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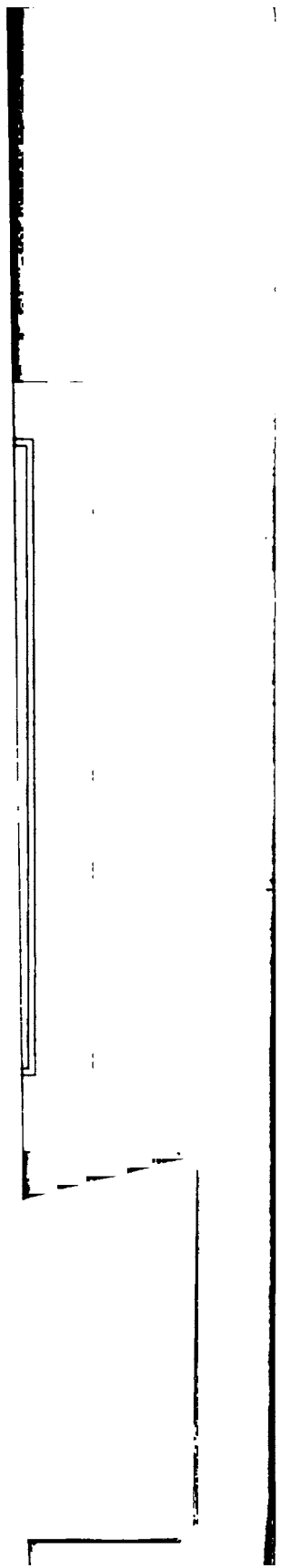
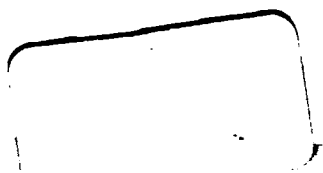
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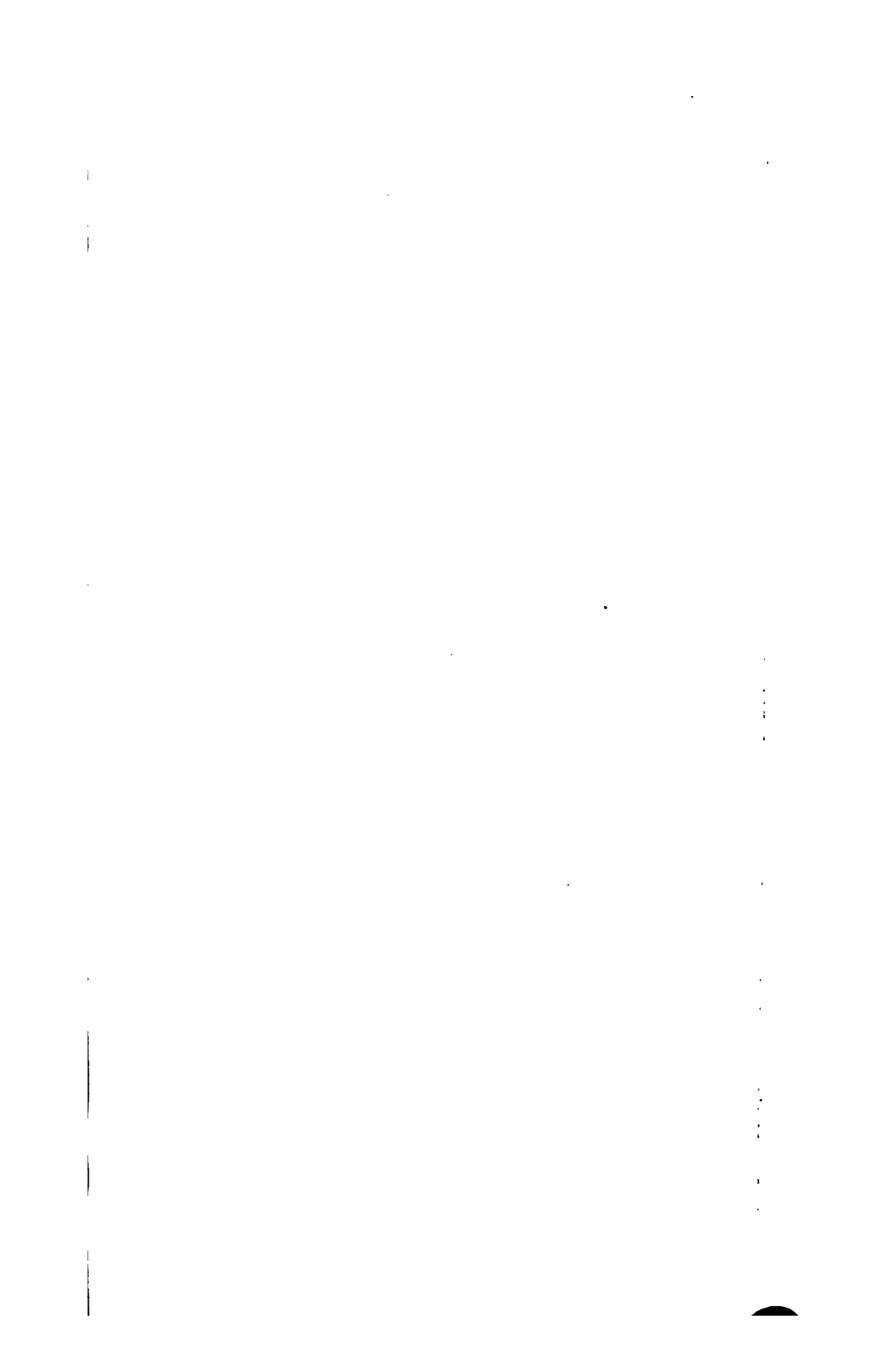


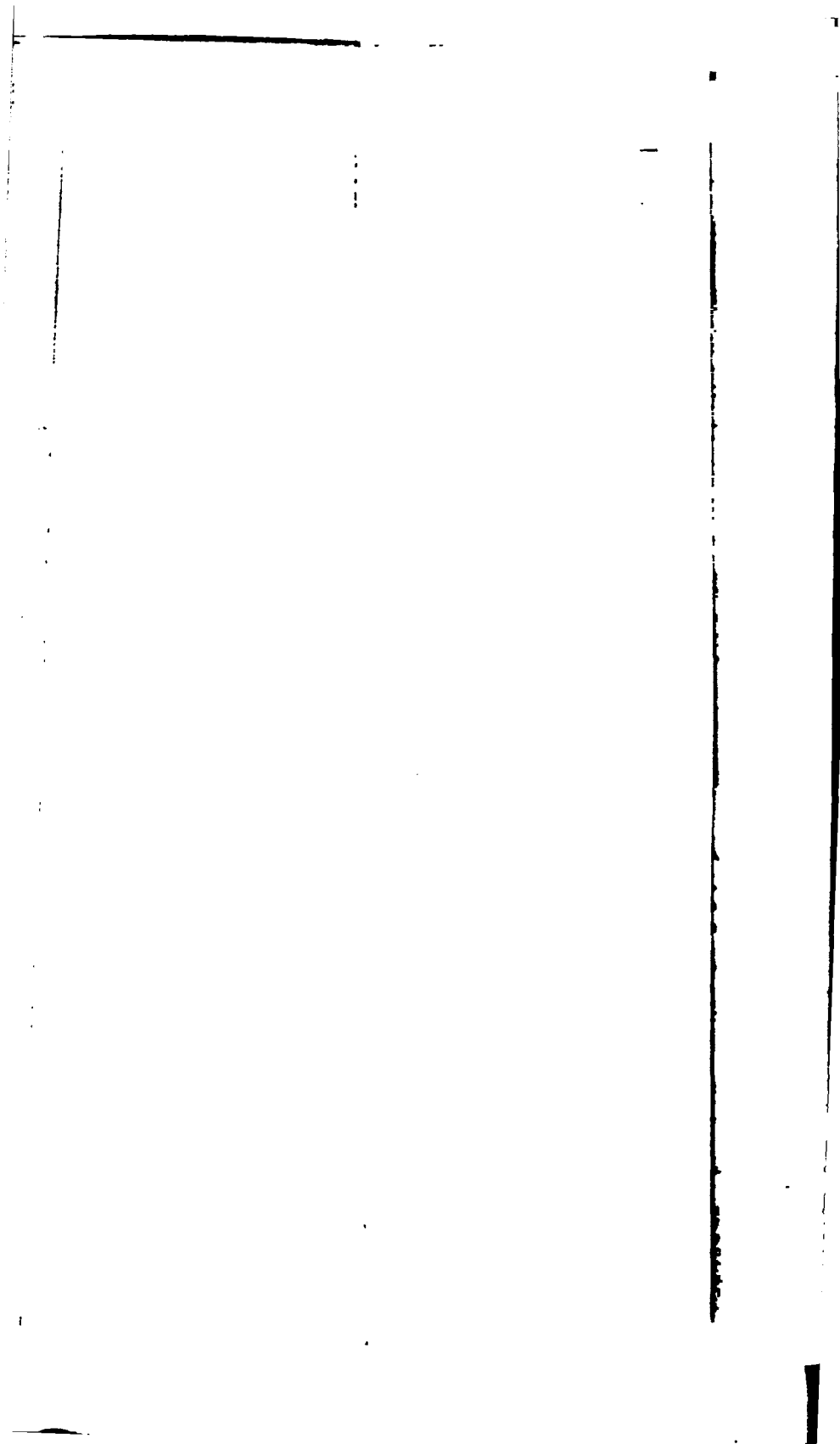
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Papers of the Archaeological Institute of America.

AMERICAN SERIES.

IV.

FINAL REPORT

OF

INVESTIGATIONS AMONG THE INDIANS OF THE
SOUTHWESTERN UNITED STATES, CARRIED ON
MAINLY IN THE YEARS FROM 1880 TO 1885.

PART II.

BY

A. F. BANDELIER.



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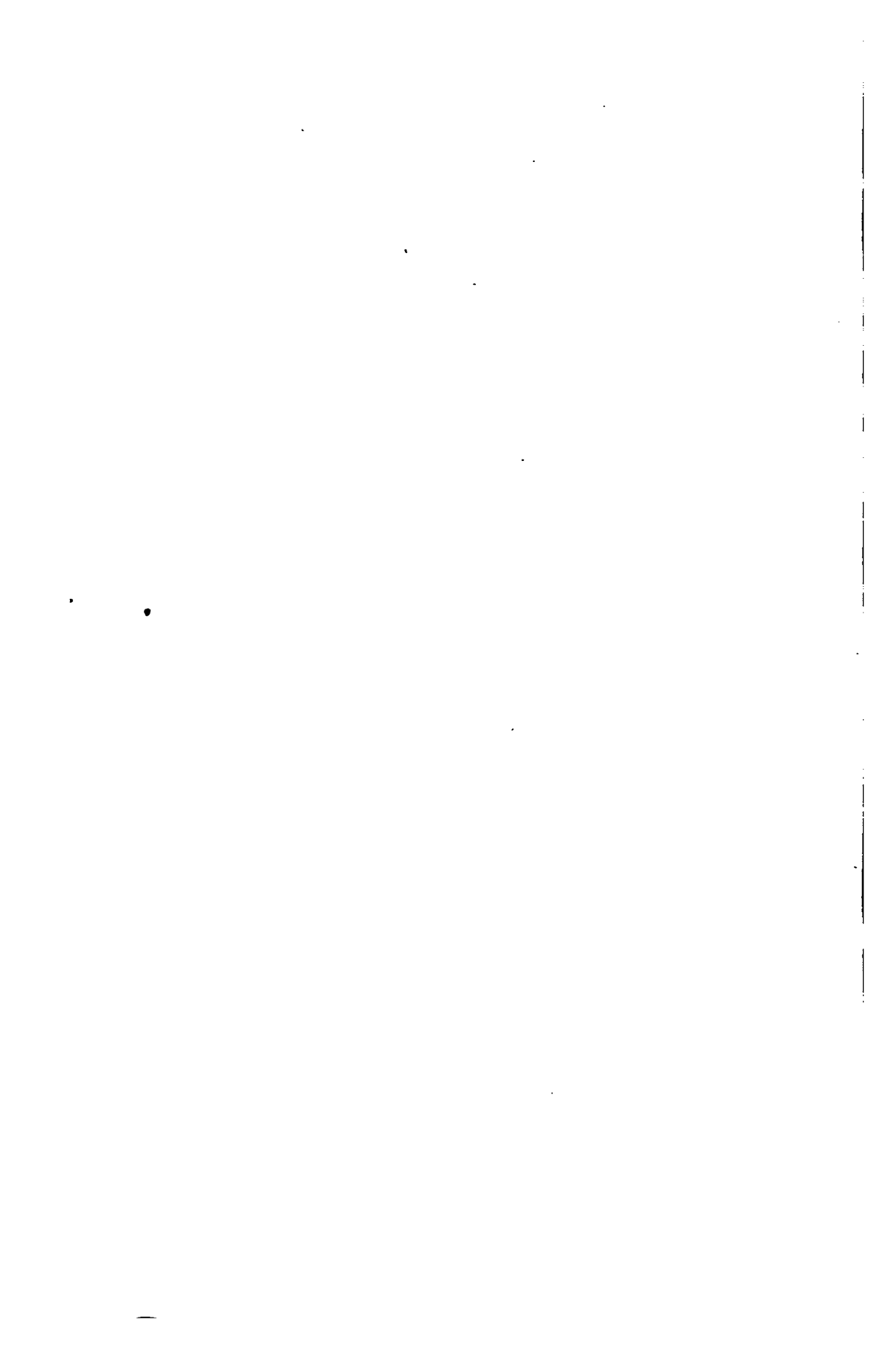
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FINAL REPORT
ON
INVESTIGATIONS IN THE SOUTHWEST. •
PART II.



INTRODUCTION.

THE search for antiquities is perhaps easier in the Southwest of North America than in any other section of the continent, at least within the limits of the United States. In consequence of the great aridity, the ruins of buildings are less exposed to rapid obliteration, and even where the walls have crumbled to mere rubbish heaps, these remain free from overgrowth for a long time, and are therefore of easy detection. Often they can be seen at a considerable distance. In New Mexico and Northern Arizona, a reddish patch in the extensive landscape spread out before the eye frequently indicates the site of a ruin, the débris taking a hue distinct from that of the soil. In Sonora, especially along the course of the Sonora, Oposura, and Upper Yaqui Rivers, a thorny vegetation has spread over the sites of former villages, and the explorer must scramble through disagreeable thickets of Mezquite (*Prosopis juliflora*), Palo Verde and Palo Blanco (*Parkinsonia*), Ocotilla (*Fouquieria*), and Cactus; among which the formidable Choya (*Cylindropuntia*) is not only annoying, but dangerous. It is beneath the scanty shade of such thickets that we find most of the vestiges of past generations of Indians. On the Lower Gila, in the delta between that river and the Salado, Mezquite bushes less dense than those of more southern latitudes have overgrown the remains of considerable build-

ings. Usually, however, on the sandy plains of Southwestern Arizona, and along the banks of the Casas Grandes River and its tributaries in Northwestern Chihuahua, the clusters of mounds to which the houses are reduced are visible from afar. Their color and shape distinguish them at a glance from natural eminences.

Fragments of pottery, flakes of obsidian or flint, and objects made of basalt, lava, or any other hard mineral, usually accompany the ruins. Still this is not always the case. The numerous ruins around Zuñi show but very little pottery on their surface; many of them none at all. This is due, as Mr. Cushing has discovered, to the custom of the present Zuñi Indians of collecting all the ancient broken pottery and grinding it to powder in order to mix it with the clay out of which they manufacture their present earthenware, to give it greater hardness. In many parts of Sonora I noticed a scarceness of potsherds also, but could not ascertain whether it was due to the same cause as at Zuñi. On the other hand, the appearance of old broken earthenware on the surface of the ground is not unmistakable evidence of the former existence of a settlement. It may be due to accidental breakage, or may indicate a spot where a certain vessel was left with sacrificial offerings, or it may be a vestige of burial. This is still more the case with obsidian, flint, basalt, or bone implements. The roaming native used the arrow-head in common with the house-dweller, manufactured it with equal care and perfection, and employed it to a more recent date than the latter. It is otherwise with the grinding slabs, or, as they are usually called in the Southwest, Metates. Where these are met with, the former existence of at least a temporary abode of village Indians is certain. Stone axes and hatchets, mauls and hammers, are easily lost on a journey or campaign; but

since the roving aborigines in the Southwest did not make them, it is reasonable to look upon them at least as signs of the passage of sedentary Indians. Bone implements were common to both classes of ancient Americans in the Southwest.

The existence of artificial caves or of ancient dwellings inside natural grottos or recesses, and of villages constructed upon rocky projections or platforms, the so called "cave dwellings" and "Cliff-houses," is dependent upon the geological features of the country. Erosion has acted powerfully in many parts of the Southwest, — aqueous erosion as well as atmospheric. But the nature of the rock has determined the extent of this action. The three kinds of ruins named, therefore, cannot be looked for everywhere. Artificial caves require exceptionally soft material in order to be burrowed out with primitive utensils. Light, friable volcanic tufa, or ashes, is the rock wherein the artificial cave is mostly found; and as this formation is not very common, it follows that the type of dwelling is limited in distribution. Large natural cavities or shelters cannot usually be looked for in granite, syenite, or hard porphyry; and long ledges over precipitous slopes or overlooking vertical walls are most abundant in sandstone. The explorer has therefore to pay close attention to the geological and lithological features of the country.

Intercourse with the inhabitants of the country, and if possible a certain degree of intimacy with them, are among the first requisites for successful exploration. However humble the condition may be of him who has been reared in the vicinity of objects to which our researches are directed, and however limited his intellectual faculties or the field which his mind can embrace, he still has the advantage of local experience. If he is truthful, and in most cases he

can be made such by affable treatment, he will always be able to tell us something valuable. The Indian is less accessible than the Spanish-speaking inhabitant. Ruins are a part of his folk-lore, not seldom a part of his creed. This he is loth to divulge. He goes to the ruins for many objects of his time-honored worship; many of the artificial objects are still useful to him at this day. Consequently he looks upon the investigator with a suspicious eye, eludes his direct questions, even shrinks from his company. It is certain that the past of a great number of ruins is still clearly engrafted upon the Indian's mind as folk-lore and ritual. In the First Part of this Report I have indicated how these are preserved, and what *role* they play in the life of the Indian. In order to be made useful for archæological research he must be approached very cautiously. The study of folk-lore in the Southwest has only been initiated; important results will undoubtedly spring from future work in that line.

As a general rule, the Indian is more prone to give reliable information about his neighbor than about himself. Therefore, by consulting such members of a tribe as have travelled, we obtain data concerning the archæology of other districts which are sometimes precious. The statements of a Tehua Indian from San Ildefonso first led me to identify Tabirá with the so called Gran Quivira; while from the Piros of Senecú, whose ancestors occupied that pueblo, I had not been able to learn anything,—not because they could not, but because they would not tell. It belonged to their own circle of knowledge, into which they were unwilling to admit me at the time. This reticence on the part of the Indian may finally disappear; still, it is quite time that their myths and traditions were collected, lest with the breaking up of customs on which that reticence is founded the memory of the past be lost.

Generally speaking, the nomadic Indian, Apache or Navajo, can impart more information on the geographical distribution of ruins than the Pueblo. The former roams, the latter stays in one spot. The former has paid no attention to settlements, except as places for plunder or trade; he may remember the manner in which a particular village was destroyed, or how its abandonment was brought about. With the Pueblo, on the other hand, the ruins are a part of his own history. Nevertheless the nomad has seen a greater stretch of territory, and he may, if he chooses, inform us of ruins of which perhaps only a dim trace is left in some mythological tale of the village Indian.

Objects of antiquity are preserved by the Pueblo Indians in many villages. Sometimes they may be obtained, but whenever they have any peculiar value for purposes of worship the native will not part with them. The Indians of Santa Clara have thoroughly rifled the caves of the Pu-yé and Shu-finné formerly made and occupied by their ancestors, and valuable "relics" have wandered into the hands of a few collectors. The leading Shamans in each village carefully preserve curious implements, very ancient sacrificial bowls, and other objects, either as particularly strong charms or as vases for sacrificial purposes. I saw in the hands of the Tzihuisendo (chief Tzihui) of San Juan¹ a beautiful green slab, resembling malachite or dark jade. It was said to have been brought from the south, probably from Chihuahua, and was used, together with an elliptical plate of basalt, to call to order the meeting of medicine-men on certain very solemn occasions.² The stone knives at Zuñi are antique. Medicine bowls are used in preference when they are very ancient and well preserved. In general, with the Indian, what is old or what has come from distant lands

¹ See Part I. pp. 305 and 309.

² The greenstone is called cua-co; the basalt, cu-cung.

very soon becomes sacred. What is great in age, and large in size or space, appeals with equal force to his superstitious feelings.

Antiquities are also occasionally found in the houses of Spanish descendants, and much information by no means to be disdained can be derived from the Mexicans. Shepherds have been of great service to me, and I have nearly always found them reliable. They travel with their flocks over great distances, and are accustomed to scan the ground thoroughly, and for a knowledge of ruins located far away from inhabited districts their information is precious. But while their geographical knowledge is usually accurate, the same cannot be said of their descriptions of architectural details. In matters of proportion and size the superlative mostly prevails; but these exaggerations are not always intentional. A ruin appears usually more extensive than it is, and the means of comparison which the average Spanish New Mexican possessed until within a few years were very scant. He compared the long, many-storied buildings of Tabirá with the hamlet where was his own little adobe house with two or three apartments, and declared the Gran Quivira to be a "city," simply because he had himself never seen a city. His artistic ideas being on the level of those of the Pueblos, he praised a quaintly decorated ancient pot or urn as a marvel of beauty. His tales about the history of certain ruins must be taken with greater allowances than an Indian tradition, for Indian folk-lore rests on the basis of definite recollections, though shrouded by a haze of mythological combinations, whereas the story of the Mexican peasant or herder lacks that basis, or contains only a greatly disfigured account of it, gathered from hearsay. It becomes the task of the investigator to sift critically all such sources of information, without disdaining or neglecting any of them.

It is self-evident that practical acquaintance with the Spanish language is essential in the Southwest. Only when we understand people, and can make ourselves understood to the full extent of our thoughts, can we expect to derive profit from intercourse with them, and to obtain their confidence; we must also be forbearing towards their manners and customs, and drop prejudices which, although traditional, are unjust, and have sprung as much from lack of direct intercourse as from erroneous statements and appreciations of history. We must forbear, all the while reflecting that that forbearance is mutual, and that there is much in our habits at which the inhabitant of the Southwest might legitimately sneer, were he not too considerate to do so.

The careful study of documents is indispensable for a successful exploration of the antiquities of the country. Numerous notices of ruined villages are scattered through the voluminous archives of Spanish rule in the Southwest. I will refer here only to the descriptions of the Casa Grande by Father Kuehne (Kino) and Father Sedelmair,¹ of the Casas Grandes by Rivera,² and of the ruins in Northwestern New Mexico by Father Escalante.³ Such descriptions, dating back sometimes two centuries or more, enable us to restore much in these edifices to which their present condition gives no clue. Furthermore, many a ruin that has been treated as "prehistoric" becomes modern in the light of

¹ The reports of Father Kuehne are found in the *Documentos para la Historia de México*, 3d series, vol. iv. pp. 804, 838, and 4th series, vol. i. p. 282; also in an Appendix to the *Luz de Tierra Incógnita*, by Mange. See my *Contributions to the History of the Southwestern Portion of the United States*, p. 93. That of Father Sedelmair is found in the 3d series of the same collection, under the title of *Relacion que hizo el Padre Jacobo Sedelmair, de la Compañia de Jesús, Misionero en Tubutama*, vol. iv. p. 847*.

² *Diario y Derrotero*, etc., 1736, p. 48.

³ *Diario y Derrotero*, etc., in *Documentos para la Historia de México*, 2d series, vol. i. p. 377 et seq.

documentary information. We are enabled to draw the line between what is historically established, and what is earlier; the analogies in culture, as well as the differences, become more apparent.

Aridity, not sterility, is the general characteristic of Nature in the Southwest; and Mr. Cushing is justified in his designation of ancient culture there as "aridian."¹ The majority of ruins in New Mexico, Arizona, Chihuahua, and parts of Sonora, are found in sandy valleys, on plateaux insufficiently protected by trees, or on levels which, though fertile when watered, present at the outset a forbidding appearance. The northern limits of the region of house-builders remains yet to be definitely established. We only know that Southwestern Colorado and Southeastern Utah harbor many well preserved ruins; the eastern limits seem to be the meridian of the Pecos River; the western, the Great Colorado; and, farther south, the dismal shores of the Gulf of California. The country of village Indians is therefore characterized by scanty precipitation and irrigation, and is almost exclusively mountainous. Central Colorado is beautifully watered, and well wooded, yet I have been unable to ascertain that any vestiges of sedentary Indians have ever been discovered about the Sierra Blanca, or east of it. I shall not attempt an explanation of this. Careful examination of the physical features alone is insufficient. Causes of which we have as yet no record may have been at work, inducing the Indian to establish permanent homes under natural circumstances apparently unfavorable, and to shun neighboring sections far more inviting in resources. Lovely valleys bordered by high forests, and abounding in springs

¹ *Preliminary Notes on the Origin, Working Hypothesis, and Primary Researches of the Hemenway Southwestern Archaeological Expedition.* "Congrès International des Américanistes," Berlin, 1888, pp. 186, 190.

and brooks, are certainly of great promise to civilized man, who can subdue the vegetation of the temperate zone and render it profitable; but the stone axe was an imperfect tool for "clearing," and the abundance of game drew thither the nomad as well as the villager. In the struggle for possession the latter was always at a disadvantage. This is a problem which must be approached by careful investigation, and Indian tradition may yet prove to be of great, perhaps decisive importance.

Within the area over which the vestiges of sedentary culture are scattered in the Southwest, and as far into Mexico as I have been able to penetrate, it is useless to look for ruins at an altitude exceeding eight thousand feet. Consequently, very few, if any, are found in the high forests, although the northern Sierra Madre presents an exception. The cave villages on the Arroyo del Nombre de Dios, in the mountains west of Casas Grandes, lie in a region covered with beautiful pine forests. Those on the Arroyo de los Pilares and near the Rio de Piedras Verdes I have not been able to visit, but the appearance presented by the landscape, as I surveyed it from the crest of the Puerto de San Diego, indicated to me that the wooded region extends over the whole interior of the range. It is therefore not the forest growth which has prevented the establishment of permanent Indian homes above a certain limit; it is rather the climate and the lack of space for cultivation, together with the steepness of slopes and the mountain torrents raging in narrow valleys with destructive power. Altitude may have been the main obstacle to settlement in some cases, for the beautiful grassy basins, with abundant water and fair quality of soil, that extend west of Santa Fé between the ranges of Abiquiu, Pelado, and Sierra de Toledo on the east, and the Sierra de la Jara and the mountains of Jemez on the west,

under the name of "Los Valles," are destitute of ruins. There it is the long winter, perhaps also the constant hostility of roaming tribes contending for a region so abundant in game, that have kept the village Indian out. Vestiges of antiquity are met with on the highest crests and summits, but they are evidences of worship only. Prayer-plumes are found on the Sierra de San Matéo (Mount Taylor), as well as at the lagune on Lake Peak, near Santa Fé.¹ The Indian of to-day still makes pilgrimages to such prominent points to offer sacrifices to some of "Those above."

The lower limit of the ruins seems mostly dependent upon natural features. In the eastern parts of New Mexico the steppes have, of course, prevented the establishment of permanent abodes. Nevertheless, there are said to be traces of the existence of a succession of ruins along the Canadian River, far across the great plains. Should these indications prove true, and these vestiges of settlements continue as far east as the outskirts of the Mississippi valley, it would be a fact of considerable importance. I have seen Pueblo pottery, which, I am satisfied, was dug up on the banks of the Canadian River, some distance east of Ocaté. Buffalo hunters have assured me, that even beyond this they had seen distinct traces of ruins along the same stream, and had picked up potsherds from the surface. For some time, I have desired to make this the object of personal investigation. What I have learned will be found later, in Chapter III.

