The Reliability of 16th-Century European Claims about Pueblo Lifestyles: An Archaeological Test

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Abstract: Sixteenth-century Europeans explored the New World to expand their sponsors' territories, to acquire wealth, and to convert souls. Today, archaeologists research the peoples about whom the explorers wrote. Although sometimes inaccurate, the explorers' accounts can provide insights into daily life that the archaeological record cannot. On the other hand, archaeological data fills in many gaps about Pueblo lifeways that the explorers failed to mention. However, both sources must be used with caution, since both are prone to biases. This paper compares the archaeological and the narrative information on precontact- and contact-period Pueblo religion, material resources, and diet and points to the pitfalls of excluding either of these two information sources. It concludes that a more accurate reconstruction of the lifeways of the Pueblo people will combine, among other sources, both the 16th-century explorers' narratives and the archaeological record.

Introduction

Historical reconstructions of the Southwest and the Pueblo peoples have frequently drawn upon the chronicles of 16th-century explorers such as Coronado, de Sosa, and Castañeda. Historical documents can indeed provide information not realized in the techniques used today for lifestyle reconstructions. Alfred Kidder attested to the importance of the explorers' chronicles in his 1924 publication, *Southwestern Archaeology*: "The Spanish explorers of the Southwest were indefatigable travellers, acute observers and, best of all, *accurate* recorders of the places they visited and of the things they saw" (1924:44; emphasis added).

The rich details and editorial embellishments in the explorers' documents give evidence to the explorers' observational skills. However, no independent proof of accuracy accompanies the documents. Through a survey of archaeological data obtained from the Pueblo societies of the Southwest, this paper attempts to test the accuracy of the early accounts. It also demonstrates how the incorporation of the direct historical approach can add significantly to our understanding of past cultures. But, before these tasks are undertaken, it is necessary to examine why the accuracy of the explorers' accounts even needs to be questioned.

Old World Meets New

Most of the earliest explorers in the New World were from Spain, where, in the 16th century, it was a time of renewed nationalism. A powerful new monarchy had ousted the Moorish overlords in 1492, and Spain was in a position to compete for power with the rest of Europe. One of the main arenas for competition was the New World.

It was with high hopes that, in 1540, Francisco Vásquez de Coronado and his forces embarked on a journey into the Southwest. His expedition, financed by the Spanish government, cut a swath through Arizona, New Mexico, the Texan and Oklahoman panhandles, and then turned around in Kansas. The forces spent a considerable time among the Pueblos, first in the Zuni pueblo of Hawikuh (Cibola), then in Acoma, wintering in the Tiguex area, and marching on to Pecos. An overview of the groups encountered is provided in several documents from the expedition, including Coronado's letters, a history of the expedition written by Pedro de Castañeda of Náxera, and an account of Tiguex by Fray Juan de Padilla and Hernando de Alvarado. Forty years later, a detailed journal was written by the Portuguese-born Gaspar Castaño de Sosa, who explored the Southwest in 1590-1591.

The Spaniards pursued the conquest of the New World because they were desperate for colonies from which they could procure "mineral wealth for the monarchy and human souls for the Church" (Cordell 1984:352). Catholicism played a significant role in Spanish exploration. In the early 1500s, the Spaniards had been amazingly successful in both spiritual and material acquisition in the New World, conquering two of the wealthiest, most complex societies in the Americas: the Aztec and Incan Empires.

Fueled by these tremendous early successes and dazzled by legends of the glittering Seven Cities of Cibola, in February 1540 Francisco Vásquez de Coronado and a force of Spaniards and native Americans started north from Compostela (Natella 1975:2). When the expedition reached New Mexico later that year, they were discouraged to find small communities living in relatively simple housing, with little obvious material wealth. Writing from Cibola in 1540, Coronado states, "It does not appear to me that there is any hope of getting gold or silver, but I trust in God that, if there is any, we shall get our share of it" (Coronado 1540:177). The friars on the expedition seemed to feel the same way about converts, leaving a trail of wooden crosses across the Southwest in every hamlet through which they passed.

