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## More about Southwestern U.S. Archaeology at Sept. 19 SWFAS

*On September 19, Michael Wylde will be speaking about his work in Southwestern U.S. archaeology and pottery traditions. He spent several seasons working there.*

### Archaeological Currents: Old Hat

By John G. Beriault

An archaeologist, like any other specialist, needs his tools. There are the usual necessary things: round and square point shovels, a ¼-inch mesh screen for sifting, zip-lock bags for artifacts and field specimens, a trowel for fine work, line levels, metric tape measures of various lengths, pens, pencils, level forms, project logs, and the list goes on...

But probably the two most essential things personally needed by an archaeologist, so the work can be done, are plenty of drinking water and a good hat. Bug spray is a fluctuating necessity depending on where and when (what time of year) you work in Florida. Water is always a need, and there was once or twice I've drunk from puddles. Not recommended, but you have to live long enough to get a waterborne disease, something that can't happen if you die of thirst first.

A hat is both a necessity and a statement. Sombrero or "Shade-provider" is a good definition of what a hat is there for. The statement part comes into play by your choice of head gear. Stylish versus utilitarian are the forces at work. A baseball cap will shade your face, but your ears can burn. An old floppy broad-brimmed hat works best, but do you want look like Jed Clampitt or Indiana Jones? Most archaeologists would like to resemble the latter, just look at that character on the Discovery Channel...

I always slightly distrust someone wearing a new, clean hat. An archaeological hat gets decrepit pretty

fast, exposed to the sun, rain, wind and dirt of most projects. If cloth, the hats need washing periodically or they smell really bad from the embedded rancid sweat. If straw, the hatband needs cleaning. Straw hats allow better ventilation, are usually lighter, can be bought cheaply (or expensively). However, they suffer damage by crushing in amongst the archaeological supplies and carelessly thrown backpacks. Mine always get the front part of the crown demolished by smacking into branches.

I think the thing I like about all the hats I've used working as an archaeologist is that I still have all of them, no matter how decrepit, scattered through my garage resting on shelves or piles of material. They're old friends, and I've had a series of adventures wearing every one of them. My first hat was a cloth one, rather stylish, that I literally wore out, so much that the crown separated from the brim. I wore it over many a hot cloudless fly-bitten afternoon digging shovel tests through the woods and at the Miami Circle where the temperatures climbed into the nineties and dust devils blew it off on many occasions. The cloth hat looked less and less stylish as time went on, got frayed... but acquired a certain character (as if saying, about me, "here's a guy whose been places...").

There are two or three straw hats collectively costing less than fifteen dollars. Several were decorated with stylish cloth bands (in hot, tropical colors) which soon

*See Archaeological Currents, page 4*

## Geology Rules: The Dating Game

By Jack Harvey

An archaeologist is an anthropologist with a calendar. In the newspaper dictum of reporting “who,” “what,” “where,” and “when,” a critical bit of the story for an archaeologist is “when.” (For the anthropologist, “when” is often “now” and sometimes is irrelevant.)

Assigning dates to recovered artifacts is always of great interest, and not just for bragging rights. While we could all delight in finding a tool even older than the oldest known, dates also serve the more practical goals of establishing site occupation sequence, duration and relevance to other sites.

The obvious method for South Florida archaeology is Carbon-14 (radiocarbon) dating. But the going rate for a C-14 date is \$300-\$400 per sample, way over the budget of many archaeological investigations. So we often use pottery tempering, firing, and decoration styles as indications of date. A Florida Crown Conch shell hammer found close to and at the same level as a pottery rimsherd with Sanibel Incised decoration might be from 500 to 900 AD. Instant dating, cheap.

Craighead Laboratory developed a “Pottery Workbook” for our own use that has a page for each of the dozens of pottery types we are likely to find in our analysis trays. It is profusely illustrated with typical sherds drawn by Betsy McCarthy. Two are shown here with the date ranges they represent. So if you spot a sherd like Betsy’s Sanibel Incised, it was probably made during the Byzantine Empire.

But how do we know the age of Sanibel Incised and Glades Tooled pottery? When Frank Hamilton Cushing came to South Florida in 1895-96, radiocarbon dating wasn’t even dreamed of.

This puzzle exposes the whole complex science of establishing the age of very old things. The question is about as old as humanity. Most creation myths answer it and many empirical scientific answers have appeared during the past 400 years.

An early and still important answer was *relative dating*. This says that even if we don’t know the absolute date of something, we can still tell which things are older than others by the Principle of Superposition, first clearly expressed

by the Danish polymath Nicolas Steno in 1669. Steno said that (in general) younger sedimentary rocks are above older sedimentary rocks. He went on to give the Principle of Original Horizontality. This jaw-breaker simply means that sediment layers are (at least at first) horizontal. Duh.

But in 1669, these were brilliant clarifications. Yet they just say that gravity controls how sedimentary rock is formed. (The polymath later became a Roman Catholic bishop and John Paul II started him on the path to sainthood in 1987.)

