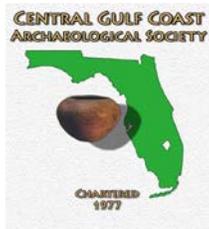

Central Gulf Coast Archaeological Society

A Chapter of the Florida Anthropological Society

www.cgcas.org



MONTHLY NEWSLETTER

August 2010



Editor: David Burns

Weeki Wachee Spring Fieldtrip



Jennifer Brown going with the flow down the river

On July 31st twenty-two members of CGCAS and friends spent a beautiful, sunny day on the Weeki Wachee River. There was lots of gorgeous scenery, dips in the refreshing spring-fed river, and lots of wild-life in and out of the boats! Many of participants watched as two manatees allowed boaters to give them a belly-rub. All agreed that they would like to return and kayak/canoe the river again next year.

Those taking part in the fieldtrip were: Rachel Nostrom, Debbie Sadler, Ellie England and friend, Alan Bailey, Sherry Keller, Jeff and Allison Moates, Karin Lovik, Tom and Marcie Connors, Chris Hardy, Linda Allred, Jen Brown, Mary Askew, Deb and Gordon Sterner, Alex and Ron Allred, and Donna Donovan.



A relaxing trip down the river

2010-2011 Lecture Series

The next CGCAS Lecture series begins again this September. The first program will be on Thursday, September 16, 2010. The presentations will be at the Weedon Island Preserve Cultural and Natural History Center. The dates are the third Thursday of the month with the lectures beginning at 7 pm. They are free and open to the public. Come and joins us to hear Lucy B. Wayne, Ph.D., with South Arc, Inc. speak on "Sweet Cane: Florida Sugar Prior to the Civil War".

Mark your calendars for the third Thursday of the month as there will be more excellent programs coming up throughout this series. Future programs and speakers will include Keith Ashley, Ph.D. in October, and Jon Endonino, Ph.D. for November. Details of these lectures and future programs will be presented in upcoming newsletters.

2011 FAS Annual Meeting

The Central Florida chapter will host the 63rd Annual FAS Meeting in historical Orlando, May 6-8, 2011. The Friday board meetings and reception along with the Saturday general session will be held at the Orlando Shakespeare Theater complex in Loch Haven Park. The Saturday night banquet will be held nearby at the Tap Room at the historic Dubsdread Golf Course in the College Park community. The Sunday tour will take place in west Orange County and will feature the Lake Apopka and Oakland area and possibly some of the surrounding historical communities. CEFAS is currently in talks with the Comfort Inn Suites, which has a hotel within close proximity to Loch Haven Park, to set up a room block for the conference. Jason Wenzel and Kevin Gidusko will serve as conference co-chairs.

Tracking the Ancestry of Corn Back 9,000 Years

Despite its abundance and importance, the biological origin of maize has been a long-running mystery. The bright yellow, mouth-watering treat we know so well does not grow in the wild anywhere on the planet, so its ancestry was not at all obvious. Recently, however, the combined detective work of botanists, geneticists and archeologists has been able to identify the wild ancestor of maize, to pinpoint where the plant originated, and to determine when early people were cultivating it and using it in their diets.

<http://www.nytimes.com/2010/05/25/science/25creature.html?hpw> (from links / mentions within, see also: <http://blogs.nationalgeographic.com/blogs/news/chiefeditor/2009/03/corn-domesticated-8700-years-ago.html> ; <http://www.pnas.org/content/106/13/5014.full.pdf+html?sid=91029512-862b-4ae8-b37c-c034f5e04848> ; <http://www.pnas.org/content/99/9/6080.long> ; <http://www.pnas.org/content/106/13/5019.long>

Art Work of Hermann Trappman on Display

The History Center welcomes *Obscured By Time: The Magic of Florida*, an exhibition featuring the artwork of Hermann Trappman.



Hermann with his painting "The Knappers"

This exhibition details the natural history of Florida through Trappman's compelling paintings, artifact replicas, and examples of the resources utilized. A self-taught artist, Trappman's work offers a glimpse of early Florida, its people, and geography prior to European contact in the 1500s.

This exhibition will remain in the Third Floor Gallery through September 26th and is included with regular admission to the History Center.

Driftwood Survey

CGCAS is still assisting FPAN in a survey of this historic area in St. Petersburg. FPAN has been working excavating the "mystery box", a probable cistern. The excavation has reached a depth of about 60 cm and has exposed the top outline of the wooden structure. However, with recent rains, the unit has flooded and efforts to remove the water enough to continue work, have not met with success. The FPAN crew has taken some time off from this project and will resume work this fall. In addition to the cistern at the Mullet Farm, several shovel test have been done throughout the immediate neighborhood. Once work resumes, this would be an excellent opportunity to participate in doing excavation and shovel tests. For further information, contact Jeff Moates at jmoates@cas.usf.edu.

Boy Scout Program at Brooker Creek



L to R: Phyllis Kolianos, Linda Allred, Bob Austin, Chris Hunt, Marcie Connors, Chris Hardy, and Dee Dee Dix.

On July 24 Brooker Creek Preserve and CGCAS held a hands-on opportunity to earn the Scout Archaeology Merit Badge through a workshop. The morning workshop was packed full of activities to satisfy most of the merit badge requirements. Activities include "Sifting through the Past," exploring a modern trash heap, creating pottery, and learning about area archeological sites. A portion of the cost for this program will go to CGCAS.

Many Helping in the Gulf Oil Cleanup

Several members of FAS are taking part in the oil spill clean-up SCAT teams along Florida's Gulf Coast. Their goal will be to identify potential impacts to archaeological sites.

These members include Bob Austin, President of FAS and Vice President of CGCAS and other members from various archeological firms and societies. We appreciate their work and support all who are also taking part in this important effort.

