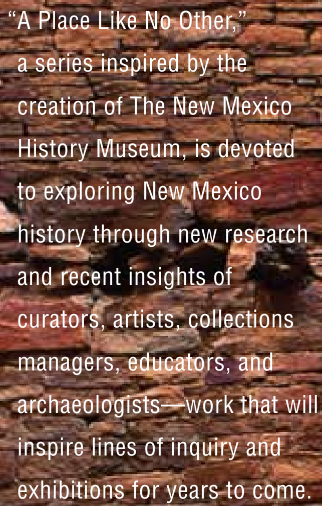


"A Place Like No Other," a series inspired by the creation of The New Mexico History Museum, is devoted to exploring New Mexico history through new research and recent insights of curators, artists, collections managers, educators, and archaeologists—work that will inspire lines of inquiry and exhibitions for years to come.

THE HISTORIC PERIOD IN NEW MEXICO BEGINS WITH THE DOCUMENTS OF THE

By Eric Blinman, Director
Office of Archaeological Studies

Lessons of Land, People, and Climate

(Pre-)History of New Mexico

FRAY MARCOS DE NIZA ENTRADA INTO THE ZUNI VILLAGES. THE EVENT WAS *charged with many dramatic moments—surely the Zunis' first sight of horses, rifles, and metal tools, and the murder of Estevan, guide and servant to Fray Marcos. But that event is not the first cultural revolution in our long history. In the following essay, Eric Blinman traces the succession of cultural revolutions brought about by the adoption of corn. His fascinating overview of the late prehistory of New Mexico reminds us that the Spanish entradas were not the only time that people traveling from the south brought change to New Mexico.*

—DR. FRANCES LEVINE, DIRECTOR, PALACE OF THE GOVERNORS/THE NEW MEXICO HISTORY MUSEUM

LEFT: A series of connected rooms in Pueblo Bonito, Chaco complex. Photo by Ray Rasmussen, © 2007, http://raysweb.net.

ABOVE CENTER: Chetro Ketl, Chaco Canyon. Courtesy Palace of the Governors (MNM/DCA) Negative No. 080821.

ABOVE RIGHT: Pueblo Bonito, Chaco Canyon. Courtesy Palace of the Governors Photo Archives.

"History" is a sensitive term when juxtaposed with "prehistory." A common perception is that history is somehow more truthful or valid or valuable than prehistory. History derives from first-person documents or images related to a community's events. Prehistory derives from the patchwork of archaeology, subject to interpretations of incomplete or chance discoveries about the distant past. Colonizers brought writing to New Mexico, and thus our state's history is dominantly the story of Spanish colonization and the subsequent waves of Euroamerican, African American, and Latin American immigration and interaction. My tendency as an archaeologist is to think first in terms of the rich story of the pre-Spanish prehistory of the state. The divide between history and prehistory is unfortunate and unnecessary. The greatest stories—and most important lessons—of New Mexico's heritage are those that transcend ethnicity and time. This outline of the occupation of the Southwest is an appreciation of human adaptability and its relevance to our lives today and in the future.

MIGRATION AND AGRICULTURE

The *entrada* of new peoples and ways of life is not just a historic occurrence. The latest archaeological and linguistic research points to a significant colonization by agriculturalists late in the first millennium B.C.[1] Uto-Aztecan language speakers moved northward from Mexico more than 2,500 years ago, pressing forward in a population surge fueled by maize agriculture. The less populous indigenous hunters-gatherers-horticulturalists were displaced, occasionally with conflict, until the northward expansion finally stalled in the greater Four Corners area. Adjacent peoples rapidly switched from horticulture to agriculture, forming a new cultural landscape in which all of the populations became increasingly dependent on maize. With the subsequent diffusion northward of pottery technology early in the first millennium A.D., the foundations of modern Puebloan culture were formed as a complex combination of the old and the new.

STABILITY, POPULATION GROWTH, AND SOCIAL COMPLEXITY

Domesticated crops (corn, beans, and squash) have the potential to fuel dramatic growth in human populations through changes in both fertility and mortality. Sedentary farm life boosts fertility by removing the penalties associated with having too many infants to carry and care for at the same time. Corn gruel provides a weaning food, enabling mothers to stop breast feeding, reinitiating their fertility earlier than with foraging diets. Periods of consistent crop yields also result in lower infant and adult mortality, expanding family reproductive potential. These factors allow agriculturalists to increase their numbers dramatically relatively quickly. In good times, agriculturalists can easily achieve reproduction rates of 0.5 to 3.5 percent. The latter value reflects a woman raising as few as two daughters to adulthood and would result in explosive doubling of population with each generation.