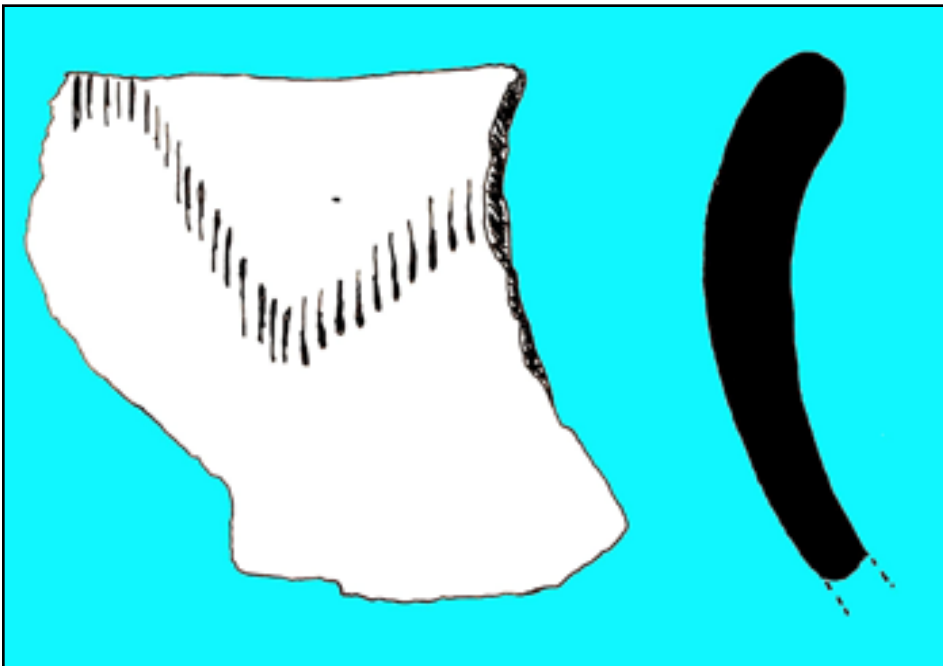
The Principle of Superposition establishes the order in which sediments are deposited and if you know the *rate* they are deposited, you can calculate the age difference between top and bottom for a layer of like sediment. Or vice versa. Then the mathematical techniques of interpolation and extrapolation can be exploited. If some points can be dated absolutely, sediment point chains can be linked.

Renaissance scholars developed histories from written records in Latin, Greek, Hebrew, etc., and went as far back as they could, producing verifiable document chains. (Coins were useful date markers and often are, still.)

But their work was limited because they couldn’t read still older ancient writing. The abundant hieroglyphs in Egyptian tombs and on stelai were particularly troublesome. The tombs and monuments were obviously old, but no one knew how old.

After the Rosetta Stone was decoded in 1822, historians had now-legible written records from ancient Egypt. Events were often dated as the 15<sup>th</sup> year of the reign of so-and-so and chronicles of the pharaohs were studied carefully to establish chains of their reigning years. There were known absolute date for the latter pharaohs (Cleopatra was almost a modern celebrity) that could be extended backward in time through the pharaoh chain.

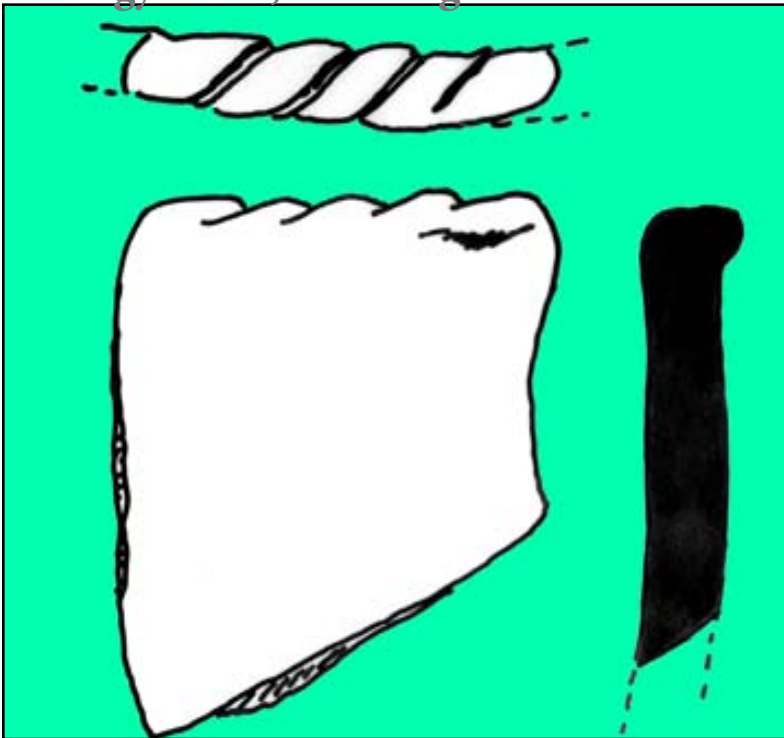
This work produced absolute



Rimsherd illustrations by Betsy McCarthy.

