



Archeology Program

National Park Service
U.S. Department of the Interior



December 2005 Archeology E-Gram

New Heritage Tourism Web Pages on Archeology Program Website

The Archeology Program has added four new travel themes to the *Visit Archeology* web pages. In addition to a guide to locations, museums, and parks along the northeast coast that are linked to the 1604-1607 French explorations described by Samuel de Champlain in his *Journals*, information about African American archeology, rock images, urban archeology, and the archeology of the Chesapeake Tidewater region is now available. *Visit Archeology* www.cr.nps.gov/archeology/visit/index.htm includes links to museums, national parks, state parks, and historical societies that involve archeology in telling our diverse local and national history. Visitors to the web pages can use this information to plan trips around specific archeological topics.

Presentation on Chaco Digital Initiative

On November 11, 2005, Dr. Steven Plog, Anthropology Department, University of Virginia, gave a presentation on the Chaco Digital Initiative to Archeology Program and CRGIS staff and guests. The Chaco Digital Initiative is a collaborative effort to create a digital archive that will integrate much of the widely dispersed archaeological data collected from Chaco Canyon. Currently, these materials are scattered around the country at various repository institutions, making it difficult to address, much less answer, some fundamental research questions. The goal of the project is to make the research and human history of this national treasure available through a comprehensive digital research archive that will allow people to search information such as field notes, images, maps, and tree ring dates by user specified criteria. Users will also be able to browse data through a graphical interface. More information about this project is available at www.chacoarchive.org.

Presentation on Archeological Cyberinfrastructure

On December 7, 2005, Dr. Dean Snow, Anthropology Department, The Pennsylvania State University, and currently on a fellowship at Dumbarton Oaks, gave a presentation on archeological cyberinfrastructure to Archeology Program staff. Cyberinfrastructure is the coordinated aggregate of technologies and human expertise that integrates relevant and sometimes disparate resources into a useful framework for research. Snow described the advancements that The Pennsylvania State University has made in developing an archeological cyberinfrastructure. Currently, the Pennsylvania team includes three archeologists and specialists in GIS, databases, computerized images, and search engines. Snow also provided examples of databases developed in other contexts that could be modified for archeologists' purposes. In his presentation, Snow described some of the national efforts to develop an archeological cyberinfrastructure, including a 2004 workshop entitled "The Promise and Challenge of Archaeological Data Integration," organized by Keith Kintigh, Arizona State University; and the possibility of the Society for American Archaeology's establishing a Cyberinfrastructure Interest Group in the near future.

Message from Editorial and Production Staff of Archeology E-Gram

This past year the Archeology E-Gram staff posted 12 monthly "issues" and instituted a regular feature that presents information about projects that NPS archeologists are carrying out. Several

of the Projects in Parks stories came from PMIS project reports. Two stories developed out of trip reports submitted by NPS archeologists who carried out archeological assessments after Hurricanes Katrina and Wilma. One Project in Parks feature was picked up by CRM Journal editors, and a longer discussion of the Sitka Archeological Survey will be published as a Research Report. Our readership has grown as well. Currently, the Archeology E-gram is sent to all NPS archeologists, four list-serves, and a wide range of park superintendents, cultural resource managers, and federal archeologists. We have thoroughly enjoyed working with everyone who contributed to the Archeology E-Gram. The production and editorial staff of the Archeology E-Gram hope that you have found the newsletter useful, and wish you all the best for the holidays and the coming year.

Projects in Parks: NPS Archeologist Conducts Archeological Site Assessments after Hurricane Wilma

Hurricane Wilma made landfall on the southwest Florida coast near Cape Romano on October 24, 2005, with Category 3 intensity. The system continued to accelerate northeastward, crossing Florida in less than five hours. It moved into the Atlantic just to the north of Palm Beach as a Category 2 hurricane.

Hurricane Wilma damaged archeological resources in four national parks in its path: Everglades National Park, Big Cypress National Preserve, Dry Tortugas National Park, and Biscayne National Park. SEAC Archeologist Margo Schwadron conducted hurricane damage assessments for 31 archeological sites at all four parks, providing current ASMIS (Archeological Site Management Information System) condition assessments and management recommendations for immediate corrective actions.

Archeological Condition Assessments

Archeological condition assessments, such as the ones carried out by Schwadron, are essential for the development of plans for responding to natural disasters, such as hurricanes, floods, and fires, as well as for general resource management. Condition information available from inspections prior to storms or other damaging events provides baseline information against which storm damage can be identified. Assessments carried out shortly after the damage occurs provide updated information about threats and disturbances to archeological sites, and are the basis for treatment or protection.