The Spanish Chronicles Put to the Test

Due to their overwhelming interest in religious and material acquisitions, the Spanish chroniclers paid very close attention to both the religious practices, as Matijasic (1987) notes, and the wealth of Native Americans. These underlying motives, coupled with the desire to send favorable reports home to the king, could make suspect any writings made by the explorers about either Pueblo religion or wealth. This paper addresses these subjects, and, for comparative purposes, assesses the accuracy of 16th-century accounts of the Pueblo diet, a subject on which the explorers probably did not hold as many biases (unlike religion) or feel compelled to report favorably (unlike material wealth). Although it is impossible to revisit 16th-century Pueblo society to test the accuracy of the explorers' chronicles, the archaeological record can serve as a basis on which to judge some of the early claims.

Pueblo Religion

The 16th-century Catholic explorers in the Southwest found some of the religious practices of the Pueblo peoples extremely offensive. Europeans during this age believed in the existence of witches and demons and thought that "Satan was an active force in the world" (Matijasic 1987:32-33). Whenever they encountered a new non-Christian culture of the Southwest, they quickly set up large wooden crosses that they instructed the people to worship. They paid special attention to burial practices and worship in the Southwest.

Burial Practices. The two kinds of burials practiced by the 16th-century Pueblos, which are mentioned in the documents surveyed, are cremations and burials in dirt mounds.

First, Hernando de Alvarado and Fray Juan de Padilla write of Taos pueblo in the Tiguex province: "Outside of the pueblo we found dirt mounds, in which they bury their people." (Alvarado and Padilla n.d.:184). The archaeological record at other Pueblo sites confirms this statement. However, for all its "accuracy," the Spaniard's claim is not completely correct. For, in all likelihood, these dirt mounds were also refuse middens.

As Brew points out in his report on Alkali Ridge, "The practice of making formal burial in refuse mounds is a common Pueblo trait. It apparently goes back to the beginning of refuse mounds as such" (1946:227). On the Alkali Ridge, which contains sites from Basketmaker III to Pueblo III periods, refuse mounds were found away from the houses and kivas, to the southeast and south-southeast. Brew is careful to note that the refuse-

mound burials found at six sites were "not merely carcasses thrown out on the dump," but formal interments (1946:227).

More recent studies, conducted in the 1970s at Arroyo Hondo pueblo, provide clear evidence that Pueblo Indians did indeed bury their dead in refuse mounds (Dickson 1979; Palkovich 1980). At this site, which was occupied from A.D. 1300 to 1425, Palkovich cites 111 formal graves, 26 of which were in either plaza or room trash-middens, apparently not outside the pueblo proper (Palkovich 1980:80). In excavations at Grasshopper pueblo, Clark notes two kinds of cemeteries: common cemeteries in trash mounds peripheral to the site and high-status burials associated with the plaza (Clark 1969:57).

It becomes crucial at this point to examine the remainder of Palkovich's data, which does not disprove or negate the Spaniards' claims but does point to their omissions. Of the burials at Arroyo Hondo, ***nearly half*** were located in plaza areas, with the remainder occurring in subfloor pits in rooms (Palkovich 1980:2). Clark also notes burials within the pueblo proper. It is quite possible that the people in Tiguex, commented upon by the explorers, may also have interred people in rooms and plazas; Alvarado and Padilla may well have been oblivious to them, since the entire Coronado expedition lasted for less than three years. By examining the language that the explorers use, we can also speculate as to the kind of access they had to funerals and the dead; they do not say that they saw a funeral but that they "found" dirt mounds in which the dead were buried. The Spaniards may have surreptitiously poked around or perhaps discovered a burial exposed by erosion.

In any case, this example highlights the necessity for students of the Southwest to examine the historical narratives in conjunction with archaeological data. If only the narratives were used to reconstruct the Pueblo culture history, vital information about burial locations would have been completely missed. On the other hand, a close reading of the chronicles provides information about explorers' activities in the New World (which ultimately led to the destruction of many Pueblo people's lives and to the destruction of much of their culture).

Castañeda, who probably presented the fullest description of the 16th-century Southwest, also commented upon Pueblo treatment of the dead. Recalling his 1540 journey to Cibola, he writes, "These people burn their dead, casting with them into the fire the tools the deceased used in their occupations" (n.d.:253). Brew found no evidence of cremation at the Alkali Ridge sites (1946:228). However, he cites Toulouse's discovery of cremations in the Chupadera Mesa country in central New Mexico. Indeed,

Toulouse found seven cremations from a total of 36 burials at Pueblo Pardo, a site located three miles south of Gran Quivira (1944:65). Some of the cremations were found "in an area contiguous to, if not within, the sphere of Spanish explorations, settlement and mission endeavors" (1944:66). Hodge, as well, records cremations from the late prehistoric period of mat-paint polychrome at the Zuni sites of Hawikuh and Kechipauan, noting that "two forms of burial were practiced—inhumation and incineration" (1920:55).

