

Southwest Florida Archaeological Society (SWFAS) April 2016 Newsletter

PRESIDENT'S CORNER



February was an exciting time in Southwest Florida archaeology as we celebrated the 450th year of the meeting of Carlos, the king of the Calusa, and the Spaniard, Pedro Menendez de Aviles in 1565. The meeting took place at the island of Mound Key here in Estero Bay which was the capital village of the Calusa. Four eminent Florida archaeologists gave presentations on the importance and impact of this event that initiated the early historic period of Florida.

In March, at the Collier County Museum in Naples, FL, we heard from Steve Koski, a well- known Florida underwater archaeologist who is the Interim County Archaeologist for Sarasota County. He discussed the Snake Island Site in Sarasota County where the cultural deposits were inundated by rapidly rising sea levels in the 1500's. His research at Snake Island has extended over 20 years as he documented the many changes to the island and the unique tool assemblage found there.

2016 marks the 36th anniversary of the founding of SWFAS as a not-for-profit corporation in 1980 as a chapter of the Florida Anthropological Society. Through the years SWFAS has been actively involved with many excavations in the area and, in concert with the Collier County Museum, sponsors the Craighead Laboratory at the museum. The Collier County Museum is the official repository for archaeological material in Southwest Florida and is registered with the Florida Anthropological Society (FAS). The museum officially opened on February 15, 1988 and the Craighead Lab officially opened on March 6, 1988. This month marks the 27th anniversary of the founding of the laboratory. The Craighead Laboratory, cleans, catalogs, assists with identification of ceramics, shell and bone, stores collections and has issued several archaeological reports since its inception. All of this with a cadre of dedicated SWFAS volunteer members who get little recognition for this work.

On May 19-22, 2016 the Florida Anthropological Society (FAS) will hold its 68th annual meeting in Jupiter, Florida hosted by the Palm Beach County Archeological Society (PBCAC). SWFAS will be represented there by Theresa Schober, a SWFAS Trustee who is also the President this year of FAS and by John Furey, this year's SWFAS President. FAS has published its journal of archaeological reports, The Florida Anthropologist, each year since its founding in 1948. Details for the FAS meeting can be found at http://fasweb.org/annual-conference/. The advance registration deadline is April 14th. The conference includes an evening reception on Friday, May 20th at large shell mound of Dubois Park, a day of engaging presentations on Saturday, May 21st, and some local archaeological and historical tours on Sunday, May 22nd. We hope to see you there!

APRIL MEETING



Ft. Myers, FL - April 20, 2016 - The Southwest Florida Archaeological Society (SWFAS) is pleased to announce a presentation by Archaeologist **Ginessa Mahar** about **Fishing Techniques of Florida's Ancient Inhabitants**. The Wednesday April 20, 2016 presentation will be held at 7:00 pm at the Southwest Florida Museum of History at 2031 Jackson Street, Ft. Myers, Florida. This free public program will be preceded by a short officers' meeting at 6:30 pm.

Millions of people venture out into Florida's waters each year to take part in an ancient practice: fishing. Weather for commercial or recreational purposes fishing has deep roots in Florida - thousands of years deep. Recent archaeological research has expanded upon what we know of Florida's ancient fisher folk,

the gear that they used and the fish they caught. Evidence presented is from across the state while focusing on recent excavations and experiments along Florida's Big Bend Coast. Ginessa Mahar is a Ph.D. candidate in Anthropology at the University of Florida and her dissertation research involves the investigation of coastal fishing communities and their practices through archaeological, ethnographic and experimental methods. Prior to attending UF, Mahar worked as an archaeologist for the American Museum of Natural History where she focused on the archaeology of the Georgia coast.



From April 12-17, 2016, Ginessa will be completing her final experiments toward her dissertation at Cedar Key, Florida, southwest of Gainesville, Florida. She will be experimenting with a large fish weir to better understand the number and types of fish this kind of technology can catch, and has put out a call for volunteers to assist her in what was a cooperative effort among the Calusa and other coastal fishing populations.

