Southwest Florida Archaeological Society Newsletter

Vol. 23 No. 1 January 2007

Coming up January and February

The "Other" Pilgrims: Work at Preacher's Cave, Eleuthera, Bahamas

On January 17th, 2007 at 7:30 p.m. at the Bonita Springs Community Center, SWFAS members and others will have the chance to hear Robert S. (Bob) Carr, director of the Archaeological and Historical Conservancy, give a presentation on recent archaeological work done at Preacher's Cave in northern Eleuthera in the Bahamas. Preacher's Cave is a large sea cave in an escarpment facing the Atlantic beach. It is one of the oldest historic sites in the Bahamas and has a pre-history extending back to the Lucayan Indians. The cave provided shelter for the Eleutheran Adventurers, a group of religious fundamentalists very similar to our Pilgrims who shipwrecked there in the mid 1630s. The cave has been used through time as a shelter, a church, and finally as a cemetery. A Powerpoint presentation will be shown on the cave, the archaeological work, and the resulting important information recovered.

Preacher's Cave in northern Eleuthera in the Bahamas

Stucco figure on corner of tmple near summit of high pyramid Ek Balam

Ek Balam, Chichen Itza and Balancanche Cave: the start of a trip through the Yucatan

On February 21st, 2007 at 7:30 p.m. at the Bonita Springs Community Center, SWFAS members and others will hear John Beriault, past president of SWFAS give a presentation on three sites in the northern Yucatan: Ek Balam, Chichen Itza, and Balancanche Cave. These sites could be characterized as the New, the Well-Known, and the Underground. Ek Balam is a lesser-known though spectacular site with amazing high relief stucco decoration on its tallest temple. Chichen Itza is a well-known and well-traveled ruin that can still surprise. Balancanche Cave is an unusual cave complete with altars and offerings that had been intentionally sealed off for close to a thousand years. Beriault will give a Powerpoint presentation of the three sites, visited on the first leg of a 2003 trip through the Yucatan.

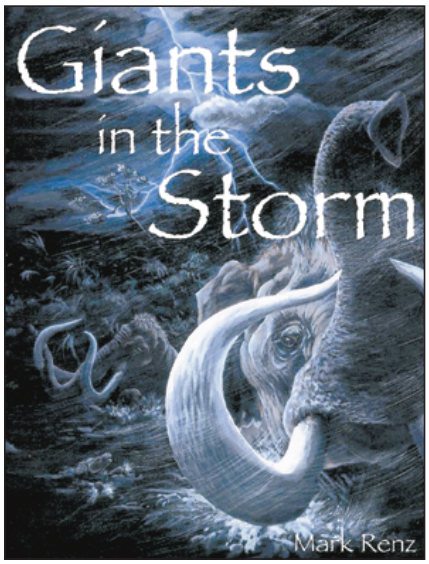
Two local lectures about ancient Florida's animal life

Mark Renz and SW Fla's 500,000-year-old fossils - Jan. 4 on Sanibel

500,000-year-old fossil beds in Southwest Florida form the topic of the season's first Sanibel-Captiva Audubon lecture — "Giants in the Storm" — based on Mark Renz's book of the same name. The presentation starts at 7:30 p.m. on Thursday, January 4, at the Sanibel Community House. Please note *new start time!* (Doors open 6:30).

Mark Renz, author and owner of Fossil Expeditions of SW Florida is a native of Fort Myers, a vocational paleontologist and amateur fossil hunter. In 1990 Mark stumbled onto a 500,000-year-old ancient Florida river bed and discovered dozens of skeletons, remnants of lumbering mammoths, mastodons, elephants, bull-size ground sloths, llamas and old world horses. This discovery triggered many questions. What happened there? Was a major storm, flood, drought or plague responsible for the death of so many creatures at once? Or, alternatively, does this accumulation of bones represent one animal dying in that very place every 10 years for thousands of years? Through his accumulation of 800 field photos of the site, Mark uncovered tantalizing clues about how these animals lived and died. The answers to these questions and the adventure that this discovery precipitated are the topics of his book and his lecture.

Giants in the Storm is the latest in a series of books authored by Renz. Other titles include *Fossiling in Florida* (University Press of Florida), *Megalodon: Hunting the Hunter* (Paleo Press) and *Doug's Ark — Thinking Outside the Pile* (Paleo Press). Of *Giants in the Storm,* Dr. Richard C. Hulbert, Jr., manager of the Vertebrate Paleontology Collections of the Florida Museum of Natural History, wrote, "All of the decisions and hard work by Renz and his crew, so richly displayed in these pages, has paid off bountifully in fossils from an interval of geologic time that was previously poorly known in Florida."