On the side of Arizona the ruins descend to within a thousand feet of the sea level, or possibly lower; but the aridity is so excessive, that it has prevented the establishment of settlements on the coast. The same must be said

¹ The elevation of the Sierra de San Matéo is given at 11,200 feet; that of Lake Peak at 12,405. Later measurements of the former make it 11,391 feet. The lagune on Lake Peak is of course lower than the summit.

of the "playas" of Sonora. In the Southeast I am slightly acquainted with archæological features in the vicinity of El Paso; there are caves in the neighboring mountains from which sandals of yucca strips have been extracted; about other ruins I have positive information only as far as the hacienda of San José, where fetiches have been exhumed. On the Texan side the remains, if any, are few. The altitude of the banks of the Rio Grande in that vicinity is not over 3,800 feet, and if this should prove the limit of settlement in ancient times, it is due to the barrenness of the country beyond. Of the interior of Texas I have no knowledge, except that, in the first half of the sixteenth century and since, only bands of roving Indians have occupied the State.

It must not be supposed that the area indicated as containing remains of the sedentary aborigines is uniformly covered by them. There are many districts utterly devoid of ruins, such as the plains of San Agustin in Southwestern New Mexico, the crest and heart of all the numerous mountain chains, the "Valles," portions of the plateau of the Natanes in Eastern Arizona, and many other sections. The banks of the Rio Grande, from the San Luis valley to the end of the gorge of the Embudo, appear also not to have been settled in ancient times.

The causes that produced the foundation of villages, as well as those that brought about their abandonment, are so manifold, that only a few of them can be indicated here. The Indian needs, in order to stay for any length of time in a given locality, water, wood, a limited area of cultivable soil, and reasonable safety. Water need not be always in close proximity to his village. If that village is perched on a high mesa, a spring at the foot of the height will be sufficient, provided the declivity is not too steep. In places where the tribe had, for the sake

of security, to select an inexpugnable rock as its residence, natural cavities played the part of reservoirs, and the water supply furnished by rain was artificially increased every winter by accumulating snow in the tanks. At this day we have an instance of the kind at Acoma. A distance of half a mile or a mile from the banks of a river was, and is, not looked upon as a great inconvenience by the women, whose duty it is to furnish the household with drinking water by carrying it on their heads in jars or urns. Leather bags were also used for carrying water, in quantities larger than those which the "tinaja," as the water-jar is called in Spanish, could contain. The various ruins scattered along the sand-flow, or "médano," issuing from the basin of the salt deposits of the Manzano, have as yet not revealed any springs in their vicinity, although at Tabirá (Gran Quivira) especially the search for water has been carried on repeatedly. Many are the hypotheses resorted to for an explanation of this strange feature. It has been overlooked, that every one of these ruins shows the traces of water reservoirs artificially constructed, and large enough to supply the population of each village all the year round; so that these villages of the Piro, though located in a comparatively open country, employed the same means as the people of Acoma on their cliff. To explain the former existence of villages at places where there is to-day no visible token of water supply, we need not, therefore, resort to the hypothesis of a decrease in rainfall during the past centuries.

It cannot be denied that the number of springs in the Southwest is greater than has been supposed. Such watering places, artfully closed by Indians, are now occasionally discovered in the immediate vicinity of ruins, showing that apparent aridity is sometimes misleading. I will mention a recent occurrence that throws additional light on

the question of local, and more or less permanent, changes in the conditions of water supply. The violent earthquake that visited Sonora, Chihuahua, Southern Arizona, and New Mexico in May, 1887, not only caused a sudden increase in the volume of many springs, but forced new ones to the surface in places where hitherto permanent water was unknown. But while earthquakes can augment springs or create new ones, so can they cause others to disappear; and instances of the kind are known to have occurred in the Southwest in connection with seismic disturbances.

The proximity of forests could not always be secured by the Indian when selecting a site for a home. But fuel was needed for his hearth and his estufa, both in winter and in summer. He also required timber for his roofs and ceilings, for the ladders on which he reached those roofs, and on which he descended into the interior of the houses. In Northern and Central New Mexico and Arizona, forests are frequent; also in Sonora and in Northwestern Chihuahua, as far as the Sierra Madre reaches; but in Southern New Mexico and Arizona, and in many parts of Northern Chihuahua, the sedentary Indian had to go long distances for the beams of his roof and of his ladders. Yet it should be remembered that the work of obtaining and carrying building materials was not, like that of gathering fire-wood, a constantly recurring task. It occurred perhaps once in the lifetime of an individual, perhaps only once in the lapse of several generations. Communal labor had to perform it, since there were no beasts of burden, and the individual alone was powerless. Like the opening of an irrigation ditch, or "acequia," it was a permanent "improvement," which was to last as long as the village. Distance, therefore, was not an insuperable difficulty.

Cultivable soil need not lie in the immediate neighborhood

of a village, or be contiguous to it. A pueblo might be, as is Acoma to-day, ten or even fifteen miles from its fields. The custom of emigrating *en masse* to these fields in summer, leaving at home only a small portion of the people to guard it, explains why we find ruins in places where the nearest tillable patch is quite distant. Neither was it essential that the soil should be irrigated. Of course it was preferable, and wherever groups of sedentary people could monopolize the neighborhood of a permanent stream, it was done, and irrigation ditches opened. Still the number of ruins situated in places where no irrigation was possible, and where it is also manifest that there were cultivated spots, is considerable. Indian corn, of the small variety, bushy, with long ears but a light grain, will grow without artificial watering wherever the rainy season is tolerably regular, as upon mountain slopes. The presence of ancient villages on the high mesas west of the Rio Grande, in the latitude of Santa Fé and as far north as opposite to San Juan, in places difficult of access, and almost without communication with the river banks, although the latter are only ten to twelve miles distant, need not therefore surprise us. The people who dwelt in the caves of the Pu-yé and on the mesas around it, the inhabitants of Tzi-re-ge, of the Potrero de las Vacas, etc., had their patches of corn, of beans and squashes, on the same plateau as their dwellings. They were of course exposed to the danger of periodically recurring droughts, and Indian traditions point to the fact that such periods of aridity have sometimes caused the shifting of tribes.

Similar conditions have enabled the Piros to establish their villages in the proximity of the salt marshes. At the Gran Quivira (Tabirá), considerable snow falls in ordinary winters, and during the rainy season precipitation, although of short duration, still occurs in reasonable quantities. The

people of these villages had therefore no need of irrigation for their limited crops. In the valley of Taos, on the heights above the Ojo Caliente of Joseph, at the great ruin of Sepä-uä, near the Rio Colorado, in the mountains of Central Arizona, and in the Sierra Madre of Sonora and Chihuahua, the native resorted to artificial means to store moisture in the soil, by surrounding the space which he intended to cultivate with an enclosure of stones. He also used mountain torrents for irrigation, by planting his garden beds right in their path, and keeping them clear of drift. An analogous device was resorted to by the inhabitants of the Gila valley, by opening narrow channels from the mountain slopes to the valleys in order to lead the "arroyos" to the fields established on either or both sides of such ditches. In mentioning these methods I am not indulging my imagination, for the Pimas are positive in their declarations on the subject; so are the Opatas; and the Maricopas to-day use these artificial prolongations of the beds of torrents for irrigating their crops. In the regions of Southern Arizona irrigation is essential, as the rainfall is almost exclusively limited to the mountain slopes and crests.

Last, but not least, the village Indian was influenced in his selection of the site for his home by the desire to insure safety from enemies. Permanence of abode does not preclude aggressiveness, but, even where a tribe is warlike, a strong position, in which non-combatants may be left perfectly secure, is one of the first conditions of successful offensive warfare. The pueblo of Tenochtitlan was rendered almost impregnable through its lacustrine surroundings, and Cuzco was protected by formidable mountains. In the case of the Southwestern village Indians, there is no evidence of any tribe or stock ever obtaining a preponderating influence or power akin to that of the ancient Mexicans or the Incas.

On the contrary, they seem to have always been on the defensive towards one another and the nomads. Safety is as much insured by watchfulness against surprise, as by successful resistance. To discover the approach of danger beforehand was even better than to repel an assault. The choice of an elevated site was therefore as much for seeing as for fighting "from above," by placing themselves upon a higher level than the assailant, which is the chief aim of Indian defensive tactics. It would lead me too far to enumerate all the instances of ruins found on commanding eminences. But there are also many cases in which an elevated situation for the village proper could not be secured, or where it was sacrificed to other advantages in the shape of water, timber, or arable soil, or to religious considerations. In many of these cases, lookouts, frequently watch-towers, round or rectangular, were erected in proximity to the pueblos. It is well known that such structures are frequent in the northern sections of the Southwest, but I have also found them in Arizona; and the best example of one, provided it is of Indian origin, stands on the summit of the Cerro de Montezuma, near Casas Grandes. The watch-tower, therefore, is neither a regular feature in the architecture of the Southwest, nor is it peculiar to a certain type of dwellings.

Along the banks of streams, the currents not unfrequently drove the villager to the higher dunes. On the Rio Grande near Bernalillo, the historically noted pueblo of Puaray is a good example, in which safety from inundations was combined with a tolerably commanding position. From the reports of Coronado's expedition we learn that there were several inhabited villages within sight of each other, all belonging to the same stock of people.¹ Puaray and the pueblo

¹ See Part I. p. 129.

north of it commanded a wide range of view, and in this manner acted as lookouts for those situated on the opposite bank, where the town of Bernalillo stands to-day. Cochiti, Santa Clara, and San Juan, are situated like Puaray. But the centre of a plain, or of a broad valley, is quite as favorable for defensive purposes as an eminence. From the tops of the high buildings a wide view is commanded, and the open ground is less favorable to stealthy approach. Examples of this kind are the villages in the Tempe valley of Arizona, those near Ascension in Northern Chihuahua, Taos, and modern Halona, or Zuñi.

Retreat into narrow gorges, caves, and to cliffs or ledges, indicates compulsion in location. With the artificial caves it is different. The situation of the cave villages of the Pu-yé and Shu-finné west of Santa Clara is a commanding one, the view from there being remarkable for its extent; but what induced the Tehuas, to whom the excavations are due, to resort to the place, and to the kind of architecture, was the extreme friability of the rock. It was easier to burrow a home than to build it. When deterioration set in and endangered further residence, the people built a village on the top of the castle-like rocks in the bases of which they had hollowed out their grottos. The Rito de los Frijoles is a secluded gorge of difficult access, where the Queres could dwell in the numerous artificial caverns with little danger from enemies; but it was the fertility and irrigability of the little vale, together with the easily workable pumice-stone of its vertical northern cliffs, that induced them to make their home there, and not a military necessity, as seems to have been the case with most cliff or cave villages elsewhere.

I merely allude here to a feature in methods of defence which makes its appearance in the southern portions of the Southwest, especially in Sonora. This is the erection of

places of refuge, fortified by primitive parapets, in the neighborhood of villages, or in connection with one or more groups of settlements. These "Cerros de Trincheras" are a purely military feature, which has no bearing upon the questions under consideration, namely, the causes that determined the native in the selection of his place of abode.

The element of religion cannot be overlooked. An oracle, a presage, a striking feature in landscape recalling to the Indian one of his mythological types or fetiches, may have exerted a decisive influence. Such instances will be clearly developed when the folk-lore of the Southwest becomes better known. Another element is the occurrence of a natural product prized by the Indian, for subsistence, for mechanical purposes, for decoration, or for worship. I have already mentioned the salt lagunes of the Manzano, which certainly induced the Piros and Tiguas to settle around that otherwise dismal spot. The same may be said of the salt basins south of Zuñi, where well preserved ruins testify to former habitation. The basin of Galisteo, south of Santa Fé, is far from prepossessing or favorable for agriculture,¹ but the neighborhood of the turquoise mines, as well as the proximity of the buffalo, have had great weight in inducing the Tanos to settle on that barren expanse. The Indians of San Felipe would be loth to abandon their location, not merely on account of its fertility and the facilities for irrigation, but also on account of the veins of ochre, used for red paint, in the volcanic mesa at the foot of which their village is built. The village of Cia enjoys to-day almost a monopoly of white apatite and flesh-colored feldspar, both of which are held in high esteem for trinkets and fetiches.²

¹ See Part I. p. 156.

² The localities where these minerals are found, near Cia, are said to have been closed by witchcraft.

These are only a few instances, at the present time, which enable us to conjecture about the past.

From the foregoing examination, it follows that any exclusive explanation of the causes of settlement of land-tilling aborigines in the Southwest is impossible.

I have reached the conclusion from what little knowledge I have of Indian traditions, that the number of ruins by no means indicates a considerable contemporaneous population at any given time. Mr. Cushing, in his remarkable investigations of Zúñi folk-lore, has found that, in the course of the shiftings of that tribe, they settled successively in not less than one hundred and nineteen different places.¹ Previous to the coming of the Spaniards the Indians of Cochiti had successively occupied the Rito de los Frijoles, the Potrero de las Vacas, the Potrero del Capulin, or San Miguel, the vale of Cuapá, the river front on the north side of the Cañada de la Peralta, and the south bank of the same torrent.

The Indians of San Juan enumerate at least three shiftings immediately previous to the sixteenth century, and their traditions point to numerous ruins on both sides of the valley as having been formerly villages of the Tehuas.

A similar story is told by the people of Cia, of Jemez, and by the Tiguas. We have not as yet many details concerning the cause of abandonment in each instance; but it is certain that warfare had much to do with it. The persistent harassing practised by the nomads upon the settlers, local droughts, freshets (as at Santo Domingo at least four times), pestilence (on the Río Mimbres), oracular utterances,

¹ *Preliminary Notes*, p. 189. "Thus we find in the great migration ritual of the Zúñis . . . that even traditionally they found no fewer than something like one hundred and nineteen middles of the world ere the final actual middle of the world was discovered."

lightning strokes, internal dissensions, the formation of new clans and consequent gradual emigration, earthquakes, — all these may have been agencies in the case of ruins of which nothing but their existence is known. We have few criteria from which to deduce with any degree of probability the cause of abandonment. If we find the pottery well preserved and without traces of intentional perforations or breaking, we may, from our knowledge of Indian customs among the Pueblos, conclude with reasonable probability that the people were compelled to hasty evacuation. If in addition, as at Heshota Uthia in the Upper Zuñi valley, fractured bones or skulls are found, it is probable that a surprise, raid, or assault had driven off the people. Where the pottery is broken, or perforated at the bottom, a slow and undisturbed evacuation may be supposed. If the ruin lies on the banks of a torrent, like Gi-pu-y, the old village of Santo Domingo, and that torrent has swept through parts of it, or carried away one side, it justifies the suspicion that the abandonment was compelled by a disastrous freshet. The evidence is rarely positive enough to exclude all doubt, and the greatest caution should be exercised. In the instance just quoted, of Gi-pu-y, tradition tells us that a sudden rise of the Arroyo de Galisteo caused the people to forsake their homes, and flee to the banks of the Rio Grande.

The abandonment of many pueblos has been attributed to earthquake shocks, or to volcanic eruptions. In Western New Mexico and Arizona there are said to be ancient houses into which lava has penetrated, so that it seems safe to assume that their occupation was prior to the latest eruptions. The destruction of the often mentioned Tabirá, as well as that of the large pueblos at Joseph's Ojo Caliente (Poseuing-ge, Ho-ui-ri, and others), has frequently been attributed to seismic convulsions. I have not yet been able to elicit

any reliable information from the Tehuas, whose ancestors built and occupied the villages near Ojo Caliente; but the presence of a number of skeletons, promiscuously scattered through the rooms and in various postures, is no incontrovertible proof of a violent earthquake shock having slain the people and destroyed the houses. The condition of the latter may be the result of decay posterior to evacuation, and the corpses may be those of individuals who fell victims to an acute pestilence. Within the past century, epidemics have almost depopulated pueblos in a very short time. At Jemez, in 1728, one hundred and eight persons died in less than one month. The epidemic of 1782 caused over five hundred victims in the pueblos of Santa Clara and San Juan and vicinity in two months' time. The abandonment of Pecos was greatly due to so called mountain fever. Although previous to the advent of Europeans neither small-pox nor the measles were known among the aborigines, still instances of "great dyings" are preserved in folk-lore; and in the case of a violent scourge, the superstitious dread inherent in Indian nature might impel a tribe to forsake its homes precipitately, and without giving sepulture to the dead or care to the living. The probability that earthquakes were the cause of the abandonment of the pueblos at Ojo Caliente is as strong as any other hypothesis. In regard to Tabirá, the existence of an extensive and apparently recent bed of lava south of the Mesa de los Jumanos, and the resemblance of the sand-flow of the Médano to the bed of an extinct river, whose course might have been intercepted by an upheaval, lend color to the hypothesis that an earthquake caused the destruction of that village and partial extermination of its inhabitants. In the First Part of my Report,¹ I have established that Tabirá was a

¹ See Part I. p. 131.

settlement of the Piros, a well known mission in the seventeenth century, and that it had to be abandoned about 1670 on account of the Apaches; but I have been unable to find any trace of volcanic outbreaks or violent earthquake shocks in New Mexican archives. Still, while the fact that the Apaches compelled the evacuation of Tabirá seems beyond all doubt, the silence of documents in respect to seismic phenomena does not authorize us to deny their occurrence within historic times. In 1887 the shock was violent at El Paso, all along the Gila River, and in Albuquerque, while at Santa Fé nothing was felt. An earthquake may have been severe at the Salines in the seventeenth century, and the northern part of the Territory may not even have heard of it.

Before entering upon a discussion of aboriginal architecture and its details, I desire to offer some observations on the manner of exploring ruins. The number of those examined by me is nearly four hundred; the territory over which they are dispersed has been indicated in the Introduction to the First Part of this Report.

It is just as necessary to trace out where remains do not exist, as to determine where they are. I have therefore taken especial pains to find out, through personal inspection and well tested information of others, in what districts or sections the village Indian has left no traces. This has led me to the establishment of approximate geographical limits, by no means absolutely reliable, but subject to correction by further investigators. In pursuing this line of investigation, I was brought to inquire why there are no ruins in certain sections of the Southwest.

In undertaking explorations in a particular district, I always strove to secure ground plans of the greatest possible number of ruins, so as to obtain, not only the most

remarkable examples, but also smaller ones, which are liable to be overlooked. In addition to furnishing a more accurate idea of the number of settlements, this led me to the discovery of types different from those accepted as general through the Southwest, and finally to their original connection, and the possible evolution of one from the other. No excavations were undertaken by me, but this deficiency has been supplied, I believe, by the number of localities investigated, the many well preserved examples of architecture examined, and the consequent insight obtained into the changes wrought by decay upon the perfect form, which enabled me to detect architectural details in structures less well preserved.

With the exception of the late E. G. Squier, I believe that no investigator in Spanish America has paid sufficient attention to the size of ruined settlements. In the Southwest, it was easier to do this so long as the so called pueblo type was exclusively studied. Since General Simpson's valuable explorations in the Chaca Cañon and the Navajo country, we have had a series of complete surveys of particular ruins. The work becomes more intricate as soon as ruins are met with in which the buildings are irregularly scattered. Even where excavations have been made, they were mostly begun at the centre, instead of first attempting to establish the outline of the whole village, and afterwards making thorough investigation of details. Thus erroneous notions about the size of the ancient villages have arisen. I have striven to obtain as accurate an idea as possible of the size of each ruin, sacrificing in some cases minor details. Where the same types repeat themselves as often as in the Southwest, it has seemed superfluous to go into the same special investigations everywhere. The results of my surveys of the respective areas covered by various ruins in the Southwest

are best presented graphically, and Plate I. contains, therefore, a selection of the largest examples of each variety, and also some of the smallest, examined by me. For the sake of comparison, some ruins in Central Mexico, Oaxaca, Peru, and the Mississippi valley, reduced to the same scale, are placed by the side of the others.

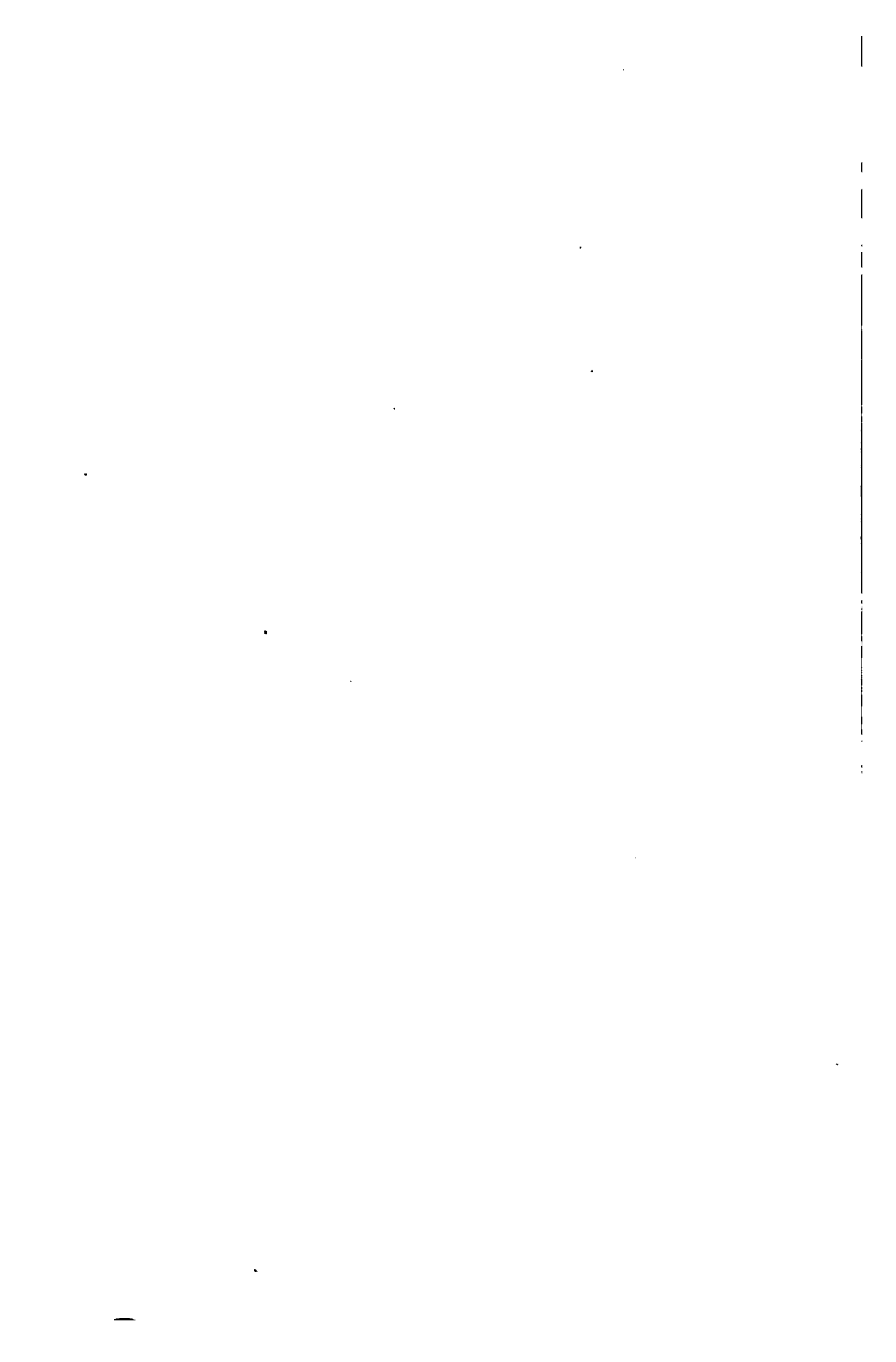
In regard to the artificial objects found in ruins, imperfect specimens, if collected in numbers, yield better results than choice ones, of which only a few can occasionally be obtained. On pottery it is mostly the decoration that affords interest, since shapes are usually similar. The value of that decoration consists in that it is, if not always intentionally symbolical, still derived from well ascertained symbols; and the curious fact is revealed that the ritual and symbolical designs in use to-day among the Pueblo Indians are the same as those found on pottery from Colorado, Utah, Arizona, Sonora, and as far as Casas Grandes. At the latter place, and in the Sierra Madre as far as I traversed it, two new symbols seem to make their appearance. In regard to other objects of art, local variations will be noted further on; also the proximity as well as the distance of the material used in the manufacture of implements or weapons.

I much regret my inability to make excavations, but in regard to burials I have endeavored to gather as much information as possible, and by the help of the researches of others, who have been more favorably situated, I may yet be able to present some not uninteresting data. Burial grounds are usually difficult to detect. The Indian is quite reticent on this subject, and unless we succeed in winning his confidence, the discovery of the place where the bones of past generations lie, or where their ashes are preserved, is accidental. The same may be said of sacrificial caves. The finding of plume-sticks is not always evidence of a

shrine. At Zuñi every corn patch almost has its prayer-plumes, fastened to poles painted red, with bow and shield of the hero-god *Mai-tza-la-ima* attached to them. Individuals praying on the spur of the moment may deposit a prayer-plume on the spot. The shrines are hallowed places, and few are the uninitiated ones who enjoy the privilege of knowing where they are.

As archæology in the Southwest is yet in its infancy, it follows that the great field of research into the existence of man in quaternary times cannot be touched upon here.

I have nothing to change in the classification of aboriginal architecture suggested by me in the Fifth Annual Report of the Institute, nor have I to modify any of the general conclusions therein presented. I proceed, therefore, to report in greater-detail upon the districts which I have visited and examined between the years 1880 and 1886, giving, as far as possible, the lie of the land in each case, in connection with its aboriginal remains, and such rays of light as documentary history and Indian tradition may shed upon them.



INVESTIGATIONS IN THE SOUTHWEST.

I.

THE COUNTRY OF THE TAOS, PICURIES, AND TEHUAS, IN NORTHERN NEW MEXICO.

BY the above title I wish to designate the section of New Mexico which is inhabited by the sedentary tribes thus named at the present day. It is indispensable to make this restriction, since we do not know whether these tribes, in their shiftings anterior to historic times, ever drifted beyond this region to the west, south, or east, or whether any of the ruins situated towards the northwest may yet prove to be those of their former abodes. The Tiguas of Isleta, who speak the same language as the Taos and Picuries and recognize them as kindred, have a tradition analogous to that of the Tehuas in regard to their origin. Mr. C. F. Lummis, who has given much attention to the language and folk-lore of Isleta, found that its people claim to have issued from the Lagune of Shi-pa-pu in Southern Colorado. The Tehuas also know Shipapu, but call it Ci-bo-be,¹ and place

¹ It is to Ci-bo-be that the Indian Pedro Naranjo, from the pueblo of San Felipe (Queres), manifestly referred, on the 19th of December, 1681, when interrogated by Don Antonio de Otermin on the causes and beginnings of the great Pueblo rebellion. *Interrogatorios de varios Indios de los Pueblos Alzados*, MS., fol. 135. He says of the notorious Pope, that, while he was concealing himself in one of the estufas of Taos, "le aparecieron . . . tres figuras de

it almost directly north of their present range, likewise in Southern Colorado. Weird stories attach themselves to this lagune. One of my informants, a wizard of high standing, assured me that, whenever a white man approaches the lake, its waters begin to boil and overflow the shores, but at the approach of an Indian they remain placid and calm. Whenever an Indian camps on its shores over night, he hears strange sounds issuing from its depths, — the neighing of horses, mingled with the bellowing of cattle and the bleating of sheep. These are the flocks upon which the happy dead feed at the bottom of the waters. Shipapu or Cibobe is not only the birthplace of the Pueblo Indians, it is also their final resting place after death, — their paradise. These stories show the authenticity of the tradition concerning the issuing of the Pueblos from some cave or lake north of New Mexico. But they also bear the marks of corruption during historic times by the addition to the riches and resources originally attributed to that Indian paradise of goods and chattels imported by the white man. They also show how strong is the hold which primitive belief still has on the Indian mind, since he has added to his original picture of the place of bliss things known to him only for three centuries, rather than give up the primitive conception altogether in favor of modern ideas.

I have made but two visits to Taos and one to Picuries.

Indios que nunca salian de la estufa, y le dieron a entender al dicho Pope que ivan por debajo de tierra hasta la laguna de Copiala." Further on (fol. 126), the same Indian says, "Porque siempre han deseado vivir como sacieron de la laguna de Colela." I believe both Copiala and Colela to be mistakes of the copyist, and that the original manuscript read Cibobe. The copy was made at the close of the last century, and forms part of the great collection of historical manuscripts made by order of the Spanish government at a time when the Lagune of Copiala was still famous in Mexico. Hence the error. The name of the lagune is also given by the Tehuas of San Juan as "O-jang-ge P'ho-quiringe." Those of Santa Clara also call Cibobe "Shi-pa-puyna."

