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Chapter Author(s): Elinore M. Barrett

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The Geography of Middle Rio Grande Pueblos Revealed by Spanish Explorers, 1540–1598¹

ELINORE M. BARRETT



When Spanish explorers arrived in the American Southwest in the sixteenth century, the greatest concentration of settled farming villages was in the Rio Grande Region. Some ninety-three pueblos were located in an area that stretched south from Taos Pueblo 215 miles along the Rio Grande rift valley, in addition to outlying areas to the east and west. Within the Rio Grande Region the general settlement pattern in the 1540–1598 contact period consisted of loose groupings of linguistically related pueblos that occupied specific drainage areas.

Spanish explorers found the largest number of inhabited pueblos in the central part of the Rio Grande Region, the Albuquerque-Belen Basin (in this study called the Middle Rio Grande Subregion).² Within the basin, twenty-two pueblos were located along a sixty-mile stretch of the river between the Rio Puerco confluence on the south and the Jemez River junction to the north. Within this territory of the Southern Tiwa people, twelve to thirteen pueblos were clustered within a fifteen- to twenty-mile distance at its northern end, with the other eight or nine spaced irregularly over the southern two thirds. Map 12 and Table 15.1 show attempts to correlate pueblos reported by the explorers with known archeological sites. (The basic work of site identification has been

Table 15.1. Pueblos Reported by Sixteenth-Century Spanish Explorers

<i>Pueblo Name</i>	<i>LA Number^a</i>	<i>Cononado 1540–1542</i>	<i>Rodriguez/Chamuscado 1581–1582</i>	<i>Espejo 1582–1583</i>	<i>Castañón de Sosa 1590–1591</i>	<i>Oñate 1598</i>	<i>1602 Map</i>
MIDDLE RIO GRANDE SUBREGION NORTH (TIGUEX)							
Kuaua	187	—	Medina de la Torre	Poguana	—	—	—
Santiago	326	Alcanfor	Palomares	Comise	—	—	Santiago
Wache	677	—	Campos	Achine	unnamed	—	—
Sandia	294	—	Cáceres	Guagua	unnamed	—	—
Corrales	288	—	La Palma	Gajose	—	—	—
Puaray	717	—	Malpaís	Simasse	unnamed	Puaray	—
Maigua	716	—	Nompe	Suyte	unnamed	—	—
?	—	—	Cempoala	Nocoche	—	—	—
Alameda	421	—	Villarasa	Hacala	unnamed	—	—
Chamisal	22765	—	Culiacán	Tiara	unnamed	—	—
Calabacillas	289	—	Analco	Taycios	—	—	—
Piedras Marcadas	290	—	San Pedro	Casa	unnamed	—	—
?	—	—	Puaray	Puala de los Martires	—	—	—
<i>Subtotal</i>	13	[12]	13	13 ^b	[15]	incomplete ^c	[12] ^d

<i>Pueblo Name</i>	<i>LA Number^a</i>	<i>Coronado 1540–1542</i>	<i>Rodriguez/Chamuscado 1581–1582</i>	<i>Espejo 1582–1583</i>	<i>Castañón de Sosa 1590–1591</i>	<i>Oñate 1598</i>	<i>1602 Map</i>
MIDDLE RIO GRANDE SUBREGION SOUTH (TUTAHAGO)							
?	—	—	San Mateo	—	—	—	—
Pur-e Tu-ay	489	—	—	—	—	—	Mesilla
Isleta	724	—	Santa Catalina	Guajolotes	—	—	unnamed
Be-jui Tu-ay	81	—	Taxumulco	unnamed	—	—	unnamed
Valencia	953	—	Tomatlán	—	—	—	unnamed
?	—	—	—	despoblado	—	—	—
Ladera del Sur	50257 ^e	—	Mexicalcingo	despoblado	—	—	unnamed
Casa Colorado	50249 ^f	—	—	unnamed	—	San Juan Bautista	San Juan
?	—	—	Piquinaguatengo	—	—	—	—
Abó Confluence	50241	—	Caxtole	El Corvillo	—	—	unnamed
San Francisco	778	—	Pueblo Nuevo	unnamed	—	—	—
?	—	—	Ponsitlán	unnamed	—	—	—
<i>Subtotal</i>	12	[8]	9	8	no data	incomplete ^g	7

^aNew Mexico Laboratory of Anthropology site number.

^bA list of thirteen names is given, but no locational information.

