



Archeology Program

National Park Service
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▶ QUICK MENU
◀ FEATURES

■ SITEMAP
■ HOME

Archeology in the Parks > Research in the Parks >

Chaco Culture NHP and University of Virginia collaborate on the Chaco Digital Initiative

Some places have been investigated by archeologists over long periods of time because they are endlessly fascinating. Chaco Culture National Historical Park in New Mexico is such a place. Unfortunately, it is difficult to find and keep track of widely scattered artifact collections, notes, photographs, and drawings made by many individuals and institutions for over a century. The Chaco Digital Initiative addresses this problem, making it possible to test and revise archeological interpretations of Chaco culture using the full range of resources.



Prehistoric masonry buildings in Chaco Canyon (NPS photo)

The [Chaco Digital Initiative \(CDI\)](#) is a collaborative effort between the NPS, the University of Virginia, and a number of museums, universities, archives, and laboratories to integrate much of the widely dispersed archeological data collected from Chaco Canyon in the late 1890s and the first half of the 20th century. Its goal is to ensure that these early archeological research records are preserved and accessible to future generations. Currently, these materials are housed at numerous repositories around the country, making it difficult to answer even fundamental research questions. The Chaco Digital Initiative is making the research and human history of this national treasure more easily available through a comprehensive digital research archive, parts of which can be accessed through a public website.

Prehistoric Habitation in Chaco Canyon

Between AD 850 and 1250, Chaco Canyon was a hub of cultural activity in the high mountain desert of the San Juan Basin. At Chaco, Native Americans built an intricately planned landscape of massive, multi-storied masonry buildings, roads with carved stairways and masonry ramps, and water control and distribution systems, marked by a notable concentration of petroglyphs, pictographs, and calendrical markings documenting solar, lunar, and stellar events. Engineering and landscaping shaped and reflected Chacoans' view of the world. During its height, Native peoples visited Chaco as a center for ceremony, trade, and political administration. By AD 1300, however, Chaco Canyon, like most of the Four Corners region, was deserted as an urban center.

Despite the large number of identified settlements (over 3,600 archeological sites) and the extensive excavations that have been carried out, many questions about occupation of Chaco Canyon remain to be answered. Was Chaco a political center (Sebastian 1992), a ritual center (Renfrew 2001; Yoffee 2001), an economic center (Earle 2001) or some combination of these functions (Judge 1989, 1993)? Was there significant social differentiation among the residents of Chaco and, if not, then how were the large number of workers mobilized to build great houses? What was the nature of the relationships within the Chaco "system" among canyon great houses and the many surrounding outliers? How can we explain the dichotomy between the large great houses and the numerous small house sites? Does such a dichotomy suggest significant social or political differentiation? What were the key organizational groups or networks upon which Chacoan society was constructed? Even more basic questions such as how many people lived in Chaco remain unresolved, with wide discrepancies between the lower and higher estimates.

The Antiquities Act: Chaco is Protected

By the 19th century, when Mexican and American explorers entered the region, evidence of the monumental architecture was still visible in the standing walls of the pueblos, some up to four stories in height. Publication of a journal chronicling the 1849 military reconnaissance of the region provided detailed descriptions, maps, and drawings of the great houses along the Chaco Wash and on the surrounding mesas. Intense public interest in the American Southwest created a market for antiquities, spurring museum collecting expeditions. One of the earliest was in 1896, when the Hyde Exploring Expedition teamed up museum archeologist George Pepper as field director and rancher Richard Wetherill as excavation foreman. Their objective was to excavate Pueblo Bonito—one of the most spectacular structures in Chaco Canyon—a four- or five-story semi-circular stone structure covering more than three acres and containing over 600 rooms and 40 kivas.

Concern over the looting of artifacts and loss of irreplaceable information into private collections led to the designation of Chaco Canyon National Monument on March 11, 1907. Its proclamation referred to the extensive prehistoric pueblo ruins as possessing "extraordinary

interest because of their number and their great size and because of the innumerable and valuable relics of a prehistoric people which they contain." Through early research efforts of Richard Wetherill, George Pepper, and Edgar Hewett, the monument was created in conjunction with the Antiquities Act of 1906. (Learn more about the [Antiquities Act](#).)

In 1966, Chaco Canyon was listed in the National Register of Historic Places as a place of national significance. In 1980, Congress re-named the park Chaco National Historical Park and increased its size. In 1987, Chaco Canyon was designated a UNESCO World Heritage Site signaling its importance as a valued part of international cultural patrimony. Today, Chaco era ruins continue to be a focus of preservation efforts both domestically and abroad.