*Sanibel Incised rimsherd from about 500 - 900 AD*

## Geology Rules, from Page 2



pharaoh date chains going back more than 4,000 years that could be applied to related Egyptian structures, tombs and the sediments around them. Suddenly we knew how old the pyramids were. And some points in the sediment chain.

A few documents were found that could be correlated with stories of ancient Greece and the Levant and so the absolute pharaoh chain dates could be stretched to cover much of the eastern Mediterranean.

But the question of absolute dates for the rest of Europe, Africa and Asia remained. There was no good way to relate dates for these areas to the Egyptian pharaoh chain. Although Hadrian's Wall in Britain could be accurately dated from Roman records of the time, the much older Stonehenge couldn't be tied to a pharaoh by the historical written record.

Tools were also important date indicators: Stone  
*See Geology, page 4*

*Glades Tooled rimsherd from about 1400 - 1700 AD*

## Florida Native American Heritage Trail Booklet Released

Florida Secretary of State Kurt S. Browning announced the release of the Florida Native American Heritage Trail guidebook. The 36-page booklet is the newest addition to the Florida Heritage Trail series, which includes the Florida World War II Heritage Trail, the Florida Cuban Heritage Trail, and the Florida Black Heritage Trail, the Florida Jewish Heritage Trail, and the Florida Women's Heritage Trail.

"We are pleased and proud to represent the Florida Native American Heritage Trail, a booklet that highlights the heritage and culture of Florida's Native Americans," said Browning. "The information contained in this booklet is a valuable educational resource that will enhance our knowledge and understanding of Florida's earliest people and their legacy."

The Florida Native American Heritage Trail booklet honors Florida's Native American cultures, both past and present, by providing in-depth information for resident and visitors. In text and photos, the booklet describes over 100 sites throughout the state where ancient Florida Native Americans left evidence of their cultures and where contemporary Native Americans thrive and exhibit their cultures. The booklet includes a synopsis of the more than 10,000 years of Native American presence and significance in Florida. Sidebars of special interest topics and biographies of individuals important to Florida's Native American heritage are included.

The Trails of Florida's Indian Heritage, Inc. (formerly

Trail of the Lost Tribes), a non-profit organization promoting awareness and preservation of Florida's ancient cultures, produced the Florida Native American Heritage Trail booklet with a grant for the Division of Historical Resources. The Florida Department of State will make copies of the booklet available to public libraries throughout the state and regional offices of the Florida Public Archaeology Network. Additional funding from the Frank E. Duckwall Foundation will allow each of Florida's approximately 3,500 public and private elementary schools to receive a copy of the publication. Copies of the publication may be purchased online at [www.floridahistoryshop.com](http://www.floridahistoryshop.com).

Founded in 2000, the Trail of Florida's Indian Heritage is a membership network of three heritage interpreters and 26 public sites pertaining to the ancient Native American cultures in Florida, including museums with exhibits of ancient artifacts and mounds in city, county, state and national parks.

With funding from the Florida Humanities Council, the Frank E. Duckwall Foundation and VISIT FLORIDA, the Trail of Florida's Indian Heritage has produced three tourism brochures and three archaeological speaker series to promote awareness, responsible visitation and protection of the remaining cultural sites of the original people of Florida.

For more information visit [www.trailoffloridasindianheritage.org](http://www.trailoffloridasindianheritage.org).

## Geology Rules, from Page 3

Age, Bronze Age and Iron Age. Smelting iron requires higher technology than the copper and tin in bronze so it came later. Bronze is higher tech than shaped stone and tool Age order was clear. Experts could differentiate between crude and refined stone tools as well as early and late metals, making finer Age gradations possible. But absolute years for the tool Ages were only wild guesses.

Nineteenth century archaeologists had little dating technology, but a geologist studying lake sediments had an idea that didn't require written documents to assign accurate absolute dates to very old objects, helping to confirm the pharaoh chain and aiding geographic extensions throughout Eurasia. The idea was greatly refined and extended during the early 20<sup>th</sup> century, particularly in Cushing's old haunts in New Mexico and Arizona. We'll round this story up next time.

## Archaeological Currents, from Page 1

got snagged and were ripped away. Most have all or part of the crown damaged. Several are warped from falling overboard from boats or airboats and being jammed back on all soggy and misshapen. There are traces of blood on one or two from swatting mosquitoes or from a cut caused by the raking of a branch or vine. Certainly they're sweaty and still maintain that faint pongy goat-like funk that old well-used hats retain. I don't think I ever cried on any of them, but there were frustrating moments out in the heat, when something wasn't going well or I was stuck in the sand on some far cattle range.

And so I say to you, as the years go by, archaeology for me has become 'old hat' -- just look inside my garage!

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### About SWFAS

The Directorate:  
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 1st VP - Karen Nelson  
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Hospitality - Jeanne Sanders  
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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 held prior to the regular meeting on the third Wednesday of the month at the Bonita Springs Community Hall on Old 41 (by the banyan tree). All are welcome. Board meetings begin at 6:00; regular meetings begin at 7:30 (with coffee served at 7).

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