local and traditionally used in area shipbuilding, and that are salvaged from storm damage and development. To this end

a certain amount of Live Oak has been secured for framing the vessel (building its ribs), as well as for posts, deck beams and interior supports such as knees. The keel will most likely be of Pine and the hull planked with Cypress, White Atlantic Cedar, or Pine - or a combination of these woods.

The project has recently entered into an agreement with St. Johns County for the use of a piece of county land as a wood lot for the laying down and seasoning of timber prior to milling. The wood lot will be inaugurated with some ceremony in early March when the first lot of Live Oak will be moved there for seasoning, officially kicking off the St. Augustine Tall Ship Project.

The caravel as conceived will be some 65.5 feet (20 meters) length overall, with a beam of approximately 20.5 feet (6.3 meters), and drawing some eight feet (2.5 meters) of water. The name favored most for the vessel - the *San Agustín* - was our fair city's name as spoken at the time of its founding. This will be a community-based project drawing support and enthusiasm from the residents of the nation's oldest port and surrounding counties and promises to be one of the principal signature events of the 500th and 450th commemorations.

For more information, and to find out how you can get involved, contact Sam Turner: sturner@staugustinelighthouse.com

Digital -- continued from Page 3

confusing object from the image means simply replacing the numbers describing it with background-like numbers. If you don't like what you did, you can *undo* the edit and try something else.

For technical illustrations, you often need to overlay text and arrows calling attention to important features in an image. This is done by substituting numbers describing the letter shapes and arrows for the original numbers under them. The image editing programs aren't limited to editing digital camera shots either. You can create professional quality charts, diagrams or maps from scratch. The program generates all the millions of pixel describing numbers needed to specify the diagram you want, as though it was a digital camera shot.

The best part of this is that you don't have to be a mathematician to use this technology. The programmers who create the image editing software do this for you, providing easy mouse and keyboard ways for you to create the images best suited to your needs. For example, to draw a straight line, mouse-click on each end and the program zaps the line across your monitor. You pick its color and width, dotted or continuous. You don't need to know about all the numbers needed to describe the line. It's like having a CPA do your tax return and you get the refund.

This is all possible because elementary school math can be done on the numbers coming from a digital camera. However high school and college math like trigonometry, calculus, matrix algebra plus Fourier transforms can do much more sophisticated image processing. Archaeologists and computer scientists at the Technion-Israel Institute and the University of Haifa have collaborated on a software system that can process an image of an original object so battered or eroded that its surface features can hardly be seen and produce a clean clear image. For details about their advanced math processing and many examples, see their technical paper: <http://webee.technion.ac.il/~ayallet/Ps/08-KST.pdf>:

No darkroom trickery could produce the marvelous results that higher mathematics achieves. And it's all doable because of the mind-boggling number lists your digital camera uploads to your digital computer.

This isn't a future possibility; it's happening right now before your eyes. Of the illustrations that have accompanied the articles in this *Digital Archaeology* series, at least two-thirds have been significantly edited, enhanced or created outright using computer software. I know this because I did each one. Can you tell which?

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. If you would like to get the newsletter by e-mail, please note it on the sign-in sheet, e-mail Charlie Strader (cesxplor@aol.com) or let Charlie, Annette Snapp or Karen Nelson know at the next meeting.

Don't Forget to Renew Your Membership

Memberships expired in January. Please help support SWFAS and renew your membership today!

About SWFAS

The Directorate:

*President - Annette Snapp
1st VP - Tom Franchino
2nd VP - James Oswald
Recording Secretary - Kathryn Betz
Treasurer - Charlie Strader
Membership Secretary - Charlie Strader*

Trustees:

*Rebecca Austin, Steve Archer, Matthew Betz, Liz Clement, Alison Elgart, Betsy Perdichizzi, Theresa Schober, Jack Thompson
Trustee Emeritus: John Beriault*

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).

July 2010 Newsletter

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