



Southwest Florida
Archaeological
Society Newsletter

Vol. 22 No. 1

January 2006

JANUARY SWFAS MEETING

The next monthly meeting of the Southwest Florida Archaeological Society will be held on Wednesday, January 18th at 7 pm. Our speaker is Dr Anne Cordell. We will meet, as usual, at the Bonita Springs Community Center at Old 41 and Reynolds Street. The public is invited to attend.

SWFAS VISITS CHADWICK MOUND

For our traditional December field trip, we visited Site 8LL56, Caldwell Midden. It is located on the property of South Seas Plantation Resort at the north end of Captiva Island.

South Seas graciously granted permission for our group to visit on December 17 and supplied a trolley to take us from the parking lot to the site. About 20 SWFAS members braved the threatening weather to see this exceptional Calusa shell mound being investigated currently. We were comfortable in light jackets but sunscreen wasn't needed.



Corbett Torrence led the tour. When the trolley deposited us at the foot of the mound, he drew a map in the sand showing what lay within the



dense undergrowth with many large gumbo-limbo trees ahead of us.



Although the sides of the 5.5 meter (18 ft) mound were quite steep in places, Torrence led us up a gradual trail “in the footsteps of the Calusa” as he explained.

Our stops on the tour of the shell mound were at five test pits that had been recently excavated. Some were two meters or more deep.

South Seas is supporting an in-depth examination of the site by Corbett Torrence. This support includes funding many carbon-14 isotope date determinations for samples found in the mound. Torrence hopes to clarify many questions about the site, as well as extending our understanding of the accuracy of carbon-14 dates in Calusa shell mounds.

An important issue in this shell mound is the large number of shells found lying on the surface. Torrence hypothesizes that these may have been left by Cuban fisherfolk in the 18th century.

Torrence discussed many ideas about the site. These expand on several questions about Calusa use

of the offshore islands such as living areas versus burial areas. The Captiva Island site may have been a living area with a corresponding burial site on the mainland.



Beyond doubt, this site was a fabulous place for living two thousand years ago. (It still is today, demonstrated by the fashionable resort surrounding it.) The Calusa no doubt treated it as upscale real estate and defended it accordingly. Steep banks around the royal quarters atop locations such as Chadwick Mound can be rigorously guarded. We can easily imagine Calusa warriors defending the trail that we walked up to see test pits exposing the shell remains of meals they ate before battle.

NEW COVER PAGE HEADER

We hope you noticed the new look of our cover page for the New Year. Actually, it's not as new as it looks. The font of the title text is still *Bradley Hand* ITC, but it has been fooled around with by Word software to make it look (maybe) like white paint sloshed on the charcoal darkened

wall. Pixia was used to give the title text perspective as it drops into the test pit hole.

That's right, our cover looks down into a Chadwick Mound test pit. Ask Corbett about the wall markings. And of course, we still have the same classic Calusa shell hammer logo drawn by our resident artist, Betsy McCarthy.

We don't want the new cover page to imply that SWFAS is in a hole. We think a better metaphor is that SWFAS enjoys getting down and dirty.

SWFAS 2006 ELECTIONS

Nominating committee:

SWFAS Board Members

The general membership will vote at January's monthly meeting, which serves as the SWFAS annual business meeting. Nominations from the floor can still be accepted until the vote.

SWFAS 2006 Nominations for Officers & Trustees are:

OFFICERS:

- President: Corbett Torrence
- 1st VP: Theresa Schober
- 2nd VP: Tom Franchino
- Recording Secretary: Jo Ann Grey
- Treasurer: Charlie Strader
- Membership Sec: Charlie Strader

TRUSTEES:

NEW - First year of 3 year term:

- Jack Thompson
- Betsy Perdichizzi
- Liz Clement
- John Worth
- Victoria Rans

STAYING - Second year of 3 year term:

- Rebecca Austin
- Karen Nelson

STAYING - Last year of 3 year term:

- John Beriault

DUES ARE DUE

Besides reminding you that annual dues are due as of January 1st, please consider our \$50 Sustaining Individual membership, or our Life membership categories, or just slipping in a little extra in your check. The bottom line is that our Society had a negative cash flow in 2005 of \$1,214. Obviously, we cannot continue this trend and none of us want to do dog washes. So, please forward your fundraising ideas - or just funds!

