What Lies Beneath the Dunes? Excavations along the Colorado River Corridor, Grand Canyon National Park By Lisa Leap and Allyson Mathis

John Wesley Powell made the initial report of antiquities in the canyon when he wrote of seeing the "ruins of two or three old houses" near the mouth of Bright Angel Creek in 1869. Since this first written documentation of the canyon's prehistory, archeologists have filled in some parts of the canyon's human history. Part of a Folsom Point found in the 1990s and a broken Clovis Point discovered in 2005 show that Paleo-Indian big-game hunters used the Grand Canyon region between 10,000 and 12,000 years ago. Split twig figurines and characteristic rock art reveal that the canyon was used by people who hunted smaller game and collected wild plant foods approximately 4000 years ago.

However, based on surface materials and limited excavations, most archeological sites in the park date from the Early to the Late Formative (A.D. 800 - 1150; equivalent to Pueblo I to Pueblo II time) Periods. Prehistoric people grew corn, cotton, beans and squash, hunted game, and gathered wild foods on the canyon rims, along the river, and in travel corridors throughout the canyon.

Systematic archeological surveys in Grand Canyon National Park (the Park) did not occur until the 1950s and 1960s, and, to date, only 4% of the Park's 1.2 million acres has been surveyed for archaeological sites. In the 50,000 acres surveyed, more than 4000 sites have been documented. In addition to archaeological sites, other traditional cultural places (TCP) exist and are important to several tribes. Currently 11 Indian tribes claim cultural ties to the canyon (Havasupai, Hopi, Hualapai, Kaibab Band of Paiute Indians, Las Vegas Paiutes, Moapa Band of Paiute Indians, Navajo Nation, Paiute Indian Tribe of Utah, Pueblo of Zuni, San Juan Southern Paiutes, and the Yavapai-Apache Nation), and three reservations, Havasupai, Hualapai and Navajo Nation, adjoin the national park boundary.

All archaeological resources are protected under the NPS Organic Act, the Archeological Resource Protection Act, the National Historic Preservation Act and other federal laws and policies. Collectively, these laws and policies direct the Park to preserve archeological resources *in situ* whenever possible. Given the National Park Service's mandate to preserve and protect these nonrenewable resources, archaeological excavations are extremely rare in Grand Canyon. The first and last full-site excavation along the river corridor occurred in 1967 through 1969: 40 years ago. This work was led by Douglas Schwartz of the School of American Research. He worked at Unkar Delta, one of the largest arable areas along the Colorado River, and at the Bright Angel Pueblo near Phantom Ranch.

Along the river corridor alone, preservation of archaeological sites has been a challenge since the closure of Glen Canyon Dam in 1963. The amount of sediment available in the Colorado River in Grand Canyon has been greatly diminished due to the operation and existence of Glen Canyon Dam, thus causing erosion of beaches and alluvial terraces. The impacts of this sediment-starved system result in the erosion, deterioration, and loss of archeological sites. The Park and the Bureau of Reclamation (Reclamation) began working together in 1990 identifying, monitoring and mitigating sites along the river corridor. For the past 15 years, monitoring and evaluation of known archeological sites in the old high water zone revealed that 161 of the 475 initially identified sites may be adversely affected by on-going dam operations and that several of these sites require preservation activities such as stabilization, trail obliteration, or excavation.

In 2006, GRCA entered into a cooperative agreement with the Museum of Northern Arizona (MNA) to excavate nine of the most extensively eroded sites where stabilization measures proved to be unsuccessful. This research, under the direction of GRCA archeologist Lisa Leap and MNA archeologist Ted Neff, includes site testing, excavation, analysis and curation of artifacts, and visitor interpretation. The \$1.2 million project is funded via the Federal Lands Recreation Enhancement Act, which allows utilization of recreation fees to enhance visitor services, including interpretation of an area's cultural history.

Site excavations began in May 2007 at a site below the Little Colorado River. This site revealed three different occupations (A.D. 800 - 1000; A.D. 1000 - 1075; and A.D. 1445 - 1776) which were also spatially distinct. Cultural features uncovered included thermal features, artifacts and two masonry structures.

Last fall, crews excavated three structures exposed in arroyo cuts in the Furnace Flats vicinity. During the excavation, archeologists found a number of ceramic gaming pieces and stone pendants, and a large number of manos and metates for grinding food products. An exciting find was a scorched pinyon nut since it indicates that the people who lived there brought in food from the rim as pinyon pines do not grow in the inner canyon.

To meet the National Park Service's preservation mandate, backfilling, transplanting vegetation, and other stabilization measures following excavation has occurred at these two sites and will continue to be an integral part of all future work. Reburying a site after excavation is not a typical archeological practice, but it restores an excavated area to a natural condition and further stabilizes it. The highly erosive and fragile Furnace Flats area will remain closed to all visitation, as it has been since 1985.

Outreach and interpretation is a critical component of the excavation project. Approximately 800 individuals on river trips toured the excavations in 2007, and river trip participants will continue to be invited by the Lees Ferry rangers to tour sites while excavation work is ongoing. Visits during the excavations are only a small part of the anticipated interpretive and educational efforts. GRCA and MNA plan future publications, exhibits, and other interpretive media.

While the erosion of archeological materials is truly tragic, excavations will provide a rare glimpse into ancient lifeways and the overall human story at Grand Canyon. Tribal representatives have visited all the sites planned for excavation, and all support the excavations. With tribal engagement in this excavation project, GRCA archaeologists and tribal representatives have a unique opportunity to augment tribal oral histories in addition to enhancing the public's understanding of the canyon's prehistory.