

## RIO GRANDE PREHISTORY: PRELUDE TO CONTACT

LINDA S. CORDELL

Department of Anthropology, University of New Mexico, Albuquerque, New Mexico 87131

### INTRODUCTION

The basic descriptive and chronological framework for Rio Grande prehistory was established early in the 20th century (e.g., Kidder, 1915, 1916, 1924; Hewett, 1906; Nelson, 1914). Before the advent of various chronometric dating techniques the Rio Grande area was especially attractive to prehistorians, because it offers the ruins of villages abandoned during the historic period. Archaeologists could then begin from a known abandonment date and, as their excavations proceeded down through various strata, work their way back into prehistory. Not only were documents crucial for chronology, but historic accounts and observations of the modern Pueblo Indian villages provided the context for interpreting archaeological finds. The Rio Grande Pueblo Indians were considered living analogs for their ancestors by generations of archaeologists.

New data have been assembled since the early days and syntheses have been prepared periodically (e.g., Cordell, 1979; Lang, 1977; Wendorf and Reed, 1955). Yet only within the past five years have southwestern prehistorians begun to evaluate in a systematic manner the discrepancies between the late prehistoric and historic periods and the kinds of changes within Pueblo culture begun by initial contact with Europeans (e.g., Cordell and Plog, 1979; Cordell, 1984; Upham, 1982). Once the changes are fully appreciated and understood, a clearer picture will emerge of the culture encountered by the Spaniards in 1540.

### ENVIRONMENT

#### Natural Setting

Compared to the San Juan Basin, the Hopi Buttes, and other regions of prehistoric Pueblo Indian development, the Rio Grande valley is relatively lush. The Rio Grande and some of its tributaries provide abundant sources of water. The mountains on both sides of the river serve as large catchment areas for precipitation, and the growing season over much of the valley proper is adequate for maize.

Nevertheless, prehistoric farming was not without risk. Floods have been catastrophic during the historic period and would have been beyond the technological abilities of the prehistoric Indians to control (Cordell and Earls, 1983). Poorly drained soils were damaged by mineralization (Fosberg and Husler, 1979). Dense stands of hardwood along the river were difficult to clear with stone tools, and crops planted in fields on the floodplain were subject to insect infestations and disease (Ford, 1972).

Relying on observations of agricultural practices among the modern Pueblo Indians, most prehistorians have underestimated the risks and assumed that irrigation or floodwater farming provided the bulk of agricultural produce during the late prehistoric period. However, recent archaeological surveys have documented hundreds of thousands of square meters of prehistoric upland-water and soil-control features throughout the Rio Grande area (Cordell and Earls, 1983; Cordell, 1984). The features, consisting of rock and earth terraces, rock grids, and raised and bordered fields, suggest that there was far more dependence on rainfall farming than is usually credited.

Given what appear to be considerable risks to agriculture, gathering and hunting must have constituted important elements in the prehistoric Pueblo Indian economies. Although few quantitative data are available, most studies support the importance of game (e.g., Emslie, 1981; Snow, 1974) and wild-plant food (Toll, 1983).

### Cultural Setting

The archaeological record of prehistoric occupation of the Rio Grande area is as long as it is elsewhere in the Southwest. Sites dating to the Paleoindian Period (ca 11000-7000 B.C.) are known through excavation and reconnaissance survey (Hibben, 1955; Judge, 1973; Weber and Agogino, 1968). Sites of the Archaic Period (ca 6000 B.C. to A.D. 100) are not abundant, nor are they unusually scarce (e.g., Campbell and Ellis, 1952; Schaafsma, 1976).

Nevertheless, the record of prehistoric Pueblo occupation before A.D. 1200 is scant compared to areas such as the San Juan River drainage, the San Juan Basin, and portions of southeastern Utah. It is possible that many earlier sites are deeply alluviated, or have long since been eroded into the river, or lie under modern villages, towns, and cities. It is also possible that the relative abundance of game and wild-plant foods permitted Rio Grande populations to rely substantially on hunting and gathering, maintaining a mobile-residence pattern.