From the Treasurer, Charlie Strader

NEWSLETTER NEEDS EDITOR

As of January 2006, the SWFAS Newsletter is without an editor. Volunteers interested in this ever-fascinating job should contact any of the Directorate.

In the meantime, the newsletter will be assembled from publishable articles received by the 20th of each month. Publishable means:

- Original material under your byline not duplicated from a copyrighted publication.
- Readable sentence text. Abbreviated notes, hints or ideas to be expanded by the editor will *not* be used.
- Of general interest to SWFAS members.

Submitted articles will be corrected for spelling and grammar by software, and proofread by Craighead Lab volunteers.

Articles may be shortened to fit available space.

Articles received after the 20th of the month may be carried over to a later issue if not date sensitive.

Jack Harvey – typesetter
jakharve@earthlink.net

OTTER MOUND PROJECT

By Melissa Hennig, Collier County Environmental Services Department

The Otter Mound Preserve lies in the south-central portion of the Caxambas Point Shell Midden (8CR107) on the southwestern end of Marco Island. The 1.78 acre site contains undisturbed shell midden features (c. 750-1200 AD), historic ornamental Busycon shell terraces constructed during the 1930s and 1940s by former resident Ernest Otter, and an historic outhouse – probably one of the last of its kind in South Florida.



Funds from the Florida Historical Resource Grant will buy three 30" X 42" interpretive signs that will be installed along the Otter Mound Preserve trail. The signs will give the history of Otter Mound Preserve, the Marco Island Caxambas Point Community and Southwest Florida pioneers, and the pre-Columbian people who inhabited Marco Island and Southwest Florida.

The Collier County Environmental Services Department will work with the Marco Island Historical Society, SWFAS and the Collier County Mu-

seum Department to obtain accurate historical information for the signs.

A portion of the funds will also be used to purchase materials to create a post and rope fence along both sides of the trail. The preserve will be open to the public once acceptable parking and trail facilities are in place.

EMAIL USE EXPANSION

By Charlie Strader

My campaign to bring us further into the 21st century by making better use of email is having some success! The campaign has two main functions. First, it facilitates communication among our members and committees. For example, currently our Board Minutes and news are circulated with broadcast emails.

The second important use is delivering our monthly newsletter via email as a PDF attachment. This saves the Society about \$8 per person in annual hard costs of mailing (to say nothing of the volunteer time for snail mail handling). We currently have 8 members who have volunteered to receive the newsletter by email. So, we are already saving about \$100 a year. Plus members receive the newsletter *in color*, sooner and do not have to keep up with a bunch of paper as they can print out only the sections needed. Please email me (Charlie Strader) at:

SWFAS@ExplorationsInc.com,

if this will also work for you. Our current hero volunteers who deserve thanks are: Helmut & Hildegard Nickel, Quentin Quesnell, William Gauger, Sandra House, Jack & Dorothy Thompson, Charlie Strader, Victoria Rans, Connie Langmann.

GEOLOGY RULES

By Jack Harvey

This Month – Concrete Florida

Tectonic plate collision produces much of the *terra firma* of this planet. The plates buckle and fold, forming mountain ranges. Internal friction in the sliding plates and hot spots in the mantle generate molten magma that may spurt to the surface in volcanoes. Or the magma may remain beneath the surface producing horizontal basalt or granite sills, or globular plutons. These are all high pressure, high temperature processes resulting in hard stone. Not the stuff of South Florida.