Mark Renz with two Giant Ground Sloth claw cores (the core is the bone inside the claw). The claws were used by this huge herbivore to reach the upper branches of trees to chew on the tender leaves, or possibly to dig for tasty roots.
One of these claw cores is 18" long and the actual claw would have been 36" long. This sloth would have measured 20 feet from head to tail and stood 14 feet tall, with an eight-foot-long tail. It would have been as large as a mastodon and would have eaten 300 - 500 pounds a day — and it was a vegetarian.
The claw cores pictured are not from the site that Renz is talking about on January 4. Sloths the size of bulls were found here (still not your average tree sloth) but no Giant Ground Sloths were found.

This is the first of ten 2007 San-Cap Audubon programs to be held on Thursday evenings at the Community House on Periwinkle Way. Parking is available at the Community House and across the street at the Schoolhouse Theater parking area.

These presentations are open to the public, but a $4 donation per person is much appreciated. For additional information call Elaine Jacobson at 395-1878 or go to San-Cap Audubon's Web site at www.sancap audubon.org.

AND Greg McDonald on Ice Age Animals of Florida - Jan. 9 on Marco

Greg McDonald, Senior Curator of Natural History, will speak on the Ice Age animals of Florida, Tuesday, January 9, 2007 at St. Mark's Episcopal Church, 1101 North Collier Boulevard, on Marco Island. This is the third lecture in the Marco Island Historical Society's 2006-2007 Lecture Series. The free presentation begins at 7:30 PM and is preceded by a reception and refreshments at 7:00 PM and is sponsored by M & I Bank.

McDonald's presentation, "Ice Age Animals of Florida," will focus on the better known large animals early Florida people would have encountered, such as mammoths, mastodons, giant sloths, saber-toothed cats as well as lesser known forms such as giant armadillos and lamas. McDonald will also discuss what the environment was like at the time these animals roamed and how different it would have been from Florida's environment today. Further, McDonald will explore how that relates to the question of the extinction of the Pleistocene mega fauna and whether it was caused by humans or due to environmental change.

McDonald is the Senior Curator of Natural History with the Park Museum Management Program, National Park Service, in Fort Collins, Colorado.

The Marco Island Historical Society Lecture Series is free and open to the public. For more information on the programs, contact the MIHS at 239/389.6447.

SWFAS Board nominees

Nominations for Board members and officers will be voted on at the January 17, 2007 SWFAS meeting in Bonita Springs.

Following are the proposed nominees for the 2007 Officers:

President	Theresa Schober
1st VP	Karen Nelson
2nd VP	Tom Franchino
Recording Secretary	Jo Ann Grey
Treasurer	Charlie Strader
Membership Secretary	Charlie Strader

New nominees to the Board are Jean Belknap, Betsey McCarthy, Jim Oswald and Kara Bridgman Sweeney (FPAN archaeologist based out of the Randell Research Center). The current Board members will continue to serve on the Board. Board meetings are always open to all members who wish to attend.

Reminder
SWFAS membership dues are due January 1.

