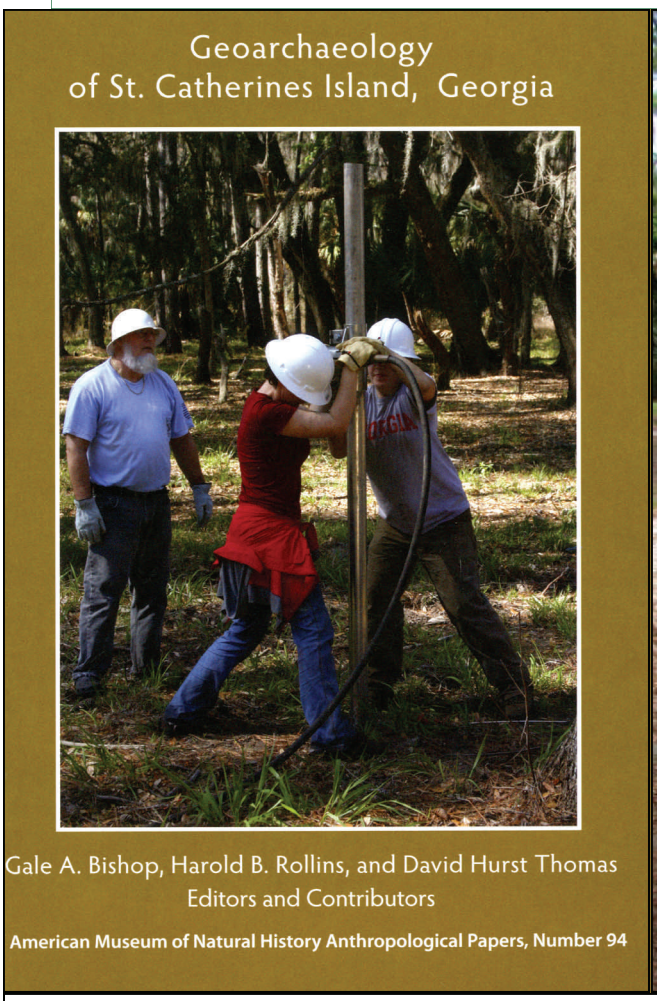
St. Catherines Island — Research, Conservation, Education Volume 6, Issue 4 April 2011

No Wake Zone



Geoarchaeology of St. Catherines Island

On March 23, 2011, the American Museum of Natural History published *Geoarchaeology of St. Catherines Island, Georgia*, edited by Gale A. Bishop, Harold B. Rollins, and David Hurst Thomas. The sixteen chapters (written by 25 contributors) present the newest research on the stratigraphic and geomorphological evolution of the St. Catherines Island landscape.

The field of geoarchaeology has typically been defined as either *geology pursued within an archaeological framework* or sometime the reverse, *as archaeology framed with the help of geological methodology*. Either way, the formalized objectives of geoarchaeology define a broad range of pursuits, from placing archaeological sites into relative and absolute temporal context through the application of stratigraphic principles and absolute dating techniques, to understanding the natural processes of site formation, to reconstructing the landscapes that existed around a site or group of sites at the time of occupation.

Bishop, Rollins and Thomas stress the importance of multiple viewpoints and methodologies to apply geoscience techniques in evaluating the archaeological record. In the broadest sense, the *Geoarchaeology of St. Catherines Island* applies multiple earth-science concepts, techniques, or knowledge bases to the known archaeological record and the processes that created that record. Of particular interest are presentations addressing the relative timing and nature of sedimentation, paleobiology, sea level change, stream capture, hydrology, and erosional patterning evident on SCI (and to some degree the rest of the Georgia Bight).

These papers were initially presented at the Fourth Caldwell Conference, co-sponsored by the American Museum of Natural History and the St. Catherines Island Foundation, held on St. Catherines Island (Georgia), March 27-29, 2009.

Editor-in-Chief Jenifer Hillburn

Recent Graduates of St. Catherines Island

Ginessa Mahar
American Museum of Natural History

Two students researching the archaeology of St. Catherines Island have recently completed their advanced degrees. Ginessa Mahar (CUNY Hunter College, American Museum of Natural History) finished her Master's thesis last spring and Carol Colaninno-Meeks (University of Georgia, Georgia Museum of Natural History) successfully completed her doctoral dissertation last fall. Both projects relied on data obtained from recent surveys and excavations on St. Catherines Island.