Population growth fueled by agriculture posed social challenges. As landscapes filled, freedom of individual action was constrained and mechanisms for resolution of "conflicts of interest" became important. Increased local population densities prevented mature children from simply homesteading new field locations, and we see abrupt changes from dispersed settlements to villages surrounded by halos of fields. Smaller settlements were probably organized according to simple kinship relationships and ranking by age and gender, while larger settlements required bureaucracies that integrated unrelated families or clans. Modern sociology and ethnology research points to a "rule of six," in which the optimum deliberative and decision-making body has six members. The family, the basic decision-making unit, sends a representative to a meeting of families, while groups of families send single

The greatest stories, *and most important lessons, of New Mexico's heritage are those that transcend ethnicity and time.*

representatives to community governance meetings. In ancient pueblos, these decision hierarchies coincided with ritual hierarchies: the larger the community, the more likely the need for multilineage solutions to organizational problems, and the more complex the ritual basis for social organization.

Patterns of aggregation and ritual hierarchy hold for the ancient Pueblos during periods of economic (weather) stability between A.D. 600 and 890. Populations grew and became concentrated within small and large villages. But when persistent droughts interrupted stable periods, communities shattered, occasionally violently, only to form again when the drought period ended and productivity resumed. With each return to productive times, ceremonial patterns were reinstituted, providing an effective, flexible, ritual-based community organization.

Dr. E. L. Hewett and party at Chetro Ketl, Chaco Canyon, ca. 1929. Photo by Edward A. Kemp. Courtesy Palace of the Governors Photo Archives.

***El Palacio's* archives, dating from 1913, are an invaluable source of Chaco Canyon information for scholars, site stewards, and armchair archaeology buffs. Our staff has compiled a set of particularly interesting Chaco Canyon articles, news, and notes, including research by E. L. Hewett (*above*), published in *El Palacio* during the 1920s and 1930s. The articles are available—free of charge—at www.elpalacio.org.**

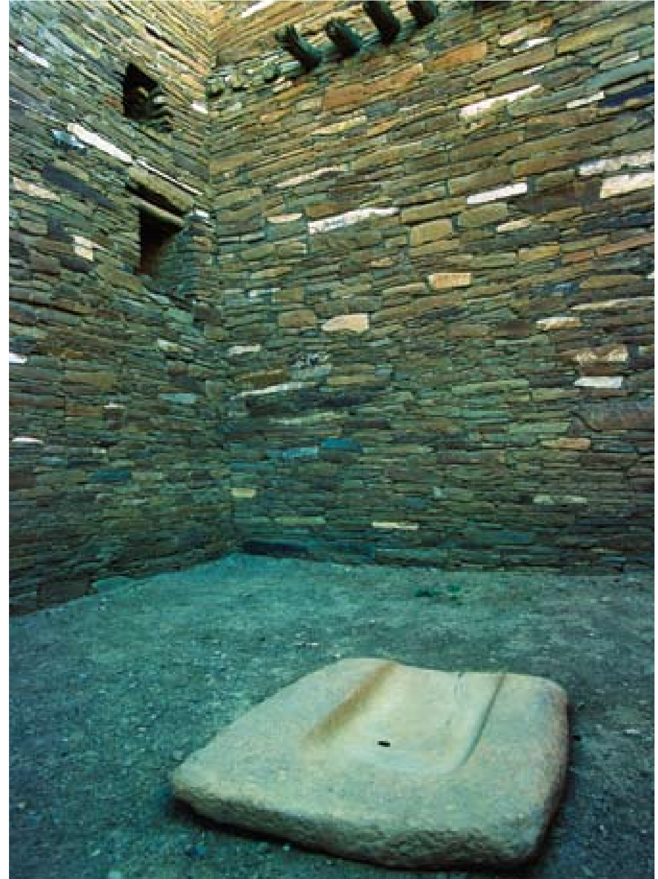
SURPLUS AND FLORESCENCE

Agriculture in the Southwest has always been dependent on vagaries of weather, particularly the capricious monsoon rainfall. Short-term coping mechanisms were developed for the ever-present threat of drought. Each family filled their storerooms with several years' supply of maize so that they could survive a year or two of crop reduction or failure. At the end of each winter, the storeroom was assessed and enough acreage planted in the spring to fill it again. An expected crop would fill the storeroom and restore a sense of security, while a bumper crop would result in a significant surplus. When entire communities or regions experienced surplus, public works (expenditures of human capital) were possible. When crops failed for many years, buffering failed, and famine ensued.