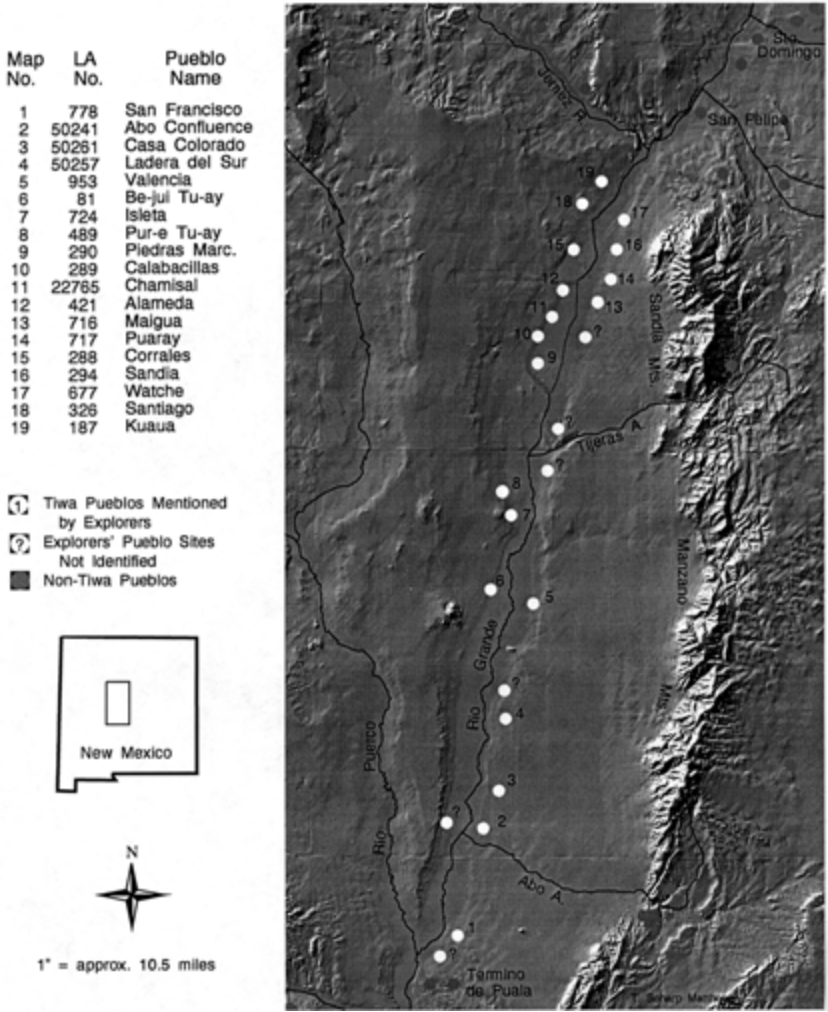
^cOf his list of ten pueblo names in the Middle Rio Grande Subregion, only Puaray and San Juan Bautista can be matched to sites.

^dEleven pueblo symbols designated “Valle de Puara” are shown without regard to specific locations.

^eNearby Ladera Pueblo is LA50259.

^fLA 50249 is the earlier and LA50261 the later component of the site.

^gTotal number of pueblos reported.



Map 12. Middle Rio Grande Pueblos, 1540–1598. By Tracy Scharp Matthews.

done by Bandelier [1892], Fisher [1931], Mera [1940], and Marshall and Walt [1985].)

These correlations have been made with varying degrees of certainty because neither the information provided by the explorers nor the dating of the sites is precise enough to make unqualified identifications in all cases.³

Coronado’s people were the first Spaniards to enter the Middle Rio Grande Subregion and they differentiated between the two groupings of pueblos by giving

them names as separate provinces: Tiguex on the north and Tutahaco on the south. They had arrived in Pueblo country at the Zuni pueblos (their Cíbola Province) about 125 miles west of the Rio Grande, and it was from there that Coronado sent out advance parties to explore the new lands. Captain Hernando de Alvarado was the first to travel east to the Rio Grande, which he called the Nuestra Señora (Winship 1896: 594; Hammond and Rey 1940: 183). His party traveled east five days to Acoma Pueblo and another three to the Rio Grande, arriving in Tiguex Province (Winship 1896: 430, 431, 490, 491; Hammond and Rey 1940: 218, 219).