It is almost certain that the former tribe was what Castañeda called "Braba," being the most northerly of the Pueblos in Coronado's time. Castañeda writes of it as follows: "Twenty leagues farther on from Yuque-yunque, or Chamita, and in the direction of the north, going up the river, there was a large and powerful village which was called Braba, which our people named Valladolid. It was built on both sides of the stream, which was crossed by bridges constructed of very well hewn beams of pine timber. In that village were seen the largest and most remarkable estufas of the whole country."¹

Taos, built on both sides of the swift and cool Rio de Taos is the only village in New Mexico, ancient or modern, so far discovered, the situation of which corresponds with Castañeda's description and location. He says, "Valladolid is the last one in ascending towards the northeast."²

Although the present buildings of Taos are not those of the Braba of the sixteenth century, they still preserve the appearance of the old village, and their position relative to the river and the valley is the same. Taos is therefore, together with Acoma and some of the Moqui villages, one of the best preserved examples of antiquity so far as architecture is concerned. The valley of Taos is one of the best irrigated sections in the Southwest. Several permanent water-

¹ *Cibola*, p. 139. He adds: "Le capitaine Hernando d'Alvarado avait déjà visité ce village en allant à la découverte de Ci cuyé. La contrée est fort élevée et très froide; la rivière qui l'arrose est fort profonde et rapide et l'on n'y trouve pas de gué." This proves that Francisco de Barrionuevo, who visited Braba in 1541, crossed the Rio Grande at Chamita and followed its course along the left (east) bank. The Rio Grande is indeed hardly fordable above Embudo, and is a very rapid and quite deep stream in some places. The Spanish officers also mistook the Taos River for the Upper Rio Grande, — a very natural mistake for one unacquainted with the country.

² *Ibid.*, p. 182. The *Relacion* of Alvarado is contained in the *Documentos de Indias*, tom. iii. p. 511.

courses flow from the high mountains that enclose it on the east towards the Rio Grande. This river is about twenty-five miles to the west of the modern town of Fernandez de Taos, which lies about three miles west of the pueblo. The aspect presented by the valley is very striking when first seen from the high plateau above the Arroyo Hondo. A plain with few undulations stretches far to the north and west, arid and bare in both of these directions. Beyond it low, dark mountains skirt the northern and northwestern horizon, and above them the Cerro de San Antonio rises in the distance, like a flat dome. In the west, beyond the deep cleft in the black volcanic rock at the bottom of which flows the Rio Grande, loom up the wooded heights above Ojo Caliente. In the southwest, the range of the Valles terminates in the pyramid of the extinct volcano of Abiquiu and in the truncated cone of the Pedernal; the south is one mass of dark pine-clad mountains; and nearly one half of the eastern horizon is covered by the imposing chain of Taos, the summits of which tower, in gigantic crags and steep cupolas, to over thirteen thousand feet above the level of the sea. Rising abruptly six thousand feet from the valley, in winter, spring, and fall, when the chain of Taos is still snow-clad, its aspect is particularly grand and solemn.

The region is also interesting from an historical and archæological point of view. The wide landscape divides naturally into areas containing ancient settlements. The western and northern sections of the valley appear at a glance to be suitable for village Indians, and therefore the ruins of the Taos people are to be sought along the base of its high mountains. One of them, to which I was told they gave the name of Mojua-lu-na, or Mojual-ua, is said to exist in the mountains, and in the plain there are said to be

considerable ruins near the Ranchos de Taos,¹ and also extensive vestiges of garden plots. Not having been able to examine any of these places, I can only report from hearsay. The north is said to be without traces of ancient architecture. The dark ridges in the northwest are those of Tierra Amarilla, and beyond them lies the archæologically important San Juan country, about which all historical data are as yet wanting. The cluster of hills above Ojo Caliente is the edge of an extensive region dotted with ruins of pueblos, which the Tehua Indians claim as having been their ancestral home. That region embraces all the southwestern landscape and includes the base of Abiquiu Peak, and of its southern neighbor, the Pelado, where lie the artificial caves. The dark mountains of Picuries divide the ruins in the Taos country from those to which the traditions of the Picuries are attached. From the plateau above the Arroyo Hondo, we therefore include at one glance a large portion of the territory to which this chapter will be devoted.

Many historical recollections are associated with this extensive territory. The pueblo of Taos, indistinctly visible at the foot of the gigantic sierra, recalls Coronado, Oñate, and the uprisings of 1680 and 1696. The valley around the pueblo reminds us of harrowing scenes enacted in August, 1680, and in 1766, when the Comanches raided the Spanish settlement. Ojo Caliente and Abiquiu were the scenes of similar outrages by the Yutes in 1747. Diego de Vargas passed repeatedly through the country around us. The cañon east of Taos was the spot where the faithful Governor of Pecos, Juan Yé, lost his life at the hands of the treacherous Taos Indians. Over the Picuries Mountains

¹ The Ranchos de Taos lie four miles from Fernandez de Taos, the modern town.

the priest of Taos fled from them in the night of the 4th of June, 1696, with a few soldiers.¹

Over the some rugged chain we now have to cross, in order to cast a glance at the Picuries valley and its vestiges of antiquity.

There is a trail leading from Taos to Picuries, but I preferred the wagon road as more commodious, and as furnishing a better view of the eastern high chain. This road surmounts the crests of the Sierra de Picuries by going directly south from the Ranchos de Taos for some distance. It follows at first a pleasant valley and a lively rivulet, and then penetrates into forests of pine on the northern slopes of the Picuries chain. These wooded solitudes afforded no room for the abode of man in ancient times. The modern traveller delights in their refreshing shade, and notices with interest the animal life that fills the thickets. The jet-black and snow-white magpie flutters about; blue jays appear, and variegated woodpeckers. It is so different from the arid mesas and barren mountains that we forget the painful steepness of the road. Its general direction is now to the southwest. Once on the southern slope of the Picuries range, we strike directly for the west.

Although forests still skirt the narrow grassy vale in the middle of which the road winds, the landscape assumes an entirely different character. In place of the imposing mass of the Sierra de Taos, the east is bounded by the bald Jicarrita and the rugged peaks and crags of the Sierra de las Truchas. Both rise higher than the Taos range,² but

¹ I will not mention the events of 1848, as they belong almost to contemporaneous history.

² The Truchas are slightly higher than Taos Peak. The latter is 13,145 feet, the former, 13,150, — both according to Wheeler. The altitude of the Jicarrita has not, to my knowledge, been determined; but the impression of those who have ascended to its top is that it exceeds the Truchas in height.

they are farther from us and their denuded slopes ascend more gradually. The summit of the Truchas is divided into sharp-pointed peaks, recalling the "Hörner Stöcke" or "Dents" of the Alps.

From these two mountains descend two streamlets, which run almost directly to the west, parallel with each other, for many miles, divided by wooded ridges of small width. One of these brooks is the Rio del Pueblo; the other the Rio del Peñasco, and they unite at a distance of a mile below the pueblo of Picuries to form the Rio del Embudo, and thus become tributary to the Rio Grande.¹ Thus the Picuries tribe had at its command two long and narrow valleys, well and constantly watered, with plenty of wood, since the heights on both sides of each valley bear thickets of pines, and the abrupt Sierra de Picuries, against which the pueblo leans on the south, is covered with stately forests. It was a choice spot, but open to incursions of the Indians of the plains in summer, and to the south, where access was easy from the Truchas and Trampas. Towards the north, mountains protected it against the Yutes and their neighbors from Taos, who were not always friendly; and in the west steep ridges with partly wooded crests rendered access from the Rio Grande difficult. We wonder at this day how it is possible for loaded wagons to overcome the long and steep inclines between the little town of Embudo and the heights above the Peñasco valley.

At the time of the first occupation of New Mexico, Picuries formed a considerable village; to-day it is reduced to a mere hamlet. The ruins of a pueblo exist on one of the mesas near by, but I had no time to investigate them,

¹ Embudo is a small Mexican town five miles from the railroad station of the same name. Peñasco, about 2½ miles southeast of Picuries, is higher than Taos, while Embudo is more than a thousand feet lower.

and have only seen many fragments of pottery and of grinding-slabs from that locality. Of other remains I could not ascertain anything. It seems that Taos, with the ruins in the Sierra, and Picuries, with its surroundings, constituted the extreme northeastern corner of Pueblo territory in very ancient times as well as to-day. In vain have I inquired for ruins in the Costilla region north of Taos, and in the Sierra de los Ratones. The environs of Trinidad appear to be as devoid of remains of ancient buildings as the high mountains east of Picuries and the valley of Mora beyond them. This is a singular feature; for if it should be established that the course of Canadian River east of Ocaté is lined by vestiges of permanent abodes, it would place the origin of these remains out of connection with what I have called the northeastern corner of the Pueblo area in prehistoric times.

After this cursory glance at the districts of Taos and Picuries I pass almost due west of the former to the extensive ruined pueblos near the Hot Springs belonging to the Honorable Antonio Joseph, and, farther west still, to those near the Rito Colorado. These ruins are claimed by the Tehua Indians as those of villages built and occupied by their tribe, and abandoned long previous to the advent of the Spaniards.¹

A distance of nearly forty miles separates Ojo Caliente from the settlements in the Taos valley. Taos lies 6,983 feet above the sea; Ojo Caliente is seven hundred feet lower. Between the Rio Grande on the east and Joseph's Springs, twelve miles of arid sandy plain intervene.

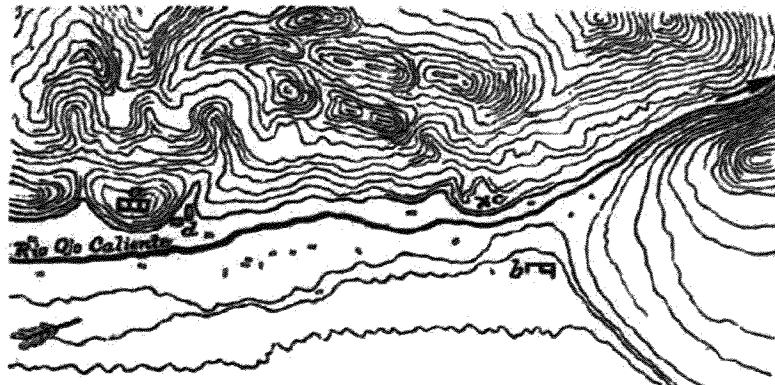
¹ There is no indication that the Pueblos at Ojo Caliente were inhabited at the time of Coronado, or since. It is not unlikely that when Vargas, in 1694, passed by Ojo Caliente, he noticed the ruins, but manifestly mistook them for those of the former Spanish settlement at San Gabriel or Chamita. *Relacion Sumaria de las Operaciones militares del Año de 1694* (MS.); also Escalante, *Relacion del Nuevo Mexico* (MS. fragment).

Isolated mesas of small extent and height dominate this dreary stretch, like truncated cones or pyramids. The plain terminates on the banks of a creek whose waters are always warm. This is the Rio del Ojo Caliente, which takes its name from the remarkable medicinal thermal springs on its western banks.¹ The stream is permanent, running through a valley of not over half a mile in breadth, and watering a long, narrow strip of irrigable ground. The climate is comparatively mild in winter, while at Taos considerable cold prevails, and snow covers the ground for weeks. It was therefore an inviting spot for the establishment of permanent Indian homes. In addition to facilities for cultivation, the neighboring heights afford a plentiful supply of wood.

Three of the largest pueblos of New Mexico, Colorado, and Arizona lie on the banks of the Ojo Caliente stream, within a mile and a half of each other. Two of them I have figured on Plate I. Their relative situation is shown in the following topographical sketch. One of them stands on the first low terrace above the creek on the east bank, and is called in the Tehua language Ho-ui-ri (marked *b* on the sketch). It will be seen by referring to Plate I. Figure 6, that the houses were unusually long; that is, they formed unusually large hollow rectangles. The three pueblos, Houiri, Ho-mayo, opposite on the west bank, on a high promontory that rises at least one hundred feet over the stream, and Pose-uingge, the one immediately above the baths, are to a certain degree specimens of a kind which I have mentioned in the Fifth Annual

¹ These springs are highly appreciated in New Mexico. The temperature of the main spring is 114.5° Fahrenheit, and an analysis of its contents gives the following results. In one thousand parts of water: sodium carbonate, 196.95; calcium carbonate, 4.20; iron carbonate, 20.12; sodium chloride, 40.03; lithium carbonate, 1.22; magnesium carbonate, 6.10; potassium sulphate, 5.29; silicic acid, 4.10; arsenic, 10.08. Besides the four hot springs, there is a cold sulphur spring almost adjacent, and many soda springs higher up the valley.

Report of the Institute as "one or two, seldom three, extensive buildings composing the village. These structures are so disposed as in most cases to surround an interior court."¹ Thus Houiri constitutes two complete and two incomplete hollow quadrangles; Homayo, two complete and one incomplete; Pose-uingge, one complete and several partial ones. But the number of single buildings is in



a, Pose-uingge. b, Ho-uirí. c, Ho-mayo d, Baths.

TOPOGRAPHICAL SKETCH OF THE OJO CALIENTES VALLEY.

every case greater than three. It is indeed an intermediate form between the type above alluded to and the one characterized by me as "scattered pueblos composed of a number of large many-storied houses disposed in a more or less irregular manner. . . . They are either in irregular squares or on a line."² The number of single edifices in Pose-uingge, not including the estufas, is at least ten, in Houiri seven, and at Homayo five, provided decay has not obliterated alleys, thus causing two buildings now to appear

¹ *Fifth Annual Report*, Appendix, p. 55.

² *Ibid.*, p. 56.

connected, which originally formed separate bodies. The outer perimeter of the great hollow rectangle of Houiri (*b*) is 415 meters (1,361 feet); the width of the rubbish mounds to which the buildings are now reduced varies from 8.6 meters (28 feet) to 14.6 meters (48 feet). This rectangle is open only on one side, where there are traces of a double row of stones. The stones are mostly thin plates set on edge, protruding but fifteen or twenty centimeters (six to eight inches) above the ground.

The pueblo was probably built of adobe, and the condition of the mounds indicates that its decay antedates that of the most southerly pueblo in the valley, the one which the Tehuas call Pose-uingge (marked *a* on the sketch).

Eight circular estufas are plainly discernible at Houiri, and there may have been ten. The great quadrangle contains three distinct ones in its interior court, and there are traces of two more. The diameter of these estufas varies between 10.4 meters (34 feet) and 15 meters (49 feet). A number of rooms still lie exposed, so that their average size can be determined. The mean of thirty-four of these cells appears to be 2.8 by 1.9 meters (9 by 6 feet).

Of artificial objects potsherds are of course most abundant. There is painted pottery, glossy with the usual figures in black and reddish brown; also corrugated ware, and incised pottery with borders in relief. Of the last sort a complete vessel, originally from the ruins of Abe-chiu, also a Tehua pueblo, is preserved in the collection of Mr. Samuel Eldodt at San Juan. The incisions are simply straight and narrow grooves, intersecting one another with a faint attempt at symmetry. The borders are indented, and seem to have encircled the upper rims of bowls, as well as the short necks of urns and jars. These vessels decorated with incised lines resemble those figured by Mr. W. H. Holmes

from Arkansas County, Arkansas; while the borders in relief are like the decorations figured by him from Pecan Point.¹

Broken metates, unfinished stone axes, flint, and obsidian flakes lie scattered about the ruins; the axes are of basalt, and the metates of lava and gneiss.

Don Tomas Lucero, who lives near Houiri, assured me that thirty years ago large jars filled with meal had been excavated from the ruins, and that skeletons had also been unearthed.

The situation of Houiri is such as to command a fair view for a few miles of the valley of the Cañada de los Comanches, a gulch emptying into it from the northeast at the foot of the low terrace on which the pueblo stands, and of the bluffs and mountains that rise above the opposite bank. There is fertile soil all around, and the stream runs at a short distance only from the ruin. No traces can be seen of defensive contrivances, other than the houses themselves; and I was assured by several persons that no ancient irrigation ditches had been noticed in the river bottom. In former times this bottom appears to have been covered with trees and dense thickets, which would account for the absence of acequias, if the Indians preferred to establish their fields on higher and open ground, rather than to attempt clearing.

Opposite Houiri, on a triangular promontory jutting out from the range of bluffs that line the river on the west, stands the ruined village to which the Tehuas give the name of Homayo (Fig. 7 of Plate I., and *c* of the sketch). It is more compactly built than the other two pueblos, and appears therefore of smaller size. Probably it contained a lesser number of inhabitants, although the mounds seem to

¹ W. H. Holmes, *Pottery of the Ancient Pueblos*, Report of the Bureau of Ethnology, 1882 and 1883, p. 282, fig. 231. A fragment of incised pottery from Abiquiu, *Ancient Pottery of the Mississippi Valley*, *Ibid.*, p. 397, figs. 403 and 404, for the rims; p. 405, fig. 418, and p. 415, fig. 434, for the incisions. I refer only to the plastic decoration, and not to the shapes of the vases.

indicate a greater number of stories of the houses. This ruin contains seven circular depressions, six of which were certainly estufas; but the seventh, the one standing farthest from the village and nearest to the brink of the steep declivity of the bluff towards the river, may possibly have been a tank. Its diameter is 9 meters (30 feet), it is quite deep, and the top of the wall is formed of slabs of stone standing on edge. The diameters of the other estufas vary from 9.0 to 15.2 meters (30 to 50 feet). The walls of the houses, as far as exposed, are mostly of adobe, with an average thickness of 0.30 m. (12 inches). The adobe shows no trace of straw, indicating that it was made previous to Spanish times.

The situation of Homayo is very favorable for defence. On three sides, north, east, and south, are abrupt declivities difficult to scale, and at least forty meters high. The Ojo Caliente stream hugs its base closely on the eastern side. To the west extends a level depression about eighty meters broad and ten meters lower than the top of any of the mounds, and beyond that depression rises a steep mountain. The pueblo therefore stood higher than its immediate surroundings, and had an exceptionally good outlook to the east, south, and north. The annexed topographical sketch¹ shows the position of the village, and its situation in relation to three groups of what, from information gathered in Arizona and Sonora, I regard as garden plots. These are indicated on the sketch by A, B, and C. Similar contrivances are also found as a continuation of the southern end of Mound F of the ruin itself.

Of these garden beds there are two varieties. One comprises rows of stones, intersecting each other so as to form

¹ This sketch is made without reference to scale or measurement, with the design only of giving the topography and location.

rude parallelograms and squares, found on levels; the other, such as are met with on slopes or inclines; both exist near Homayo. In some instances the stones are not thin plates set on edge, but simply fragments of various sizes laid on the ground in lines more or less straight.



SKETCH OF THE SURROUNDINGS OF THE RUINS OF HO-MAYO.

On the same side of the river as Homayo, about a mile and a half south of it, stands the large ruin called Poseuingge, or the village of Po-se or P'ho-se, marked *a* on the topographical sketch of the whole valley. Its position is somewhat similar to that of Homayo, as it is built on a high bluff, but not projecting so much, and it stands not so close to the river. Directly at the foot are the hot springs and the baths. The height of the bluff above the Ojo Caliente River is forty-two meters (140 feet). As this ruin has been measured and the ground plan published by Mr.

Holmes, and my own measurements confirm his, I refer to that publication for a plan of the ruin on a larger scale.¹

It is plain to see that it was the largest village of the three, and may have sheltered at one time as many as two thousand inhabitants. Houiri however had at least one building larger than any of those of Pose-uingge. According to the custom, prevalent in ancient times, of each clan having its particular estufa, the latter village must have had at least thirteen clans or gentes, while Houiri had but eight, or at most ten, and Homayo only six. It must, however, be taken into account, that one or more estufas may have become completely obliterated, and that the same estufa may have been used, as at Taos to-day, by two or more clans.

There has been more digging at Pose Uingge than at any of the other ruins, consequently more of the architectural details are visible. They show the walls to have been of adobe bricks made without straw. I measured one and obtained the size, 0.35 by 0.25 and 0.27 m. high (14 inches by 10 and 12). In some places a layer of thin slabs of stone is intercalated between the courses of adobe, and the latter are laid without breaking joints. The average thickness of the walls is 0.30 m. (12 inches). The rooms are small, the longest one measuring 4.1 m. ($13\frac{1}{2}$ feet), an average of twenty-three rooms being 2.0 by 3.1 m. ($6\frac{1}{2}$ by $10\frac{1}{4}$ feet). By complete excavation, there is hardly a doubt that larger apartments would be discovered.

In one of these rooms the face of one of the walls is exposed to a little less than its full height. In it the beams of the roof, or ceiling, have left the impressions of their ends, and a niche is also to be seen, and the upper part of a doorway. The walls, the arrangement of the cells, and the manner

¹ *Report on Ancient Ruins of Southwestern Colorado*, U. S. Geol. and Geog. Survey, Hayden, 1876, Plate XLl. and page 401.

of construction of the roofs and ceilings, are the same as in any typical New Mexican pueblo. The doorways are nowhere fully visible, but what I saw of them indicated that they were doorways, and not doors. There was no means of closing them other than by hanging hides, blankets, or mats over the opening. All were narrow at the top, widening towards the bottom, and probably narrowing again below. As in many other villages, I saw neither lintels nor door-plates; but it is not unlikely that flags of stone may occasionally have served for such a purpose. Of air-holes I saw no trace, but it is presumable that they existed. How many stories the buildings had can only be guessed.

I have already mentioned that thirteen Estufas are connected with the ruin, some of them inside, others outside, the irregular courtyards formed by the edifices. Their diameters vary between 5.5 m. (18 feet) and 13.1 m. (43 feet). One is quite remarkable in that it has an ascent to its top or roof in the shape of a solid inclined plane 10 meters (33 feet) long horizontally, and 1.7 (5½ feet) high, so that the rim of the estufa must originally have protruded nearly two meters from the ground. This kind of ascent to the roof of an estufa I have found elsewhere.

At one spot there is an excavation 2.5 m. (8 feet) long from east to west, with a niche at its eastern end 0.61 m. wide and 0.30 m. deep, walled in by thin slabs of porphyritic syenite of a reddish color. The depth is 1.9 m. (6 feet), and the roof or covering appears to have been flat. I have been told that out of this place a human skeleton was exhumed that measured, while in its original position in the ground, 2.3 m., or 7 feet and 6 inches in length. That a skeleton of unusual size was found in the ruins at Ojo Caliente seems to be almost certain, from the numerous concurring statements to that effect. The cavity, therefore, must have been

a grave, in which a niche was built for the head. The plates of syenite show no trace of superior workmanship; they are simply thin slabs laid in adobe mortar. I could not find out whether the rest of the hole had also been walled in or not.

Broken artificial objects are plentiful about the ruins of Pose-uingge. The potsherds resemble those at the other ruins in the valley. Of metates I saw one made of syenite; all the others were of lava. Stone axes of basalt and syenite have been picked up. There is little obsidian, but chips and flakes of chalcedony, jasper, and flint abound. Arrowheads are not rare. The grinders accompanying the metates were made of lava, porphyry, and gneiss; some moss agates I also noticed. It is stated that large jars filled with corn, and also charred corn, have been exhumed. Perhaps the most interesting statement made to me about finds, and one which, from its source,¹ I have no reason to doubt, is that in nearly every room opened, human skeletons were found. They were in every imaginable posture, and with the skulls fractured or crushed. This has given rise to the supposition that Pose-uingge was destroyed by an earthquake. So long as we have not the exact Indian traditions concerning the place, it is useless to attempt a discussion of the matter.

The site on which the ruin stands affords an excellent point of view towards the northeast, east, and southeast. The whole valley stretches out at our feet. In the northeast, the snow-clad range of the Culebra looms up above distant hills, and south of it are the mountains of Taos. Thence to the southeast, the southern ranges of the Rocky Mountains spread out in wonderful distinctness. The Jicarrita at the north, the picturesque Truchas in the centre, and the Santa

¹ The Hon. Antonio Joseph, Delegate to Congress, is my authority. He is himself the owner of the springs, and has resided there for a number of years at least a part of the time.

Fé range at the southern end, appear separated into well defined massive groups.

There is hardly any arable ground on the mesa occupied by the ruins, but at its northern end, where the trail comes up from the baths, there is a limited area covered with garden plots. North of the baths, separated from the eastern projection of the mesa of Pose-uingge by a deep cleft, the mountains rise with steep and denuded slopes. Still, there are promontories jutting from their base, on which, and partly on the lower end of the declivities themselves, lines of stones are to be seen forming a series of narrow parallel terraces, or larger and smaller quadrangles. As in other garden plots, the stones are plates or small slabs set on edge, or boulders and pieces of every shape and size laid on the ground in rows. Such contrivances resemble so much both the ancient garden beds of Arizona and the "Banquitos" (terraces constructed in the beds of mountain torrents) of Sonora, that I cannot but attribute to them the same object. It is interesting to find the same feature in countries as far apart as Northern New Mexico and Northern Mexico.

In close proximity to these garden plots are nearly circular concavities, resembling the vestiges of so called "dug-outs," but whether they stood in any relation to them I am unable to say. It is not impossible, however, that they were formerly abodes of nomadic Indians. The ground where the garden beds are is covered with rocky débris at the present time, but it is not barren. Low vegetation grows on it, and by keeping the surface clear from drift, it might have been made productive.

On account of the high temperature of the water of the stream, and of the hot springs issuing from the naked rock and covering them with an emerald-green stain, they were not only objects of curiosity to the native, but, like every-

thing he does not comprehend, objects of veneration, of worship. It is not unlikely that superstition prevented the ancient Tehuas of Ojo Caliente from using the warm waters of its stream for irrigation. It is quite possible, therefore, that they did not clear that valley of its forests, and that they planted their corn, beans, and squashes on the mesas, in as close proximity as possible to the villages, relying upon the summer rains for the growth of their crops. There is less danger of persistent drought in Northern New Mexico than farther south, so that the Indian might well trust to the sky for moisture. On the west bank of the stream, in the midst of a thicket, is an elliptical ring made of boulders heaped together so as to form a crude circumvallation 4.3 m. (14 feet) wide and 0.6 m. (2 feet) high. It encloses a level space measuring 8.2 m. (27 feet) from north to south, and 7.3 m. (24 feet) transversely. What the object of this enclosure, to which there is no entrance, may have been, and whether it is ancient or modern, I am unable to determine. It may be of Pueblo origin, or it may just as well be the work of the Indians of to-day as of their ancestors, or it may be of Mexican construction, the work of shepherds.

Considerable interest attaches to the ruined sites at Ojo Caliente because the myth of Pose-yemo or Pose-ueve refers to one of them as the birthplace of that personage and the scene of his main achievements. As stated in the First Part of my Final Report,¹ Pose-ueve, which is the proper name in Tehua folk-lore, is the person around whom the Montezuma legend has gathered, or rather he has been taken as the figure-head for that modern fabrication.

As far as I am able to learn, Pose-yemo (Moisture from heaven), or Pose-ueve (He who walketh or cometh along

¹ Part I. of this Report, p. 310.

strewing moisture in the morning), was the son of a girl of Pose-uingge. The story about his mother conceiving from a piñon nut that fell into her lap, may possibly be a genuine Indian legend. At all events, he remained, like the hero of the Zúñi folk-tale about the "Poor boy of Pin-a-ua," a wretched pauper for a long time, until the day came when a new cacique had to be chosen. Pose-ueve was proposed in jest to the medicine-men, and accepted, to the discomfiture of those who had intended to make a laughing-stock of the poor boy. At once he began to astonish all with prodigies, for which an eagle was his principal helper. He soon became a great wizard, and the people of his village grew very rich in corn, turquoises, shells, and other valuable objects. His fame spread, and he exercised a sort of power over many of the Pueblos, which, however, does not appear to have gone beyond that of a magician. Modern history affords instances of a similar sort; for example, the notorious prophet, Tecumseh's brother, whose influence was only destroyed by the defeat of the Indians at Tippecanoe.¹

Of warlike exploits of Pose-ueve I have not been able to find any traces. After remaining the great Shaman of the Tehuas for a long time, he once went to the pueblo of Yuge-uingge (Chamita) in disguise. The people were on the point of celebrating one of their dances, and failed to recognize the powerful medicine-man. So he grew angry, and pronounced a dire curse on what he considered an ungrateful pueblo, and returned to Pose-uingge, where he disappeared.

Such is the Indian part of the tale. What is told of the wizard's journey to the south is a modern addition.² Still,

¹ So also the case of Tchatka, an Assiniboin chief and wizard, related by Father Desmet, *Western Missions and Missionaries*, letter XIII.