COME VISIT THE SOUTHWEST FLORIDA MUSEUM OF HISTORY



Come early to the April meeting and experience the many exhibits this museum has to offer. Housed in the former Atlantic Coastline Railroad depot, the museum maintains permanent exhibitions on Paleo Indians, the Calusa, Seminole, Spanish explorers and



early settlers of southwest Florida. The grounds include an authentic replica of a pioneer "cracker" house, a 1926 LaFrance fire pumper and a 1929 private Pullman rail car.

Currently on display in the museum's temporary gallery space through June 11 is the exhibit: Civil Rights in the Sunshine State. This ground-breaking exhibit is one of the first attempts to look at the Florida Civil Rights Movement through a statewide lens. From Miami to Tallahassee and St. Petersburg to St.

Augustine, visitors discover Florida's role in the movement at the local, state and national levels. It explores the history of the Civil Rights Movement by using artifacts, archival images, film footage and oral histories to educate visitors about Florida's significant contributions to the movement. The Southwest Florida Museum of History worked with institutions and experts from across the state to produce this leading edge exhibit sponsored by the Southwest Florida Museum of History Foundation.

MAY MEETING

There is no SWFAS May meeting as the annual Florida Anthropological statewide meeting will be held in Jupiter, Florida from May 19 – 22.

Meetings will resume in the Fall.

MEET YOUR SWFAS BOARD OF DIRECTORS



WILLIAM LOCASCIO

Bill Locascio received a B.S. in Biopsychology from Loyola University of Chicago, an M.A. in Anthropology from Southern Illinois University, and a Ph.D. in Anthropology from the University of Pittsburgh where he studied under Robert D. Drennan. Since entering the field of archaeology, Bill has been fortunate enough to have worked in a host of areas, including the Aleutian Islands in Alaska, Southern Arizona, Southern Illinois, Central and Southern Ecuador, Central Panama, the Diquis Region of Costa Rica, St. Augustine, FL, and most recently South Florida. His primary interests are in investigations of households and communities aimed at reconstructing day-to-day activities at the local level of past societies, and in comparison of archaeological cases to address broader questions regarding long-term

social change. Bill spent three years at Flagler College before arriving to Florida Gulf Coast University where his is currently Assistant Professor of Anthropology.

Recent Publications:

Multi-scalar approaches to the Archaeology of the Isthmo-Caribbean Area. Co-editor with Scott Palumbo, Ana Maria Boada, and Adam Menzies. (2013)

"Feasting and Status in a Prehispanic Community at He-4/El Hatillo, Panama". In *Multi-scalar* approaches to the Archaeology of the Isthmo-Caribbean Area. (2013)

WELCOME NEW MEMBER

SWFAS welcomes our latest new member Robert Crum from Cape Coral, FL. We look forward to seeing him at our meetings where people with an interest in Florida archaeology and prehistory meet.

LEGISLATIVE UPDATE NEWS HB803 AND SB1054

We noted in the January 2016 SWFAS Newsletter an attempt to introduce two bills (HB803 and SB1054) in the Florida House and Senate that would create a permit process that would allow people to remove artifacts from state owned submerged land. These bills are supported and funded by groups that collect and sell the artifacts for profit. The passage of these bills would have effectively allowed the pillaging of archaeological sites in Florida and the loss of our archaeological heritage. This legislative session ended on March 11 without passing these bills however, the archaeological community will continue to

monitor the legislature to ensure that they are not reintroduced in the next session. Thanks go out to the many people that followed the twist and turns that were used to attempt to pass this terrible legislation and who wrote letters to educate the Representatives and Senators as to what the passage of these bills would really mean.

LOCAL POINTS OF INTEREST MOUND KEY IN ESTERO BAY



As noted in the President's Corner above, Mound Key was where chief Carlos of the Calusa and Pedro Menendez met 450 years ago in 1513. This was recognized by the program sponsored by The Friends of Koreshan State Historic Site in Estero, Florida in February. This is another local archaeological site that can be easily visited here in Southwest Florida.