The major prehistoric increase in Rio Grande area settlement occurred between about A.D. 1200 and 1400. These dates follow the collapse of the structured social system centered in Chaco Canyon (Judge, 1983) and the abandonment of large areas of the Colorado Plateau. Some of the people from the San Juan Basin and Mesa Verde areas may well have moved into the upper Chama and Rio Grande valleys, accounting for the population increase. At the same time, however, other densely populated areas also included the area around Zuni, the upper Little Colorado and Winslow/Chavez Pass area of central Arizona, and the Tonto Basin and adjacent areas of Arizona below the Mogollon Rim (Cordell, 1984; Upham, 1982).

Most of the large and better known sites of the Rio Grande area date to the period between 1300 and 1600. These include Te'ewi, Tsiping, Howiri, Tsama, and Sapawe of the Chama Valley; Tsankawi, Tshirege, Otowi, Tyouny, and Puye of the Pajarito Plateau; Pot Creek Pueblo, Old Picuris, and the ancestral Taos village "Cornfield Taos" near Taos; Arroyo Hondo, Cieneguilla, Pindi, Pueblo Lumbre, Pueblo Largo, San Cristobal, San Marcos, and Las Madres of the Santa Fe and Galisteo Basin areas; Rowe Ruin, Loma Lothrop, Arrowhead, and Pecos Pueblo on the upper Pecos River; Kuaua, Alameda Pueblo, Paa-ko, Tijeras Pueblo, and San Antonio in the vicinity of Albuquerque; Tenabo, Gran Quivira, and Chilili east of the Sandias; and Pottery Mound, Senecu, and Teypama south of Albuquerque.

The number of very large late prehistoric sites of the Rio Grande area is impressive in contrast to the number of late prehistoric sites in central Arizona. In addition, the Rio Grande sites were occupied longer, many into the historic period, again in contrast to the upper Little Colorado and Tonto Basin sites that were abandoned in prehistoric times. The relative stability of the Rio Grande sites suggests that natural resources were sufficient to support large settlements and the social mechanisms of village integration were well developed.

### CONTINUITIES AND DISCONTINUITIES

It is easy to recognize continuities between late prehistoric pueblo villages and the modern pueblos—a fact that has long encouraged the archaeological practice of using the modern villages as direct sources of analogy. Both prehistoric and modern villages consist of a massed series of roomblocks, one or more open, community-plaza areas, and one or more semisubterranean, ceremonial rooms or kivas. The cotton mantas (dresses), kilts, sashes, and tablitas (headaddresses) worn by dancers at ceremonies are depicted in rock art and in murals dating to the

14th century. Many symbolic representations found painted on late prehistoric ceramics, rock art, and kiva murals are clearly recognized and understood by modern pueblo people (e.g., Dutton, 1963; Smith, 1952). These include representations of awanyu (plumed serpents), stepped clouds or kiva stairs, and lightning, as well as particular ceremonies and cosmological personages. On a more prosaic level, modern pueblo women make pottery, know how to grind corn using manos and metates, and know the use of many wild plants found in archaeological contexts, just as modern pueblo men know the rituals and techniques of the hunt and farming, the regulation of ritual events, and how young men are to be educated for positions of leadership in Pueblo society. On the most obvious levels, Pueblo Indians maintain their native languages and value their traditions.

Perhaps one of the more common paths of human reasoning is to emphasize similarities and continuities, thereby minimizing or overlooking the unfamiliar and the different. Archaeologists traditionally employ this mode of thought. This has led to numerous attempts to assign linguistic or tribal identity to pueblo archaeological remains, especially ceramic styles (e.g., Mera, 1935; Ford and others, 1972) and to interpretations of prehistoric patterns of kinship and post-marital residence rules (e.g., Longacre, 1964, 1970). Emphasizing similarities has also led to assuming that prehistoric pueblo villages were politically and economically independent, as the modern villages are, that each prehistoric village produced its own ceramics, and that agriculture provided a greater portion of food than did hunting and gathering.