Around A.D. 900, a climate change devastated farming at large, high-elevation villages[2]. However, the change opened up agriculture at lower elevations with monsoon rainfall that was stronger and more reliable than today's. Farmers spread out over newly productive lowlands, forming dispersed communities rather than aggregated villages. Populations grew under these conditions, and surpluses were common. Several generations into this bountiful climatic regime, the eleventh-century communities in Chaco Canyon became a central place for the residents of the greater San Juan Basin. Construction of monumental architecture began, and human capital was expended in remarkable ways. Tens of thousands of timbers were imported from many miles away, multistory buildings were constructed and repeatedly enlarged, symbolic roads guided pilgrims and supported processions, ritual pottery was made and stockpiled, and sumptuous deposits of turquoise were left as offerings. Leadership positions were filled and honored across generations, hosting periodic gatherings that would have filled the canyon with voices and sacred ceremony.

CLIMATE, CRISIS, AND REFORMATION

In a reverse perception of cause and effect, the ritual embellishment made possible by eleventh century surpluses also was probably seen as securing those surpluses. But climate does not respond to human wants. The continental pattern that brought the monsoon rainfall became unstable in the early twelfth century, undermining



A metate in an interior room of Pueblo Bonito, Chaco complex. Photo by Ray Rasmussen, © 2007, http://raysweb.net.

first the surplus and then the survival of the now-large populations. Intensification of ritual did not restore the balance, and Chaco Canyon suddenly and dramatically ceased to be a central place. Other lesser centers now received the religious allegiance of regional populations, but droughts of unprecedented severity, frequency, and duration undermined the farming communities. Public works were no longer possible, replaced by a struggle for survival that often pitted community against community. Migration was common as families coped with increased uncertainties.

By the early thirteenth century, a new climatic regime was settling in across New Mexico. Prolonged cold limited high-elevation farming, and monsoon rainfall no longer penetrated as early or deeply into the Puebloan heartland. Simultaneously, agricultural potential in areas to the south and east blossomed. Rio Grande Valley communities had suffered neither the feast nor famine of their western brethren, but the monsoon shift provided opportunities that were embraced with homesteading of newly fertile lands. Refugees from the San Juan Basin filtered into their midst, occasionally as communities but more often as families. Cycles of population boom and social complexity were initiated again but with new religious ideas. Plazas were the focus of daily life and ritual, reinforcing a sense of community identity on a much larger scale than previously. But regional affiliations of the scale of Chaco were a thing of the past, presaging the independence of today's pueblos.

Grinding corn, Zuni Pueblo, ca. 1910. Photograph by Jesse Nusbaum. Courtesy Palace of the Governors (MNM/DCA) Negative No. 028689.

CRISIS AGAIN AND THE ARRIVAL OF THE FOREIGNERS

The climate perturbation that held the monsoon rains to the south for about 250 years reversed itself in the late fifteenth century. What had been stable pueblos with hundreds of families began to struggle against increasing variability and famine. Populations declined and pueblos were abandoned, but two new factors made these adjustments unique. A new people, the Spaniards, were encroaching from the south, bringing with them disease, domestic animals, new crops, metals, and religious ideas. Cattle, sheep, wheat, and rye diversified the economy and buffered communities against the loss of the monsoon rainfall, slowing abandonment of pueblos despite continued population loss. The new religious ideas were added to the polytheistic mixtures of Pueblo religions, but the Spanish insistence on only a single religion was confusing.