Coronado himself later led a party to the Rio Grande, also in eight days, arriving in Tutahaco Province (Winship 1896: 432, 492–493; Hammond and Rey 1940: 220–221). Although he indicated that Tutahaco was south of Tiguex, his route to the Rio Grande is so vaguely described that the only clues as to how far south he went are the distance, which could not have been greatly different from that covered by Alvarado because the number of days is the same, and the likelihood that his Zuni guides would not have taken the party to a destination that was inconvenient for their own return. It is, therefore, probable that Tutahaco was located in the southern part of the Albuquerque-Belen Basin, and not farther south in the Socorro Basin as has been suggested (Riley 1995: 170). Coronado reported a total of twelve pueblos in Tiguex and eight in Tutahaco but mentioned few individual pueblos. Only one can be identified with any confidence, Santiago (LA 326), which the Spaniards took over as their headquarters and which they called Alcanfor or Coofer⁴ (Winship 1896: 432, 451, 454, 492, 519–520, 525, 567, 569, 576, 594; Hammond and Rey 1940: 183, 220, 253, 259, 290, 309, 326, 347; Vivian 1932: 67; Snow 1976b: 166–167; Winter 1982: 185; Chapter 16).

The reports of the 1580s give a more complete picture of the Tiwa settlements in the Middle Rio Grande Subregion. Starting from the southern frontier, Hernán Gallegos, chronicler of the expedition led by Francisco Sánchez Chamuscado, mentions a total of twenty-two pueblos north to the northern border while Diego Pérez de Luxán of the Antonio de Espejo expedition notes at least twenty-one, both listing thirteen in the cluster at the north end of the subregion, a figure also mentioned by some of Coronado's men (Hammond and Rey 1966: 103–105, 116–117, 176–177, 203; Bancroft Library 1551). Although there is some similarity in the number and location of the pueblos they report in the southern part of the subregion, there is also considerable discordance, despite the lapse of only a year and a half between the visits of the Rodríguez/Chamuscado and Espejo expeditions.⁵ At one time an extensive uninhabited frontier zone was thought to exist between the Southern Tiwa and the Piro people to the south, largely because there were no known sites in the area and because it was considered a buffer zone between two

hostile peoples. But some sites have been identified in this area and, although statements by explorers indicate there was conflict, Espejo noted that only a half league (1.5 miles) separated the Piro and Tiwa Provinces⁶ (Mera 1940: 17–18; Wilcox 1991: 132–133; Marshall and Walt 1985: maps; Riley 1995: 230; Hammond and Rey 1928: 290; Hammond and Rey 1966: 82, 221, 303). The listing of pueblos by Gallegos and Luxán further reinforces the likelihood that there was no significant no-man's-land at the Piro–Southern Tiwa frontier.

After Espejo returned from visiting the Estancia Basin to the east, the expedition decamped from Termino de Puala at the southern border of Piro territory, and traveled four leagues (twelve miles) along the Rio Grande (their Río del Norte) to a pueblo they named El Corvillo, passing some small pueblos and many deserted ones along the way. One of these small pueblos might have been at the San Francisco site (LA 778) located four miles north of Termino de Puala (Sevilleta site, LA 774) (Archeological Records Management Site files of the Laboratory of Anthropology, Museum of New Mexico, Santa Fe [ARMS]; Mera 1940: 8; Marshall and Walt 1984: 211, 345). LA 778 might also have been Gallegos's Ponsitlán or his Pueblo Nuevo, both of which were located along the Rio Grande (his Guadalquivir). A distance of four leagues would have put El Corvillo in the vicinity of Abó Arroyo where there was a small pueblo (LA 50241) that could possibly have been occupied at that time (ARMS; Marshall and Walt 1985: n.p.; Marshall and Marshall 1992: 75). This eastside pueblo could also have been Gallegos's very small Caxtole.

As Espejo's people continued north they observed that all of the pueblos were deserted, the inhabitants having fled the Spaniards' approach. It was known that the Tiwa people were responsible for the deaths of two priests from the Rodríguez/Chamuscado expedition who had insisted on staying behind when that expedition returned to New Spain. They called their next campsite, four leagues north of El Corvillo, Los Des poblados. It was between two pueblos, one very large, which, given the distance, would have been near the Ladera del Sur site (LA 50257). Ladera del Sur is not a large site but Ladera Pueblo (LA 50259), located 150 yards away, is (ARMS; Marshall and Walt 1985: n.p.; Marshall and Marshall 1992: 40). Archeological evidence does not indicate that the latter was occupied in the contact period but the site is badly damaged and such evidence could have been destroyed. It seems reasonable, if Luxán could observe that both pueblos were deserted, the two pueblos would have been in sight of each other. There are no other pueblos that fit the information Luxán gives. A pueblo they encountered along the way might have been at the Casa Colorado site (LA 50249 or 50261), which was also on the east side of the Rio Grande.