Despite the undeniable similarities, however, there are discontinuities between the present and the prehistoric archaeological remains. For example, some symbolic representations (e.g., Dutton, 1963; Cordell, 1980) are not identifiable today. Petrographic analyses of rock used to temper ceramics, as well as analyses of clays and pigment minerals (e.g., Warren, 1980; Kidder and Shepard, 1936) indicate that not only were large quantities of ceramic vessels exchanged or traded among villages, but residents of some sites produced no ceramics of their own (Plog, 1980), and some sites, or clusters of sites, supplied certain kinds of vessels for an entire region.

There are other contrasts between the late prehistoric and historic periods which suggest that prehistoric organizational patterns were unlike those of today. The similarities between the Rio Grande and Western Pueblo stylistic treatment of ceramics and in kiva art indicate considerable interaction, oriented along an east—west axis, over the enormous distance from Pecos to the Hopi villages. A well-known example is the Sityatki style, a complex decorative treatment produced at Hopi, that also occurs on jars made at Pottery Mound. The murals from Kawai-ka-a and Awatovi, in the Jeddito area of Arizona, are similar in execution, pictorial treatment, and motif to those from Kuaua, at Bernalillo, and Pottery Mound (Cordell, 1984). It seems likely that at least some of the motifs relate to the Kachina cult, and it is possible that Kachina ceremonialism entered the Western Pueblos from the Jornada and Rio Grande areas, as the Schaafsma (1974) propose. Probably most important though is that the similarities reflect a strength of interaction among villages that is not documented historically.

Two additional lines of evidence suggest that late prehistoric villages may not have been completely autonomous. First, within clusters of contemporary sites, some large sites seem to lack kivas whereas other sites within the cluster have several. This situation seems to characterize the late prehistoric upper Pecos Valley sites of Rowe Pueblo, which lack kivas, and Arrowhead, which has several. Second, modern pueblos maintain shrines and sacred areas well beyond their reservation boundaries, sometimes on other reservations. For example, the Zuni maintain shrines in the Sandia Mountains, and the Hopi make pilgrimages to the Zuni salt lakes. Retreats to shrines and sacred areas should not be interfered with. Today, arrangements for undisturbed pilgrimages are made by telephone (E. Ladd, oral comm. 1981). It is likely that in the late prehistoric period communication among villages relied on some coordination of ritual events by the religious hierarchies of different villages. Upham (1982) discusses modes of alliance systems within the 14th century Western Pueblo that may have been similar and have not continued into historic times.

## FACTORS BEHIND THE DISCONTINUITIES

The brief discussion of differences between the late prehistoric and historic periods focuses attention on the systemic changes that must have accompanied contact with Europeans. Only three of these are discussed here: introduced disease, domestic livestock, and laws regulating colonial settlement.

Native-American populations had no immunities to the diseases introduced by Europeans (i.e., smallpox, tuberculosis, measles, etc.). When diseases are introduced in such situations, mortality rates of between 20 and 100% are documented. A severe smallpox epidemic struck the First Mesa Hopi villages as late as in 1853, reducing the population from 1200 to 650 persons by 1862 (Adams, 1981). Schroeder's (1979) review of various archival records lists 61 pueblos known to have been abandoned since 1540. Although reasons other than epidemic disease are given for some of these abandonments, disease is an all too common factor in most cases.

Heavy population losses must have had profound effects on pueblo economy and political organization. For example, some villages may not have been able to perform traditional ceremonies, because there were not enough people to carry out important roles or the leadership positions of various societies could not be filled. It is also possible that there were not enough able-bodied people to plant, tend, and harvest crops. Villages that could not continue to survive socially may have joined other villages, as the inhabitants of Pecos did when they went to Jemez in the 19th century (Cordell, 1984; Lycett, 1984).

Wild-plant and animal foods were not only important to the pueblos prehistorically, but often may have made the difference between starvation and survival. European domestic livestock grazed on land that had provided the wild resources essential to the pueblos. At first, the diminishing quantities of wild resources must have been alarming. However, as pueblos adopted domestic livestock and European crops, former hunting, trading, and foraging expeditions must have become less common, and the social ties that facilitated access to resources in the vicinity of distant villages declined.