As in the previous case, if we rely solely upon Castañeda's claims about burials, the truth is distorted. While some Pueblo groups around the time of European contact did practice cremation burials, according to the archaeological record cremation was not the only kind of burial form practiced. But when we rely solely upon the archaeological data, we lose a human element to which Castañeda and the other chroniclers are sensitive. For Castañeda does not write of "skeletons" or "cremations," but of "people" whose occupational tools were burned alongside them.

Worship. In addition to an interest in the dead, the 16th-century explorers made a number of comments about the worship practices among the natives of the Southwest. Some of those comments are not readily testable by archaeological methods. For example, Hernando de Alvarado and Fray Juan de Padilla write about the people of Tiguex: "They worship the sun and the water" (Alvarado and Padilla n.d.:184). Also, in a letter to Mendoza, Coronado writes: "these Indians worship the water, because they say that it makes the maize grow and sustains their life" (Coronado 1540:175).

The explorers did make other claims, however, that can be compared to archaeological data. In 1591, a member of the Gaspar Castaño de Sosa expedition writes of a kiva in San Ildefonso pueblo, in central New Mexico:

> We understood it to be a mosque where on some days of the year they meet to perform idolatries, because it contains many idols... In the first pueblo [Pecos]...there was a very large quantity [of idols], and they all have them (Schroeder and Matson 1965:118).

In a similar vein, the Verdadera R*elación* of 1632 provides the following description of the kivas at Hawikuh:

> They have their temples [kivas] with idols of stone and of wood, much painted, where they cannot enter except it be their priests—and these by some trap-doors which they have on top of the terrace (Hodge 1937:81).

Were the Spaniards accurate about Pueblo culture when they wrote of idols? It is impossible today to know whether or not 16th-century Native American peoples in the Southwest "worshipped" idols in a Judeo-Christian sense of the term. However, archaeological evidence does, in a limited number of instances, confirm the existence of stone effigies with human features found in a ceremonial context, which may be the "idols" of which the Spaniards wrote.

At Pecos Pueblo, Kidder unearthed four stone figures. Two of these stones were found in a slab-lined and box-like cist, just two feet below the surface in the area of a plaza overlying a kiva (Kidder 1932:86). The most spectacular of these figures is nearly a foot high and represents a squatting human, with its elbows resting on its knees. The third figure was found in a similar slab-lined cist in a room facing a plaza. Kidder, in highly charged language, offers an explanation that may elucidate whether or not these stone images played a part in ceremony at Pecos:

> The three images just described had all been subjected to violent misuse, but they had nevertheless been buried in prepared receptacles...And the broken one had probably been mended, or had at least been most reverently reassembled for deposit in its final resting place (Kidder 1932:88).

He then suggests that missionary priests may have been responsible for battering the stone images, which were buried after the Spanish conquest. On the other hand, clay effigies resembling humans were found in refuse heaps at the site, which suggests that they were used for a different purpose.

A fourth stone image at Pecos was found in direct association with a ceremonial structure, coming from a sealed recess in the wall of a kiva. Other stones were found with all four figures, possibly indicating a ceremonial importance. Kidder states that, although he could not determine absolute dates for the figures: "Objects as sacred as these might, however, be expected to have remained in use for long periods, and it is altogether probable that they were fashioned in prehistoric times" (1932:91).

Did the kivas contain idols, as the explorers claimed? According to the archaeological data, they probably did. But caution must be exercised in using the term "idol," which carries many negative connotations in contemporary North American as well as sixteenth-century Spanish culture, implying a false god and blind love or worship of an unworthy object. It is evident that the Spaniards were interpreting Pueblo religion as Catholics.

But what about archaeologists? A quick examination of a passage above demonstrates that archaeologists, too, are prone to bias, often

displayed in value-laden language. Kidder (1932:88) states that the three stone images at Pecos underwent "violent misuse," speculating that this was done by missionaries, and that one stone was "most reverently" reassembled and put in its "final resting place." Despite his obvious distate for missionary activity in the Southwest and his supposed respect for Native American rituals, Kidder (1932:86,89) still uses the term "idol," revealing his own form of bias. Thus, not only do the explorers' writings display bias, but so do some archaeological reports. Perhaps a more apt description of the stone figures would be "ceremonial objects," a term used by Brew (1946:241) and Smith (1972:112). For the people who used these stone figures in a ceremonial context did not view them as false or unworthy.