It is here that matching Luxán's and Gallegos's pueblos becomes especially difficult. Gallegos mentions a large westside pueblo he called Piquinagatengo op-

posite Caxtole at Abó Arroyo. But there is no such site at that location and Luxán does not mention a comparable pueblo.⁷ Gallegos's next pueblo, Mexicalcingo, was on the east side but whether it occupied the site at Casa Colorado or at Ladera del Sur cannot be known because he does not give the distance. Above Mexicalcingo was his Tomatlán and across the river opposite it on the west side was Taxumulco. These pueblos fit the sites of Valencia (LA 953) and Be-jui Tu-ay (LA 81) respectively and are not likely the same as the two pueblos near Luxán's Despoblados camp because the latter were presumably on the same side of the Rio Grande.⁸

From Los Despoblados, the Espejo expedition covered five leagues (fifteen miles) to a pueblo called Los Guajolotes. This distance would have brought them to the Isleta site (LA 724), which is located on the west side of the Rio Grande. Luxán noted another deserted pueblo along the way, one that could have been either Valencia or Be-jui Tu-ay. That he does not mention both, when it is very likely that these were the sites of Gallegos's Tomatlán and Taxumulco, further brings out just how speculative is the reconstruction of the settlement pattern in this area. Espejo had been traveling along the east side of the Rio Grande but at some point, perhaps at Valencia, his party must have crossed the river, although Luxán does not mention it, because they actually entered Los Guajolotes, noting its abundant provisions, including turkeys. Here, at the Isleta site, there again seems to be a correspondence with Gallegos, with his westside Santa Catalina Pueblo. Above Isleta lay the first pueblo of the northern cluster, called Puaray by Gallegos and Puala by Luxán. Luxán gives the distance as three leagues (nine miles) and mentions no pueblos along the way, whereas Gallegos notes one, San Mateo, placing both it and Puaray on the east side.

Both Gallegos and Luxán list twelve pueblos above Puaray/Puala (Table 15.1).⁹ Unfortunately Luxán does not continue to mention each pueblo encountered as Espejo's expedition moved north through the northern cluster of Tiwa pueblos (Coronado's Tiguex Province), but later when he names the pueblos in this area, Puala is the thirteenth and last on his list, reinforcing its location as the southernmost of these pueblos (Hammond and Rey 1966: 203). It cannot be said that the other pueblos on his list are in any geographic order, but Gallegos does supply this order. Above Puaray he notes five pueblos on the east side of the Rio Grande: Cempoala, Nompe, Malpaís, Cáceres, and Campos. Above Cempoala, the sites to which they could correspond are respectively: Maigua (LA 716), Puaray (LA 717), Sandia (LA 294), and Watche (LA 677), although occupation of the latter during the contact period is questionable (ARMS; Mera 1940: 18–19; Winter 1982: 183–185; Scurlock 1982: 179–182). A bigger question surrounds Cempoala for which no site has been found. Two other contact period sites that today are on the east side of the Rio Grande, Alameda (LA 421) and Chamisal (LA 22765), were located

on the west side of the river at that time.¹⁰ Gallegos's westside pueblos were: San Pedro, Analco, Culiacán, Villarasa, La Palma, Palomares, and Medina de la Torre beyond which lay the pueblos of the Keres people. The westside sites to which they correspond are probably: Piedras Marcadas (LA 290), Calabacillas (LA 289), Chamisal (LA 22765), Alameda (LA 421), Corrales (LA 288), Santiago (LA 326), and Kuaua (LA 187).

The location of Puaray in the 1580s remains a puzzle. It was at this pueblo that members of the Rodríguez/Chamuscado expedition took leave of two priests who insisted on staying behind and there that the latter were probably later killed (Hammond and Rey 1966: 109). When the Espejo expedition, whose purpose it was to learn the fate of the priests, arrived, they named the pueblo Puala de los Martires (Hammond and Rey 1966: 177). Gallegos had established its location on the east side of the Rio Grande and Luxán put it three leagues (nine miles) north of Isleta. Luxán also mentioned that when they were camped near Puala they were visited by a delegation that had come from eight to ten leagues (twenty-four to thirty miles) upriver, making it likely they were Keres people from San Felipe Pueblo (Hammond and Rey 1966: 178). If the distance were ten leagues, it would have brought them to that site three leagues north of Isleta where Luxán located Puala. That site would have been two miles above the Rio Grande–Tijeras Arroyo junction (or just south of Albuquerque in the general vicinity of the Rio Bravo Boulevard and Highway 47 intersection), an area where there are no known pueblo sites. It would also have been about ten miles south of the other twelve closely spaced pueblos of the northern cluster.