Finally, Spanish law required colonists to establish their communities on land not already occupied by the Indians. Thus, in most cases, Spanish settlements were established in between the pueblos. While it is true that the general absence of Spanish colonists within Indian villages enabled the Indians to preserve many of their cultural traditions, the rule would have disrupted some aspects of the native system. The presence of Spanish settlements in between the pueblo villages further inhibited economic, ceremonial, and political interaction among the pueblo villages. The end result was the village autonomy and independence we are familiar with today.

## REFERENCES

- Adams, E. C., 1981, The view from the Hopi Mesas; *in* Wilcox, D. R., and Masse, W. B. (eds.), *The Protohistoric Period in the North American Southwest, A.D. 1450-1700*: Arizona State University, Anthropological Papers, no. 24, pp. 321-335.
- Campbell, J. M., and Ellis, F. H., 1952, The Atrisco sites: Cochise manifestations in the middle Rio Grande valley: *American Antiquity*, v. 17, pp. 211-221.
- Cordell, L. S., 1979, *Cultural resources overview of the middle Rio Grande valley, New Mexico*: U.S. Government Printing Office, Washington, D.C., 198 pp.
- (ed.), 1980, *Tijeras Canyon: analyses of the past*: University of New Mexico Press, Albuquerque, 200 pp.
- \_\_\_, 1984, *Prehistory of the Southwest*: Academic Press, New York, 450 pp.
- \_\_\_, and Earls, A., 1983, Mountains and rivers: resource use at three sites: Paper presented at the Anasazi Symposium, Farmington, New Mexico.
- \_\_\_, and Plog, F., 1979, Escaping the confines of normative thought: a reevaluation of Puebloan prehistory: *American Antiquity*, v. 44, pp. 405—429.
- Dutton, B. P., 1963, *Sun Father's Way, the kiva murals of Kuaua, a pueblo ruin, Coronado State Monument, New Mexico*: University of New Mexico Press, Albuquerque, and School of American Research, Santa Fe, 237 pp.
- Emslie, S. D., 1981, Prehistoric agricultural ecosystems: avifauna from Pottery Mound, New Mexico: *American Antiquity*, v. 46, pp. 853-860.