Thus, although the explorers' commentary on worship may contain some truths, the reader must always be aware of the biases that have been woven between the lines of the narratives. In addition, one must look for similar prejudices that may play into archaeological descriptions and interpretations. By discovering these biases, the reader will gain a clearer understanding of Pueblo lifeways, and, perhaps more important, will begin to see what values are woven into the reader's own consciousness.

Pueblo Resources and Riches

The Spaniards' high hopes for plunder were crushed when they reached the pueblos of the Southwest. Leading expensive expeditions that often had been financed by distant governments, the explorers desperately wanted something to show for their wandering. As a result, they appear to have recorded every minuscule item of material wealth they found.

In 1540, when Coronado's army reached Cibola, the Spaniards discovered that the houses were not decorated with turquoise as had been claimed previously by Fray Marcos de Niza. The expedition did note that "two points of emeralds and some little broken stones, rather poor, which approach the color of garnet were found in a paper, besides other stone crystals" (Coronado 1540:171). However, Coronado suspected the Cibolans were wealthier than they pretended:

> I think that they have a quantity of turquoises, which they had removed with the rest of their goods...because, when I arrived, I did not find any women here nor any men under fifteen years or over sixty (Coronado 1540:171).

He also states that "Some gold and silver has been found in this place [the province of Cibola] which those who know about minerals say is not bad" (Coronado 1540:178). But the Indians did not—or would not—tell

Coronado where they had obtained the metals, and Coronado never again mentions them.

The de Sosa expedition had better luck. A few miles from the San Marcos pueblo in New Mexico, de Sosa and some companions searched for mineral deposits, bringing back high-quality ores (Schroeder and Matson 1965). Schroeder and Matson claim that de Sosa had probably discovered the Cerrillos turquoise deposits, although the de Sosa journal does not specify what kind of ores they found, except that the ores "showed no silver" (Schroeder and Matson 1965:157).

Castañeda writes that the Indians of Tusayan, a Hopi pueblo, presented the Spaniards with "a few turquoises, although not many," and some cotton clothing (Castañeda n.d.:215). In Pecos, too, the Spaniards were presented with "clothing and turquoises, which are found in abundance in that region" (Castañeda n.d.:219). Castañeda continues: "In many of the pueblos (in New Mexico), there were found silver ores, which the natives used to glaze and to paint their pottery" (Castañeda n.d.:260).

The archaeological data provided by Kidder, Palkovich, and Griffen substantiates most of the explorers' claims, except one made by Castañeda about silver ores being found in many of the New Mexican pueblos. Coronado claimed, as well, to have found some gold and silver in the Cibolan province (Zuni); it is possible that these were items the native people had obtained through trade.

In Pecos, Kidder found that all metal objects recovered, including objects of iron, copper, brass, and bronze, were originally of European manufacture. However, he does note one small piece of copper ore found with a Glaze III burial prior to European contact. He claims that "there is no reason to suppose that in prehistoric times the Pecos had any knowledge whatever of metal working" (Kidder 1932:305). They did, however, use turquoise, which is found in association with a few Pecos burials in the form of beads, pendants, and mosaics. From Castañeda's chronicles, Kidder concludes that the Pecos were "very well supplied with turquoise," and he cites the Cerrillos deposits 50 or so miles away (Kidder 1932:103). The lack of turquoise artifacts at the site is due, Kidder claims, to the gradual abandonment of the site, plus the fact that the Pecos people were not lavish with grave goods.

The inhabitants of Arroyo Hondo pueblo probably quarried their turquoise from the same mine as did the Pecos and Santo Domingo pueblos (Palkovich 1980:xvi). Turquoise and jet were found with a scant four of the 120 site burials. Farther to the east at Grasshopper pueblo, an awl with a turquoise mosaic as well as other mineral burial accoutrements, including

blue azurite powder and hematite, were unearthed from a high-status burial (Griffen 1967). In his 1969 work on the Grasshopper site, Clark notes that turquoise pendants were found among the grave goods as well.

In sum, aside from the comment about abundant silver ores made by Castañeda, the archaeological evidence supports the claims made by the explorers about Pueblo resources and riches. Although material wealth was important to the Spaniards, it obviously did not arouse as much emotion in them as did religious practices.