² The Montezuma story, as told me by one of the Queres at Cochiti, contains the details of his journey to the south. Another friend, a Tehua of San Juan,

many of the Pueblos of to-day believe it, and the name of Montezuma is familiar to all of them. Those "who know," however, members of esoteric societies, and principally the great Shamans, smile at the foreign importation and foreign dress, and discriminate between the Pose-ueve of their ancestors and later additions to his biography.

Mr. Cushing identifies the Pose-ueve or Pose-yemo of the Tehuas with the Po-shai-an-kia of the Zuñis. He writes of this deity: "He is supposed to have appeared in human form, poorly clad, and therefore reviled by men; to have taught the ancestors of the Zuñi, Taos, Oraibi, and Coçonino Indians their agricultural and other arts; their systems of worship by means of plumed and painted prayer-sticks; to have organized their medicine societies; and then to have disappeared toward his home in Shi-papu-lima (from *shi-pi-a*, mist, vapor, *u-lin*, surroundings, and *i-mo-na*, sitting place of, 'The Mist-enveloped City'), and to have vanished beneath the world, whence he is said to have departed for the home of the sun. He is still the conscious auditor of the prayers of his children, the invisible ruler of the spiritual Shipapu-lima, and of the lesser gods of the medicine orders, the principal 'Finisher of the paths of our lives.' He is, so far as any identity can be established, the 'Montezuma' of popular and usually erroneous Mexican tradition."¹

It will be noticed that the Zuñi tradition makes of Po-shai-

also stated to me that Pose-ueve went as far as the vicinity of El Paso del Norte in Chihuahua. He said he was accompanied by his sister, Navi-Tua, and that she followed him on Christmas! Christmas in Spanish is "Pascua de Navidad," and the word "Navitua" is suspiciously like the Spanish word. The full details of the Montezuma legend, however, are found in a queer document, entitled *Historia de Montezuma* (MS.), composed in Mexico in the year 1846, about the time of the breaking out of the Mexican war, which embodies, together with much nonsense purporting to be history, some of the original tales about Pose-ueve.

¹ *Zuñi Fetiches*, p. 16. (Report of the Bureau of Ethnology, 1880-81.)

an-kia a god, while Tehua folk-lore considers him as an historical personage endowed with extraordinary magic powers. In addition to this, the Tehuas assign a definite locality to his mortal career. I believe both personages to be the same, and while among the Tehuas Pose-ueve appears only as a hero, among the distant Zufis he has already become a hero-god.

The Queres know Pose-ueve very well, and some of them even give him that name; but another title is applied to him at Santo Domingo. He is called "Our Father from the East, that cometh together with the Sun." This would make the morning star his fetich. This resembles another Tehua designation, which is Po-se Ye-mo T'an Se-ndo, literally, "Our sun-father, Pose-yemo." These names are titles given in worship, and subsequent to the historic appellative, which is a genuine Indian personal name.

The Tehua folk-lore concerning Pose-ueve deserves to be closely studied, as it manifestly embodies considerable ancient history of the tribe. What I have been able to give is a mere outline, which further investigations will of necessity modify. So much, however, appears to be certain: that the village of Pose-uingge was the birthplace of the Indian hero, that he was a Tehua Shaman or wizard, and that he wielded considerable influence over the whole tribe during his lifetime.

I have not been able to secure any information concerning the other two villages of the Ojo Caliente group. What the Shamans told me at San Juan, however, leads me to believe that they were abandoned before Pose-uingge; they said that Houiri and Homayo were very ancient, and that they remembered nothing about them except the names and the fact that their ancestors built and inhabited them.

I was assured that the three ruins described were not the

only ones of the Ojo Caliente group. Some mentioned two, others as many as five more. But the rows of stones characterized by me as "garden beds" are frequently mistaken for foundations of ancient buildings, and in this way an exaggerated conception of the number of villages may have arisen, as it undoubtedly has in many other localities. From the extent of the valley, its topography and natural resources, I think that three villages, as large as those described, were all it could conveniently support.

Rugged mountains, mostly well wooded, rise west of the Ojo Caliente valley, and separate it from the nearest permanent watercourse in that direction, the Rito Colorado. I have not heard that any ruins have been noticed in this range. Its width is nine miles; a very picturesque and agreeable stroll, at the end of which the level basin of El Rito spreads out to the view. It is surrounded by wooded heights on all sides; its soil is dark red, and on its eastern edge flows the stream that has taken its name from the color of the ground. The Mexican settlement of El Rito lies at the northern end of the basin, near where the creek issues from a sombre and rocky gorge.

At the southern extremity of the plain, about five miles from the little town and thirty meters above the banks of the stream, lies the very large pueblo ruin, called by the Tehuas Se-pä-ue. I consider it to be the largest in New Mexico, and it could shelter more people than Casa Grande in Arizona. I have given the plan of the ruin on Plate I. (Fig. 8), and it clearly belongs to the type of the Ojo Caliente pueblos. The average size of the rooms appears to be somewhat larger; but as they are only exposed in a few of the rubbish-mounds, the average of 4.1 by 2.3 meters ($13\frac{1}{2}$ by $7\frac{1}{2}$ feet) is no criterion. The walls are of adobe without straw, and the mounds are low and flat; a sign, perhaps, of great age, but

possibly also due to heavy rains. I noticed six circular depressions, one of which measured as much as 16.5 meters (54 feet) in diameter, and has a wall of stone. The other estufas, for the former may have been a tank, measure only from 9 to 13 meters (30 to 40 feet) across. The depth of the first is $2\frac{1}{2}$ meters (8 feet) at the present time. On the whole, Sepäue so much resembles the Ojo Caliente pueblos, particularly Houiri, that I need not go into any great detail. The artificial objects are of the same description as those at Pose-uingge, only there is a little more obsidian. Cedar posts still protrude, at intervals of from 2 to $2\frac{3}{4}$ meters, from the edge of one of the mounds; their diameter is in the the mean 0.18 m. (7 and 8 inches). Originally they may have stood erect, but they may have been beams supporting the roof, which after falling were gradually forced into an upright position by the débris accumulating around them.

On a plateau north of the ruins and separated from it by a deep gulch or arroyo are a number of garden plots incased by stones laid on the ground, the outlines of which are marked by heavier pieces than the compartments. The quadrangles are quite large in comparison with the narrow terraces at Pose-uingge and Homayo.

All the garden plots at Sepäue lie on a level, and at the same elevation above the stream as the pueblo. Many of the lines are nearly obliterated, so that it is impossible to reconstruct the quadrangles originally formed by them. The soil is covered with gravel; but wherever that gravel is removed, it proves fertile. In the very squares of the pueblo, neighboring settlers have recently planted corn and beans, which yielded exceedingly well, although there is no possibility of irrigation. The bottom of the Rito near the ruin is also too narrow and rocky to permit cultivation. In general, the soil of the valley is very fertile, but there is great

complaint about scarcity of water. While this does not affect Indian corn much, it almost precludes the cultivation of other cereals.

The Tehuas claim Sepäue as one of their ancient settlements, but I failed to obtain any folk-lore concerning it. I was also informed that another ruin existed near by, to which the Indians of San Juan give the name of P'o-nyi Pakuen. It might be the ruin of which I was informed as lying about seven miles farther west, near the road to Abiquiu. My informant told me that near that ruin there were traces of an ancient acequia.

The elevation of El Rito is 2,071 meters (6,792 feet);¹ there is consequently a rise of several hundred feet from Ojo Caliente to it. From any point of the Rito plain, the high peak of Abiquiu² appears prominent in the southwest. That peak and the range of the "Valles" of which it is the northern termination indicate the western limit to which the ancient settlements of the Tehua Indians at any time extended. To what tribe or linguistic stock the numerous vestiges of pueblos along the Upper Rio Chama, north of Abiquiu and west of El Rito, must be attributed, is still unknown. I have not visited any of them,³ Abiquiu having been the terminal point of my excursions in that direction.

From El Rito to Abiquiu the distance is about twenty miles. The difference of level is considerable, Abiquiu being only 1,808 meters (5,930 feet) above the sea. The road mostly follows the course of the Rito, the banks of which become more sandy the nearer it approaches the Chama. Picturesque rocks, curiously eroded, line the creek bottom on the east. I could not ascertain anything about ruins between

¹ Wheeler's measurements.

² 11,240 feet high (Wheeler).

³ While at the Rito, Don Pedro Jaramillo told me of a pueblo lying west of it, and north-northwest of Abiquiu.

the old pueblo last mentioned and the Chama. As soon, however, as the Chama valley is reached, we strike remains of Indian habitations. That valley is extremely sandy, but the soil is fertile and can always be irrigated. The bluffs lining it on the south side afford good points for observation and defence, and on these bluffs the ruined pueblos which I saw are situated.

The modern town of Abiquiu stands almost on the site of an ancient village. That town was peopled in part by "Genizaros," or Indian captives, whom the Spaniards had rescued or purchased from their captors.¹ The Tehuas of Santa Clara contend that most of those Genizaros came from the Moquis, and that therefore the old pueblo was called Jo-so-ge. At San Juan the name was given to me as Fe-jiu. The situation of Abiquiu is a peculiar one. The main portion of the village stands on the east side of the muddy and treacherous Chama River, and on a steep em-

¹ There were two settlements made at Abiquiu during the past century. The first prior to 1747, since the Yutes raided it on the 12th of August of that year, killing a number of the settlers and compelling the remainder to abandon it. It is stated by Antonio de Villaseñor y Sanchez (*Teatro Americano*, vol. ii. p. 414) that in 1748 this first settlement consisted of twenty families. A second settlement was effected in 1754 (*Merced de Abiquiu*, 1754, MS.), and Fray Juan Joseph Tobedo became the first priest. *Libro de Bautismos de Santo Tomas de Abiquiu*, MS.). But the settlers had always to contend with the Yutes, and later on with the Navajos. Governor Pedro Fermin de Mendiñeta had to force them to return to their homes again in 1770. *Mandamiento Sobre el Repueblo del Puesto de Abiquiu* (MS.). According to Fray Agustin Morfi (*Descripcion Geográfica del Nuevo Mexico*, 1782, MS.), there were already Genizaros there in 1765, as he says: "La mision de Sto Tomas de Abiquiu se hallaba con 75 familias y 166 personas; y vecinos 104 familias con 612 almas." The same authority states that in 1779 it had 851 inhabitants. In 1794 it was certainly peopled by Genizaros (*Certificaciones de las Misiones que son al Cargo de la Provincia del Sto Evangelio de N. S. P. S. Franco de la Ciudad de Mexico, en esta Custodia de la Conversion de S. Pablo, Sita en esta prova de la Nueva Mexico*, MS.): "De Indios Genizaros de diversas naciones." In 1808, it contained 122 Indians, and 1,816 whites and mestizos. Fray Josef Benito Pereyro, *Noticia de las Misiones que ocupan los Religiosos de la Regular Observancia de N. S. P. S. Francisco*, etc., MS.

bankment. On three sides it is completely shut in, — by volcanic mesas on the southeast and northwest, and by the slopes of the peak of Abiquiu on the south, — so that the only vista is to the east-northeast, where as through a gap comparatively open country is visible as far as the distant Sierra de Picuries. The ruins lie on the highest point of the present village. As far as I could discern, the pueblo formed an "L." Although it is certain that Abiquiu is a settlement dating from the past century, nevertheless I regard the pueblo as of pre-Spanish origin. It is a well established fact, that nobody dwelt there in the sixteenth and seventeenth centuries.¹ What further confirms me in the belief that the ruins are quite ancient are the objects found there. The pottery, of which there are handsome specimens in Mr. Eldodt's collection at San Juan, is the same as that at Ojo Caliente and El Rito. The metates are of a very ancient type, and there is much flint and obsidian. Axes of basalt and other stone have also been exhumed. I therefore suppose the pueblo to be ancient, and distinct from the settlement of the Genizaros. In that case it is quite likely that its name was Fe-jyu; while the modern village of rescued Indian captives would be the one called Jo-so-ge by the Tehuas of Santa Clara.²

A picturesque gorge or cañon terminates above Abiquiu, and from it emerges the Chama River. The ruins above Abiquiu, and on the three branches by which the Chama is formed, I have not visited. Some of them have been noticed in the publications of the U. S. Geographical Survey and of the Bureau of Ethnology, to which I refer the student.³

¹ I can find no trace of it as a settlement prior to the middle of the eighteenth century.

² Jo-so is the name given by the Tehuas to the Moquis.

³ *Annual Report of the Chief of Engineers for 1875*, Appendix LL (App. J, i),

Three miles below (southeast) Abiquiu, at a place called "La Puente" (the Bridge), on a bluff close to the river on the south bank, stands the ruin which Dr. Yarrow of Washington examined about sixteen years ago, and of which he has given descriptions and a ground plan.¹ I have also figured it on Plate I. Fig. 9. The height on which the ruin stands is forty-eight meters (150 feet) above the river. Its gravelly slopes are very steep, so that for defence and observation the position was well chosen. This pueblo was built of adobe, with thin plates of sandrock intercalated in some places. An average of forty-one rooms measured gave 2.5 by 3.7 m. (8½ by 12 feet). The number of stories was certainly two, and in some places three. One single estufa is still visible. The long structures of the pueblo surround two good-sized courtyards or "squares," and rows of stones set on edge form appendixes to several of the mounds.

Nearly on the brink of the slope towards the river, between two mounds and forming the northeast angle of the principal square, stand the remains of a round watch-tower. It is connected with the buildings next to it by rows of stones forming little rectangles in one place, as if a few garden

Part ii. p. 1086, copied into *Report upon United States Geographical Surveys West of the Hundredth Meridian* (vol. vii., Special Report by Professor E. D. Cope, pp. 351 to 360 inclusive). It is also interesting to note that ruins on the Chama were also noticed in 1776 by that remarkable monk, Fray Silvestre Velez de Escalante, during his trip to the Moqui Indians by way of the San Juan country. See his *Diario* of that journey, and the *Carta al P. Morfi*, April 2, 1778 (par. 11).

¹ See, in the volume last referred to above (App. I, i), Part ii. p. 1065, H. C. Yarrow, *Notice of a Ruined Pueblo and an Ancient Burial Place in the Valley of the Rio Chama*, pp. 362-365. The branches of which the Chama is formed are the Coyote in the west, the Gallinas north of west, and the Nutrias north. It is said that the waters of the first are red, those of the Gallinas white, and those of the Nutrias limpid. According as one or the other of these tributaries rises, the waters of the Chama assume a different hue. The word "Chama" is properly "Tzama."

plots had extended between the tower and the nearest mound on that side.¹

Near this pueblo Dr. Yarrow discovered a number of skeletons. I copy from his Report: "After carefully examining the remains of the village, we set out in search of the graves, and found that bodies had been buried within thirty feet of the walls of the town. The arroyos, as already stated, had been washed out by water, and the falling away of the earth disclosed the remains. The first skeleton found was in the right-hand or eastern arroyo, some six or eight feet below the level of the mesa, and had been placed in the grave *face downward*, the head pointing to the south. As the body lay, we had a fine section of the strata of earth above it. Two feet above the skeleton we noticed two smooth black 'ollas,' or vases, which, when dug out, were found to contain charcoal, parched corn, and the bones of small mammals and fowls, which had doubtless been placed therein at the funeral feast; and the remaining earth to the surface contained nothing but pieces of charcoal. Not a vestige of clothing, no ornaments, implements, or weapons, were found near the corpse, and apparently no receptacle had been employed to contain it. . . . A further search in both arroyos revealed more bodies similarly buried, and we secured several skeletons. But in some cases the crania were wanting. Three or four skeletons of children were also discovered; but the bones were in such fragile condition as to crumble on exposure to the air."²

The mode of burial as described corresponds to the present customs of burial of the Pueblos.³

¹ Although the sides of the hill are very gravelly, the summit, where the pueblo stood, has very good soil. Hence it is not improbable that a few garden plots were established in close proximity to the dwellings.

² *Notice of a Ruined Pueblo*, etc., p. 364.

³ Part I. of this Report, p. 153. The custom to-day is to place a vessel filled

To this ruin the San Juan Tehuas apply the name of Abechiu, while those of Santa Clara call it Oj-po-re-ge, "Place where metates are made rough."¹ Abechiu is undoubtedly the original name, and the other one of more recent date.

That both of the villages just described were built and occupied by the Tehuas seems to be certain; and that they were abandoned previous to the advent of Europeans is positive. Further than this, I have not been able to ascertain anything regarding their history.

I was told that another ruin existed eight miles southeast of Abechiu, near the Chama; and that small houses were scattered over the high mesas. Indians of San Juan have given me the names of some of the ruined pueblos that lie on the mesas west and south of the Chama River; for instance, Fe-se-re and Te-e-uing-ge. They are said to be small. The ruin next to Abechiu which I investigated, is that of the Yuque-yunque of Coronado's time, on which part of the settlement of Chamita is erected, Yuge-uingge.²

Chamita lies directly opposite San Juan. The ruins form an irregular quadrangle, and even in their present condition

with corn-meal and one filled with water on each side of the corpse in the grave. This is done to supply the soul with food and drink while it wanders through the air to Shi-pa-pu. As the journey takes four days and nights, and the only danger to which the soul could be exposed is from evil sorcerers or their spirits, the place where the person expired is kept sacred for four days by placing on it a little wooden image to represent the body. To this image are added a bowl of water, one containing food, cigarettes, and a miniature war-club, by which the soul may defend itself. To lead the fiends astray, a magic circle is drawn around the figure, and marks intended for the tracks of the pheasant, or "road-runner." As they point in all four directions it is believed they will bewilder the sorcerers when they come to take the soul, and thus prevent them from following it on its journey to Shi-pa-pu.

¹ "Lugar adonde pican los metates." As the ancient metates were not made rough by picking, I therefore conclude that it is a modern designation for the place.

² Castañeda, *Cibola*, p. 138. Also Part I. of this Report, p. 123, note 4.

resemble the description which Gaspar Perez de Villagran has given of the village.¹ The valley of Chamita is fertile. Situated between the Chama of the west and the Rio Grande on the east, it enjoys exceptional facilities for irrigation. For a ground plan of the ruin, I refer to Figure 10 of Plate I. Some protruding walls show that unhewn stones and rubble laid in adobe mortar entered largely into the composition of the structure. Whether the quadrangle on which a number of modern adobe houses stand to-day constituted all the village, or whether there were buildings besides, is difficult to determine, since fields extend all around the ruins. Cultivation by the Indians of San Juan, as well as by Mexicans, has obliterated every indication that might have existed formerly. The same has happened with the Spanish abodes and with the chapel of San Gabriel erected there in the fall of 1598.² All has disappeared; yet the tradition exists that at Chamita the first settlement of

¹ *Historia de la Nueva Mexico*, 1610 (Canto xxvii. fol. 228) : —

“ El Pueblo, no constaua ni tenia,
Mas que vna sola plaça bien quadrada,
Con quatro entradas solas cujos puestos,
Despues de auerlos bien fortalecido,
Con tiros de campaña, y con mosquetes.”

That the village had at least two, perhaps three stories, is also indicated in the same book (fol. 228 and 229) : —

“ Al arma dando todos con gran priessa,
Requirieron los puestos, y notaron,
Que estavan ya los altos de las casas.”

Also : —

“ Los techos y terrados lebantados.”

² Oñate, *Discurso de las Jornadas que hizo el Campo de su Magestad desde la Nueva España á la Provincia de la Nueva Mexico* (Doc. de Indias, vol. xvi. pp. 262-264). September 8th : “ Dia de Nuestra Señora, fue la gran fiesta de la dedicacion de la dicha Yglesia de Sant Joan Baptista.” *Cbediencia y Vasallaje de San Juan Baptista* (Ibid., p. 116) : “ Y este pueblo do Sant Joan Baptista y el de San Gabriel el de Troomaxiaquino . . . y mas, la Cibdad de Sant Francisco de los Españoles, que al presente se edifican.” This might indicate that it was Oñate's intention to call the new settlement San Francisco. But it is

whites in New Mexico took place, and very old people still remember that the site was formerly called "San Gabriel del Yunque."¹

Indian folk-lore has much to say about Yuge-uingge. The Tehuas relate that when their ancestors journeyed southward from Cibobe, and the division into summer and winter people occurred, of which I have spoken in the First Part of this Report,² the summer people, under the guidance of the Pay-oj-ke or Po-a-tuyo, settled at Yuge-uingge ;

abundantly proved that its patron saint was San Gabriel from the very beginning. Zaldivar, *Memorial* (Ibid., p. 198) : "Parece que con este aparato entro hasta el asiento y Villa de San Gabriel." Zaldivar was an eyewitness. Torquemada, *Monarchia* (vol. i. p. 672) : "Despachados Don Juan de Oñate, y los suios, para la jornada del Nuevo Mexico, siguieron su camino, en demanda de aquellas tierras, y en llegando á aquellas partes, tomaron posesion, por el Rei, en ellas, y el Pueblo donde Don Juan de Oñate, Governador, y Capitan General de esta entrada, hiço asiento y puso su Real, se llama San Gabriel, el qual sitio está en treinta y siete grados de altura al Norte, y está situado entre dos rios, y con las aguas del menor de los dos, se riegan los trigos, cevada, y maiz. . . . El otro rio es grande, que llaman del Norte, que es de mucho, y mui buen pescado." Torquemada wrote not later than 1609 (*Carta Nuncupatoria*, Ibid.), and he was a contemporary of the events. He adds, on page 678 : "Ya hemos dicho, que el lugar principal donde el Governador Don Juan de Oñate hiço su Poblacion, y sentó su Real, le puso por nombre San Gabriel . . . y que tiene por vanda dos rios, vno de los quales es de menos agua, que el otro." The same author also publishes a letter from Fray Juan de Escalona, dated "De este Convento de San Gabriel de el Nuevo Mexico, á primero de Octubre de mil seiscientos y vn años." *Carta de Relacion*, p. 675. I have in my possession the copy of a document (*Peticion de los Pobladores de la Villa de San Gabriel*, MS), executed at San Gabriel in December, 1604, which begins as follows : "Cava de Sn Gabriel de la Nueva Mexico." Fray Gerónimo de Zárate Salmeron, *Relaciones de Todas las Cosas*, MS., par. 34 : "Plantó su real entre este rio y el de Zama." Par. 44 : "Año de 1604, á 7 dias del mes de Octubre, salió D. U. de Oñate de la villa de Sn Gabriel á descubrir la mar del Sur." Lastly, Vetancurt, in speaking of the pueblo of San Juan, says (*Crónica de la Provincia del Santo Evangelio de México*, p. 318) : "Desde alli se ven los edificios de San Gabriel, primera fundacion de que se pasó á Santa Fé, á la otra parte del rio."

¹ Yunque is but a contraction of Yuge-uingge. Escalante says, in *Carta al Padre Morfi*, par. 2 : "Una Villa de Españoles, que era de San Gabriel del Yunque, primero y despues de Santa Fé."

² Part I. of this Report, p. 303.

but the winter people, after wandering over the eastern plains for a long while, at last went in search of their brethren, and established themselves near San Juan in sight of the other's village at Chamita. Finally it was agreed upon that a bridge should be built across the Rio Grande, and the official wizards went to work and constructed it by laying a long feather of a pafrot over the stream from one side, and a long feather of a magpie from the other. As soon as the plumes met over the middle of the stream, people began to cross on this remarkable bridge; but bad sorcerers caused the delicate structure to turn over, and many people fell into the river, where they became instantly changed into fishes. For this reason the Navajos, Apaches, and some of the Pueblos, refuse to eat fish to this day.

The story then goes on to tell that both factions united and lived together at Oj-ke on the east bank. It seems, however, that Yuge-uingge was not abandoned, since Poseueve in that pueblo met with the affront that caused him to forsake this earth, as I have already related.¹ The village was definitively forsaken in 1598, for the benefit of the Spaniards, who established themselves in the houses temporarily, until they could build their own abodes. This occurred with the consent of the Indians, who voluntarily relinquished the place to join their brethren at San Juan; and it was partly on account of this generous action that the title "De los Caballeros" was bestowed upon the Tehuas of the latter village.²

¹ Yuge-uingge must have been still occupied in 1541, for Castañeda says, in *Cibola*, p. 138: "Mais ceux de Yuque-yunque abandonnèrent deux beaux villages qu'ils possédaient sur les bords du fleuve, et se retirèrent dans les montagnes. . . . On trouva beaucoup de vivres dans les deux villages abandonnés."

² *Historia de la Nueva Mexico* (fol. 141):—

"Aqui los Indios mui gustosos,
Con nosotros sus casas dividieron,

The site of Chamita does not seem to have been much occupied during the seventeenth century; ¹ but although the Yutes and Comanches in the eighteenth century greatly harassed the settlers of San Pedro de Chama, as the district was called after the reoccupation of New Mexico, the number of Spanish inhabitants considerably increased.² The Indians of San Juan to-day still hold a portion of the arable

Y luego que alojados y de asiento,
Haziendo vezindad nos assentamos."

Also:—

"Hazfa un gracioso Pueblo bien trazado
Á quien San Juan por nombre le pusieron,
Y de los caualleros por memoria,
De aquellos que primero lebantaron,
Por estas nuevas tierras y regiones,
El sangriento estandarte donde Christo,
Por la salud de todos fue arbolado."

This disposes of the fable that the title of "Caballeros" was given to the San Juan Indians for their loyalty to Spain during the insurrection of 1680. On the contrary, the Indians of San Juan were among the most bitter and cruel of the rebels; and their participation in the risings of 1694 and 1696 is well known.

¹ *Merced de la Villa Nueva de Santa Cruz de los Mexicanos*, 1695, MS. The Spanish dwellings existing in the valley prior to the rebellion of 1680 are all indicated in this document, and were in the vicinity of the present town of Santa Cruz, — mostly towards San Ildefonso, and between that pueblo and the one of Santa Clara. Compare also *Diario del Sitio de Santa Fé*, 1680, MS., fol. 20 *et seq.*, and *Visita que Hizo el Sor Marques dela Naba de Brasinas*, 1704, MS.

² The name Chamita dates from the eighteenth century, and was given in order to distinguish it from the settlements higher up on the Chama River. Morfi (*Descripcion Geográfica*, fol. 99) says that seventeen families peopled it in 1744. A list nearly complete of the murders committed by the roaming Indians in the Chamita (Chama) district is contained in the *Libro de Entierros de Santa Clara*, MS. In 1748 the people of Chamita applied for permission to abandon their homes owing to these hostilities. *Peticion y auto sobre abandonar los Puestos de Abiquiu, Ojo Caliente y Pueblo Quemado*, 1748, MS. This was refused. Tomas Velez Cachupin, *Auto prohibiendo el despueblo de Chama como pretendian sus moradores por ostilidades de los Yutas*, 1749, MS. In 1781 the district was visited by a terrible epidemic, which lasted about two months, and carried off a frightful number of victims. *Libro de Difuntos de Santa Clara*, 1781, MS.

lands about Chamita, and a small colony of them dwell on the west side of the Rio Grande, at the so called "Pueblito."

The delta on which Chimita is situated narrows at a short distance north of the settlement, and becomes the Chama valley,—sandy, dotted with groves of cottonwoods and flanked on the west by the mesas,—above which towers the former volcano of Abiquiu. In the east an extensive plateau, covered by a layer of black trap, separates this valley from the Rio Grande; it is called the "Mesa de la Canoa,"¹ and there are no vestiges of antiquity on its surface so far as I am aware, but there are rents and clefts in its eastern side that I have reason to believe are used to-day by the Indians of San Juan for sacrificial purposes. The eastern side of the Rio Grande is a level and very fertile expanse for a length of ten miles, between the "Joya" in the north, and San Juan in the south. This abuts against a barren table-land that stretches westwards from the Sierra de la Truchas. On this table-land there are said to be ruins, and three in the plain along the river, of which I have visited but one, Pio-ge, three miles north of San Juan. This is smaller than Abiquiu; but the disposition of its buildings appears to have been similar. Considerable pottery has been exhumed from Pio-ge, and handsome specimens are in Mr. Eldodt's possession. Among them are sacrificial bowls with the turreted rim that characterizes those vessels, and the symbolic paintings of the rain-clouds, of water-snakes, and of the libella. Similar fetiches of alabaster have also been unearthed. Pio-ge is claimed by the Tehuas of San Juan as one of their ancient villages, and they assert that it was abandoned previous to Spanish times. They also state that there are two ruins at La Joya, (ten miles

¹ A trail leads across it to the Rio Grande from Ojo Caliente.

north of San Juan,) one of which they call "Sä-jiu Uing-ge," and the other "Pho-jiu Uing-ge."