Archeological condition assessments are an essential part of the Service's Systemwide Archeological Inventory Program (SAIP). These assessments are needed to evaluate archeological sites for their scientific, archeological, and historical significance and values. They also are the basis for decisions about treatment to preserve significant scientific, archeological, and historical data from all sites threatened with irreparable loss, damage, or destruction.

Information gained from condition assessments is key to achieving national and park program goals. The baseline summary data are recorded in the NPS's standardized database, ASMIS. ASMIS records contain management information on the condition, threats and disturbances, site location, site documentation and description, proposed treatments, and management actions for known park archeological sites. It is a source for information in annual reports on national and park Strategic Planning goals to comply with the Government Performance and Results Act (GPR), and on heritage assets for the annual NPS Accountability Report. The information collected by Schwadron will be used to update ASMIS site records.

Everglades National Park

Currently, 230 archeological sites have been identified and documented at Everglades National Park. It was only possible, however, to assess a small sample of archeological sites as part of this incident. The sample of assessed sites was chosen based on several criteria: potential for wind and storm surge damage, as predicted by models using GIS data; listing on the National Register; potential for exposure of human remains; and accessibility to the public. Assessed sites were concentrated in the park's Ten Thousand Islands District, a sub-tropical wilderness waterway containing shallow estuaries and a maze of remote mangrove islands. Sites were accessed by motor boat, canoe, foot, and, in one case, by helicopter. Schwadron was assisted by park Law Enforcement Officers Tom Iandimarino and Steve Rice, and by SET (Special Event Team) rangers assigned to the incident.

Damage assessments were conducted for 16 archeological sites. Six sites were found to be in good condition, with no corrective action needed. Ten archeological sites, however, were assessed to be in poor condition: six shell midden sites and four outer gulf-site beach sites.

The shell midden sites, Turner River Mounds, Sandfly Key, Russell Key, West Pass, Lopez Place, and Watson Place are listed on the National Register of Historic Places as representing some of the most unique and significant prehistoric examples of earth and shell midden architecture within the national park system. The sites contain complex arrangements such as rows of conical mounds, parallel and semicircular shell midden ridges, ditches, canals, plazas, and temple mounds.

The shell works sites are suffering continual loss of integrity from ongoing erosion. Without appropriate corrective actions, these sites will undergo further degradation, and the site's data potential for historical or scientific research will be diminished. Irreplaceable data is being lost from these important prehistoric monuments. Immediate corrective actions were recommended: data recovery, archeological testing, and stabilization.

Data recovery is the preferred action for all six shell works sites, since natural forces such as stream bank erosion, changes in hydrology and water levels will continue to impact these mound sites, and stabilization is often temporary and expensive. Data recovery assures that the site's data is recovered and preserved before it is lost.

The eroded outer gulf key beach sites are Pavilion Key, North Pavilion Key, Mormon Key, and Old Turkey Key. All four sites showed evidence of severe deterioration and erosion due to storm surge. The corrective action recommended is archeological testing, since it is unknown whether any *in situ* archeological deposits remain at these sites. Without knowing if intact archeological deposits are extant at these sites, their conditions can not be assessed accurately and appropriate corrective treatments can not be recommended. Data recovery is likely going to be the corrective action recommended, however.

Big Cypress National Preserve

GIS data was used to model wind speed and storm surge to predict the archeological sites that were most likely to have received the greatest damage. Sites located in the southern portion of the preserve, along rivers, and in the coastal mangrove zone of the preserve were predicted to be most likely to have been damaged.

Schwadron, assisted by Big Cypress National Preserve plant specialist Jimi Sadle, assessed 11 archeological sites for damage. The sites included several historic Seminole sites, a nineteenth century trading post, prehistoric earth and shell mounds, and a series of midden hammock sites located along the Turner River. Sites were mostly accessed by canoe, but also by airboat and helicopter.

Fortunately, all sites were found to be in good condition, with only minor tree falls. The invasive Brazilian pepper has become so severely overgrown in many of the hammock sites that it is impossible to see the ground surface for condition assessments. The extensive tree roots of these trees may soon compromise the integrity of the archeological deposits by displacing archeological strata.

Dry Tortugas National Park

The Dry Tortugas are a series of seven islands and coral reefs. Schwadron assessed damage to Fort Jefferson, on Garden Key, and assessed damage to historic structures on Loggerhead Key. The archeological resources of Dry Tortugas suffered moderate damage.