Pueblo Diet

The New World explorers found little to write about mineral wealth in the Southwest, except that it was lacking. They made up for this dearth by writing about a more urgent concern that was with them every day: potential food sources and the native Southwestern diet. Fortunately for the explorers, food sources abounded.

Cibola. In the province of Cibola, the explorers tell of a dietary smorgasbord. Castañeda writes that the Indians planted a short-stalk variety of corn that bore three and four ears with 800 grains each per stalk (Castañeda n.d.:252). The kiva mural paintings at Pecos, studied by Smith, attest to the presence of maize, represented by painted corn ears, including stems and kernels (Smith 1952:228). Smith also notes the presence of gourds in kiva murals (Smith 1952:232). The *Relación Postrera de Cibola* (n.d.:309) states: "Natives grow maize, beans and calabashes...They possess some chickens, although not many. They have no knowledge of fish" (*Relación Postrera de Cibola* n.d.:309). Ezzo's study (1992) of 14th-century dietary change at Grasshopper pueblo, east of Cibola, substantiates these claims. The Spaniards probably mistook turkeys or some other bird eaten by the Cibolans for chickens.

Coronado was impressed by the resources of Cibola. There were bears, tigers, lions, porcupines, wild goats, deer, leopards, roebucks, cattle, and "sheep as big as horses, with very large horns and little tails" (Coronado 1540:173). This is a case in which the reader must remember that, not only was Coronado not a social scientist, he was also *not* a zoologist. While the archaeological records from Grasshopper (Lang and Harris:1984) and Arroyo Hondo pueblos produced remains of bears, porcupines, deer, bighorn sheep, and possibly goats, they did not produce remains of tigers, lions, roebuck, or cattle. Coronado probably had never seen the exact equivalent of these species in Europe and so defined them the he could. Bone remains were found at Arroyo Hondo of bobcat and an unidentified kind of cat; these may have been the tigers, leopards, or lions of which

Coronado spoke. The roebucks to which he referred may have been mule deer or pronghorn antelope, and the cattle were undoubtedly bison.

Coronado then makes an interesting statement about the fowl at Cibola:

> The Indians tell me that they do not eat (fowl) in any of the seven villages, but that they keep them merely for the sake of procuring the feathers. I do not believe this, because they are very good and larger than those of Mexico (Coronado 1540:171).

Were Coronado's intuitions correct? According to the faunal remains from Arroyo Hondo, they were. Lang and Harris present an excellent study of domestic turkey utilization at this site. Evidence for turkey domestication there includes dung deposits, egg clutches, and roosting pens. Significantly, they note a pronounced increase in turkey production from A.D. 1315 to 1330, a time when the community population experienced a rapid increase, which probably would have resulted in a decrease in wild meat resources (Lang and Harris 1984:107). Archaeological evidence suggests that the early peoples also domesticated dogs—which the Spaniards never mentioned about the Pueblos. Lang and Harris cite uses for the dog at Arroyo Hondo, including: food source, hunting companion, garbage scavenger, and watchkeeper (1984:90).

Coronado also provides information about the daily diet of the Cibolans: "They make the best tortillas that I have seen anywhere, and this is what everybody ordinarily eats" (Coronado 1540:172). Although there is ample evidence for corn in the archaeological record, it is difficult to know exactly how the Pueblos prepared the corn. Here, Coronado's letter enhances our knowledge of the diet of the Pueblo people, in a way in which current archaeological method alone cannot.

Acoma. From Cibola, the expedition moved on to Acoma where there was "space for planting and growing a large amount of maize," in addition to "turkey cocks with very large wattles, much bread, dressed deerskins, piñon nuts, flour, and maize" (Castañeda n.d.:218). If we look to the faunal and floral remains at Grasshopper and Arroyo Hondo pueblos, the Spanish accounts are once again substantiated. In addition, we learn information that the archaeological record does not provide: the size of the turkey wattles and that the natives cooked their flour into bread.

Tiguex. The Coronado expedition then travelled on to the province of Tiguex, where: "They have provisions of maize, beans, melons, and chickens in great abundance" (Alvarado and Padilla n.d.:183). Although melons do not turn up in the remains from Arroyo Hondo or Grasshopper,

the Spaniards may have been referring to the fruit of a variety of cacti, including the prickly pear, hedgehog, or banana yucca (Wetterstrom 1986:25-27). Also, there were cranes, geese, crows, and thrushes (Castañeda 1977:255). All these birds, save the thrush, are represented in the faunal remains at Arroyo Hondo pueblo (Lang and Harris 1984:146-149).