- Ford, R. I., 1972, An ecological perspective on the Eastern Pueblos; *in* Ortiz, A. A. (ed.), *New perspectives on the pueblos: School of American Research*, Santa Fe, and University of New Mexico Press, Albuquerque, pp. 1-18.
- , Schroeder, A., and Peckham, S., 1972, Three perspectives on Puebloan prehistory; *in* Ortiz, A. A. (ed.), *New perspectives on the pueblos: School of American Research*, Santa Fe, and University of New Mexico Press, Albuquerque, pp. 22-40.
- Fosberg, S., and Husler, J., 1979, Pedology in the service of archeology: soil testing at LA 13086; *in* Biella, J. V., and Chapman, R. C. (eds.), *Archeological investigations in Cochiti Reservoir, New Mexico*, vol. 4: Office of Contract Archeology, University of New Mexico, pp. 307-318.
- Hewett, E. L., 1906, *Antiquities of the Jemez Plateau, New Mexico*: Bureau of American Ethnology, Bulletin 2, Smithsonian Institution, p. 187.
- Hibben, F. C., 1955, Specimens from Sandia Cave and their possible significance: *Science*, v. 122, pp. 688-689.
- Judge, W. J., 1973, *The Paleo-Indian occupation of the central Rio Grande valley, New Mexico*: University of New Mexico Press, Albuquerque, 130 pp.
- , 1983, The Chaco system: A.D. 900-1200: a trial reconstruction: Paper delivered at the American Anthropological Association Annual Meeting, Chicago.
- Kidder, A. V., 1915, Pottery of the Pajarito Plateau and of some adjacent regions in New Mexico: *American Anthropological Association, Memoir*, v. 2, pp. 407-462.
- , 1916, *The Pueblo of Pecos*: Archaeological Institute of America and School of American Research, Santa Fe, no. 33, 86 pp.
- , 1924, An introduction to the study of southwestern archaeology, with a preliminary account of the excavations at Pecos: *Papers of the R. S. Peabody Foundation Southwest Expedition 1*, Phillips Academy Andover, Yale University Press, New Haven, 377 pp.
- , and Shepard, A. O., 1936, *The pottery of Pecos*, vol. II: the glaze paint, culinary, and other wares: *Papers of the R. S. Peabody Southwest Expedition 7*, Phillips Academy Andover, Yale University Press, New Haven, 418 pp.
- Lang, R. W., 1977, The prehistoric pueblo cultural sequence in the northern Rio Grande: Paper delivered at the 50th Pecos Conference, Pecos, New Mexico.
- Longacre, W. A., 1964, Archaeology as anthropology: a case study: *Science*, v. 144, pp. 1454-1455.
- (ed.), 1970, *Reconstructing prehistoric Pueblo societies*: University of New Mexico Press, Albuquerque, and School of American Research, Santa Fe, 247 pp.
- Lycett, M., 1984, Social and economic consequences of aboriginal population decline from introduced diseases: Paper presented at the Society for American Archaeology 49th Annual Meeting, Portland.
- Mera, H. P., 1935, *Ceramic clues to the prehistory of north-central New Mexico*: Laboratory of Anthropology (Santa Fe), Technical Series, 8, 109 pp.
- Nelson, N. C., 1914, *Pueblo ruins of the Galisteo Basin, New Mexico*: American Museum of Natural History, Anthropological Papers, 15, pt. 1, 38 pp.
- Plog, S., 1980, *Stylistic variation in prehistoric ceramics*: University of Cambridge Press, 160 pp.
- Schaafsma, C. F., 1976, Archaeological survey of maximum pool and Navajo excavations at Abiquiu Reservoir, Rio Arriba County, New Mexico: School of American Research, Santa Fe, Contract Program, 143 pp.
- Schaafsma, P., and Schaafsma, C. F., 1974, Evidence for the origins of Pueblo katchina cult as suggested by southwestern rock art: *American Antiquity*, v. 39, pp. 535-545.
- Schroeder, A. H., 1979, Pueblos abandoned in historic times; *in* Ortiz, A. A. (ed.), *Handbook of North American Indians*, vol. 9, Southwest: Smithsonian Institution, Washington, D.C., pp. 236-254.
- Smith, W., 1952, Kiva mural decorations at Awatovi and Kawaika-a with a survey of other wall paintings in the Pueblo Southwest: *Papers of the Peabody Museum of American Archaeology and Ethnology*, vol. 37, 363 pp.
- Snow, D. H., 1974, *The excavation of Saltbush Pueblo, Bandelier National Monument, New Mexico, 1971*: Museum of New Mexico (Santa Fe), Laboratory of Anthropology, Note 97, 74 pp.
- Toll, M. S., 1983, Wild plant use in the Rio Abajo, some deviations from the expected pattern throughout the central and northern Southwest: Paper delivered at the Rio Abajo Conference, "A seminar on archaeology and history of the Socorro District," Socorro, New Mexico.
- Upham, C. S., 1982, Policies and power, an economic and political history of the Western Pueblo: Academic Press, New York, 225 pp.
- Warren, A. H., 1980, Prehistoric pottery of Tijeras Canyon; *in* Cordell, L. S. (ed.), *Tijeras Canyon: analyses of the past*: University of New Mexico Press, Albuquerque, pp. 149-168.
- Weber, R. H., and Agogino, G. A., 1968, Mockingbird Gap Paleo-Indian site: excavations in 1967: Paper presented at the Society for American Archaeology 33rd Annual Meeting, Santa Fe.
- Wendorf, F., and Reed, E. K., 1955, An alternative reconstruction of northern Rio Grande prehistory: *El Palacio*, v. 62, pp. 131-173.



Taos Pueblo, ca 1920. Photo by Burt Harwood.