The Mesa de la Canoa descends towards Chamita in a jagged spur, along whose base runs the Denver and Rio Grande Railroad. From its bald crest is an extended view, taking in the pueblo of San Juan¹ on the opposite bank, which shows above the green fields and groves of fruit trees of the river bottom. Between the river on the west and the high mountains of Nambé extends the valley of Santa Cruz, with its dismal historic recollections. Barren ridges shut in the view in the south; in front of them we see the top of the black Mesa of San Ildefonso looming up like the head of a gigantic negro. All that side of the Rio Grande except the heart of the mountains is the range of the Tehua tribe, ancient and modern; and the Indians of to-day, whenever they speak with freedom, assert that the ruins scattered over it are those of the villages of their forefathers.

West of the Rio Grande high peaks like the Pelado² and the Sierra de Toledo overlook the course of the river, but in much closer proximity. Bleak mesas covered with pine timber near the foot of the mountains form their base, and crowd close on to the river bank, leaving but a narrow strip for cultivation. The Mexican houses lie mostly on the first tier of bluffs, and the fields are as near the river as possible. We catch a glimpse of the pueblo of Santa Clara, and of its ungainly church. Farther south dark ridges seem to close in on both banks. Beyond the Mesa of San Ildefonso the Rio Grande rushes into the long, wild chasm which separates San Ildefonso from Cochiti, or the most southerly Tehua village from the most northerly pueblo of the Queres.

Santa Clara, or Ka-pou, lies six miles south of Chamita,

¹ Elevation 5,554 feet (Wheeler).

² Elevation 11,260 feet (Wheeler).

and a long mile beyond Española, the terminus of the Texas, Santa Fé, and Northern Railway; it stands on a bluff, from which the Santa Fé range and the valley of Santa Cruz are seen most favorably at sunset. The church dates from 1761.¹ The former pueblo and church of Santa Clara have long since disappeared, but their site is still known to the Indians, north of the pueblo. A still older site is at the outlet of a mountain torrent called Arroyo de Santa Clara, a short distance to the west. There, say the natives, stood "old Kapo before the white man and the gray fathers came to dwell among us." But the most ancient vestiges of the Tehuas of Santa Clara lie much higher still, on the bleak table-land through which the Santa Clara Creek has cut a narrow, deep, and very romantic gorge, the Santa Clara Cañon.

There are no ruins in this cleft; for ten miles it is a sandy groove; farther west the creek is filled with limpid water, abounding in mountain trout, and stately trees cover the bottom; thence it rises, narrowing, and finally becomes a beautiful wilderness where towering cliffs and pinnacles look down upon a maze of trees and shrubbery. Twenty-five miles separate the outlet of the gorge at Santa Clara from the crest of the Valles Mountains.² The Valles proper are

¹ *Libro de Difuntos de Santa Clara*, 1726 to 1842 (MS, fol. 34): "En catorze de Oete año Setezientos Sesenta y uno di sepultura en esta yglesia nueva á Maria, par bula, á Jua. Antto Chapulin Soltero, qe murió Violento, y á Phe-lipa Donbella, quien recibió los Santos Sacramentos lo qe firme Fr. Mariano Ródriguez de la Torre, Mrõ." I give the text of this entry as a specimen of these church books, so frequently disdained, and yet so valuable for historical studies.

² The distances are not absolutely accurate, but according to the statements made to me, the only means of checking them being my own experience on foot. The view from the crest, where the Pelado looms up on one side and the Toledo range on the other, is really striking. The sight of grassy levels glistening with constantly dripping moisture is something rare in the Southwest. To heighten the effect, groves of "Pino Real" and mountain aspen rise everywhere. The soil is very fertile, and there is abundant water, and yet no trace

as destitute of ruins as the heart of the eastern mountain chain; beyond them begin the numerous ancient pueblos of the Jemez tribe.

Both north and south of the Santa Clara Cañon, about a mile on either side, and twelve miles from the Rio Grande, the light-colored pumice-stone and volcanic ashes of which the mesas are mostly formed rise in abrupt heights. On the north side a castle-like mesa of limited extent detaches itself from the foot of the Pelado. The Tehuas call it the Shu-finné, and I have seen it distinctly from a distance of thirty miles. It is not the absolute height of the rock, (I should estimate it at not over 150 feet above the mesa,) but the almost perfect whiteness of its precipitous sides and lower slopes against the dark mass of mountains that makes it so conspicuous. The perimeter of the Shu-finné is not very large, and its base is surrounded by cedar and juniper bushes with a sprinkling of low piñon trees.

Two thirds of the elevation of this rock consist of a steep slope covered with débris of pumice and volcanic tufa. Along the base of the vertical upper rim small openings are visible, which are the doorways of artificial caves. The Shu-finné contains a complete cave village, burrowed out of the soft rock by the aid of stone implements. During my last visit to Jemez I passed quite near this natural castle,—near enough to see the doorways easily, and to notice that in some places two tiers of grottos were superposed; but I had not time to ascend and examine the caves themselves. This was unnecessary, since three years previous I had investigated the other locality of artificial cave dwell-

of ancient abodes has been found. The winters are long in the Valles, and there is too much game not to attract the cupidity of a powerful tribe like the Navajos. This may serve to explain why the Valles remained uninhabited in ancient times. I suppose that no ruin on the flanks of the chain, both east and west, is to be found at an altitude exceeding 7,500 feet.

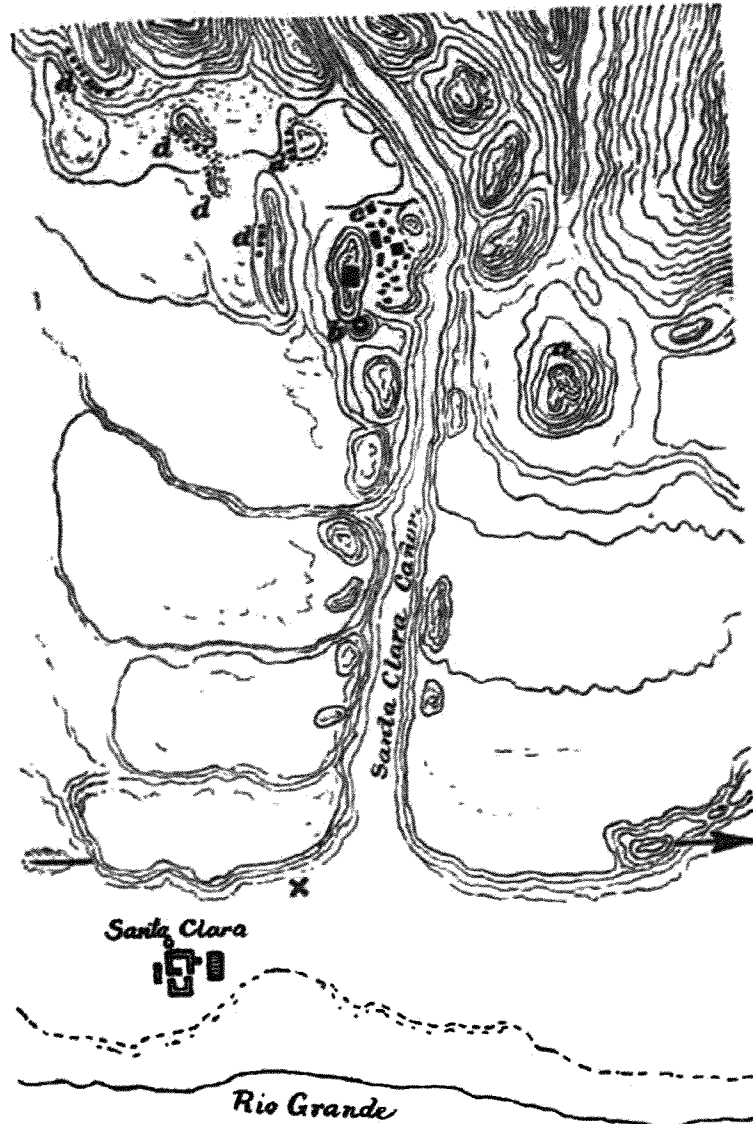
ings, separated from the Shu-finne by a distance of only three miles. This other locality is called the "Pu-yé," and is also a mesa of pumice-rock; but it rises from the plateau that lies south of the Santa Clara Cañon.

The annexed sketch will give a better idea of the relative position of the Shu-finne (*a*) and the Pu-yé (*b*) than any written description. It is made without reference to scale, but the distance separating the two rocks from each other is about three miles. The Pu-yé lies lower than the Shu-finne, and as seen from it the latter looms up conspicuously in the north, like a bold white castle.

Only the southern and eastern sides of the Pu-yé are vertical; towards the north and west the slope is gradual. Groves of pine partly cover the summit; and quite a large pueblo ruin, with its walls of pumice still intact to the height of two stories, crowns the top of the cliff.¹

The vertical wall in which the caves (*d*) have been excavated varies in height. In places it may be only six meters (twenty feet); in others it attains as many as sixteen (fifty

¹ The following description of this ruin, by the late Mr. James Stevenson, relieves me from the necessity of giving any details regarding the appearance of the pueblo (*Illustrated Catalogue of the Collections obtained from the Indians of New Mexico in 1880*. Report of the Bureau of Ethnology, 1880 and 1881, p. 432): "Upon the top of the mesa of which these cliffs are the exposed sides we found the ruins of large circular buildings made of square stones, eight by twelve inches in size. The walls of some of these structures remain standing to the height of ten to twelve feet, and show that from four to five hundred people can find room within each inclosure. One of these buildings was rectangular, and two were round structures. The latter were about 100 and 150 feet in diameter; the rectangular, about 300 feet square. Many small square rooms were constructed in the interior from large cut bricks of the tufa of which the bluffs are composed. These rooms all opened toward the centre of the large enclosure, which has but one general doorway. From these ruins we secured great quantities of pottery, arrow and spear heads, knives, grinding-stones, arrow-smoothers, and many of the small flint adzes, which were undoubtedly used for making the blocks for the structures on the mesa, and for excavating the cave dwellings. Among the débris in the dwellings are found corn cobs, and other evidences of the food used by the inhabitants."



SKETCH OF SANTA CLARA CAÑON, THE SHU-FINNÉ, AND THE PU-YÉ.

feet). The incline on the other hand is twenty meters (sixty-five feet) on the western, and as many as fifty meters (one hundred and sixty feet) on the eastern end. As the denuded faces of the cliff are those of the south and east, it follows that the caves extend around it from the southwestern to the northeastern corner, forming a row of openings along the base of the vertical wall. There are also scattered groups of caves in other heights near by (*d*). I did not count their number, but since they extend at irregular intervals on a line nearly a mile long, counting both faces, and there are sometimes two and occasionally three rows, they must have been capable of harboring at least one thousand people. In some places beams protrude from the rock, showing that houses had been built against it alongside of cave dwellings. There was also a level platform all along the base of the vertical declivity, wide enough at one time to afford room for at least one cell if the rock were used as a rear wall. This rock is soft and friable, and can easily be dug into by means of sharp and hard substances, such as obsidian and flint. The volcanic formation of the mountains affords sufficient quantities of both materials, but chiefly of obsidian. Basalt chisels rudely made have also been found in connection with the caves. That the caves are wholly artificial admits of no doubt, and it was in fact easier for the Indian to scrape out his dwellings than to build the pueblo whose ruins crown the summit of the cliff. Since Mr. J. Stevenson examined the Pu-yé in 1880,¹ the locality has been frequently visited,

¹ Mr. Stevenson says in regard to the manner in which the rooms were excavated (*Ibid.*, p. 431): "The process, from the evidences shown inside, of carving out the interior of the dwelling was by scraping grooves several inches deep and apart, and breaking out the intermediate portion; in this way the work progressed until the room reached the desired size." At the same time Mr. Stevenson was making these observations at the Pu-yé, I was arriving at similar

and but few specimens of broken objects are obtainable. I refer to the Catalogue published by the Bureau of Ethnology for a description of the collections made on the spot by Mr. Stevenson in 1880.¹ Mr. Eldodt has in his possession several valuable specimens from the Pu-yé.² These relics have nothing to distinguish them from those found in pueblo ruins in general; but the pottery is not so well decorated as that of Ojo Caliente and Rito Colorado. Fragments of a coarsely glazed variety are very abundant, and I know of but one specimen of incised ware found at or about the artificial caves.

The ascent to the caves is tedious, for the slope is steep, and it is tiresome to clamber over the fragments of pumice and tufa that cover it. Once above, we find ourselves before small doorways, both low and narrow, mostly irregularly oval. I measured a number of the cells and found their height to vary from 1.47 (4 feet 10 inches) to 2.03 m. (6 feet 8 inches). Most of them, however, were over five feet high. The outer wall was usually 0.30 m. (1 foot) thick, like most of the pueblo walls. A single doorway sometimes serves as entrance to a group of as many as three cells, connected by short, narrow, and low tunnels, large enough for a small person to squeeze through. I noticed little air-holes and also loop-holes in the outer walls, but no fireplaces, although, as Mr. Stevenson also observed,³ the evidences of fire are plain in almost every room. Altogether these caves must have been uncomfortable places of abode. In summer the hot sun strikes full on the face of the rock,

conclusions concerning the artificial caves at the Rito de los Frijoles, nearly thirty miles farther south, in the same mountain region.

¹ *Ibid.*, p. 441.

² The most interesting are several stone axes, and one war-club with head of stone, — all with their wooden handles, — and the stone arrow-smoothers.

³ *Ibid.*, p. 431.

and the line of grottos lies high above the tallest trees in the arroyo beneath. In winter smoke must have made them extremely disagreeable. The ceilings of the caves are black from soot. The floor is 0.05 m. (2 inches) thick, and appears to have been an ordinary coating of adobe mud spread on the rock and washed with blood to render it hard and smooth. Niches are frequent, and there are traces of a coating of whitewash of gypsum on the walls. On the whole, the interior of these cells resembles that of a pueblo room now of ancient type. There are even the holes where poles were fastened, on which hides, articles of dress, or dance ornaments were hung,¹ as is still the custom of the Pueblo Indians. In one room I noticed what may have been a stone frame for the metates. The interior chambers may have been used for store-rooms, or the largest of them may also have served as dormitories.

Every feature of a Pueblo household is found in connection with these caves. They form a pueblo in the rock, and there are also a number of estufas.

I have not succeeded in ascertaining that any artificial cave pueblos have been discovered north of the Shu-finné, nor are there any south of the parallel of Cochiti. But the country intervening between these two points — thirty miles from north to south, and ten miles on an average from east to west, lying west of the Rio Grande valley and east of the high crests of the Sierra de los Valles — all belongs to the peculiar volcanic formation that rendered the excavation of abodes easy. Cave villages of the kind described are consequently quite numerous, occupying an area of about three hundred square miles. They are merely a local feature,

¹ *Ibid.*, p. 431: "Near the roofs of many of the caves are mortises, projecting from which, in many instances, were found the decayed ends of wooden beams or sleepers, which were probably used, as they are now in the modern Pueblo dwellings, as poles over which to hang blankets and clothing, or to dry meat."

to which the Indian was induced to resort by the nature of the prevailing geological formation.

The Shu-finné and the Pu-yé seem to form the northern limit of this peculiar region, — peculiar archæologically as well as geologically. The two cliffs form two distinct settlements, but they are so close together that, if they were inhabited at the same time, as seems probable, relations, either friendly or hostile, must have been frequent. But the Shu-finne stands alone; I was unable to find any traces of ruins around it on the north side of the Santa Clara Cañon, while the Pu-yé is surrounded in every direction by vestiges of ancient Indian abodes.

About two miles west of it, at the foot of the high mountains called the Sierra de Toledo, a part of the Valles chain,¹ bare cliffs show, on their eastern and southern faces, the marks of former caves, the front of which has completely fallen, leaving only arched indentations in the rock. I did not find a trace of pottery in these localities, and they all bear the marks of having been very long abandoned.

South of the Pu-yé extends a level space, whose soil appears to be quite loamy and fertile, and on this level are traces of garden plots. On a grassy plain northwest of the cliff, between it and the cañon, there are not only garden beds encased by rows of stones, as at the Rito and Ojo Caliente ruins, but considerable mounds, in one of which the

¹ As I shall have occasion to refer frequently to the different sections of the Valles Mountains under their current Spanish names, I give here a list of them from north to south. The northern end of the range is formed by the Sierra de Abiquiu, with the peak of the same name; then follows the Cerro Pelado; afterwards come the Sierra de Toledo, Sierra de San Miguel, Sierra de la Bolsa, and, lastly, the Sierra de la Palisada. As seen from Santa Fé, they seem to constitute one long chain of contiguous heights. West of this range, at an elevation of at least eight thousand feet, extend the grassy basins of the "Valles"; beyond it rises the high Sierra de la Jara, sometimes called Sierra de Jemez, because the Jemez region lies on its western base.

remains of a wall made of pumice-stone is still visible. The buildings were evidently made of blocks of this stone, and were at least two, if not three, stories high, forming hollow quadrangles and long, low mounds.

There is little pottery about these ruins, and their condition is such as would be produced by a period of decay much longer than that which both the caves and the ruin on top of the cliff appear to have suffered. In some of the enclosed spaces which I believe to have been garden plots, trees have grown up. These ruins, as well as the almost obliterated artificial caves on the base of the mountain, seem to be much older than the cave villages of the Shu-finné and Pu-yé, and the pueblo that stands on the summit of the latter.

I have spoken of the apparent fertility of the soil; but fertility alone is not sufficient for successful cultivation. Moisture also is required, and there is no possibility of irrigation on the whole mesa, north, south, or west. Towards the east it is thirteen miles to the Rio Grande. Still there is no doubt that the inhabitants had their fields around the cliffs. The cañon affords no space for cultivation sufficient for the number of people that must have occupied either one of the two rocks; but it is certain that, so near the mountains, the quantity of rainfall is sufficient, in ordinary years, to enable corn and the other indigenous staples to be grown. But in case of protracted droughts, such as are known to occur in the Southwest, the Shu-finné, the Pu-yé, and all the country around must have become uninhabitable.

For drinking purposes, a small spring lying to the north-east of the Pu-yé afforded a limited supply. The beautiful waters of the Santa Clara Creek flow at too great a distance, and access to them might frequently have been impeded.¹

¹ The descent to the cañon is through woods and steep valleys, where an ambuscade might easily be laid.

But a large tank had been constructed by the inhabitants of the villages, and the vestiges of it still exist. The locality therefore, fulfilled all the requirements for an Indian settlement: a good military position, arable soil, wood, and water for household purposes.

As lookout places, both cliffs are magnificently situated, commanding in every direction a superb view. The slopes of the mountains may be scanned for any living object not concealed by forests. The Rio Grande valley is visible from north of San Juan to San Ildefonso, and from Santa Clara to the gorges of Chimayo. The whole eastern chain stretches out in the distance, from Taos to its most southerly spurs below Santa Fé. In case of imminent danger, the inhabitants of one rock could signal to those of the other, night or day, as there was nothing to obstruct the view. As defensive positions they were beyond danger from assault by an Indian force. Only an ambush prepared under cover of darkness could injure those who descended from their lofty abodes in order to fetch water or till the fields. Nevertheless, constant harassing might at last compel the inhabitants to abandon even such impregnable positions, and to retire to places more distant from the range of their enemies.¹

Who were the people that lived upon and around these two cliffs? For two consecutive years I inquired of the Tehuas of San Juan and San Ildefonso if they knew anything about the cave dwellers, and they invariably told me they did not. At last, in 1888, I became acquainted with the people of Santa Clara, and during three protracted stays at their village I

¹ There was not always danger of their being followed by the foe, in case of the removal of the whole village. Well authenticated cases are known in which the Apaches, after compelling the Pueblos to evacuate a certain position, did not disturb them in their new homes for a number of years.

succeeded in gaining the confidence of several of their principal Shamans. These medicine-men assured me that the pueblo on the summit of the Pu-yé, and the cave dwellings in that cliff and at the Shu-finné, were the work and abodes of their ancestors. Subsequently I questioned the medicine-men of San Juan, and they acknowledged that what their neighbors had told me was true, but that it was no part of their local traditional history. The same was said to me afterwards by one of the wizards of San Ildefonso. The Indians of Santa Clara also informed me that drought and the hostility of nomadic Indians had compelled the final abandonment of the sites. The statements of these Indians were so emphatic, that I am strongly inclined to believe them. The cave-houses and the highest pueblo appear therefore to have been the homes of that portion of the Tehua tribe whose remnants now inhabit the village of Santa Clara, in days long previous to the coming of Europeans.

I was not unprepared for such a result. While I lived at Cochiti, the Queres, after numerous evasive answers, and even formal denials, had acknowledged to me that the caves of the Rito de los Frijoles were the work of their tribe, many centuries ago. But while the people of Santa Clara were positive about the Pu-yé and the other cliff, they remained silent about the ruined cave villages higher up the mountains and the much deteriorated pueblos on the level around the Pu-yé. All I could elicit from them was that they "supposed" their forefathers made these also, but so long ago that they had neither recollection nor tradition concerning them. This statement of the Indians is corroborated by the general appearance of the ruins. There seem to be, therefore, the vestiges of two distinct epochs, marked by two different architectural types, — artificial caves, and communal pueblos built in the open air.

Whether the Tehuas were the builders of the older remains it is at present impossible to decide. One Indian of San Juan assured me that all the ruins on both sides of the Rio Grande, from the western slope of the Rocky Mountains to the eastern of the Valles chain, were those of former Tehua villages. Such sweeping statements must be taken with a great deal of allowance.¹ Concerning the Shu-finné and the Pu-yé, the following problems still present themselves: —

First, Were the two cliffs simultaneously occupied?

Second, Were the caves of the Pu-yé and the village on the summit inhabited contemporaneously?

Third, What caused the abandonment of these settlements?

First. I have already expressed my belief that the Pu-yé and the Shu-finné were inhabited at the same time. The appearance of both cliffs, and the amount of decay, indicate that probably only a short time elapsed between the abandonment of both. The isolated position of the northern cliff favors the hypothesis that it had to be evacuated sooner than the southern.

Second. Here two possibilities arise; one, that the pueblo is more recent than the caves; the other, that the former was the *summer*, the latter the *winter* village of the same population. I doubt very much if the pueblo is older than

¹ He mentioned, it is true, two successive occupations of the country by the Tehuas. In the first, the tribe kept along the heights for the reason that the bottom and valley of the Rio Grande was too moist for habitation; then they spread to the south as far as the region of San Pedro, and, turning back, settled again near the sites of their earliest abodes: lastly, they descended into the Rio Grande valley. This tale is by no means to be rejected, but further investigation is necessary before we can pass judgment upon it. The ruin at San Pedro marks the southern limit of the range of the Tanos, who were the southern branch of the Tehuas; and on the west side of the Rio Grande, Tehua ruins lie within twenty miles north of Cochiti. On the east side, Tanos ruins are found three miles east and northeast of the latter pueblo.

the caves, for it is in a better state of preservation, and the majority of the artificial objects were found there, and not in the grottos. There is nothing improbable in the hypothesis of a winter and summer village, as the caves must have been excessively hot and close during the summer months.¹

Third. The Santa Clara people stated to me that drought and wars were the causes of the abandonment of the cliffs and the pueblo. The former reason especially seems highly probable, but there may have been still another. The rock is exceedingly friable, and its deterioration from atmospheric action is rapid. Still, comparatively few caves are so far gone as to have lost the front walls. The older cave dwellings, however, about which the Tehuas could give me no positive information, show such disintegration of the face of the rock very plainly. Whenever it set in, there was no remedy for it, and the inhabitants were compelled to move. This may have been one of the causes why the pueblo on top of the Pu-yé was built; the inhabitants may have seen that their cave dwellings were becoming untenable.

The country south of this interesting spot abounds in artificial caves; in nearly every gorge the southern and eastern cliffs show the traces of such abodes. With but one exception these gorges have no permanent water as far south as the Rito de los Frijoles; but springs have been discovered here and there on the long and narrow mesas that separate the cañons, and also in the river bottoms. These bottoms are frequently well wooded, and the forests encroach also

¹ At the present day the Indians of Acoma have their summer village, Acomita, at a distance of fourteen miles from the rock, and nearly the whole population emigrate thither every year. The Zufis move to Pescado, to Aguas Calientes, and to Nutria, so that their pueblo is almost deserted from spring to fall.

upon the mesas the nearer we approach the latitude of San Ildefonso. I heard of no pueblo ruins except caves on the mesas immediately south of the Pu-yé, but a little above San Ildefonso stands quite an extensive ruin, through one angle of which the track of the Texas, Santa Fé, and Northern Railroad is carried. Pe-ra-ge, as the Indians of San Ildefonso call it, lies not far from the river, on the first terrace of the bluffs. The pueblo was built of rubble and stones, and consisted of several apparently connected quadrangles. It is therefore of the type of Se-pä-ue and Abe-chiu, but not as large as the former. The Tehuas of San Ildefonso state that it was inhabited by their ancestors before the coming of the Spaniards, and that they removed thence to the east bank of the Rio Grande. This change of location occurred previous to the sixteenth century. We have therefore in this tale about Pe-ra-ge a fragment of the ancient history of San Ildefonso, just as the lore about Chamita affords a glimpse into the past of San Juan, and the tales concerning the Pu-yé and vicinity throw light upon that of the Santa Clara tribe.

The country west of the Rio Grande, between Pe-ra-ge in the north and the vicinity of the Rita de los Frijoles in the south, is wild, with deep cañones traversing it like gashes cut parallel to each other from west to east. They are mostly several hundred feet in depth, and in places approaching a thousand. On the northern walls, facing the south or east, caves, usually much ruined, are met with in almost every one of them. There are also several pueblo ruins on the mesas, about which I have only learned from the Indians that they were Tehua villages, and that their construction, occupation, and abandonment antedate perhaps by many centuries the times of Spanish colonization. The Tehua names for these ruins are, respectively, Tzi-re-ge, Sä-ke-yu, and Po-tzu-ye.

Almost opposite San Ildefonso begins the deep and picturesque cleft through which the Rio Grande has forced its way. It is called "Cañon Blanco," "Cañon del Norte," or "White Rock Cañon." Towering masses of lava, basalt, and trap form its eastern walls; while on the west those formations are capped, a short distance from the river, by soft pumice and tufa. As far as I could ascertain, the last two pueblos mentioned lie near the line where the two formations touch each other. Tzi-re-ge¹ stands on a higher level, and is built of pumice and volcanic tufa. The plateau on which this ruin is situated slopes towards the east, and is of inconsiderable height. Its southern side is abrupt, and numerous cave dwellings have been excavated in it. Southeast of the ruin in a bottom lies a spring, with forests all around, though not immediately adjacent to the ruin. Tzi-re-ge was quite large, and comprised several quadrangles, after the manner of the northern Tehua pueblos, but I was not able to make measurements of it. I have seen considerable pottery from it, chiefly black ware, decorated with indented rims, and other simple plastic ornamentation. In a straight line Tzi-re-ge lies seven miles from San Ildefonso, and its altitude above the river I estimate at one thousand feet, if not more.

South of Tzi-re-ge, there are caves in the deep Cañada Ancha and other gorges. On the summit of the Mesa del Pajarito I found ruins of small houses with garden plots. The Mesa del Pajarito² forms the northern rim of a deep gorge called Rito de los Frijoles. In the cliffs of this romantic mountain valley, the largest and best preserved cave villages of the whole region are to be seen. These caves are no longer claimed by the Tehuas, but by the Queres.

¹ It is also called "Pajaro Pinto," from a large stone, a natural concretion, found there, slightly resembling the shape of a bird.

² The Queres call it "Tziro Ka-uash," of which the Spanish name is a literal translation.

What tribe erected the buildings on the Mesa del Pajarito I could not learn. Here the ancient range of the Tehuas terminates on the west side of the Rio Grande, and I turn to cast a glance at the antiquities on the east side of the river.