Pecos. As the expedition moved eastward, they came upon Pecos pueblo. The area around Pecos contained a brook that "abounds in trout and otters. Big bears and fine falcons multiply in this region" (Castañeda n.d.:258). At Arroyo Hondo, the excavated falconid remains include vultures, hawks, and falcons. In the same report, Lang and Harris argue that raptorial birds may have been kept in cages (1984:72). However, no trout or otter was evidenced in the archaeological faunal array. In 1591, de Sosa wrote that Pecos and five surrounding pueblos harvested "a very great amount of maize, beans, and other vegetables" (Schroeder and Matson 1965:117):

> The corn was of many colors, and the same [is true of] the beans...They have many green herbs [quilites, from Aztec *quilitl*] and *calabazas* [pumpkins or gourds] in their houses [and] many things for the cultivation of their corn fields (Schroeder and Matson 1965:99).

At the pueblo of Cuyamungue, the Spaniards were given "maize, flour, beans, squash, tortillas, and turkeys, all in great abundance for the people that were there" (Schroeder and Matson 1965:115).

When considering the Pueblo diet, the explorers' chronicles provide useful and often supplementary information to the archaeological record, as in the case of their discussion of tortillas and bread. For the most part, their claims about faunal and vegetal resources are factual, if one takes into account their calling some animals and foods by the name of the closest European counterpart. However, to rely solely on the explorers' accounts in a study of the diet and dietary resources would obviously be inadequate. For example, at Arroyo Hondo, which was occupied for 125 years, the archaeological record turned up 24,589 animal bones representing a minimum of 4,448 individuals of at least 91 species (Lang and Harris 1984:5). At Grasshopper pueblo, Bohrer identified many wild plants that were potential food sources never recorded by the explorers, including manzanita, sunflower, grape, walnut, prickly pear, squawbush, juniper, *Chenopodium*, and ragweed (1982:240). Finally, Ezzo notes that the diet at Grasshopper also would have included jackrabbit and cottontail, neither of which are mentioned by the explorers (1992:254).

Conclusion

When attempting a historical reconstruction of what life was like for the Pueblo peoples of the Southwest, one may turn to several sources, including the archaeological record, accounts left by European explorers, ethnographic analogy, ethnoarchaeology, and others. In most cases, the archaeologists attempt to provide objective data. On the other hand, the explorers' accounts are less dependable because they were not written by trained analysts of cultural activity. However, both sources must be read with caution, since the writings of neither 16th-century explorers nor 20th-century archaeologists are immune to bias.

It is when one reads with a careful eye for these prejudices that a clearer picture of the past emerges. The explorers' accounts can provide insights into daily life that are forever lost to the archaeological record. How else are we to learn that a major staple of the Pueblos was tortillas and that this people made "the best tortillas" that one explorer had ever seen (Coronado 1540:172)? How else do we learn that Cibolan children, women, and men over 60 were not present, that perhaps they knew what was coming, when Coronado and his troops descended on the pueblo (Coronado 1540:171)? On the other hand, the archaeological data can help us to test the accuracy of the explorers' claims. For instance, from archaeology we gain a much more complete picture of all the resources used in the Pueblo diet and are able to sort out the explorers' inaccuracies.

A comparison of the archaeological and the narrative information on Pueblo religion, material resources, and diet points to the pitfalls of using only one of these information sources. A historical reconstruction cautiously utilizing both the 16th-century explorers' narratives and the archaeological record, in addition to other methods of historical reconstruction, will provide a more complete reconstruction of the lifeways of the Pueblo people.

References

Alvarado, Hernando de, and Fray Juan de Padilla. n.d. Account of what Hernando de Alvarado and Fray Juan de Padilla Discovered while in Search of the South Sea. In *Narratives of the Coronado Expedition, 1540-1542.* George P. Hammond and Agapito Rey, eds. Pp. 182-184. Albuquerque: University of New Mexico Press.

Bohrer, V.L. 1982. Plant Remains From Rooms at Grasshopper Pueblo. In *Multidisciplinary Research at Grasshopper Pueblo, Arizona.* W.A. Longacre, S.J. Holbrook, and M.W. Graves, eds. Anthropological Papers of the University of Arizona 40:97-105.