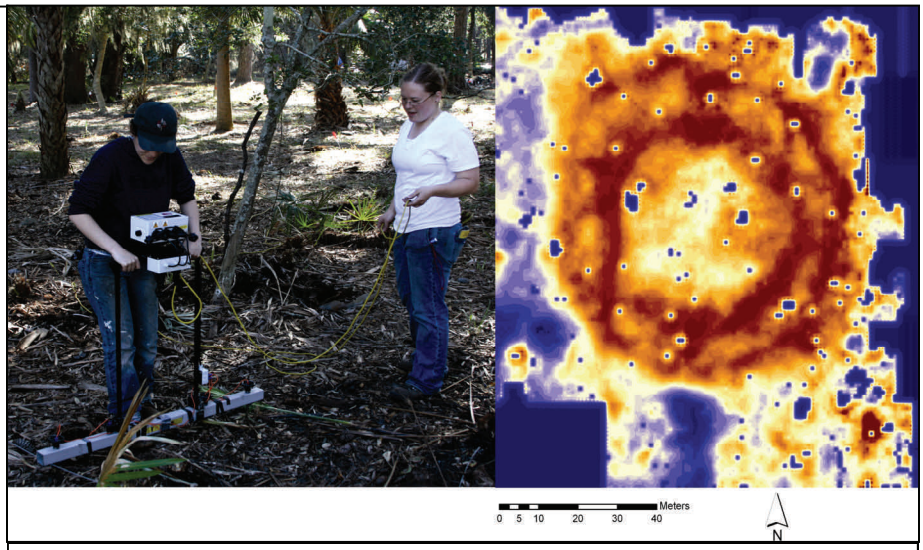


Fig. 1. Above: Collecting soil resistance data at the McQueen Shell Ring. Right: the results of the soil resistance survey, the dark and light orange colors highlighting exactly the confines of the ring. (Photo by Anna Semon, Image by Ginessa Mahar)

Ginessa's thesis concentrated on the geophysics of two Late Archaic (cal 3000 B.C. – 1000 B.C.) sites on the island, the St. Catherines and McQueen shell rings. Two different kinds of geophysics were performed, soil resistivity and gradiometry. Soil resistivity works by sending an electrical current into the ground and measuring the speed and strength of the return current. Gradiometry systematically measures the magnetic field of the earth, detecting archaeological features with magnetic signatures that differ from the surrounding area. Fire pits, storage pits, living surfaces, subsurface ditches and mounds, and otherwise disturbed soils are typically detected by these geophysical techniques. Such surveys allowed us to "preview" the sites, helping to guide our excavations and providing data about site layout, shape, extent, and even depositional processes. In recognition of her research, Ginessa received the Elsie Clews Parsons Prize from Hunter College for Outstanding Scholarship in Anthropology.

Carol wrote her dissertation on the interaction between Late Archaic hunter-gatherers and marine environments of the Georgia coast. To do this, she analyzed archaeological faunal collections from five shell rings, including materials recovered since 2006 from both St. Catherines Island rings. She found that the shell ring collections are dominated by estuarine fishes, and that Late Archaic fishers used mass-capture technologies (nets, for example) during all four seasons of the year. Carol received an National Science Foundation Doctoral Dissertation Improvement Grant during the course of her work at UGA. You can also read about her work in an upcoming Caldwell volume entitled, *Seasonality and Human Mobility along the Georgia Bight: Methodologies and Substantive Applications*, an Anthropological Paper of the American Museum of Natural History.

Complying with the highest standards of archaeological investigation, these projects could not have been completed without the hands-on assistance and tireless efforts of the St. Catherines Island staff in hauling water trucks, felling trees, burning brush and jack-of-all-trades ingenuity. Thank you so much!

Fig. 2. Below: A shell heavy unit at the St. Catherines Shell Ring. (Photo by Anna Semon) Right: top, sorting through the fine shell fraction, pulling out faunal remains (Photo by Anna Semon); bottom, Carol sampling fish otoliths for isotopes. (Photo courtesy of GMNH).