DIGITAL ARCHAEOLOGY: Where am I?

By Jack Harvey

Location, location, location. Or as we say in archaeology: *provenience, provenance, origin*. The cub reporter learns to carefully establish the five Ws: *who, what, when, why* and *where* in order to do her job well. Each of these descriptors is vital to the archaeologist's reporting too, yet each is often uncertain. It might be argued that archaeology is simply a quest to resolve these five uncertainties. The *where* descriptor has often been an issue in the past, but digital technology has recently almost completely solved the problem.

Typically archaeologists need to determine locations where traces of ancient people were found. This helps to establish access and ownership of artifacts as well as facilitate returning for further investigation. Importantly it also aids comparison with other nearby sites. Location is on multiple scales: first, where is the site itself and then where within the site. Sometimes precise location coordinates and depth in centimeters within a particular test unit are recorded.

Determining urban site locations is often as simple as finding house numbers on adjacent structures. County and city property plats are usually quite accurate because of well-established land surveys. United States Coast and Geodetic Survey (USGS) maps have long been a precise source of location information. USGS benchmark locations were painstakingly established using optical theodolites triangulating from more distant known locations. But the nearest benchmark may be far from an archaeology site. So the archaeologist must be able to identify a nearby road intersection, river bend or permanent structure that can also be found on the USGS map of the area. In remote areas, this is often difficult.

Space age military need has brought new digital technologies that drastically simplify finding a site location. It's called the Global Positioning System (GPS) in the U.S. and was first launched during the 1970s. The digital technology bypasses the whole requirement to locate a nearby known spot such as a USGS benchmark, road intersection or permanent structure. It works best in remote areas where low-cost pocket devices reliably locate archaeological sites to within about 15 meters (50 feet) anywhere on the planet.



U.S. GPS Satellite tells archaeologists where they are.
(Image courtesy NASA)

The American GPS is implemented by a family of 24 to 32 satellites in 10,000 mile high earth orbits. Each satellite continuously broadcasts the current time on its internal highly precise clock as well as its current position. When the little pocket GPS device can simultaneously receive these time signals from four different satellites, it can calculate its own location

and elevation. This is because the radio waves carrying the time signals take a fraction of a second to arrive at the ground site, thus delaying the broadcast time slightly and by a different amount from each satellite. For any set of time signals received at one instant, there is only one specific location of the GPS receiver where that can occur. The computer in the pocket device compares the various time signals, then calculates and displays that location. The radio broadcast signals are one-way, satellite to receiver only. The pocket device does not "talk" to the satellite, it just listens. For technical details see:

http://en.wikipedia.org/wiki/Global_Positioning_System

This is all possible because the speed of light is constant. Radio waves travel at this speed so the delay in the time signal is also constant for any given satellite and receiver position.

I skipped over a small flaw in this explanation. The speed of light is only constant in a vacuum. In fact, it slows down slightly when passing through the atmosphere and the amount of delay depends on the weather and solar conditions. Since each satellite signal encounters different atmospheric conditions, this unpredictable slowing will be slightly different for each. As atmospheric conditions change, the indicated position of a simple pocket receiver will appear to shift. Fortunately, this drift is only a few meters, so it's still accurate enough to identify an archaeological site and get back to it.

However, the pocket receiver error is too much for the further need to identify where *within* a site particular objects are found. For this a more-specialized survey-grade receiver is needed. This uses additional sources of position information from other receivers at nearby known locations to correct the GPS atmospheric drift. Several survey-grade technologies are available. Some depend on special radio signals sent from a series of ground stations maintained by the U.S. Coast Guard.

Another technique amounts to putting a temporary "base station" at a fixed base location on the site. It sends a low-power radio signal giving the current GPS base station location to a portable GPS receiver. Since both devices have the same weather/solar induced error, the portable device can show a position *relative to the site base station* that's accurate to a centimeter or so, sufficient to define test unit corners and levels.

Digital technology has put a small gadget in the archaeologist's pocket that tells her where her shovel turned up an interesting artifact. Now she can tell her students exactly where to dig for more.

FAS Membership

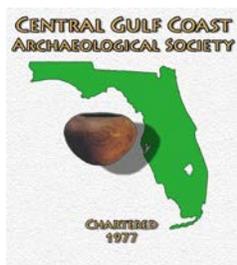
The Florida Anthropological Society (FAS) is open to persons interested in anthropology, archaeology, preservation of cultural resources and community education. Membership is made up of both professional and avocational archaeologists. Benefits of membership include the journal *The Florida Anthropologist*, the *FAS Newsletter* and participation in the annual meeting in May. More information and membership forms can be found on the web site www.fasweb.org or by writing to the Membership Secretary at P.O. Box 13191, Pensacola, FL 32591. Dues are: Student - \$15; Regular and Institutional - \$30; Family - \$35; Sustaining - \$100; Patron - \$1000; Benefactor - \$2500 or more.

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The Society

Central Gulf Coast Archaeological Society (CGCAS) is an association of amateur and professional archaeologists and concerned citizens dedicated to the preservation and interpretation of Florida's great cultural heritage. CGCAS is a chapter of the Florida Anthropological Society (FAS) and is a state chartered non-profit organization. All contributions are tax deductible.



Central Gulf Coast Archaeological Society

P.O. Box 1563,
Pinellas Park, FL 33780-1563

Membership

Membership is open to anyone with a sincere interest in the cultural past of Florida and who is dedicated to the understanding and preservation of that heritage

Amateurs, professionals and concerned citizens are welcomed as members. Membership is yearly and all dues are payable in January. Contact Karin Lovik, 1225 Jeffords St., Apt 225A, Clearwater, FL.

Dues

Regular	\$20.00
Student	10.00
Family	25.00
Life	150.00