Mound Key is a 125-acre island located near the mouth of the Estero River and is only accessible by boat. It is a complex of three mounds 30 feet above the water that were accumulated over a 2,000 year period made of shell, fish bones and pottery. The Calusa purposely constructed these mounds to create water courts and canals whose features still exist today. The historic records indicate that one mound served as the residence of Carlos, one the courtyard and the third held the Calusa temple which was reputedly large enough to hold the entire village of about a thousand people under its thatched roof. It served for many years as the Calusa political capital and the main ceremonial center for a kingdom stretching from Tampa Bay to the Ten Thousand Islands and eastward to Lake Okeechobee. In 1566 the Spanish founded the first Jesuit mission in the new world on Mound Key but the Calusa fled the island and the mission was abandoned in 1569. The Calusa never lost a battle with the Spanish nor did they surrender to them but, because of their lack of immunity to European diseases, especially small pox and influenza, the Calusa tribe was wiped out by 1750 from these illnesses.

IF YOU GO: The estuary around Mound Key is quite shallow and only shallow draft craft can navigate the

area. There are several ways to get to the Island. You can launch your own canoe, kayak or motorized small boat at Lovers Key or at Koreshan State Park. Canoes and/or kayaks can be rented at Lovers Key, Koreshan State Park or at Estero Outfitters (20991 S. Tamiami Trail, Estero, FL). Guided trips by pontoon boats and kayaks leave from many points around the estuary and if you go on line you can find them advertised. Remember that picking up and keeping anything from the island, pottery, bones or even shell is prohibited.



The following article was written by Jack Harvey, a longtime SWFAS member and originally published in the January 2008 edition of our SWFAS newsletter. Lucy was discovered in 1974 in Ethiopia, only 42 years ago, and was dated at 3.2 million years old. While we in Florida do not encounter Australopithecus afarensis fossils or deal in millions of years as a time frame, the article reminds us of the many types of dating the past and how "Lucy" got her name from a 1970's Beatles song.

GEOLOGY RULES: LUCY TIME

By Jack Harvey

There was wild celebration in camp the evening of the day that Donald Johanson and his young field team found the famous skeleton. The Sgt. Pepper's Lonely Hearts Club Band song was playing over and



Lucy in the Sky with Diamonds drawn by Julian Lennon.

over when the name of the girl with kaleidoscope eyes fell from tangerine trees and marmalade skies. The 3.2 million-year-old hominid skeleton was, roundabout, named for Lucy O'Donnell, a kindergarten classmate of Julian, son of Beatle John Lennon. Lennon wrote "Lucy in the Sky with Diamonds" after seeing Julian's classroom drawing of her. And you thought it was about LSD.

Johanson's team was celebrating because it already knew the hominid skeleton's great age. They didn't have to wait for radiocarbon dating results from a remote laboratory because Nicolas Steno postulated the Principle of Superposition in 1669.

Sending a Lucy bone to a radiocarbon lab was pointless anyway because every last atom of its carbon-14 had vanished long ago. They knew that because they knew the age of a layer of volcanic rock just above the sandstone layer containing Lucy's bones was 3.2 million years. And just below the sandstone was another volcanic layer 3.8 million years old, assuring the layers hadn't flipped. (See illustration.) Steno's Superposition Principle then states that the Lucy sandstone is at least 3.2 million years old.



Rock layers where the Lucy skeleton was discovered.

But what kind of a clock do geologists use to date rocks that old? Clocks have to be appropriate to the time interval. For Galileo timing a swinging chandelier, his pulse was appropriate. For a Calusa shell hammer, its ratio of radioactive carbon-14 to stable carbon-12 tells the age. But when we get to millions of years, we need to switch to the potassiumargon clock. This is like the radiocarbon clock but with important differences. For one, we don't get the date of a human bone or artifact directly. Instead we get the date of a volcanic deposit such as lava *above* the bone or artifact.