Individual - $20
Sustaining - $50
Family - $35
Student $15

Geology Rules: Contemporary Rock

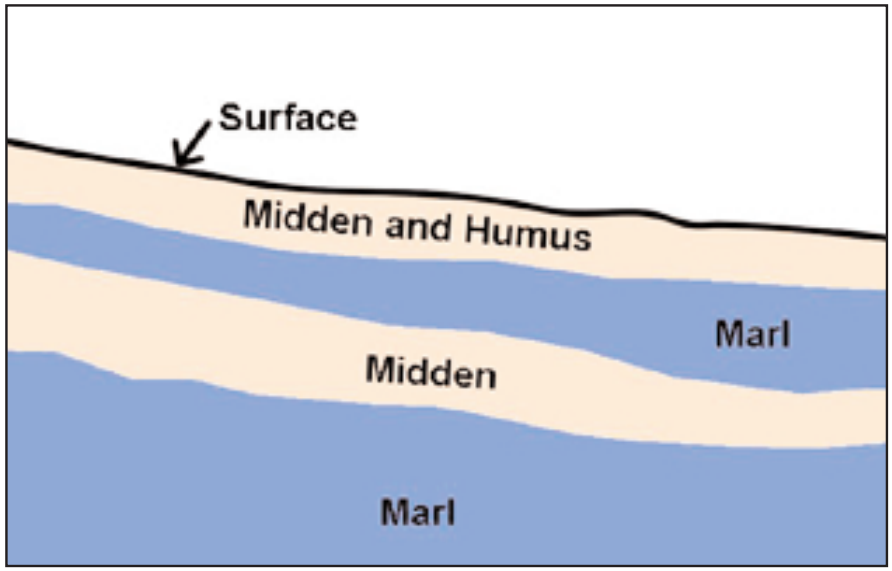
By Jack Harvey

New rock is forming in your bathroom this minute. It clogs up the faucets and showerheads. It forms a film on tiles and fixtures. It's real limestone rock and hard to remove so you use scouring powder and various cleaning products such as Lime-A-Way. This rock comes out of the water in your pipes.

The water contains calcium carbonate, a compound that dissolves into or precipitates out of water depending on a number of physical conditions such as temperature, pressure, acidity and the concentration (or amount) of calcium carbonate already in the water. It is not unlike the sugar we dissolve in our cup of coffee, except it works far slower.

When so much calcium carbonate is already in the water that no more will dissolve, chemists call it *saturated.* If some of the water then evaporates, the remaining water is *supersaturated* and some of the calcium carbonate must precipitate out. This is the white film on your bathroom tile and it's the mineral calcite a.k.a. limestone, a sedimentary rock.

One way to remove the white film is to wash it with distilled water having no calcium carbonate already dissolved in it. Rainwater is close to distilled. It will remove the film but only very slowly and you will no doubt use something much more vigorous such as vinegar that raises the acidity causing the calcium carbonate to dissolve more like sugar in the coffee cup.



New rock at Indian mound

So limestone lying unprotected in our South Florida rainstorms will eventually dissolve and lime rock roads don't last long. By coating the lime rock with *bitumen* (the sticky black petroleum byproduct) calcium carbonate is protected from liquefying rainwater and we can build asphalt roads that last much longer.

As we have seen, South Florida is pretty much made out of limestone and it isn't all protected by black chewing gum. So how come it hasn't all washed away in the rain?

First, an awful lot *has* washed away, but where it forms (sandbars, barrier islands), there is also lots of our fine white beach. It's made of quartz and granite sand grains from the mountains of Georgia and Alabama and these don't dissolve in rainwater. Surf and wind can pile sand onto recently formed limestone

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and plant roots may bind it, forming a protective layer that greatly slows the effect of rainwater.

Or humans might pile their garbage on it.

John W. Griffin in his book, *The Archaeology of Everglades National Park*, 1988, describes the Bear Lake site where the archaeologists didn't stop digging an Indian midden when they hit rock. It was a layer of marl (a mixture of calcium carbonate and clay) about a foot thick. They persevered and broke through into yet another Indian midden *beneath* the marl layer. This is shown in the figure.

This sequence of material (midden-marl-midden-marl) strongly suggests that the upper marl layer formed *after* Indians first lived at the site. Could it be that a Holocene highstand, such as we discussed last time, caused this? Griffin addressed the question: "The top marl zone was apparently deposited atop the [lower] midden zone and may represent a period of either higher water or a storm deposit." Rats, we don't know for sure what happened at Bear Lake.

The lesson is that South Florida limestone, depending on local conditions, can well be contemporary with other recent deposits, and even with human activities. Limestone precipitates from seawater or mineral springs with a strong concentration of calcium carbonate, but the rock dissolves again if washed by water with a low concentration of the compound. In short, limestone comes and goes.

This two-way passage between the solid mineral calcite and water-liquefied calcium carbonate makes a place for cave people.

We'll look into this opening next time. In the meantime, good luck keeping contemporary rock out of your bathroom.

About SWFAS

SWFAS web site: www.explorationsinc.com/swfl-archaeology

The Directorate:
President - Corbett Torrence
1st VP - Theresa Schober
2nd VP - Tom Franchino
Recording Secretary - Jo Ann Grey
Treasurer - Charlie Strader
Membership - Charlie Strader
SWFAS Committees:
Field - John Beriault
Lab - Jack Thompson
Hospitality - Jeanne Sanders
Education - Dr. John Worth
Publicity - Victoria Rans
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

Board meetings are the second Wednesday of the month at 7 p.m. at the Hampton Inn in Bonita Springs (except Dec. 2006, as noted above). All welcome. Member meetings are the third Wednesday at 7:30 (coffee served at 7) at the Bonita Springs Community Hall on Old 41 (by the banyan tree).

The Southwest Florida Archaeological Society
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