Brew, John O. 1946. *Archaeology of Alkali Ridge, Southeastern Utah.* Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 21. Cambridge, Mass: The Peabody Museum.

Castañeda, Pedro de, of Nàxera. n.d. Narrative of the Expedition to Cibola, Undertaken in 1540, in which are Described All Those Settlements, Ceremonies, and Customs. In *Narratives of the Coronado Expedition, 1540-1542.* George P. Hammond and Agapito Rey, eds. Pp. 191-283. Albuquerque: University of New Mexico Press.

Clark, G. A. 1969. A Preliminary Analysis of Burial Clusters at the Grasshopper Site, East-Central Arizona. *The Kiva* 35:57-86.

Cordell, Linda S. 1984. *Prehistory of the Southwest.* Orlando: Academic Press.

Coronado, Francisco Vasquez de. 1540. Letter of Coronado to Mendoza, August 3, 1540. In *Narratives of the Coronado Expedition, 1540-1542.* George P. Hammond and Agapito Rey, eds. Pp. 162-178. Albuquerque: University of New Mexico Press.

Dickson, D. Bruce, Jr. 1979. *Prehistoric Pueblo Settlement Patterns: The Arroyo Hondo, New Mexico Site Survey.* Arroyo Hondo Archaeological Series, vol. 2. Santa Fe: School of American Research Press.

Ezzo, Joseph A. 1992. Dietary Change and Variability at Grasshopper Pueblo, Arizona. *Journal of Anthropological Archaeology* 11(3):219-289.

Griffen, P. B. 1967. A High Status Burial from Grasshopper Ruin, Arizona. *The Kiva* 33(2):37-53.

Hodge, Frederick W. 1920. The Age of the Zuni Pueblo of Kechipauan. *Indian Notes and Monographs* 3 (2). New York: Museum of the American Indian, Heye Foundation.

Hodge, Frederick W. 1937. *History of Hawikuh, New Mexico: One of the So-Called Cities of Cibola.* Los Angeles: Ward Ritchie Press.

Kidder, Alfred V. 1924. *An Introduction to the Study of Southwestern Archaeology.* New Haven: Yale University Press.

Kidder, Alfred V. 1932. The Artifacts of Pecos. Papers of the Southwestern Expedition, no. 6. New Haven: Yale University Press.

Lang, Richard W., and Arthur H. Harris. 1984. *The Faunal Remains from Arroyo Hondo Pueblo, New Mexico: A Study in Short-Term Subsistence Change.* Arroyo Hondo Archaeological Series, vol. 5. Santa Fe: School of American Research Press.

Matijasic, Thomas D. 1987. Reflected Values: Sixteenth-Century Europeans View the Indians of North America. *American Indian Culture and Research Journal* 11(2):31-50.

Natella, Arthur A., Jr., ed. 1975. The Spanish in America 1513-1974: A Chronology and Fact Book. Dobbs Ferry, N.Y.: Oceana Publications.

Palkovich, Ann M. 1980. *Pueblo Population and Society: The Arroyo Hondo Skeletal and Mortuary Remains.* Arroyo Hondo Archaeological Series, vol. 3. Santa Fe: School of American Research Press.

Relación Postrera de Cibola. n.d. In *Narratives of the Coronado Expedition, 1540-1542.* George P. Hammond and Agapito Rey, eds. Pp. 308-312. Albuquerque: University of New Mexico Press.

Schroeder, Albert H., and Dan S. Matson . 1965. *A Colony on the Move: Gaspar Castaño de Sosa's Journal 1590-1591.* The School of American Research. Salt Lake City: Alphabet Printing.

Smith, Watson . 1952. *Kiva Mural Decorations at Awatovi and Kawaika-a.* Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 37. Cambridge, Mass.: The Museum.

Smith, Watson . 1972. *Prehistoric Kivas of Antelope Mesa, Northeastern Arizona.* Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 39, no. 1. Cambridge, Mass.: The Museum.

Toulouse, Joseph H., Jr. 1944. Cremation Among the Indians of New Mexico. *American Antiquity* 10:65-74.

Wetterstrom, Wilma. 1986. *Food, Diet, and Population at Prehistoric Arroyo Hondo Pueblo, New Mexico.* Arroyo Hondo Archaeological Series, vol. 6. Santa Fe: School of American Research Press.