A volcanic plateau skirts the Rio Grande, beginning south of San Ildefonso, and extending to a few miles southeast of Cochiti, twenty-five miles long from northeast to southwest, and fifteen miles transversely. This plateau is surmounted near its southern end by the isolated height of the Tetilla.¹ This peak is only 2,153 meters (7,060 feet) high, and presents on all sides the appearance of a pointed cone resting on a gracefully curved basis. North of the Tetilla lie several ancient craters, whose sides have crumbled and are now rounded eminences or jagged humps. A layer of trap and lava covers the cretaceous formation to a depth of a hundred feet or more. The nearer we approach San Ildefonso, the wilder the scenery becomes, and the broad cañadas that traverse it are without permanent water. I know of only one ruin in this region, which stands three miles northeast of Cochiti on a rocky bluff of volcanic origin in the so called "Caja del Rio." Whether the Tehuas, the Tanos, or some other unknown tribe, were the builders of it, I am unable to say. The people of Cochiti disclaimed all knowledge of its former occupants.² The amount of arable soil in the vicinity is sufficient; for the population, as I estimate it, could not have exceeded four hundred. (See Plate I. Fig. 12.) The appearance of the mounds, to which the ruin is now reduced, is exceedingly ancient. Over them opuntias have grown, and indicate from a distance their shape and extent. The

¹ "Shkasi-sku-tshu," in Queres the pointed height; Ta-pu, in Tehua, which has an analogous signification."

² They call the ruin simply, Ti-tji Hän-at Ka-ma Tze-shu-ma, "The old Houses in the North," or Chin-a Ka-na Tze-shu-ma, "The old Houses on the River."

usual remnants of pottery and stone implements, including obsidian, are scattered about the ruin. The walls were of rubble, and I noticed only two estufas. The position is a good one for observation and defence. To the west especially the view is striking, the sombre cañones opening directly opposite, beneath the bold crest and peaks of the Sierra de San Miguel. The height of the ruin above the river must be several hundred feet, and the declivities are perpendicular in part, so that the stream seems to hug the base of the rock on which the pueblo was perched. On the waterless plateau called El Cuervo, farther north, I know of no ancient vestiges, and both the Cañada Ancha and Cañada Larga, at the foot of that wide and long mesa, I have been informed, are devoid of all remains of former Indian habitations.

Neither the Quereres of Cochiti nor the Tehuas of San Ildefonso gave me any traditions concerning the volcanic phenomena of which the Tetilla and the ancient craters bear testimony; but I do not think that this silence was intentional on the part of the Tehuas, as they spoke without reserve concerning other volcanic phenomena near San Ildefonso.¹ They say that "once upon a time," very, very long ago, smoke issued simultaneously from four different points. From the heights on the Mesa del Cuervo, or To-ma, from the "Gigantes," or the black cliff of Shyu-mo south of San Ildefonso, from the Tu-yo, or the black Mesa of San Ildefonso north of the village, and from another point in high mountains, which I could not locate. Of earthquake shocks, fire, or lava, they told me nothing; neither could I find out how long ago this happened.

¹ The Tehuas call the Mesa del Cuervo, and the heights which crown it, To-ma, and the gigantic rocks forming the entrance to the Rio Grande gorge south of their village, Shyu-mo.

The pueblo of San Ildefonso, or Po-juo-ge, offers nothing of archæological interest. After the uprising of 1696, when the church was ruined by fire,¹ the village was moved a short distance farther north, and the present church is located almost in front of the site of the older one, to the north of it. Neither does the black mesa called Tu-yo, two miles from the village, deserve attention except from an historic standpoint. It was on this cliff that the Tehuas held out so long in 1694 against Diego de Vargas.² The ruins on its summit are those of the temporary abodes constructed at that time by the Indians. On the steep side of the Tu-yo there is a cave about which some fairy and goblin stories are related, which may yet prove useful for ethnological and historic purposes.

San Ildefonso lies eight miles south of the town of Santa Cruz, and in a direct line about twelve south of San Juan. Between the latter pueblo and Santa Cruz I know of no ruins; but the valley, or cañada, at the outlet of which this Mexican settlement is situated, has a number of sites which the Tehuas claim. In some cases, near Santa Cruz, for in-

¹ This occurred on the 4th of June, 1695. Two priests, Father Francisco Corbera and Father Antonio Moreno, were murdered by the Indians, who during the night closed all the openings of both church and convent, and then set fire to the edifice. Several other Spaniards also perished. The facts are too well known to require reference to any of the numerous documents concerning the events.

² No documentary proof of this is needed. Vargas made four expeditions against the mesa, three of which proved unsuccessful. The first was on the 28th of January, 1694, and as the Tehuas made proposals of surrender, Vargas returned to Santa Fé without making an attack upon them. But as the Indians soon after resumed hostilities, he invested the mesa from the 27th of February to the 19th of March, making an effectual assault on the 4th of March. A third attempt was made on the 30th of June, without results; and finally, on the 4th of September, after a siege of five days, the Tehuas surrendered. Previously they had made several desperate descents from the rock, and experienced some loss in men and in supplies. The mesa is so steep that there was hardly any possibility of a successful assault.

stance, every vestige has disappeared from the surface. Higher up toward Chimayo, there are said to be well defined ruins on the mountain sides, the names of two of which are Po-nyi Num-bu and Yam P'ham-ba.¹ The former is very ancient, but Yam P'ham-ba was a village which the Tanos constructed in the vicinity of Santa Cruz after the uprising of 1680, when they forsook the Galisteo region and moved north in order to be nearer to their kindred, the Tehuas.² There is also a ruin in that neighborhood, I-pe-re, or San Lázaro, which dates from the same period. Both were abandoned after the reconquest, San Lázaro in 1694, and Yam P'hamba or San Cristobal in the same year. It was subsequently reoccupied, and finally deserted in 1696, after the murder of the missionary Fray José de Arvizu on the 4th of June.³ In the Cañada of Santa Cruz, consequently, there are ruins of historic, as well as of pre-historic pueblos; a fact which future explorers should bear in mind.

The sandy Arroyo Seco, between Santa Cruz and Pojuaque, has neither permanent water, arable soil, nor ruins.⁴ But the banks of the Pojuaque stream, from its sources at the foot of the Sierra de Nambé to its outlet into the Rio Grande at San Ildefonso, are lined with the débris of former Tehua pueblos. Upon this same stream there are two inhabited pueblos besides the one last mentioned, Na-i-mbi, or Nambé, and P'o-zuang-ge, or Pojuaque.

The valley in which the former of these two villages stands is not only very fertile, but very well irrigated. The Rio de

¹ The site of Yam P'ham-ba is probably that of the so called "Puebla," two miles east of Santa Cruz.

² Vargas found them there in 1692, when he made his first successful dash into New Mexico.

³ With him was killed the priest of Taos, Fray Antonio Carboneli.

⁴ The Arroyo Seco was the scene of the engagement in August, 1837, in which Governor Perez was routed by the insurgents from Taos and Northern New Mexico.

Pojuaque, called in its upper course Rio de Nambé, is a swift and limpid brook that leaves the mountain gorges but a short distance above the Nambé pueblo. Mesas with abrupt sides border upon the valley in the east, and on these there are pueblo ruins. The Indians of Nambé assert that they were reared and occupied, as well as abandoned, by their ancestors prior to the establishment of Spanish rule in New Mexico. They also gave me some of the names: T'o B'hi-päng-ge, the former village of the Nambé tribe, eight miles northeast of the present pueblo; Ke-gua-yo, in the vicinity of the Chupaderos, a cluster of springs about four miles east of Nambé in a narrow mountain gorge; and A-ga Uo-no and Ka-ä-yu, both in the vicinity of the Santuario in the mountains.

Around the Pojuaque of to-day cluster ancient recollections. A large ruin, called by the San Juan Indians Te-je Uing-ge O-ui-ping, occupied the southern slope of the bleak hills on which stands the present village. The Tehuas claim that this pueblo marks the centre of the range of their people, and that the division into two branches, of which the Tehuas became the northern and the Tanos the southern, took place there in very ancient times. Certain it is that in the sixteenth century the Tehuas already held the Tezuque valley ten miles south of Pojuaque, as they still hold it to-day.

Pojuaque, or P'o-zuang-ge, was inhabited when Oñate occupied New Mexico. After the rebellion of 1680 it was abandoned, and only resettled in 1706 by order of the Governor Don Francisco Cuerdo y Valdés.¹ The student of antiquities should therefore bear in mind that at Pojuaque he will find pre-historic and historic remains in close proximity to each other.

¹ *Testimonio de Diligencias sobre la Fundacion de Albuquerque, de Sta Maria de Grado, de Pojuaque y Galistéo, 1712, MS.* The settlement began with only five families of Indians in 1706.

On the south side of the Pojuaque River, between that village and San Ildefonso, two ruins are known to exist; Jacona, or Sacona, a small pueblo occupied until 1696,¹ and l'ha-mba, of more ancient date. I have not heard of any others in that vicinity.

Near Pojuaque the Tezuque stream enters that of Pojuaque from the southeast. On its banks, about three miles from the mouth, stand the ruins of Ku Ya-mung-ge. This Tehua village also was in existence until 1696, when it was finally abandoned.² Higher up, in the Tezuque valley proper, are various sites which the Indians of Te-tzo-ge (Tezuque) state are those of settlements of their forefathers. I have not been able to learn their names of these ruins, most of which are almost obliterated.

With the valley of Tezuque the range of the Tehuas in the southeast, as it was in the sixteenth century, terminates. I would not be understood to claim that I have enumerated all the ruins scattered over this area, nor to assume that all of them are of Tehua origin. Even where positive tradition claims an old pueblo for the Tehuas, it must be taken with a grain of allowance until that tradition has been confirmed in different ways. It is also probable that the Tehuas drifted at one time farther south than the Tezuque valley, which would account for the spread of the Tanos as far as San Pedro.

Nearly six miles separate the Tezuque village from a high crest in the south, from which a magnificent view is enjoyed over the whole country of the Tehuas. Looking south from

¹ In 1680 Jacona was an "aldea" only. Vetancurt, *Crónica*, p. 317. It belonged to the parish of Nambé. After its abandonment, it became the property of Ignacio de Roybal, in 1702. *Merced de Jacona*, MS.

² In 1699 the site of the pueblo was granted to Alonzo Rael de Aguilar; in 1731 it was regranted to Bernardino de Sena, who had married the widow of Jean l'Archévêque or Archibeque.

the "divide," as this point is called by the people of Santa Fé, the landscape is different. A wooded declivity seems to overhang a wide and arid plain. The last spurs of the Santa Fé range border this plain on the east, and separate it from the Pecos valley. Mountains with jagged profiles cluster together in the southwest. Behind them a broad mass looms up, the Sierra de Sandia. The bleak looking expanse and the rugged mountains beyond were the country of the Tanos, to which and to its ancient remains the next chapter will be devoted.

II.

THE COUNTRY OF THE TANOS.

ANTONIO DE ESPEJO in 1582 called the Tanos "Maguas," and described a part of their country as follows: "There they have no river, neither have they running brooks nor springs of which they make use. They have much maize and many fowls of the country, and supplies like those of the province spoken of before, in great abundance. This province borders upon the country of the cows called the cows of Cibola."¹

A truer and at the same time more concise description of the basin of Galisteo, which constitutes the principal portion of the former Tanos country, could hardly be framed. The Galisteo plain, however, constituted only the eastern portion or half of the range of the southern Tehuas, or, as

¹ *Relacion del Viage* (Doc. de Indias, vol. xv. p. 114). *Expediente y Relacion* (Ibid., p. 176). "A qui no alcanzan rio, ni tienen arroyos que corren y fuentes de que se siruen, tienen mucho maiz y gallinas de la tierra, y bastimentos y otras cosas como in la provincia dicha antes de esta, en mucha abundancia; esta provincia confina con las vacas que llaman de Cibola." The "provincia dicha antes de esta" was that of the Tiguas, or the Rio Grande valley about Bernalillo. I would call attention here to the difference in text between the two documents above quoted, which are the original reports of Espejo, and the corrupt version in Hakluyt's *Voyages*, vol. iii. The latter says: "Y a dos dias de camino toparon con vna prouincia donde vieron onze pueblos, y en ellos mucha gente, que a su parecer passaua en numero de quarenta mil animas; era tierra mui fertil y bastecida, cuyos confines *estan inmediatamente juntas con las tierras de cibola, donde ay muchas vacas*" The Italics are mine. This is sufficient to demonstrate the complete change in the text. The original versions speak of the "Cows that are called cows of Cibola," while Hakluyt's version says that the country was "Cibola." Such perversions are common in the document in question, and I caution students as to its use.

they are called, the T'han-u-ge, or Tanos. Those Indians also claimed the environs of Santa Fé, and the ruins of their villages are scattered as far as San Pedro in the south, the Rio Grande valley in the west, and the mesa of Pecos in the east.

The Rio de Santa Fé flows from east to west through the northern section of this area, and the San Pedro, or Uña de Gato, irrigates its southwestern corner. But the waters of neither of these streams reach the Rio Grande except during heavy rains. The first named "sinks" twice: between Agua Fria, southwest of Santa Fé, and the Cienega; and again, farther west, between La Bajada and Cochiti. The San Pedro dwindles down to the sandy Arroyo del Tunque, twelve miles east of the Rio Grande. Mountain torrents traverse the district in its centre, such as the dangerous Arroyo de Galistéo.

The plateau of Santa Fé is not barren, although generally arid. Rain will at once, in summer, develop on it a peculiar vegetation, and aboriginal crops could prosper in ordinary seasons. But it cannot compare in facilities for irrigation and in fertility with the delta of Chamita or the San Juan valley, or even with the little vales of Nambé, Pojuaque, and Tezuque. Its altitude is considerable, (2,000 meters or 6,500 feet on an average,¹) and the climate is correspondingly cool, with short seasons, and it is of exceptional salubrity. Cool winds temper the summer's heat, without ever assuming the character of destructive tempests.

The gorge through which the Santa Fé River issues from the high eastern range² is said to contain ancient ruins.

¹ The altitude of Santa Fé signal station is 6,862 feet (Wheeler); of Agua Fria, six miles to the southwest, 6,486 feet; of Cieneguilla, twelve miles southwest of Santa Fé, 6,011 feet.

² Two of the highest peaks of the southern Rocky Mountains rise within a comparatively short distance of Santa Fé, — Baldy, 12,661 feet, and Lake Peak, at the foot of which the Santa Fé River rises, 12,405 feet.

Vestiges of a pueblo have been noticed on the site of Santa Fé itself, but they are now obliterated. It is certain that when the Spaniards removed to Santa Fé from Chamita, in 1605, the place was deserted, and had been in that condition for at least a century.¹

The Tehuas call the site of Santa Fé by at least two differ-

¹ Not one of the pueblos mentioned by Castañeda, or by any other of the chroniclers of Coronado's expedition, corresponds to the situation of Santa Fé. Espejo approached this site, but not near enough to see it. Oñate, *Obediencia y Vasallaje de San Joan Baptista*, also *Discurso de las Jornadas*, is absolutely silent about it. The last document is decisive, as it establishes that Oñate went from San Marcos directly to San Ildefonso through an uninhabited country. Had there been a village at Santa Fé, he could not have avoided stating it. Benavides, *Memorial*, 1630, p. 26, only speaks of the "Villa de Santa Fé, cabeça deste Reino, adonde residan los gobernadores, y Españoles, que seran hasta dozientas y cincuenta, aunque solos los cincuenta se podran armar por falta de armas . . . á este presidio sustenta V. M. no con pagas de su caxa real, sino haziendo los encomenderos de aquellos pueblos, por mano del governador; el tributo que les dan los Indios, es cada casa una manta, que es una vara de lienço de algodón, y una fanega de maiz cada año, con que se sustentan los pobres Españoles; tendrán de seruicio setecientas almas de suerte, que entre Españoles mestizos, y Indios acerca mil almas." This "servicio" consisted of Mexican Indians, not of Pueblos. The abodes of these were on the south bank of the little river, and the church of San Miguel was the chapel of the Mexican Indians, and not a pueblo church. *Diario del Sitio de Santa Fé*, 1680, MS., fol. 24, August 13th: "Y á otro dia por la mañana se descubrio el exercito del enemigo en el Llano de las Milpas de S: Miguel, y casas de los Mexicanos saqueandolas." *Diario de la Retirada de Don Antonio de Otermin para el Paso del Norte*, fol. 54, 55. Diego de Vargas, *Autos de Guerra de la segunda Entrada al Reino y Provincias de la Nueva Mexico*, 1693, fol. 71: "Pase á reconocer la Yglesia o ermita que servia de parroquia á los Yndios mexicanos que viuan en esta dha Uilla con el titulo de la achocacion de su Patron el arcangel Sn Migl." *Relacion Anónima de la Reconquista* (Documentos para la Historia de México, Tercera Série, p. 141): "Pasó á la capilla de San Miguel, que antes servia de parroquia á los Indios Tlaxcaltecas." Escalante, *Carta al Padre Morfi*, par. 3: "Dia 15 sitiaron á esta los Tanos de San Marcos, San Cristóbal y Galistéo, los Queres de la Cienega, y los Pecos por la parte del Sur, se apoderaron de las casas de los Indios Tlascaltecas, que vivian en el barrio de Analco y pegaron fuego á la Capilla de San Miguel." Analco is the place where there is now the so called "oldest house"; but this name was given to it only in the past century. Fray Agustin Morfi, *Descripcion Geográfica*, MS., fol. 96. Compare also Part I. of this Report, p. 125.

ent names: Kua-p'o-o-ge, the place of the shell-beads near the water, and Og-a-p'o-ge. The former name comes from San Juan, the latter from Santa Clara. They also acknowledge that a Tanos village stood on the spot; but this may possibly refer to the pueblo constructed after 1680 by the Tanos from Galisteo, on the ruins of the old "palace" of Santa Fé.¹ Nevertheless, I regard the fact that a Tanos village also existed here in pre-historic times as quite certain.

Five miles south of the capital of New Mexico, on the southern bank of a deep and broad gulch called Arroyo Hondo, stand two ruins, called Kua-kaa or Kua-kay by the Tanos,² who affirm that their ancestors built them. The larger of the two has been figured on Plate I. Fig. 21; the smaller one lies about a mile to the east of it, at the upper end of a rocky gorge through which the Arroyo Hondo has cut its deep bed. It is a so called "one-house" pueblo; the outer perimeter of the well defined mounds was 154 meters (505 feet); and it was certainly two stories high. The larger pueblo was capable of lodging about two hundred households, or seven hundred persons. The walls were made of broken stones, and there is much pottery, — black and

¹ *Relacion Anónima*, Tercera Série, p. 139. "Entró en el Pueblo de los Tanos y [de] Galistéo, puesto desde el alzamiento en las casas reales de dicha villa." *Ibid.*, p. 144: "Desalojar á los Indios Tanos de grado ó por fuerza del pueblo que en las casas reales habian fabricado y en que actualmente vivian." Father Escalante, who, as Mr. H. H. Bancroft very judiciously remarks, was probably the author of these "Relaciones," had at his command the complete journal of Vargas. Now there are only fragments at Santa Fé, but among them the description of Santa Fé as it appeared in 1692 and 1693 is not found. Escalante says, in his *Carta al Padre Morfi*, par. 10: "En Santa Fé estaban fortificados los tande de Galistéo." Lastly, there is a description of the Tanos village at Santa Fé in the *Autos del Cabildo de Santa Fé, justificando á Don Diego de Vargas*, 1703, MS.

² These names in the Tehua language were given to me by an old Tanos Indian living at Santo Domingo. There are a number of Tanos still residing at that village among the Queres, and some of them speak Spanish in addition to the Tehua and Queres languages.

white, red and black, black, red, white, and orange; also, corrugated and indented ware; but no incised specimens. The usual fragments of stone implements are found; also obsidian, flint, bones, and some charred corn. The situation is a good one for observation and defence, commanding a wide view down the arroyo, and to the west and southwest across the plain. To the south is a level expanse, and on the north lies the arroyo, at a depth of nearly fifty meters. The pueblo stands on the brink of the declivity, which is very steep, and a spring rises at the bottom. For cultivation, the people of Kua-kaa had to resort to the plain around their village, since irrigation is impossible, either below or above. This pueblo bears the marks of long abandonment; the mounds are flat and at most two meters (six feet) high, or generally lower. The Tanos claim that it was pre-Spanish, and documentary evidence as well as the nature of the objects found there corroborates the statement.

I know of no vestiges of antiquity south and east of the Arroyo Hondo nearer than those at Peñas Negras, and in the vicinity of Lamy on the Atchison, Topeka, and Santa Fé Railroad. Before treating of these, I prefer to dispose of such ruins as lie to the west and southwest of Santa Fé.

We meet with a considerable one at the Cienega, near where the Santa Fé stream enters a narrow defile called the "Bocas." This is the pueblo of Tzi-gu-ma, or Tzi-gu-may. Until 1680, this village, under the name of "La Cienega," belonged to the ecclesiastical jurisdiction of the mission of San Marcos.¹ It was abandoned during the time that the Pueblos were independent, and an effort to repeople it was made by Diego de Vargas after the pacification of New Mexico in 1695, but with little success.² Tzi-gu-ma is there-

¹ Vetancurt, *Crónica*, p. 324.

² *Relacion Anónima*, p. 167. In 1782 there were no Indians there. The four

fore an historic pueblo. Nevertheless, I am in doubt as to which stock its inhabitants belonged. They are mentioned as being Queres in such documents as are at my command,¹ but the people of Cochiti do not regard them as having been of their own stock, but as belonging to the Puya-tye,² or Tanos. Furthermore, the name Tziguma is a Tehua word signifying a "lonely cottonwood tree," in Spanish "alamo solo." Until the question is decided by further researches among the Tanos of Santo Domingo, I shall hold that the pueblo was a Tanos village.

The same difficulty exists in regard to San Marcos. This ruin I have not seen, but descriptions by intelligent persons represent it as a very considerable village, and as having formed several quadrangles. Its name in Queres is Ya-tze,³ but the Tanos call it Kua-kaa, the same name as the one on the Arroyo Hondo. In 1680, at the breaking out of the insurrection, it had six hundred inhabitants.⁴ The name San

distinct settlements still in existence to-day in that vicinity, Cieneguilla, Alamo Solo, Golondrinas, and Cienega, were all peopled by Spanish families. Morfi, *Descripcion Geográfica*, fol. 98.

¹ *Diario del Sitio de Santa Fé*, fol. 12. Otermin makes a distinction: "Que se han alzado los Indios Tanos, y Pecos, Cienega, y San Marcos." But Vargas, *Autos*, fol. 25, after having previously (fol. 24) spoken of them as attacking Santa Fé from the south, and enumerating the four tribes, adds: "Con que se pusieron en fuga los dichos Tanos y Pecos." Escalante (*Carta*, par. 3) is quite positive: "Los Queres de la Cienega."

² Puya-tye is the Queres name for the Tanos. It is a sobriquet applied to this tribe on account of their custom of doing penance by pricking their bodies with cactus, and other spines. This, however, is of later origin, and is derived from "Púa," thorn or spine.

³ It appears under the name of "Yates" in the *Obediencia y Vasallaje de San Joan Baptista*.

⁴ Vetancurt, *Crónica*, p. 324: "Tenía seiscientos cristianos, de nacion Queres." On the other hand, Escalante (*Carta*, par. 3) writes as follows: "Día 15 sitiaron á ésta los Tanos de San Marcos, San Cristóbal y Galistéo, los Queres de la Cienega, y los Pecos por la parte del sur." Vargas (*Autos de Guerra de la segunda Entrada*, MS.), mentions repeatedly Queres Indians from San Marcos. It may be that there were both Queres and Tanos in the pueblo, but I consider

Marcos appears to have been given to it in 1591 by Gaspar Castaño de Sosa.¹ It was abandoned by its inhabitants during the siege of Santa Fé, in August, 1680;² and in 1692, when Diego de Vargas passed through it, it was in ruins, with only a few of the walls still standing and a portion of the church edifices.³

Near San Marcos lies the celebrated locality of Callaite, called popularly the "turquoise mines." The turquoises are imbedded in a white porphyritic rock, and a high authority on gems, Mr. George F. Kunz, has informed me that the New Mexican turquoise bears greater resemblance to the Egyptian than to the Persian specimens of that mineral. Beautiful stones have been found occasionally;⁴ also very large masses of an inferior quality. The Tanos of Santo Domingo regard themselves as the owners of the site and visit it frequently to procure the stones that are so much esteemed by them. As to the popular belief in ancient mining of turquoises, it is, like many others of the kind, a myth. The Tanos obtained the mineral by knocking it out of the rock with stone mauls, axes, and hammers, many of which have been found in this locality. They also dug and burrowed, but their excavations were made at random, and went but little beneath the surface. Still less did the Spaniards compel the Indians to "mine" the turquoise for

the village to have been a Tano village, just as to-day Santo Domingo is counted among the Queres, although there are many Tanos among them, and Isleta among the Tiguas, although a good portion are Queres from Laguna.

¹ *Memoria del Descubrimiento que Gaspar Castaño de Sosa, hizo en el Nuevo Mexico*, Doc. de Indias, vol. xv. p. 248.

² *Diario de la Retirada de Otermin*, fol. 28.

³ *Autos de Guerra de la segunda Entrada*, fol. 138: "Y halle despoblado y se conservan algunos aposentos y paredes de los cuarteles y viuyendas de el y asimismo se hallan las paredes y cañon de la Yglesia buenas con las de el conuto."

⁴ Some exceptionally handsome ones are in possession of my friend, Abraham Spiegelberg, in Santa Fé.

them. Very little attention was paid by the whites to the green and blue stones, the latter of which are comparatively rare; since they regarded the New Mexican Callaite as of a base quality, and therefore as of no commercial value.¹ Nevertheless, the turquoises of the Cerrillos were quite a resource for the Tanos, so far as aboriginal commerce went.

¹ This was already noticed by the members of Coronado's expedition. *Relacion del Suceso de la Jornada*, p. 320. It is strange that none of the chroniclers of that journey mention the turquoise locality at Cerrillos. Neither does Espejo, who visited the Tanos. Castaño (*Memoria*, p. 248) speaks of the mineral (ores) found there by some of his men: "Truxo metales mui buenos, al parecer." Oñate also is silent, or at least makes no account of the green stones. In the documents of 1636, concerning the violent strife then going on between Governor Martinez de Baeza and the Franciscan priests in New Mexico, the latter accuse him of collecting tribute in an abusive manner; but they mention only piñon nuts, hides, and cotton mantles. Fray Pedro Zambrano, *Carta al Virey*, MS. Fray Antonio de Ybargaray, *Carta al Virey*, MS.: "Porque desde que entro en el gouerno solamte a atendido á su aprouechamiento, y este con gran exceso y daño de todas estas prouinas en el trabajo excesivo que a dado á estos pobres resien combertidos en mucha cantidad de mantas, y paramentos que a mandado hazer y pintar, y assimismo cantidad de camiças que les a echo buscar y resgatar, y cantidad de Piñones que les a echo a carrear." *Carta al Virey, del Custodio y de los Definidores del Nuevo Mexico*, MS. Fray Andres Suarez, *Carta á su Magestad*, Nambé, October 23d, 1647, MS. In none of these severe accusations against the governors is the mining of turquoises or of any other mineral mentioned; neither do the Indians themselves speak of it in their depositions of the years 1680, and 1681. *Diario de la Retirada*, fol. 32. *Interrogatorios de varios Indios de los Pueblos Alzados*, 1681, MS. Otermin, *Ynterrogatorio de Preguntas*, 1681, MS. Also *Declaracion de vn Indio Picuri*, 1683, MS. In 1626, Fray Gerónimo de Zárate Salmeron wrote about the turquoises of New Mexico, *Relaciones de todas las cosas que en el Nuevo México se han visto y sabido*, MS., par. 34: "Y minas de Chalchihuites que los Yndios benefician desde su gentilidad, que para ellos son Diamantes y piedras preciosas. De todo esto se rien los Españoles que allá están." The term "minas," in older Spanish, is used to designate the localities where minerals are found, equivalent to the German "Fundorte," and not *worked* mines, in the English sense of the term, or the French. This has caused a misunderstanding which misled the majority of prospectors. Vetancurt, *Crónica*, p. 286: "Hay minas de plata, de cobre, de azabache, de piedra imaná, y una de talco trasparente á modo de yeso, que lo sacan como tablas, y adornan las ventanas con ellas como si fueran de cristál." No mention is made of turquoises. Benavides, *Memorial*, 1630, p. 44: "Toda esta gente [the Pueblos] . . . con gargantillas y oregeras de turqucsas, que tienen minas dellas, y las labran, aunque imperfectamente."