A location somewhat farther north would seem more likely for Puaray and consensus among modern scholars does place Puaray in the midst of the pueblos on the east side at the LA 717 site (Fisher site #13), which is about seven leagues north of Isleta (Fisher 1931: n.p.; Vivian 1932: 59, 63; Snow 1975: 463–480; Riley 1981: 210; Scurlock 1982: 180). This location also accords with information provided by Gaspar Castaño de Sosa in 1591 and Juan de Oñate in 1598 (Hammond and Rey 1966: 293; Hammond and Rey 1953: 319). Castaño de Sosa gave the distance from the first Southern Tiwa pueblo he encountered to his main camp at Santo Domingo as five or six leagues. Six leagues, or twenty-four miles (at four miles to the league), would be roughly the distance from Santo Domingo to the LA 717 site, an indication that his first pueblo might have been Puaray or a pueblo close to it. Oñate also established the location of Puaray in the vicinity of LA 717, and not farther south, when he, too, stated that it was six leagues from Santo Domingo, a Keres pueblo to the north. While at Puaray, one of his men, Gaspar Pérez de Villagrà, claimed he saw on a wall inside one of the houses a mural depicting the death of the two priests, but the scene had been painted over with

whitewash and it is doubtful its contents could have been clearly discerned (Villagr  1933: 142). O ate did not report it and scholars have tended to treat it as apocryphal (Snow 1975: 464; Riley 1987: 227). Even if it were true, it does not prove that the pueblo where the killings took place was LA 717. Residents of Lux n's Puala de los Martires could have painted the scene in a different pueblo.

A possible explanation of the discrepancy between the reports of Gallegos and Lux n and those of Casta o de Sosa and O ate might be that there were two Puarays: the one of the 1580s and the one of the 1590s. After the Espejo expedition left Pueblo country, the people of Puaray/Puala, wishing to disassociate themselves from the place where the killings took place, might have destroyed their pueblo and moved to the one at LA 717, giving it the same name. Perhaps Gallegos's San Mateo and Cempoala, located respectively south and north of his Puaray, were destroyed at that time as well, leaving the area devoid of identifiable sites.