Recall that radiocarbon dating depends on a constant ratio of two isotopes in the atmosphere as living tissue grows. At organism death, new carbon stops entering the tissue. Then the predictable decrease in carbon-14 with time (halving every 5730 years) tells the time of death.

Radioactive potassium-40 (like carbon-14) also decreases at a predictable rate (far slower than C-14) but there isn't a convenient standard ratio as a starting point, such as we have with C-14/C-12. However, the daughter product of potassium-40 fission is argon, a gas.

So when molten lava flows out on the surface, all argon gas in it escapes. When the lava hardens, new argon created from potassium-40 is locked inside impervious rock and very slowly *increases* with age. Of course the amount of argon depends on the amount of potassium-40 so both have to be measured, and once again it is a ratio that establishes age. For example, if we find that argon has built up inside the solid rock equal to the amount of potassium-40 remaining, then we know that half of the K-40 (K is the chemical symbol for potassium) has fissioned, reaching its first half-life.

Half-life for K-40 is 1.25 billion (with a B) years and that's over 200,000 times longer than the half-life of Carbon-14. This means it can measure much farther into the past.

Cubic zirconium, an easily made mineral of zirconium dioxide, is often used for jewelry because it glitters much like diamond. (Diamonds again!) Zircons are naturally occurring crystals that are often found embedded in rocks. If a zircon is sliced open and examined with a microscope, tiny streaks can sometimes be seen inside the transparent crystal. Trace amounts of radioactive uranium cause these when its atoms fission, firing off powerful alpha particles that rip the neat crystal structure. The older the zircon, the more fission tracks will be found. These start accumulating as soon as the zircon forms so that the fission track density tells the time since crystallization. This method has been used to date the oldest rocks on earth so far found - 4 billion years. They are from Great Slave, the deepest lake in North America. It's in Canada near the Arctic Circle.

Are you seeing a pattern here? Methods for dating very old things, from Lucy to the planet itself usually involve radioactive atoms in some way. And there is another pattern: the schemes all have something that starts the clock ticking. For radiocarbon dating, it's the death of the organism. For Lucy's age, lava cooling enough to trap argon gas is the event. For zircon dating, formation of the crystal starts the clock. In still another scheme, river sediments can sometimes be dated by the ratio of aluminum and beryllium isotopes found in them. These isotopes are created in a fixed ratio by cosmic rays when the sediment is exposed on the surface. But sediment burial protects it from cosmic rays and the ratio begins changing. In this case, sediment burial is the clock trigger.

We are no longer limited to the relative and named ages of the 19th century. The physicists have given us numerous ways to get absolute ages that can be compared to check their accuracy. The story is complex with serious issues like contamination. So I have touched just lightly on only a few of many techniques devised to exploit the astonishing revelations by Einstein and two generations of Curies. They lighted up the magnificent hidden panorama of the past, showing us tangerine trees and marmalade skies, and a girl with kaleidoscope eyes.

MEMBERSHIP APPLICATION

SOUTHWEST FLORIDA ARCHAEOLOGY SOCIETY (SWFAS)

I want to help The Southwest Florida Archaeology Society preserve and interpret our prehistoric heritage.

| Name (please print) | | | |
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| Address | | | |
| City/Town | State | ZIP | |
| Phone | Email | | |
| Check One | | | |
| Individual (\$20) | Sustaining Individual (\$ | 550) | |
| Family (\$35) | Student (\$15) | | |
| Life (\$500) | | | |
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| Skills, training, interests: | | | |
| I hereby agree to abide by the rule release from any and all liability d cooperating with the society. | es and bylaws of the Southwe ue to accident and injury to n | est Florida Archaeologi nyself, dependents and | cal Society. I further any property owners |
| Signature: | | Date | |
| Please make your check out to SW | /FAS and mail to: | | |
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