Returning now to the Cienega, and following the course of the Santa Fé River westward through the pass of the Bocas, we emerge from that gorge at the so called Bajada, or "descent."¹ The Bocas themselves offer hardly anything of archæological interest except some rock carvings of which it is impossible to say whether they are due to Pueblo Indians or to nomads. It is a narrow cañon, picturesque in places, with little spots of fertile soil, occasional cottonwood trees, and usually permanent water. At the Bajada the river sinks nearly always during early summer, and a plateau five miles wide spreads out to the west, to within a mile of the banks of the Rio Grande at Peña Blanca; northwards it extends not more than four miles, being encompassed on the north and east by a high and very abrupt mesa, from which rises the cone of the Tetilla peak. At the Bajada the slope of this mesa is almost vertical, and about five hundred feet high. Where the stream makes its southwestern angle, cretaceous rocks are exposed in snow-white strata. Above them tower lava and trap, black, craggy, and chaotic. To the Indian this was and still is an important locality, for white alabaster is found there; a mineral that serves for whitewashing the rooms of his pueblo and for the manufacture of his fetiches. We need not be surprised therefore to meet opposite the little settlement of La Bajada, on the declivity sloping from the west towards the bed of the Santa Fé River, the ruins of the old pueblo of Tze-nat-ay, as the Tanos call it to-day.

Low mounds, in places hardly distinguishable, a faint depression indicating an estufa, and the usual fragments of stone implements, obsidian, and earthenware, are all that

¹ The altitude of the Bajada is 5,515 feet, 500 feet lower than the Cieneguilla on the eastern base of the high mesa of the Tetilla, nine miles to the east, and 345 feet above Peña Blanca, six miles to the west, on the banks of the Rio Grande.

is left on the surface. The walls were of volcanic rocks, rudely broken, and of rubble. It was a village of medium size, probably sheltering five hundred people. Its situation was good both for safety and cultivation; but timber was rather distant, and, although the soil is fertile, it is entirely dependent upon the rain for moisture. Tze-nat-ay commanded a wide view, and from the tops of the many-storied houses its inmates could scan the plateau for fully twenty square miles. At the mouth of the cañon, from the bed of the river meandering to the northwest along the base of the mesa, no enemy could approach unnoticed in the daytime. But it was also a dreary spot. In summer the hot glare of the sun was reflected from the white level, and when the southeast wind arose clouds of sand and dust enveloped the village.

Tze-nat-ay is not the only ruin on the banks of the Rio de Santa Fé. Between the Bajada and the outlet of the stream opposite Cochiti, not less than three others are found along its course. One lies about equidistant from the two points named, and was a communal pueblo like Tze-nat-ay; but the houses were smaller, and I saw only a single estufa.

At the second ruin I did not notice any estufa. The pottery is the same in both, and so are the other objects. Tze-nat-ay appears to have been quite a large pueblo, and it was probably three, if not four, stories high.

Neither the Tanos nor the Queres of Cochiti could give me any information concerning the smaller pueblo. Neither of the two tribes claimed it. Tze-nat-ay, the Tanos say, was one of their ancient villages; but whether it was abandoned previous to the sixteenth century, I cannot determine. It is also designated in Spanish as "El Pueblo Quemado," the village that was burned, and such a Tanos village appears in the list furnished by Oñate in the year

1598.¹ The "Bocas de Senetu" are also mentioned in 1695, though not the ruins.²

The other ruins are situated near the mouth of the Santa Fé River, and belong to a different type of architecture. I reserve a more detailed notice of them for another place, and return to the ruins south of Santa Fé.

The ruin at Peñas Negras, eight miles south-southeast of the capital of New Mexico, I have only seen, not explored. It seemed to me to be that of a small communal pueblo. A considerable collection of relics from this locality was made by a Mr. Cole, and is at present in possession of the Historical Society of Santa Fé. Incidentally I learned that the Tehuas (or Tanos) claim the pueblo at Peñas Negras as belonging to their ancestors. It lies on an eminence west of the Pecos road, near the edge of the forest, with a fair view to the southwest, and there is a spring in its vicinity.

At the railroad station of Lamy, where the branch road to Santa Fé turns off from the main line of the Atchison, Topeka, and Santa Fé, I noticed, in the summer of 1882, little mounds covered with potsherds, which recalled to me forcibly ruins of the so called "small houses," of which I have treated more extensively in a former report to the Institute.³ The fragments of pottery are clearly distinguishable from such as are found in the Tanos ruins.

¹ *Obediencia de San Juan Baptista*, p. 114: "La Prouincia de los Cheres con los Pueblos de Castixes, llamados Sant Philepe y de Comitre, y el Pueblo de Santo Domingo y Alipoti, Chochiti; y el de la Cienega de Carabajal, y el de Sant Marcos, Sant Chripstobal, Santa Ana, Ojana, Quipana, el del Puerito y el Pueblo Quemado." The name of Pueblo Quemado is given to several ruins in New Mexico; but the one mentioned in the above document lay in or near the Queres district, or in that of the Tanos.

² *Merced de la Bijada*, 1695, MS.: "Y desde la casa del Ojito para el oriente asta las Bocas que llaman de Senetu."

³ *Fifth Annual Report*, p. 65. "A second architectural type even more prevalent is that of detached family dwellings, either isolated or in groups forming

The mounds lie on the north side of the railroad track, and are fast disappearing. It is useless to speculate upon their origin, but they certainly antedate the time when the sedentary Indians of this district adopted the large house type of architecture.¹ They cannot have been mere summer dwellings of Pueblo Indians, for the pottery is different from that found in other ruins; or, rather, a certain kind of pottery which always accompanies the remains of Tanos villages is never found in connection with the small houses. We cannot admit that the sedentary native had a particular earthenware for summer use and another for the cold season.²

The fragments of earthenware found at Lamy, I have described as follows: "It is harder and better, white, gray, or red, with simple but not badly executed geometrical figures painted black, and, so far as I could detect, without gloss. This pottery is decidedly superior in quality and in finish to the glossy kind. Along with it the corrugated and indented ware abounds." The larger ruins in Central New Mexico, and especially those belonging to historic times, are generally covered with a profusion of potsherds, "coarsely painted, the decorations being glossy; some of it is undecorated and plain black."³ Southwestern pottery shows two kinds of gloss or glaze; one is thin, and displays a fair polish; the other, the kind exclusively applied on decorative lines or figures, looks like a coarse varnish laid on very thick, so as frequently to overrun the outlines. The latter is the variety that I have always found wanting in the small house ruins,

villages." Also, pages 61, 62. I first gave an account of this class of buildings in the *Bulletin of the Archæological Institute of America*, 1883 (p. 28), and refer to those publications for a description of them.

¹ Compare on this point my Report in the *Fifth Annual Report*, 1884, p. 78; also, *Bulletin*, 1883, p. 31.

² *Bulletin*, p. 30 *et seq.*

³ *Ibid.*, p. 29.

whereas at the Pu-yé in the Tanos country, and in the Queres, Tigua, and Piros pueblos, it is abundant.¹ Corrugated and indented ware is rarer among the large type pueblos south of Santa Fé than farther north and in the small houses; and while the small house pottery also occurs among ruins of the communal type, it is not abundant there.²

Ruins of two other pueblos lie east and southeast of Lamy, at some distance in the mountains. I have not seen them,

¹ That is to say, in the more recent ruins, principally those of the past three centuries. Further on, I shall refer to an old Queres pueblo, where the potsherds all belong to the painted small-house variety.

² Still, in the ruins of Colorado, Utah, and Northwestern New Mexico, it is the only painted kind found. On the Rio de las Animas, and in the Cañon de Chaca, the coarsely glazed variety does not seem to exist. Compare the plates in Simpson, *Journal of a Military Reconnaissance from Santa Fé, New Mexico, to the Navajo Country, in 1849* (Senate Executive Document, No. 64, 1850). The red painted pottery with black decorative lines, and the white or gray also decorated with black lines, both with a fair gloss, were found in the ruins of the Chaca Cañon and of the Navajo country in general; and along with it, plain, corrugated, and indented ware. Also in the Tze-yi or Cañon de Chelly (*Illustrated Catalogue of the Collections obtained from the Indians of New Mexico and Arizona in 1879*, pp. 419 et seq.). I refer with particular pleasure to the Monograph of Mr. W. H. Holmes, *Pottery of the Ancient Pueblos* (Bureau of Ethnology Report of 1882 and 1883, pp. 308 to the end). This close student of Southwestern pottery says very justly (p. 321), in regard to the pottery found on the Rio Colorado Chiquito of Arizona: "Beside the *archaic white ware and its closely associated red ware*," (the Italics are mine,) other associations of colors are also found in the older ruins, but never the coarsely glazed kind; whereas the latter is frequently mentioned as being made by the Pueblos in the sixteenth century, at least by some of the Pueblos. Castañeda, *Cibola*, p. 138. When Francisco de Barrionuevo visited Yuge-uingge in 1541, he found "de la vaisselle de terre très-belle, bien vernie et avec beaucoup d'ornements" (p. 185). "Dans beaucoup de villages on trouva des morceaux de minéral d'argent qui servaient aux naturels pour vernisser et pour peindre les vases de terre." I call attention to this sentence only to warn students against using it in their researches. Ternaux-Compans has inserted the words "vases de terre" without the slightest foundation. He claims that the Spanish original is illegible; but when Dr. Moore, the Superintendent of the Lenox Library, showed me the original, and the word which Ternaux could not decipher, I found it as plainly legible as print. It reads "para pintar los Rostros." Any one slightly acquainted with Spanish knows that "rostro" means the face; consequently the blue or green silver ore was used, not to make a glaze, but simply to paint the faces, as it is sometimes

and therefore speak from hearsay only. The gentleman who mentioned and described them to me inquired about them of a well known Indian of San Ildefonso, who informed him that they were respectively called Uap-i-ge and Dyap-i-ge, and are those of very ancient Tanos villages.

Lamy lies at the mouth of a narrow pass through which the railroad emerges from the Pecos valley. The two ruins last mentioned seem therefore to have been on the border of the Tanos range, and on the confines of that of the Pecos Indians. South of Lamy, however, spreads the Galisteo basin, which has been always considered as the proper home of the Tanos tribe until the past century.

The elevation of Lamy is 6,458 feet, that of Galisteo 6,117, so that the rise from Santa Fé in a distance of twenty-two miles is almost nine hundred feet. In that direction, due south, the Tanos pueblos extend as far as six miles below Galisteo, to the southern border of the basin.

Two ridges parallel to each other, surmounted by shaggy crests called "crestones," traverse the Galisteo plain from east to west; one of them lies six miles south of Lamy, the other on the southern limits of the basin. It is a bleak and arid level, just as Espejo has described it. The northern base of the northern crest is hugged by a dangerous torrent, the Arroyo de los Angeles, frequently, and more appropriately, called the Arroyo del Infierno. About a mile and a half from the modern Galisteo settlement, on the north bank of this treacherous dry creek, lie the ruins of the Tanos village called T'a-ge Uing-ge, and by the Spaniards Santa Cruz de Galisteo. What is the origin of the word

by the Indians to-day. Gaspar Castaño de Sosa, *Memoria del Descubrimiento*, pp. 236 to 238) mentions in the first village which he visited, and which was either a Tanos or a Pecos pueblo, "Mucha loza bien vidriada." I have not yet been able to ascertain what the composition of this coarse glaze is. It appears to be a "lost art."

Galisteo, I am ignorant. It first appears as "Glisteo," in 1598.¹ The church and mission may have been in existence as early as 1617,² it is certain that they were in 1629.³ When the Indian outbreak took place on the 10th of August, 1680, the Father Custodian of New Mexico, Fray Juan Bernal, resided at Galisteo, and he was one of the first priests killed by the Indians. With him perished Fray Juan Domingo de Vera; and in sight of the pueblo the Indians murdered Fray Manuel Tinoco, the priest of San Marcos, and Fray Fernando de Velasco, the missionary of Pecos. Both were coming to Galisteo from opposite directions to inform their superior of the designs of the natives.⁴ Several Spaniards also suffered

¹ *Discurso de las Jornadas*, p. 258: "Fuimos á Glisteo, que llamamos Santa Ana." Castaño (*Memoria*, p. 248) had christened it "San Lucas."

² In the *Cédula Real* of May 20, 1620, MS., the King says: "El Cabildo de Santa Fé del Nuevo México en carta que me escribió en 3 de Octubre del año pasado de 1617, refiere . . . que hay once Yglesias çundadas con pocos ministros." It may be that Galisteo, being near Santa Fé, was one of them.

³ Benavides (*Memorial*, p. 24), says that the Tanos numbered four thousand, but that only a single convent had been established among them; this was the house occupied by the priests at Galisteo.

⁴ There is a detailed account of the manner in which Fray Juan Bernal was killed, in a sermon delivered at the city of Mexico and printed there, but I have not the book to refer to. Otermin (*Diario del Sitio*, fol. 22) only says: "Que se han alzado los Indios Tanos, y Pecos, Cienega, y San Marcos, los quales se dice haber muerto al R. P. Custodio F. Juan Bernal, y á los Padres predicadores Fr. Fernando de Velasco, Fr. Manuel Tinoco, y Fr. Domingo de Vera con el Teniente de Alcalde mayor Juan de Leyva." But a Tanos Indian who was captured near San Marcos during the retreat to El Paso is more explicit in his declaration, saying (*Diario de la Retirada*, fol. 323): "Hizo que habian muerto en el dicho pueblo de Galisteo á los padres al Padre Custodio, al Pe Fr. Domingo de Vera, y en el campo á la vista del Pueblo á los Padres Fr. Manuel Tinoco, ministros guardianes de Pecos, y S. Marcos." That Father Velasco had been warned by one of the Pecos Indians, who offered to save his life, is told as follows by the Custodian Fray Salvador de San Antonio, and the other priests of New Mexico, *Protesta á Don Diego de Vargas*, December 18, 1693, MS.: "Dijo á su ministro el Padre Fray Fernando de Velasco; padre la gente se alza para matar á todos los Españoles, y religiosos; y así, mira á donde quierdes irte, que yo te daré mozetones para librate, como de hecho lo hizo." This Indian who warned and attempted to save the priest was Juan Yé, afterwards

death; as Galisteo was an "Alcaldía mayor," or one of the several judicial districts into which New Mexico was divided, and although strictly an Indian pueblo, the lieutenant of the "Alcalde mayor," Juan de Leyva, resided there with his family and a few other Spanish colonists.¹ After the Spaniards had been driven out of the country, the Tanos of Galisteo removed to the site of Santa Fé, whence they were expelled by Vargas. In 1706 Governor Cucrbo established the pueblo again, under the name of Nuestra Señora de los Remedios de Galisteo. It remained a very inconsiderable Indian village until the latter part of the past century, when the Tanos, decimated by the persistent hostilities of the Comanches and by small-pox,² removed to Santo Domingo, where their descendants still live, preserving the language of their ancestors and in part their tribal autonomy.³

A plot of the ruins is given on Plate I. Figure 20. They are low, red mounds, but with walls protruding here and

Gobernador of Pecos in 1694, and murdered by the Taos Indians for his fidelity to the Spaniards. It seems that Fray Velasco fled to Galisteo right into the jaws of death.

¹ The names are given in the *Diario del Sitio*, fol. 22: "El Teniente de Alcalde mayor Juan de Leiva, el capitan Jose Nieto, Nicolas de Leyva, y á todas las mugeres, y niños de sus familias." Further details are in the *Diario de la Retirada*, fol. 33.

² The Comanches continued to harass the inhabitants, and about 1748 surprised the men in the fields outside of the village, and killed eight of them. *Libro de Entierros de Nuestra Señora de Remedios de Galistéo*, MS. Another attack was made on December 3, 1751, but it was repulsed. Marqués de Altamira, *Dictamen*, 1752, MS. The establishment of the pueblo of Galisteo in 1706 is mentioned in *Testimonio de Diligencias sobre la Fundacion de Albuquerque, de Sta Maria de Grado, de Pujuaque y Galistéo*, 1712, MS. Ninety Indians were the original settlers; six years later it had 110; in 1748 there were fifty families. Villaseñor y Sanches, *Teatro Americano*, vol. ii. p. 420. Morfi (*Descripcion*, p. 98) mentions 52 in 1782. The Indians abandoned it between that year and 1794. It is neither mentioned in the *Certificaciones de las Misiones* of the latter year, nor in the *Relacion de las Misiones* of 1808.

³ It is said that the Tanos maintain a separate tribal government within the pueblo.

there. I failed to discover the site of the church or of the convent. In 1680 Galisteo is stated to have had a "handsome" temple, that is, for New Mexico.¹ Its population may have amounted at one time to over one thousand souls.

East of Galisteo, on the borders of the basin, in a picturesque valley surrounded by woods and supplied with permanent water, stand the ruins of Yam-p'ham-ba or San Cristobal (Plate I. Fig. 22). It was inhabited until 1680, and formed a "visita" dependent upon the parish of Galisteo; and in that year it had eight hundred inhabitants. After the expulsion of the Spaniards, the Tanos of San Cristobal settled in the vicinity of Santa Cruz,² as already related. Most of their descendants are now among the Moquis.

On the other side of the Arroyo de San Cristobal, which runs at the foot of the gentle slope on which the pueblo stands, lies another group of ruins. The pueblo proper still shows many of its walls, and it is plain to see that they were generally 0.27 m. (11 inches) thick, and made of thin plates of sandstone. The second ruin, which lies a short distance southwest of the other, is reduced to compact mounds of earth. The stream has manifestly carried away a part of it, but it is not possible to determine whether this occurred recently or in olden times. The appearance of the mounds denotes long decay, and it may be that they are older than the historic San Cristobal. There are two estufas,

¹ Vetancurt, *Crónica*, p. 323.

² Could the hostile attitude of their neighbors the Pecos have caused the Tanos to forsake their old homes? Escalante says, *Carta al Padre Morfi*, par. 7: "Los Queres, Taos y Pecos, peleaban contra los Tehuas y Tanos." *Relacion Anónima*, p. 127: "Los Tanos, que cuando se sublevaron vivian en San Cristóbal y en San Lázaro, dos pueblos situados en la parte austral de la villa de Santa Fé despues por las hostilidades de los Apaches y de los Pecos y Queres se trasladaron y fundaron con los mismos nombres dos pueblos, tres leguas largas de San Juan." The number of inhabitants is from Vetancurt (*Crónica*, p. 323), who says it was a "visita" of Galisteo.

while the village proper shows but one; but it is not certain whether this was the only one, as not all the estufas were round, and not all were subterraneous. Still the round form seems to have been the "archaic" one, where it was possible to excavate for the purpose. I suspect that the group of mounds southwest of the principal ruins are the remains of an older village, abandoned prior to the other.

The church was built of the same material as the pueblo, thin plates of sandstone, but the walls were more substantial. In 1882 the rear part of it was still standing to the height of about four meters. It is a chapel only, measuring 16.0 by 7.4 meters ($52\frac{1}{2}$ by $24\frac{1}{4}$ feet). In front of it lies a churchyard, and other buildings seem to have been appended to it on the south. The main pueblo stands between the chapel and the more ruined vestiges on the south side of the arroyo, another indication that the latter were forsaken at an earlier date, perhaps before San Cristobal had been visited by the Spaniards. The first authentic visit by a Spaniard was made in 1690, by Gaspar Castaño de Sosa, who gave the village the name by which it still continues to be known.¹

San Cristobal lies in what might be called a sheltered nook. There is little cultivable ground contiguous to it, but at a very short distance, on the edge of the Galisteo plain, there is tillable land that can also be irrigated. The site is not favorable for observation, but the heights surrounding it afford good lookouts. For defence the houses had to suffice, and there are traces of a double stone wall connecting several of the edifices. On the whole, the buildings seem to have been smaller than usual, and nowhere could I see indications of greater height than two stories. It has in fact the appearance of a pueblo of to-day; whereas the

¹ *Memoria del Descubrimiento*, p 247 et seq.

ruins on the south bank of the arroyo belong to the compact older pueblo type.

Six miles west of Galisteo, on the eastern slopes of the picturesque Sierra del Real de Dolores and on the southern bank of the Arroyo del Chorro, stand the ruins of I-pe-re, or San Lazaro, another Tanos village, which was abandoned after the uprising in 1680 and never occupied again. The three historic pueblos of the Galisteo group thus stand in a line from east to west eleven miles long. The ground around San Lazaro is much broken. The ruin stands on bluffs that are not abrupt, and the arroyo winds around their base. The disposition of the buildings is similar to that at San Cristobal and traces of stone walls connecting them with each other are visible. It seems to have been smaller than either Galisteo or San Cristobal, and was built of stones. The houses were so disposed as partly to encompass an elliptical enclosure of stone built around a slight depression. The perimeter of the enclosure is about 140 meters (460 feet). Only two buildings appear to have been connected with it, and in the depression which the wall surrounds are still two circular sunken areas of small dimensions.

At San Cristobal there are also, in connection with some of the mounds, enclosures made of roughly piled stones. I can only suggest a probable object of these unusual structures. The Tanos possessed flocks, mostly sheep, and the enclosures may have served for keeping them in safety over night. Quite analogous enclosures of stones, usually reared against the steep acclivity of a mesa or other height, so as to require building only three sides, are made by shepherds in treeless districts. The stone enclosures at San Lazaro and San Cristobal may have been constructed for the same purpose. Both villages

were very much exposed to attacks by the Apaches from the side of the plains as well as from the mountains west of the Galisteo basin.

On the southern border of the Galisteo basin there are three more ruins, lying in a line from east to west. I visited none of these, but the Tanos of Santo Domingo, who claim that they were villages of their tribe, gave me their names. The Pueblo Colorado was called Tze-man Tu-o; the Pueblo Blanco bore the name of Ka-ye Pu; the next was called Shé; and they are all within three to five miles south and southeast of the town of Galisteo. From descriptions by persons who have seen them frequently I gather that they belonged to the communal type, and were villages of reasonable size for Pueblos. I have seen some artificial objects purporting to have come from these ruins consisting of stone axes and coarsely glazed pottery.

The Galisteo plain is bordered on the west by the Sierra de Dolores; south of this mountain rises the Sierra de San Francisco; and a long and waterless valley, running from east to west, separates the two ranges. This arid cañada is partly covered with coniferous trees, though in most places it is grassy, and haunted by antelopes. A little beyond the entrance to it lies the "Pueblo Largo," called by the Tanos Hish-i, — a large ruin indicating a considerable village situated on both sides of a mountain torrent. The main portion of the ruins is to the north of the arroyo, and, as at San Cristobal, the water has washed it, chiefly on the south side, exposing some of the rooms. They are usually 2.8 to 3.5 m. long by 2.1 to 2.5 m. wide (average in feet, 9½ by 7); the walls are 0.25 m. (10 inches) thick, made of thin plates of sandstone. The village formed several quadrangles, and it may have accommodated fifteen hundred people, upon the supposition that both sides of the arroyo

were occupied simultaneously. The southern ruins, however, show more and apparently longer decay than the northern, and it is not safe to assume for Hish-i any comparatively large population.

At least five estufas can be detected within the squares of large court-yards formed by the edifices. In the neighborhood of one of these estufas there is a very peculiar arrangement of ten stones, in three parallel lines. The stones are parallelepipeds, or prisms about 0.75 m. (34 inches) long by 0.30 to 0.40 wide, and 0.20 to 0.30 broad. Two thirds of their length is set in the ground so that only about 0.25 m. protrudes: they stand at quite regular intervals and two of them are connected by a row of smaller stones set on edge. Their proximity to an estufa renders the presence and arrangement of these slabs mysterious, but they resemble common headstones on graves. Still, I could not ascertain that anything had been discovered beneath one of them which has been excavated. Their shape is not artificial, but due to natural cleavage alone, as I satisfied myself by inspecting a rocky hill near by, where ledges of the same material crop out.

Whether the Pueblo Largo was occupied within historical times I am unable to answer. In 1630 Fray Alonzo de Benavides stated that the Tanos occupied five pueblos.¹ This number agrees with that of the historically known villages of the Tanos, provided San Marcos and the Cienega were inhabited by them, and not by the Queres. If, however, San Marcos and the Cienega belonged to the latter tribe, there would be room for Hish-i among the historical settlements.

¹ *Memorial*, p. 24. He ascribes to the Tanos four thousand souls. I hold this estimate to be reasonable, although probably a little above the true number. Eight hundred inhabitants is a high average.

When the insurrection of 1680 broke out, these settlements occupied the eastern portion of the Tanos range. The comparatively arid basin of Galisteo was the latest home of that tribe. West of it, between the San Francisco and San Pedro Mountains in the east, and the great Sandia chain,¹ and separated by the last from the valley of the Rio Grande, several ruins are found, which the Tanos say are those of their former villages. Some of these may have been inhabited as late as the beginning of the seventeenth century.

South of the portion of the Atchison, Topeka, and Santa Fé Railroad that lies between the stations of Cerrillos and Wallace, a bleak expanse, neither valley nor plain, gradually rises towards the foot of the Sierra de Dolores and the Sierra de San Francisco.² At Golden, or Real de San Francisco, where the Arroyo del Tuerto emerges from a narrow mountain valley, and where gold washing has been carried on sporadically, two sites of former pueblos are pointed out. These are called El Tuerto and Valverde, and both lie within one mile to the north of Golden. The villages were small, and the Tanos of Santo Domingo gave me their names as Ka-po and Sem-po-ap-i. Barely distinguishable mounds indicate the sites, and I found neither pottery nor obsidian on them, only fragments of basalt and other rocks. Both these pueblos may have been inhabited in 1598, according to the list given to Oñate by the Indians at San Juan, on the 9th of September of that year.³

¹ The respective altitude of these chains are, Dolores 8,827, the San Francisco and San Pedro about the same, while the Sandia rises to 10,609 feet.

² Cerrillos is 5,667 feet in height; Wallace, 5,246 feet.

³ *Obediencia y Vasallaje de San Juan Baptista*, p. 114: "Y el de la Cienega de Carabajal, y el de Sant Marcos, Sant Chripstobal, Santa Ana, Ojana, Quipana, el del Puerto y el Pueblo quemado." But it may be that, instead of "Puerto," Tuerto was intended; or Puerto may have applied to the entrance of the Bocas at the Bajada. Further on, I shall refer to a singular passage in the *Memoria* of Castaño de Sosa, which may relate to these two villages.

The same is true also of the ruins called O-jan-a and Ki-pan-na. I have not visited them; but they lie south of the settlement of Tejon, in the hilly country separating the Sandia chain from the San Francisco. That they were Tanos villages there can be no doubt, and the catalogue of pueblos which I have mentioned includes them. Still, this is no absolute proof that these four pueblos were occupied at the time of Oñate. The list was made at San Juan among the Tehuas, and they may have given the names of villages abandoned some time previous without their knowledge. Intercourse even between kindred tribes in ancient times was irregular, and frequently interrupted. Several pueblos might have been given up in one section of New Mexico without a neighboring stock hearing of it for a number of years afterwards.¹

Whether the large ruin called El Tunque, three miles north of the Tejon, at the northeastern extremity of the Sandia chain, must be considered as that of a pre-historic settlement or not, is also a matter of doubt. That it was a Tanos village is well ascertained, and its proper name was Tung-ge, or Village of the Basket.² It lies on a gentle bare slope near the banks of a stream which in the mountains farther south is called Rio de San Pedro, lower down Uña de Gato, and here takes the name of Arroyo del Tunque. A little beyond the ruin the stream sinks and becomes a dry mountain torrent for twelve miles, to its mouth opposite the present pueblo of San Felipe. Tung-ge seems to have been the last Tanos village towards the west, in pre-

¹ An instance of this kind is found in the report of Fray Marcos of Nizza about Marata. The fugitive Zúñi Indian whom he found among the Sobaypuris told him that the people of Marata (Ma-kyat-a) were still holding their own: whereas it is amply proved that their pueblos were abandoned and in ruins in 1540.

² Tung is the Tehua word for basket or tray.

historic times. It was also a very extensive pueblo, to be compared for size and plan with the large and extended villages of Se-pä-ue and Ho-ui-ri of the northern Tehua country. It formed a number of irregular squares, and sometimes two and three separate buildings constitute one side of a quadrangle. The population was therefore not as large as the area covered by the ruins might indicate. I was not able to find a single circular estufa. The walls were mostly of adobe, and had the usual thickness (0.30 m., or one foot). Rubble foundations are visible, but a portion of the ruins consists merely of low mounds. This is particularly the case in the north and east, or on the highest ground. In the western portions the interior of the first story is partly exposed, showing the roof or ceiling made in the usual pueblo fashion by round beams supporting rough splinters, and these in turn a layer of earth. The average of eighty-four rooms measured gave 3.4 by 3.2 meters (11 feet 2 inches by 10 feet 6 inches).