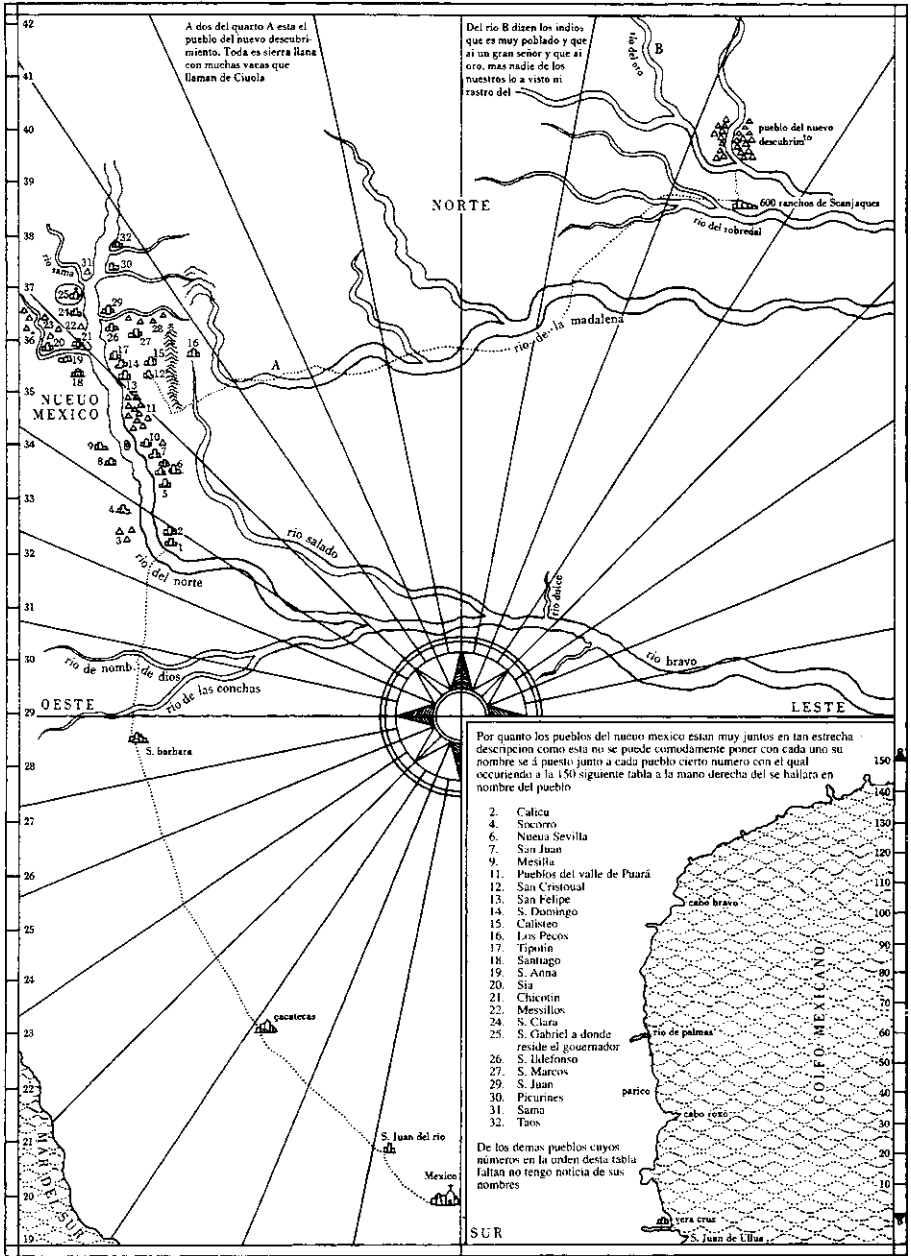
Which other pueblos of the northern cluster were still inhabited in the 1590s cannot be determined from either the Casta o de Sosa or O ate reports. Casta o de Sosa visited pueblos on both sides of the river, which he called the Rio Grande, claiming there were a total of fifteen, but he did not name any of them (Hammond and Rey 1966: 292). Because he probably approached the area through Tijeras Canyon from the east side of the Sandias, the first pueblo he would have encountered was the most southerly on the east side¹¹ (Hammond and Rey 1966: 291–292; Snow 1988: 95–97). He found this pueblo deserted and was told that the people had fled because it was they who killed the priests, but inhabitants fled from the other pueblos as well, so it is difficult to know if that particular pueblo was Puaray. It probably was not because from that first pueblo Casta o de Sosa proceeded up the east side of the Rio Grande, visiting four other pueblos before crossing to the west side. Above Puaray (LA 717) the only sites are Sandia (LA 294) and Watche (LA 677), and there is some doubt about the latter's occupancy during the contact period.¹² Casta o de Sosa's first pueblo was probably Maigua (LA 716), which is less than a mile south of Puaray (LA 717). Identity of the fourth pueblo is still in question, but in this area of intense urban settlement it would not be surprising if this site has been lost.

On the west side Casta o de Sosa's pueblos are even more difficult to link to known sites, but it is possible that the pueblo across the river from the first one he encountered on the east side was Alameda (LA 241) and the other near it was Chamisal (LA 22765). The southernmost, which he describes as very large, might have been Piedras Marcadas (LA 290) (ARMS; Marshall 1988: 13). O ate gives a list of Tigua (Tiwa) pueblos on the river he called the R o del Norte, but the only recognizable name is Puaray (Hammond and Rey 1953: 314, 346). The 1602 map shows twelve pueblos (Map 13). Unfortunately, eleven are placed without regard to

location, designated together as “Pueblos del valle de Puará,” but the twelfth, Santiago, is correctly placed at the north end of the west side. This latter location might well be the site of Coronado’s headquarters (Alcanfor/Coofer), indicating that it continued to be occupied.

To return to the southern part of the Albuquerque Basin, the explorers who came after Rodríguez/Chamuscado and Espejo have little to add. Castaño de Sosa did not visit the area and Oñate moved through it quickly, mentioning only newly built San Juan Bautista four leagues (sixteen miles) above Sevilleta (LA 774), which would have put it at the Casa Colorado site (LA 50261)¹³ (Hammond and Rey 1953: 319). The 1602 map, based on information from a member of Oñate’s expedition, is more helpful. The arrangement of symbols indicates that the pueblo sites could have been Abó Confluence, Casa Colorado (named San Juan), Ladera del Sur, and Valencia on the east side of the Rio Grande, Be-jui Tu-ay and Pur-e Tu-ay on the west side, and Isleta on an island in the river (actually, a volcanic outcrop in the western floodplain). The northernmost pueblo on the west side was named Mesilla, a name that would fit the Pur-e Tu-ay site (LA 489), which is on a small butte. Although its late ceramics leave open the possibility that Pur-e Tu-ay was established after the end of the contact period, it does not preclude the possibility of occupation at the time of Oñate’s arrival (ARMS; HPD; Marshall and Walt 1985: n.p.).