Fort Jefferson, named for Thomas Jefferson, is sixteen acres in size, and almost completely covers the island. Construction of the fort began in 1846. The walls were fifty feet high and eight feet thick and enclose two tiers. A third level of gun emplacements is located on the top of the walls. The structure is considered to be the largest masonry fort in the western hemisphere. It housed 450 guns and 1500 troops. During the early years of the Civil War, the fort was used as a supply depot for the distribution of rations and munitions to Federal troops in the Mississippi Delta, and as a supply and fueling station for the Union naval forces engaged in the blockade of the Confederacy. The fort also served as a Federal prison.

Damage was concentrated in several areas of Fort Jefferson, including the seaplane launch, the campground, and areas of the moat wall. In the area of the seaplane launch, at least one vertical meter of beach sand was removed from land adjacent to the moat wall. Much debris from various stages of fort building and rip rap for beach stabilization was uncovered, which consisted of broken and whole bricks, some as partial sections with mortar still in place, and occasional pieces of granite and slate. Material exposed along the beach was obviously debris used as fill, likely for beach erosion control. Several sections of the moat wall are gone.

A “cast” of a Rosendale cement barrel, dating to the 1840s-1870s, was uncovered from the beach. The Rosendale barrel once held powdered cement for mixing mortar for fort construction. The barrel was, likely, lost during unloading or in a shipwreck. It was dropped into the water where it became inundated with sea water, and then hardened into cement. Over time, the wood barrel rotted away, leaving a cement cast. It is also possible that it was placed there intentionally by occupants of the fort to help build or stabilize the beach area. The cast weighed approximately 300 pounds, and was situated in an upright, angular position, suggesting that it may have been dropped in place. The Rosendale cement barrel was carefully uncovered and removed to a safe location within the fort, since it was an artifact dating to the construction of the fort.

Loggerhead Key damage was largely restricted to several historic structures. The “Little House” and the Coast Guard house suffered structural damage. The lighthouse had several windows blown out and possible damage to the beacon light. The Carnegie Marine Biological Laboratory Site Complex and Alfred Goldsborough Mayor Monument were examined, but there was no apparent damage to the ruins, the sign, or the site. It appears that this part of the island was submerged during the hurricane, and sand was deposited over the key.

Biscayne National Park

Schwadron assisted Biscayne National Park's Underwater Archeologist and Cultural Resource Manager Brenda Lanzendorf and assistant Cathy Williams in conducting damage assessments on three remote prehistoric terrestrial sites. Three sites were accessed by boat.

On Totten Key, the only extant prehistoric rock mound in Florida was found to be in good condition. Several small trees were found growing on the rock mound. It was recommended that these be removed before their roots further burrow into the site and compromise its stability. A black earth midden was also in good condition, although ceramics, faunal bone, and shell were eroding out of one edge of the site.

On Sands Key, an extensive and unusual prehistoric queen conch shell midden was in good condition. Several trees were uprooted along the site, exposing prehistoric ceramics and faunal bone. These few small disturbances, however, were relatively minor.

New Discoveries

Hurricane Wilma also produced unexpected benefits. The thick tropical vegetation covering Gopher Key site in Everglades National Park, a complex shell works site consisting of a complicated array of mounds, was appreciably reduced after the hurricane. This allowed a rare opportunity to walk through the site and see the mound contours. It is now possible to prepare base map of the site, which has been identified as a critical data need for this archeological resource.

Two exciting surface finds were discovered on Sands Key, in Biscayne National Park. Five large shards of an historic Olive Jar ceramic, representing almost two thirds of the vessel, were found. This vessel probably originated in Iberia and dates to the 16th - 18th centuries. The second find was more recent: a "message in a bottle" sent from Norway in 1984.

Sources: Margo Schwadron, trip reports; ASMIS 3.00 User Guide

"Projects in Parks" is a feature of the *Archeology E-Gram* that serves to inform others of interesting archeology-related projects in a national park. To contribute project information, contact DCA@nps.gov. *Archeology E-Gram*, distributed via e-mail on a regular basis, includes announcements about news, new publications, training opportunities, national and regional meetings, and other important goings-on related to public archeology in the National Park Service and other public agencies. Recipients are encouraged to forward *Archeology E-Grams* to colleagues and relevant mailing lists and new subscribers are accepted. Past issues of the *Archeology E-Gram* are available on the *Archeology E-Gram* webpage, accessed through the Archeology homepage, on Inside NPS. Contact DCA@nps.gov to contribute news items and to subscribe.