While the Spaniards were arriving from the south, the Athbaskans were arriving from the north. After leaving their homes near the Arctic Circle during the eleventh century, these adaptable people moved slowly southward. Competing with the Utes, they filled the hunting-and-gathering niche in lands that had been abandoned by the Pueblos in the thirteenth century. These Apachean peoples alternately traded with and raided adjacent farmers, Pueblo and Spanish alike. But as monsoon rainfall returned to northwestern New Mexico, the resident Apachean peoples were able to embrace agriculture and associated social and religious institutions. By the seventeenth century, these people had forged a unique identity, Apaches de Navajo, incorporating maize, domestic animals, and a semi-sedentary lifestyle. The stage was now set for the historic development of multicultural New Mexico.

THE PAST AS THE KEY TO THE FUTURE

This story is speculative, bridging islands of fact with inferences drawn from universal patterns of human history. Its details are far less important than the point that our New Mexico history, pre- and post-Spanish, is rich and dynamic. Every people took advantage of periods of stability to grow their population and enrich their cultural institutions. Every people in turn found that they were powerless to maintain their lifestyles in the face of more powerful forces of climate change. Past climate changes were always a balance of constraint and opportunity, and Native American cultural institutions have been molded by the need for adaptability.

Today our population density eclipses anything achieved in the past, placing unprecedented demands on our economic and social structures. Climate change is still with us, its natural rhythm now augmented by our own contributions and energy consumption. To carry forward a lesson from the past: enjoy the stability, but be ready to embrace change in the Land of Enchantment. ■

Pueblo Bonito (shown in the center) in Chaco Canyon. Photo by Charles A. Lindbergh, ca. 1929. Photo #70.1/156 (Charles A. Lindbergh Collection). Museum of Indian Arts and Culture/LAB archives (#130208).

[1] The arguments for this interpretation are not fully accepted by Southwestern archaeologists but have been building for the past decade. Inspired by the Archaic and Basketmaker II research of R. G. Matson (University of British Columbia) and the linguistic reconstructions of Jane Hill (University of Arizona), this is a revolutionary model that I expect will become standard in college textbooks within the decade.

[2] Reconstructions of past climate are based on tree-ring records of drought and cold, as well as pollen-based studies of vegetation change and observations of stream erosion and aggradations. Decisions of farming peoples are also reflections of climate change, albeit dependent expressions. Although the Southwest enjoys the best understood record of past climate in the world, reconstructions are still being refined, and those presented here are a snapshot of current research.

Chaco Canyon needs volunteer site stewards willing to commit to one visit per month. Sites to be monitored include rock art and ruins within the canyon and at outlier sites. Chaco stewards are treated to caps, sunhats, T-shirts, and VIP campground accommodations with showers and kitchens. For information, contact Chief Ranger B. J. Ratlief, 505-786-7014, ext. 231 (b_j_ratlief@nps.gov) or Sitewatch coordinator Sally McLaughlin, 505-898-9083 (saljimcl@hotmail.com).

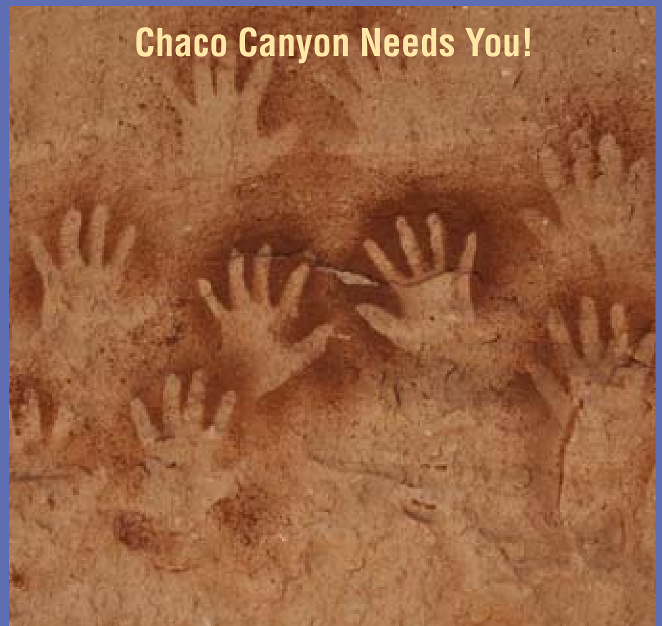


Photo by Ray Rasmussen, © 2007, http://raysweb.net.