Need for a Digital Archive

Early excavations of the 1890s and 1920s in Chaco Canyon centered on discovering the genesis and evolution of the ancestral Puebloan "Anasazi" inhabitants. These early research efforts conducted by the American Museum of Natural History, the National Geographic Society, and the Smithsonian Institution placed Chaco at the center of the evolving discipline of archeological science. However, resolution of basic research questions has been hindered by the fact that the pre-1970s fieldwork in the canyon has been inadequately reported. Pepper and Wetherill's excavation of much of Pueblo Bonito, including extraordinary artifact assemblages, has been described in only one short monograph and a few articles (Pepper 1899, 1905, 1906, 1909, 1920; see also Reyman 1989). Neil Judd's later work at Pueblo Bonito and Pueblo del Arroyo resulted in three published volumes but do not provide information on all of the artifacts recovered or the large number of rooms and areas excavated. Edgar Hewett never published a major monograph on the Chetro Kettle excavations.

Exacerbating deficiencies in the published excavation record for Chaco is the distribution of the artifacts, images, and field records from the excavated great houses (primarily Pueblo Bonito, Pueblo del Arroyo, Chetro Kettle, Kin Kletso, and Pueblo Alto) and small house sites. Numerous institutions house these collections including the National Anthropological Archives; the National Museum of the American Indian; the National Museum of Natural History; the American Museum of Natural History; the Chaco Culture National Historical Park; the Maxwell Museum; and the Museum of New Mexico. As Wills (2001:448) notes, many of the proposed models of how Chacoan society was structured and developed rely on data collected in the early part of the 20th century. An archeologist attempting to test these ideas, however, faces the daunting and expensive task of assembling material from widely scattered sources. The result has been that while models often emphasize data from the early studies of the canyon, tests of these models often rely only on the more fully published recent excavations.

Moreover, as Mills (2002:81) has observed, it has been difficult to initiate new fieldwork in the canyon since the completion of the joint NPS-University of New Mexico Chaco Project. In fact, there has been virtually no new fieldwork in the canyon in the last two decades (Mills 2002:68) and, for a variety of reasons, prospects for major excavations in the near future are minimal. Data from the earlier projects described above are thus likely to comprise the archeological record available to scholars for the foreseeable future.

The Chaco Digital Archive

The Chaco Digital Archive is not yet completed, but brings together a vast amount of information in the form of references, field notes, images, maps, and tree ring dates on excavations at five key sites—Pueblo Bonito, Bc 50, Bc 51, Bc 53, and Aztec Ruins—and various other related sites. Much data are already digitized, and a portion is available on the Chaco Digital Initiative website. Completion of the archives is planned for 2007.

The data are compiled into a number of individual databases. Users will be able to search information by user specified criteria or through a graphical interface.

F. Joan Mathien bibliography (on CDI website)

The F. Joan Mathien bibliography contains primary research reports, summaries, discussion papers, and analysis through early 2005. It has been compiled and generously donated by F. Joan Mathien, a Chaco scholar, archeologist for the National Park Service, editor for and author of various Chaco Canyon Studies volumes from the Chaco Project, and member of the CDI Steering Committee.

Image Gallery (on CDI website)

Because maps, drawings, and photographs from the early projects in Chaco Canyon are critical to understanding the pre-contact occupation of this important region, the images and maps from the National Geographic Society and Smithsonian excavations in Chaco Canyon have now been digitized. Ultimately these and many other images will be integrated and made available through a relational database.

The set of images currently available on the website are all from the Neil Judd collection. Judd directed the National Geographic/Smithsonian project from 1920 through 1927 and excavated a number of sites, including Pueblo Bonito, Pueblo del Arroyo, and Shabik'eshchee. All accompanying captions are from the original photographs. These images speak to both the history and prehistory of Chaco Canyon.

Inventory Database (on CDI website)

This database tracks the location of archival materials pertaining to the early projects in Chaco Canyon. The inventory database currently contains comprehensive information about the Neil Judd and Frank Roberts collections at the National Anthropological Archives. It also contains partial inventories from the following seven institutions:

- The American Museum of Natural History

- The Latin American Library at Tulane University
- The Middle American Research Institute at Tulane University
- The Peabody Museum of Archeology and Ethnology, Harvard University
- The University of Colorado Museum of Natural History
- Aztec Ruins National Monument
- Chaco Culture National Historical Park
- The Chaco Archive and Vivian Archive

Tree Ring Database (on CDI website)

Tree-ring dates from several of the great houses in Chaco Canyon and from Aztec are now available, in the form of an Excel spreadsheet.

See Also:

- [The Chaco Digital Initiative Archive](#)
- [Chaco Culture NHP](#)
- [Chaco Culture NHP and the Antiquities Act](#)
- [Chaco Culture NHP Museum Collections of the National Park Service](#)

Karen Mudar, with contributions from [Chaco Digital Initiative website](#)

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