In combination, the reports of the sixteenth-century Spanish expeditions to New Mexico constitute a rich source of information about the geography of the Rio Grande pueblos. This study has drawn on the information they provide about the number and spatial distribution of pueblos in the Middle Rio Grande Sub-region, integrating it with archeological data, to establish the overall pattern of settlement. This area seemed to experience a fair degree of settlement stability compared with other parts of the Rio Grande Region. Ceramic evidence indicates that twelve of the thirteen pueblos in the northern Albuquerque Basin were occupied in all phases of the Classic Period (1300–1600). The explorers are quite consistent in the number of pueblos they reported, both at the beginning and at the end of the contact period. However, they did contribute to disturbed conditions. Their need to requisition food and clothing from the pueblos, in addition to other matters, caused considerable friction, which led in some cases to Spanish attacks on pueblos, especially by members of the Coronado expedition, who destroyed a number of pueblos in the northern Albuquerque Basin. In the same area the people of Puaray Pueblo may have destroyed their pueblo and moved to another because they were linked to the killing of two Spanish priests from the Rodríguez/Chamuscado expedition. But reports from later explorers seem to indicate that damaged or destroyed pueblos were rebuilt and that the number of pueblos and their overall



Map 13. Pueblos of New Mexico based on the Enrico Martínez Map of 1602. Reprinted by permission of the University of New Mexico Press.

location pattern did not change significantly as a result of Spanish intrusions during the 1540–1598 contact period. Thus, the reports of the Coronado, Rodríguez/Chamuscado, Espejo, Castaño de Sosa, and Oñate expeditions provide a geography of Pueblo settlement that most likely reflected the needs of those societies, but one that did change drastically once Spanish settlement replaced exploration.

Notes

1. This chapter is a specially prepared extract from *The Geography of Rio Grande Pueblos Revealed by Spanish Explorers, 1540–1598* (Barrett 1997).

2. Between 1540 and 1598 five Spanish expeditions to New Mexico left records of the Pueblo societies they encountered in the Rio Grande Region. These expeditions were led by Francisco Vázquez de Coronado (1540–1542), Francisco Sánchez Chamuscado (1581–1582), Antonio de Espejo (1582–1583), Gaspar Castaño de Sosa (1590–1591), and Juan de Oñate (1598). An additional document is a map drawn in 1602 by Enrico Martínez based on information provided by one of Oñate's men. (See Wheat 1957: 1: 29–33; Hammond and Rey 1966: 63 for discussions of this map.) (See Map 13.)

3. Although there is information about Pueblo settlements in all of the sixteenth-century Spanish chronicles of New Mexico, these accounts cannot be coordinated to give an entirely clear idea of pueblo numbers and location for a number of reasons: the explorers probably did not encounter the same occupied pueblos in all cases because some were abandoned and others reoccupied during the period; chroniclers did not report settlement location in an unambiguous manner and gave different names or no names to the pueblos; and they undoubtedly varied in their understanding of what they were told by local people.

Archeological identification of pueblo sites that were occupied during the 1540–1598 contact period is also burdened with many problems (Cordell and Gumerman 1989: 295). The dating of sites is based on the presence of certain ceramic types, the chronology of which is derived from such measures as tree-ring analysis from a few sites (Breternitz 1966: 105–107). Although there are questions about the regionwide applicability of these dates and the adequacy of surface collections (few sites have actually been excavated), it is the long duration of ceramic-type periods that creates the greatest problem for this study, which has a time frame of only fifty-eight years (Cordell 1984: 90–91). The diagnostic ceramic type for this period should be Glaze E—one of a series of glazed ceramic types that began with the introduction of Glaze A (1300–1475) and ended with Glaze F (1650–1700) (Warren 1979: 193; Chapter 21). Glaze E has been assigned dates between 1515 and 1650, making it possible that a site with this pottery could have been abandoned before 1540 or built after 1598. Evidence from some sites indicates that one type of Glaze F pottery might have been made as early as 1550, making it a possible indicator of pueblo occupation in the contact period (Sundt 1987: Table 2). In the same way, Glaze D may be an indicator because in some areas it continued to be made after 1515, possibly even into the seventeenth century (*ibid.*).

There is a further problem that bears on the identification of pueblo sites. Over time they have been subject to forces of destruction, natural and/or human. More so than in any other part of the Rio Grande Region, the disturbance of Tiwa sites in the Albuquerque-Belen Basin

by intensive agricultural and urban development as well as by periodic flooding and channel shifting has made their identification and temporal placement especially difficult (Schaafsma 1987: 10).

