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Chester B. DePratter
University of South Carolina - Columbia, cbdeprat@mailbox.sc.edu

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Coastal Shell Midden Research

Chester DePratter

Over the past several months, I have been actively pursuing my coastal research interests. Although this work is not the main focus of my activities here at SCIAA, it is long-term research that I intend to continue in coming years as time and resources become available.

Spanish Mount

Late last summer, I visited the Spanish Mount shell midden at Edisto Beach State Park [Legacy 10(3):8-9]. I had never seen that site, though I was familiar with the research done there by Donald Sutherland back in the early 1970s. I was surprised by what I saw. In the years since Sutherland worked on the site, Scott Creek has continued to eat away at what must have been, at one time, a huge midden. Sutherland mapped a midden nearly three meters high covering approximately 186 square meters, and even at that point there had been extensive loss, since the creek had been cutting into the bank for decades or perhaps even centuries. By late 2006, that midden has been reduced by erosion to about 66 square meters, and the tallest remaining portion of the profile is about two meters high.

Archaeologist David Jones of the S.C. Department of Parks, Recreation, and Tourism (PRT) recognized the rate of loss and the need to halt erosion, and as a result, there is now a wooden bulkhead in place that will prevent further erosion and allow the site to be viewed more readily by visitors.

I saw the exposed profile as an opportunity to easily collect data that would help to understand the occupational history of this important site. Jim Legg, Stan South, and I spent three days in October mapping the site, recording the exposed profile, and collecting samples for radiocarbon dating. Housing was provided by PRT in a park cabin, so this was a totally pleasant operation.

In the profile, we could see what we interpreted as living surfaces or perhaps house floors separated vertically by lenses of clean oyster shell. We carefully recorded the details we observed in the profile, and in the process we took 16 samples of shell for radiocarbon dating. We already knew from Sutherland’s work on this site and the work of other archaeologists at related sites, that the occupation of this midden dated to the Thoms Creek period (c. 3,000 to 4,000 years before present). With additional samples, I hoped to refine the Thoms Creek chronology as well as finding out the specific occupation dates for Spanish Mount.

Once we were back from the field, I applied to the Archaeological Research Trust (ART) Board for funds to obtain radiocarbon dates from 10 of our samples. The ART Board funded my proposal, and I subsequently found additional funds to obtain two more dates. The 12 dates, processed by Beta Analytic, Inc., fell between 3,480 to 3,980 years before present, well within the range for known Thoms Creek occupations. Unfortunately, the dates did not fall in good stratigraphic order, but finding the best explanation for that will be part of my ongoing research.


Sewee Clam Midden

In late February 2007, I traveled to the coast to see the Sewee Shell Ring (38CH45), which is located on the Francis Marion National Forest. That ring was mapped and tested by National Park Service archaeologists, Michael Russo and Greg Heide in 2003, and their report is available online. After visiting the shell ring, I walked over to a nearby point where interpretive signage said there was a clam shell midden (38CH44). Because I have been working on clam shell middens on the northern South Carolina coast [Legacy 9(3):12-13], I was immediately curious about this one. Pottery exposed on the surface was all Irene/Pee Dee period in age (c. 600 to 700 years old). This pottery was younger than what I have seen on other clam middens that I have mapped and tested, so I decided to map and test this small site.

I contacted Robert Morgan, U. S. Forest Service archaeologist, and he obtained the necessary permits and found housing for us. Jim Legg and I worked on the site from March 19 to 22. After making a detailed topographic map, we excavated a one-meter square test unit on the highest part of the 30 meter-long midden, which is ca. 75 centimeters high at its highest point. The midden proved to be composed primarily of clam shells as anticipated. Pottery from all levels within the shell midden was Irene period, and we have submitted a carbon sample to provide a date for this occupation.

Once we were through the 65 centimeters of shell midden, we continued excavating into the underlying sand. We were somewhat surprised when we found first one, and then several, sherds of pottery in the upper ten centimeters of that sand. We continued to excavate deeper, and when we were done, we had a nice assemblage of Thoms Creek pottery, several flakes of various kinds of stone, and fragments of a baked clay object that would have been used in cooking. This Thoms Creek deposit did not contain a single shell of any kind, despite the fact that the nearby shell ring was all shell.

We are in the process of completing our report on this clam midden excavation. In addition to the radiocarbon date we will obtain in the near future, we will submit samples of clam to the Florida Museum of Natural History as part of our study of duration and seasonality of occupation of such middens [Legacy 9(3):12-13]. Because the Sewee midden is the most southerly and youngest of the clam middens we have so far tested, it should provide important information on the origin and history of these unusual sites.

Geological Society of America, Southeast Regional Meeting, Savannah, GA

At the Georgia Archaeological Society (GSA) meeting in Savannah on March 29, my colleague, Dr. Frank Stapor, geologist at Tennessee Technical University, and I presented a poster summarizing our work to date in the marshes west of St. Helena Island on the lower South Carolina coast near Beaufort [Legacy 10(3):8-9]. This poster provided our initial interpretations relating to shoreline progradation over the past 5,000 years, as well as results of the archaeological survey that we have used to identify shoreline positions. With the addition of our optically stimulated luminescence (OSL) dates that we are beginning to receive from the lab, we should soon be able to further refine our estimates of shoreline positions through time in this extensive marsh ecosystem. Anyone interested in seeing this poster can come by SCIAA; it is hanging on the hallway wall outside my office.