Instead, mild processes of erosion by wind and water form our kind of land. Older mountains break up (*klastos*) into stones and boulders, which grind together making gravel, sand and ever finer powder. Rivers transport this clastic material to the sea, where water currents transport it along the coast as *littoral drift*. Wind also moves some of the fine clastic material.

The littoral drift forms familiar sandbars and barrier islands. The process can extend points of land into ever-lengthening peninsulas. But sand bars and barrier islands are notoriously transient, coming and going in mere centuries. This isn't the stuff of South Florida either. What gives us the real *terra firma* we have?

Shellfish build their exoskeletons from calcium carbonate. We tend to think of shellfish as being clams, oysters, whelks and perhaps crabs and lobsters. However, these animals are all near-shore dwellers. There is a far larger mass of animal life that lives free-swimming in the

sun-illuminated upper levels of the broad oceans. These are shrimp, krill, plankton and even microscopic diatoms as well as fish. When they die, their calcium carbonate-rich skeletons, exoskeletons and shells sink to the ocean bottom, often to great depths.



Non-Volcanic Land Formation

Calcium carbonate, CaCO_3 , has a curious property. It dissolves in seawater much easier when under the tremendous pressure of the deep abyss. So given a million years or so of marine life dying above it, the abyssal or bathyal water can become saturated with dissolved calcium carbonate.

Currents flow through this deep CaCO_3 -saturated water and carry it up over higher elevations of the sea floor where the water pressure is lower. The water is now supersaturated with CaCO_3 and elementary chemistry tells us it must precipitate out as a solid. The chemical often takes the form of the mineral calcite. The illustration above shows how an abyssal current crossing a point of land might raise it to a higher elevation, releasing the pressure on

seawater saturated with CaCO_3 and causing calcite to precipitate.

One place the calcite precipitates is in the interstices between the grains of clastic material eroded from mountains into the sea. This makes *sedimentary rock* of many different kinds depending on the actual clastic material *concreted* together.

Or the super-saturated water may simply form layers of solid calcite lying on a surface of older sedimentary rock. When it is pure calcite like this, we call it limestone. There are many combinations of sedimentary rock and limestone.

Sometimes the limestone precipitates in very shallow water where shore shellfish can thrive. (The CaCO_3 – rich water can be beneficial to their growth.) They leave their exoskeletons to be implanted in the growing limestone layers creating what we locally call lime rock, again with many variations.

There are other cementing agents that can convert clastic material to rock or sandstone, and a variation on the CaCO_3 precipitate includes magnesium in the mineral. This happens long after the original precipitation through absorption of magnesium atoms into calcite. This mineral, calcium magnesium carbonate, $\text{CaMg}(\text{CO}_3)_2$ is called dolomite or dolostone. Dolostone is a little harder than limestone, but still not hard enough to form a decent tool or projectile point.

If “dolomite” is familiar to you, it may be from your visit to northern Italy where a range of spectacular mountains is called that. The mineral was formed under water just as the Flor-

ida dolomite was, but tectonic plate movement then pushed up beds of it, leaving mountain-sized chunks standing like gothic church spires.

And we can't forget the coral reefs. The coral animal also thrives in the CaCO_3 – rich water and both calcite and dolomite add their concrete and bulk to this source of *terra firma*.

These non-volcanic land formation processes always take place under the surface of the sea. We have lots of limestone and sedimentary rock above the surface in South Florida because sometimes the sea level is much higher than it is now. When and why that occurs is tied to ice ages. To learn about them, we'll visit the heavens next time.

ABOUT SWFAS

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

Finance – Charlie Strader

Publicity – Victoria Rans

To Join: Address your check to:

The Southwest Florida Archaeological Society,

PO Box 9965,

Naples FL 34101.

Dues are:

Individual - \$20. Sustaining - \$50.

Family - \$35. Student - \$15.

Board meetings: 2nd Wednesday of the
month at 7 PM, Hampton Inn, Bonita
Springs
All welcome