4. In the documents related to the Coronado expedition are references to several Tiguex pueblos attacked by the Spaniards. Two referred to by name, Arenal and Moho, were scenes of major battles. Pueblo de la Cruz and Pueblo del Cerco were probably alternate names for Arenal and Moho respectively. Alameda was the name of a pueblo located between Arenal and Alcanfor. Although distances between these pueblos are given, they vary from one witness to another and there is no information to indicate whether they were north or south of Alcanfor or even if they were on the same side of the river. It seems likely they were all on the west side, but it has been suggested that Arenal may have been on the east side (Riley 1981: 206, 210; Riley 1995: 170). Despite voluminous testimony in the Coronado documents about the pueblos involved in attacks and the speculation of various scholars, there is not enough information to link them to known pueblo sites (Hammond and Rey 1940: 331–335, 347–349, 352–360; Bancroft Library 1551; Bancroft Library 1544; Bolton 1949: 206–208, 212, 216–219, 229; Tello 1891: 419–422, 425; Riley 1995: 177; Schroeder 1992a: 185–187; Scurlock 1982: 180; Chapter 16).

5. See Mecham (1926: map) for another interpretation of the pueblos encountered by the Rodríguez/Chamuscado expedition and Schroeder (1979: 243) for a comparison of the Southern Tiwa pueblos of the Rodríguez/Chamuscado and Espejo expeditions.

6. All distances are based on straight-line measurements taken from 1:250,000 maps prepared by the U.S. Defense Mapping Agency Topographic Center. These measurements are rounded and should be considered approximate as were the distances mentioned by the Spanish explorers, who gave them in leagues. The standard league measured 2.6 miles and the long league about 4.0 miles. The league used by Luxán of the Rodríguez/Chamuscado expedition quite consistently measured about 3.0 miles. Castaño de Sosa is only consistent in that his league measured either 2.6 or 4.0 miles and not some other value. Oñate used the long league of 4.0 miles. For a discussion of the Spanish land league as used in North America see Chardon 1980: 147–151.

7. There are two large west-side pueblo sites in the general area but neither is opposite the Abó Wash site: Abeytas (LA 780) five miles to the south and Los Trujillos (LA 50271) eight miles north; neither shows evidence of contact period occupation (ARMS).

8. The late ceramics (Glazes E and F) found at the LA 953 site cast some doubt about the occupation of this site in the contact period, but it has not been ruled out (ARMS; Mera 1940: 20; Marshall and Walt 1985: n.p.; New Mexico Historic Preservation Division [HPD]; Franklin 1994: 75, 88).

9. Another analysis of the Pueblo settlement pattern there is presented by Vivian (1932: 14–77). A listing of different interpretations by various scholars is found in Scurlock 1982: 180.

10. Alameda Pueblo (LA 421) was reported on the west side of the Rio Grande in Spanish chronicles and on maps as late as 1701 (Hackett 1915: 383–384; Mecham 1926: 277; Delisle 1701; and discussed in Wheat 1957: 1: 56–57). Subsequent reports, maps, and archeological investigations show its location on the east side. A shift in the river's channel has

been considered a possible explanation for this phenomenon. The river might have reoccupied, for a time, the more easterly channel it had established in an earlier era, but recent attempts to ascertain if this could have been the case have given inconclusive results (Staley 1981: 24; Martínez et al. 1985: 4.33–4.34, 4.6; Sargeant 1987: 38–39, 41–44; Kelley 1969: 15). A major flood in 1735 or 1736 might have caused the river to shift to the more westerly channel it still occupies (Martínez et al. 1985: 4.7). The Miera y Pacheco map of 1758 shows Alameda on the east side of the river (Kessell 1987: 510–511). If the river did alter its course, nearby Chamisal Pueblo (LA 22765), which was also located in the floodplain, was probably affected and it, too, is considered a west-side pueblo in the contact period.

11. For an alternate interpretation involving an approach from the north end of the Sandias see Schroeder and Matson 1965: 168–170.

12. The LA 677 site, also known as Nuestra Señora de Dolores, has been built over and much disturbed by a church and school complex that has prevented excavation adequate to determine precisely when it was occupied (Scurlock 1982: 179–182; ARMS; Mera 1940: 19; Winter 1982: 183–185; Marshall 1982: 2, 4).

13. The earlier site, LA 50249, might have been the one referred to by Espejo (Marshall and Marshall 1992: 58, 89).