The buildings were two stories high in most places; but the existence of a third story is not impossible. Pottery is scattered about in profusion, and it shows no difference from that at Galisteo and other points of the Tanos country where the pueblo type of architecture was represented. I noticed a great deal of obsidian and basalt, fragmentary and complete arrow-heads of both materials, also stone axes, corn grinders, and a few stone chisels and knives; even a spade made of basalt was picked up at Tunque, and is now in my possession. I have not heard of metallic objects. The various objects indicate a primitive culture, one probably anterior to the coming of Europeans; but this is by no means sufficient evidence to justify the conclusion that the pueblo was not also inhabited during historic times.

The former fields of the pueblo can be traced along the

Arroyo del Tejon, and along the dry Arroyo de la Yuta, in places at a distance of two and three miles from the ruins. Little watchhouses of which only the foundations are visible indicate their location. These watchhouses, equivalent to the "summer ranchos" of the Indians of to-day, are usually quadrangular and of one room only; still I found one with two rooms and of an L shape. Their average size corresponds nearly to that of single rooms in a pueblo of the ancient pattern, with two exceptions. These two, being very small, may have been guardhouses merely, where the crops were watched in the daytime or at night, whereas the other may have sheltered entire families during summer.¹ The foundations are rubble, and the same kind of potsherds are scattered about as at the pueblo.

The Arroyo del Tejon has permanent water as far as these structures are found. I have not noticed any trace of ancient acequias; but there is no impossibility that such existed, and that the Tanos of Tunque cultivated by irrigation. Along the Arroyo de la Yuta the banks are too steep and the water flows ten to fifteen feet below the surrounding levels. But the soil is fertile, and at the present day the people of Tejon raise good crops with the aid of summer rains alone. For agricultural purposes the situation of Tung-ge was well chosen. Wood was not far off, and water always at hand, and from a military standpoint the location was not bad. The highest parts of the pueblo commanded a fair range of view in almost every direction.

I have been unable to find any notice of the pueblo of Tung-ge or Tunque in the older documents. It is mentioned

¹ Even to-day, people at the Tejon sleep out of doors in summer, as do most of the Pueblos while out on the ranchos. The house (or shanty) is only used for cooking, for sheltering the tools and household articles, and in case of rain or exceptionally cool weather.

in a petition of the year 1770 as an "ancient pueblo."¹ I doubt, therefore, if it was occupied at the time when the Spaniards first came.

Although there may be other ruins yet in the valleys east of the Sandia chain, I know of only one, that of the village at old San Pedro, south of the mining camp of that name. This pueblo is called by the Tanos "Pa-a-ko."

The narrow valley of the Upper San Pedro resembles somewhat that of the Pecos, but the stream is not as large, and the scenery decidedly grander. The forests descend into the bottom, and the peaks of the San Pedro range, covered with beautiful pines, rise at a short distance in the east. In the west, the slopes of the Sandia chain sweep upwards like an enormous slanting roof terminated by a long shaggy crest. There is not much space for cultivation, yet enough for the inhabitants of a good-sized pueblo. The ruins lie on the west bank, and almost at the edge of the woods. They show considerable decay. The walls appear to have been of rubble. Pottery and other objects similar to those of the other Tanos villages lie on the surface.

It was a village of the more compact type, which may be due to the nature of the ground on which it was built and to the lack of space. The mounds are high enough to admit the supposition that the buildings were over two stories in height, at least in some places. Three circular estufas are plainly visible, and three enclosures like those noticed at San Cristobal and San Lazaro. These enclosures were without doubt made for the purpose of confining flocks, and if they are coeval with the pueblo, and not subsequent additions, Paako belongs to the category of historic pueblos. But

¹ The *Petition* of the authorities of Santo Domingo and San Felipe jointly for a tract of land bounded in the east, "por el oriente con un pueblo antiguo llamado el Pueblo de Tunque," MS., September 20, 1770.

I was unable to investigate, while in that vicinity, whether shepherds may not have reared these stone enclosures in modern times. When, on the 12th of October, 1598, Juan de Oñate received the submission of the Pueblos lying along the western border of the Salines of the Manzano, Paako is mentioned as being among them.¹ This is significant, though not conclusive. In 1626, Fray Gerónimo de Zárate-Salmeron, in speaking of the murder of Fray Juan de Santa Maria in 1581, at some place east of the Sierra de Sandia and three days' journey south of Galisteo, attributes the deed to "the Tigua Indians of the pueblo that now is called San Pablo."² Zárate's commentator, the Jesuit José Amando Niel, changes that name into "San Pedro."³ I infer, therefore, that there was an inhabited pueblo near the place where Fray Santa Maria perished, which place must have been in the vicinity of the "old" San Pedro of to-day.⁴ Niel may have been right in changing the name, or the copyist of Zárate's manuscript may have made a mistake.⁵

¹ *Obediencia y Vasallaje a su Magestad por los Indios del Pueblo de Acolocu*, October 12, 1598 (Doc. de Indias, vol. xvi. p. 118). Four villages are mentioned: Paako, Cuzayá, Junétre, and Acolocú. If the first was the one at San Pedro, the other three may have been the Tigua pueblos "Cuar-ay," "Ta-ji-que," and "Chil-i-li."

² *Relaciones de todas las cosas que en el Nuevo Mexico se han visto y sabido*, 1626, MS., par. 7: "Y salió detras de la Sierra de Puaray, para atravesas por las Salinas, y de allí cortar derecho al paso del Rio del Norte, 100 leguas mas acá del Nuevo México; más no llegó á colmo su buen intento. Por que al tercero dia que se despidió de sus compañeros hermanos llegando á sestear debajo de un árbol, los Indios Tiguas del pueblo que ahora se llama Sn Pablo lo mataron, y quemaron sus huesos."

³ *Apuntamientos que sobre el terreno hizo, etc.*, written in 1729 (MS.). Niel is very unreliable in everything touching upon New Mexico, but he knew Sonora, part of Chihuahua, and California.

⁴ Three days' journey south of Galisteo brought the monk, travelling on foot, to San Pedro, or between San Pedro and Chilili.

⁵ An error in copying is quite likely. The copy of Zárate's MS. in Mexico contains glaring blunders of that sort. For instance, "el Capitan Nemorcete," instead of "De Morlete, &ca."

The earlier testimony indicates that the ruin just described and called by the Tanos Paako is that of a village inhabited at least as late as 1626, which assumption is not negated by the presence of the stone enclosures in question.

The documents referred to above make of Paako a village of the Tiguas. My Tanos informant at Santo Domingo declared that it was a Tanos pueblo. Which is right? It is a case similar to that of San Marcos and Cienega. Paako lies at the extreme southern limits of the Tanos range, and its position in relation to the Tigua settlements of Chil-i-li and Ta-ji-que is analogous to that of the pueblos of San Marcos, Cienega, and Bajada in reference to the Queres towns of Santo Domingo and Cochiti. I incline, however, to the belief that it belonged to the Tanos. A high ridge, densely wooded, the Sierra de Carnué, separated it from the nearest Tigua pueblo in the south, Chilili. The distance in a straight line is at least twenty-three miles, a long day's journey, owing to the intervening mountains. From San Pedro to the nearest Tanos villages in the north, at Golden, was only a few hours' travel.¹ I believe, therefore, that my Tanos informant is right, and that Paako was a settlement of his own people, which was abandoned for reasons as yet unknown at some time between 1626 and the great uprising in 1680. That it was no longer occupied in that year seems certain.²

¹ The proximity of a pueblo of one stock to one of another linguistic group, and its greater distance from the nearest kindred village, however, is not impossible. Cia, a Queres village, is only five miles from Jemez, while a greater distance separates it from Santa Ana, another Queres village. Sandia, a Tigua pueblo, lies only thirteen miles from San Felipe, while at least thirty miles separate it from the next Tigua town, Isleta. But in ancient times, when the stocks were more on the defensive towards each other, such cases hardly ever occurred. Acoma, however, is one, being nearer to the Zuñis than to its own people at Cia; but Acoma was impregnable to Indians.

² It was abandoned even previous to 1670. In that year began the emigra-

There is another ruin, smaller and more compact, a few hundred meters south of the one described; and on the opposite bank of the San Pedro there are also traces of buildings, but I had not time to examine either. With the notice above given of the principal ruin of San Pedro, my sketch of the Tanos country and its antiquities must terminate, although it is incomplete. There are other ancient vestiges which I have not touched upon. Sacrificial caves are spoken of in the vicinity of Cerrillos, and I have also heard of grottos showing traces of having been formerly inhabited. Documents of the year 1763 mention a ruin situated to the west of Carnué in the mountains.¹

So far all the pueblo ruins scattered over the Tanos country² may be considered as those of villages built and inhabited by that tribe, whether their abandonment antedated the Spanish occupation of New Mexico or not. If we consider Tung-ge, the four villages south of Galisteo, the ruins near Lamy, at Peñas Negras, on the Arroyo Hondo, and at the Bajada, as pre-historic, it would seem that the Tanos had, in times prior to the middle of the sixteenth century, receded from the eastern, southeastern, and western boundaries of their range, and clustered about the basin of Galisteo and the Cerrillos, with Ojana, Kipana, and Paako, as isolated outposts in secure mountain fastnesses. This concentration was certainly a slow and gradual process, and the same causes have not produced it everywhere. The tendency of tribal society being segregation and isolation of local groups, it was natural for the Tanos to recede from their kindred, the Tehuas, in course of time. In the west, the proximity of the Piro and Tiguas from the Salines; and Paako is not mentioned among the villages that were abandoned after that date.

¹ *Real Posesion de Su Miguel de Laredo*, 1763, MS.

² Under the term "pueblo ruins," I do not include here the small-house type of buildings found at Lamy and described in this chapter.

Queres had something to do with the concentration of the Tanos upon San Marcos and Cienega. Unfortunately, we have no traditional information upon these points. It is different in regard to the southeast. I heard while at Cochiti a folk-tale current among the Indians of Santo Domingo, which may throw light upon the past of the ruined pueblos lying on the southern border of the Galisteo plain, those called to-day Pueblo Colorado, Pueblo Blanco, Pueblo Shé, and Pueblo Largo. The substance of this tradition is as follows.

A long time ago, and before the Spaniards came to New Mexico, some wild tribe from the plains made a sudden irruption into the valley of the Rio Grande. They were called the Kirauash, and they seriously threatened Santo Domingo, or (as it was then called) Gi-pu-y.¹ Among the people of that village were wicked sorcerers, who entered into negotiations with the Kirauash for the purpose of delivering the pueblo into their hands. Some of the men of Santo Domingo, however, began to suspect their doings, and one night, when the principal men of the pueblo had gathered in council at an estufa, they noticed that one of the wizards stole out of the village. This looked very suspicious, for the Kirauash were in the neighborhood, and it was dangerous to stray from the houses. So they followed the sorcerer, and soon heard him exchange signals with the savages. Thereupon one of the men of Santo Domingo bade his comrades wound him slightly with their arrows, so as to cause his blood to flow, and then leave him on the ground as if he was dead, while they concealed them-

¹ The old pueblo of Guipuy lay on the banks of the Galisteo torrent a short distance east of Wallace, and was inhabited in 1598. Eighty years afterwards Santo Domingo stood on the banks of the Rio Grande, Guipuy having been wrecked by a flood.

selves near by. Soon a prairie wolf approached, sniffing and barking, and, as he smelt the blood, began to talk like a man, but in an unknown tongue. Cautiously the animal drew nearer and nearer until he touched the body, licked the blood from its wounds, and finally grasped it with its fangs. Thereupon those in concealment seized him and held him fast, calling out to their companions, who rushed up at once. The wolf was tied, gagged, carried to the pueblo, and down into the estufa, where the council was still in session. There the wolf was laid on the floor and untied; he then sat up, dog-fashion, and gazed stolidly into the fire. Only when the incantations began for breaking the charm by means of which men can change themselves into animals did he show signs of uneasiness. A roll of mountain tobacco was forced between his teeth, and at the first puffs the wolf vanished and a warrior of the Kirauash stood in its place.¹ Then the whole plot was revealed; some of the traitors were taken and punished, others had already fled. The savages, seeing their plan frustrated, made a desperate attack upon the neighboring village of Cochiti, which was repulsed. Enraged at their failure, they withdrew toward the plains. Their retreat carried them past the most southerly pueblos of the Tanos, which they were able to surprise and utterly destroy.

This piece of Indian folk-lore, which I give with the reservation elsewhere expressed, appears genuine; but there are usually several versions of one story. The source, however, from which I obtained this is one which I have learned to respect and to trust. Some weight attaches to it from its resemblance to a statement of Coronado's chronicler, Pedro

¹ This is a truly Indian tale, as transformation into animals at the will of one's self as well as of others is one of the chief faculties ascribed to sorcerers. The Navajos, formerly at least, made complete wolf's costumes and wore them occasionally on nocturnal scouts and raids.

de Castañeda. Speaking of the pueblo of Tshi-quit-e or Pecos (Cicuiq) and of the villages lying between the Pecos valley and the Rio Grande, he expresses himself in the following manner: —

“Between Cicuyé and the province of Quirix [the Queres] is a small village very well fortified, which the Spaniards have called Ximera, and another one in appearance very large, but which is almost completely abandoned. A single quarter of it is still inhabited; the rest appears to have been destroyed by violence. That place was called Silos, on account of the number of subterraneous rooms [probably estufas] that were found there.

“Farther on, there was another large but totally ruined village, in the courtyards of which we found a considerable number of stone balls of the size of a leather pouch containing one arroba [twenty-five pounds]. It appeared as if they had been thrown by machinery, and had served to destroy the village. All we could learn was, that five or six years previous there had appeared in this province a very numerous nation called the Teyas, who had taken and wrecked all the villages. These strangers had also besieged Cicuyé without succeeding in taking it. Before they left the country, they made a treaty of alliance with the inhabitants. It seems that they were very powerful, and had siege engines. The Indians did not know whence they had come, and only believed that they had arrived from the direction of the north. They call this nation Teyas, that is to say, valiant men, in the same manner as the Mexicans called themselves Chichimecas or braves. The Teyas whom we met later on were well known to the inhabitants of Cicuyé.”¹

¹ *Cibola*, p. 179. He adds: “Ils viennent même hiverner sous les murs de ces villages; mais les habitants n’osent pas les y laisser entrer car ce sont des gens auxquels on ne peut pas se fier.” This implies that they were

The military engines which Castañeda attributes to a tribe of nomadic Indians from the plains must be regarded as purely imaginary. I will quote his description of these Teyas, whom he afterwards met on the steppes of North-eastern and Eastern New Mexico: —

“There are in these plains, as I have stated in the first part, a small number of roving Indians, who hunt the bison and tan the hides, which they sell in the villages. In the winter they come in bands to the villages that are nearest, some to Cicuyé, others to Quivira or close to Florida. These natives are called Querechos and Teyas. . . . These nomadic Indians are braver than those of the villages; they are taller and more warlike; they live in tents like the Arabs, and have large troops of dogs which carry their baggage. . . . These Indians eat raw meat and drink blood, but they do not touch human flesh.”¹

Coronado says of the Teyas: “They have their faces and bodies covered with designs, are very tall and well formed, and eat meat raw like the Querechos, and like them they live and travel with the cows [buffaloes].”² I think that Castañeda attributes to the Teyas an incursion into Central New Mexico which was really made by another tribe from the plains, the Querechos or Apaches.³ Ever since the Pueblos have been known, and long before, the Apaches have been the scourge of the sedentary Indians, and they were superseded by the Comanches only in the beginning of the past century. Between Querechos and Kirauash there is quite a similarity in sound. At all events, Castañeda refers to the

really the Teyas of the plains. I believe, notwithstanding, for reasons which will be given further on, that he meant the Querechos or Apaches, and not the Teyas.

¹ *Ibid.*, p. 189 *et seq.*

² *Carta al Emperador Carlos V.* (Doc. de Indias, tom. iii. p. 363).

³ For identification of the Querechos with the Apaches, see Part I. of this Report, p. 179.

destruction of several Tanos villages by Indians from the plains, and in this his statements resemble the folk-tale which I have related.

The name "Tanos" is not mentioned by Castañeda; but the pueblos lying between Pecos and the Rio Grande must have belonged to that tribe. Besides the three spoken of above, "seven more are to be found between the Sierra Nevada and the road; there is one subject to Pecos which was partly destroyed by the nation of which I have just spoken."¹

By "the road" he means the route taken by Coronado's force in 1541, when they marched from Bernalillo, or Tiguex, to Pecos, on their way to the plains. The ten villages mentioned by Castañeda must therefore have been situated in the following order: three along the route, and seven to the north of it; for the "Sierra Nevada," or Snowy Mountain, was the Sierra de Santa Fé, which is the highest one in sight, and the only one that in April and May sometimes deserves the appellation of Sierra Nevada. As seen from Tunque, from Galisteo, or from Pecos, the Santa Fé chain stands in the north.

Another document, written in New Mexico in the autumn of 1541, before Coronado's return from Quivira, states that "from the province and river of Tiguex in four days' journey they met with four pueblos: the first had thirty houses; the second is a large and good village destroyed in their wars; the third had about thirty-five houses occupied. These three are after the fashion of those of the river in every respect: the fourth is a large village, situated among mountains, and is named Cicuiq."²

¹ *Cibola*, p. 179. On page 182, in enumerating all the pueblos which he knew, he says: "Dans les montagnes neigeuses, Seipi, Ximena, trois."

² *Relacion Postrera de Sivola* (MS.): "Desde la provincia y Rio de Tiguex á quatro jornadas toparon quatro pueblos; el primero tenia treinta casas; el segundo es buen pueblo grande, destruido de sus guerras; tenia hasta treinta y cinco casas pobladas el tercero; hasta estos tres son de la manera de los del rio en todo;

It will be noticed that this narrative confirms that of Castañeda in the principal points, the number of villages which the Spaniards touched on their route, and their condition, except that Castañeda makes the ruined pueblo the last, that is, the one nearest to the Rio Grande, while the other authority calls it the second after leaving Pecos.

I have not found anything more explicit in other documents relative to Coronado's expedition. The above data are hardly precise enough to establish his line of march across the Tanos country. A gentleman whose long experience in New Mexico and intimate acquaintance with its topography gives great weight to his opinions, Mr. R. B. Willison, C. E., of Santa Fé, has suggested that Coronado may have taken the following route: from Bernalillo to Tunque possibly by way of the "Plazitas," in which case he would have diverged from the Rio Grande and remained out of sight of the Queres village of San Felipe; from Tunque to San Lazaro around the northern base of the Sierra de Dolores; from San Lazaro to the old pueblo of Galisteo; and from the pueblo of Galisteo to Pecos, passing three miles north of the pueblo of San Cristobal.

This route is indicated by old Indian trails, which make his suggestion quite plausible. If true, the following conclusions might be drawn: — 1. That the pueblo of Tung-ge was in ruins in 1541, having been abandoned a few years previous to that date in consequence of an attack by nomadic Indians from the plains. 2. That the pueblo of San Lazaro had also suffered from the same source. 3. That the pueblo of Galis-

el quarto es un pueblo grande, el cual está entre unos montes llamase Cicuic." Mota-Padilla (*Historia de la Nueva Galicia*, chap. xxxiii. p. 164) also mentions "Zitos por los muchos que tenían en que guardaban maíz; el otro se llama Jimena, y otro Coquite, y todos se mantuvieron fortificados, sin permitir si quiera que se les hablase." He was able to consult some papers left by Don Pedro de Tobar, one of Coronado's lieutenants.

teo, or Tage-uingge, was at that time only a small village, and was called by the Spaniards "Ximera."¹

To identify the seven villages "between the road and the Sierra Nevada" is more than I can do, nor are we authorized to conclude that they were all inhabited. The Indian indicates and names the *sites* of his pueblos, irrespective of whether they are still occupied or not. To find out which are the inhabited ones he must be specially interrogated, which the Spaniards were unable to do, owing to lack of time and ignorance of the language. Taking the well known sites of Tanos pueblos north of the route followed by Coronado, it is easy to pick out seven, some of which, like San Marcos and Cienega, were undoubtedly inhabited in 1541, while the others were probably in ruins.

No mention is made of any pueblos south of the route. San Cristobal the Spaniards could not see from the trail, still less the four villages on the southern border of the Galisteo plain. The village of Paako lay far to the south; so did Ojana, Kipana, and the pueblos near Golden. To the north the country is open, while to the south rugged mountains arise in close proximity, producing the effect of an uninhabited wilderness.

It appears at least plausible that the withdrawal of the Tanos from the southeastern confines of their original range was due to an irruption of nomadic Indians, which happened but a short time previous to the arrival of Coronado in New Mexico, possibly between the years 1530 and 1540.

Of the pueblos south of the route, apart from the four probably destroyed by the Teyas, I hold that Paako, or old San Pedro, remained inhabited until after the first half of the

¹ Ximera, although the Spaniards gave that name to the pueblo, may have been a Tehua or a Pecos word misunderstood, and therefore incorrectly reported.

seventeenth century. It is also likely that Ojana and Kipana were occupied at least until 1700. In regard to the pueblos near Golden, the Tuerto and Valverde, I will refer to a passage in the journal of Gaspar Castaño de Sosa, of the year 1591. Castaño had established his headquarters at a village which he called Santo Domingo, situated on the left (east) bank of the Rio Grande; and while it is certain that its inhabitants belonged to the Queres, it is just as likely to have been the former pueblo of San Felipe as Guipuy, or old Santo Domingo. From one or the other of these the Indians guided Castaño on an excursion into the mountains where he "found two villages abandoned but very few days previously on account of war, as the Indians who were with us gave us to understand by signs; and we saw clearly that it was so, from the many dead bodies. In these villages were much maize and stores of beans."¹

The mountains Castaño visited on this excursion can only have been those of the Tanos country. The two villages close together were therefore the two pueblos at Golden. They are the first ones which he would have met coming from Wallace or from the present Santo Domingo, and also the first ones on his route from old San Felipe into the mountains, as the pueblo of Tung-ge had been in ruins for nearly sixty years. I therefore consider myself justified in assuming that the pueblos near Golden, Sem po-ap-i and Ka-po, or Valverde and Tuerto, were abandoned in the beginning of the year 1591 on account of a raid by other Indians;

¹ *Memoria del Descubrimiento*, p. 256: "Fué por entre unas sierras donde halló dos pueblos despoblados de muy pocos días atrás, los cuales estaban despoblados, respeto de que por guerra de otros, habian dejado sus pueblos, como en efeto hera, por que otros Indios que con nos iban, nos lo diéron á entender, é lo vimos claro ser así, por las muestras de muchas muertes que habia señales; habia en ellos mucho maiz y frisol." The hostilities might have arisen from Pueblo Indians as well as from wild tribes.

but to what tribe or stock they belonged, it is impossible to determine.

In the east the Tanos range joins that of the Pecos. Although the large Pueblo of that tribe was examined by me in 1880 for the Institute, and a full report upon those investigations published, I deem it advisable to devote the next section of this Report to the Pecos valley, and to the question of the eastern limit of the Pueblos at the beginning of the historic period, as well as in times anterior to the coming of Europeans.

III.

THE UPPER VALLEY OF THE RIO PECOS, THE
RIO GALLINAS, AND THE EASTERN LIMITS
OF THE PUEBLO COUNTRY.

IN my report to the Institute upon the aboriginal ruins in the valley of the Pecos, I stated that the large ruin known as the old Pecos pueblo was not the only one in that beautiful mountain valley. Since that report was published, I have visited several of these ruins: that at Las Ruedas near the railroad station of Rowe, formerly Kingman; the one at San Miguel de Pecos, farther southeast; and that at San Antonio del Pueblo, three miles down stream. I have also heard of a ruined pueblo near El Gusano, and of ruins higher up the valley than the historic Pecos or Tshi-quit-e.

The Pueblo de las Ruedas is called by the Pecos Indians Ku-uäng-ual-a.

The ruins of Ku-uäng-ual a lie near the bed of the small creek called Arroyo Amarillo, and consist of low mounds of rubble. The village was manifestly built of that material, and forms three quadrangles connected with one another, and with only two entrances. I found no trace of estufas; and the appearance of the ruins shows long decay. The potsherds looked to me quite ancient, and I noticed no coarsely glazed specimens; but corrugated earthenware, as well as white and black and red and black, was abundant. The spot is a sheltered depression, with forests around it and water near by; and the pueblo may have contained, at most, four hun-

dred souls. Skeletons have been exhumed in the immediate neighborhood of this village, but I was unable to ascertain anything definite concerning them. It was a compact pueblo and well constructed for purposes of defence, but commanded no distant view, since it lies at the foot of the abrupt wooded mesa that skirts the Upper Pecos valley on the southwest, and is encompassed by forests on all other sides. The site was selected on account of the proximity of wood and water. Lookouts could be established at some distance from the pueblo, but even these commanded only a limited portion of the valley, the near slopes of the mesa, and the Tecolote chain.

From the testimony of the chroniclers of Coronado's march, it would appear that Tshi-quit-e was the only pueblo inhabited by the Pecos tribe in the middle of the sixteenth century.¹ The "last of the Pecos," now living at Jemez, make the same assertions. But in 1583 Antonio de Espejo mentions three villages of the Tanos, as he calls the Pecos tribe.² Fifteen years later Oñate speaks of only one;³ and

¹ *Cibola*, chap. vi. p. 182: "Cicuyé un." In chapter v. page 179, he says, however: "On compte sept autres villages entre la route et la Sierra Nevada; il y en a un soumis à Cicuyé qui fut à moitié détruit par la nation, dont je viens de parler." That "nation" was the one called by him Teyas. But as he only states that the village was "subject to" Pecos, and reports from hearsay, there may have been one of the Pecos villages destroyed previous to 1540, and never reoccupied. On page 182 he says again that Cicuyé (Tshiquite) was the last pueblo to the east, "de là à Cicuyé qui est le dernier village." (It is given upon Plate I. Fig. 17.)

² *Relacion del Viage* (Doc. de Indias, vol. xv. p. 122). He says there were three pueblos, but clearly identifies one of them with the Ciquique — Cicuyé, Cicuic (the Tshiquite of to-day) — of Coronado. This is alone sufficient to identify the Pecos with the "Tamos"; but, in addition, we have the statement of Oñate in *Discurso de las Jornadas*, p. 258: "Al gran pueblo de los Peccos, y es el que Espejo llama la prouincia de Tamos."

³ *Discurso*, p. 258. *Obediencia y Vasa'laje de San Juan Baptista*, p. 113: "La Provincia de los Pecos con los siete Pueblos de la Cienega que le cae al oriente."

so does Benavides in 1629.¹ Seven years later, however, the priest of Pecos, Fray Antonio de Ybargaray, mentions a "Visita de Indios," dependent upon the parish of Pecos, where he had gone to say mass.² It is therefore not absolutely certain that Tshiquite was the only Pecos settlement occupied in the earliest times of Spanish colonization, although it is possible that Espejo was misled, attributing to the Pecos pueblos inhabited by some other stock. The "Visita" spoken of by Father Ybargaray in 1636, may have been a settlement then recently formed, and subsequently abandoned.³

Between the great Pecos pueblo and the Pecos River I noticed in 1884 a number of ruins of small houses which had probably been built of stone; and I had seen similar ones in 1880 in another direction from the pueblo. I then believed them to be burial places, but I am now positive that they were houses of the small type. At the little town of Pecos I found one ruin with three apartments measuring respectively, 2.2, 2.2, and 3.8 by 3.7 meters, thus forming a house 8.2 by 3.7 meters (27 by 12 feet). I measured in all nine which were much smaller; the largest one being 4.0 by 3.5 meters (13 by 11½ feet). Hardly any pottery was visible about these ruins.

I was informed that on the extensive mesa separating the Pecos valley from the Galisteo basin there are two pueblo ruins, both much decayed. One was said to lie at the Ojo de la Vaca, the other in the Valle de San Miguel. The mountain torrents near which these ruins are situated are

¹ *Memorial*, p. 25.

² *Carta al Virrey (Escrita por el Ministro de Pecos, Fray Antonio de Ybargaray, November 20, 1636, MS.)*: "Sobre que vn domingo . . . la missa adonde yo abia ido a decirla a vna bisita de Yndios."

³ There are several such instances in the environs of Zuñi. In the last century those Indians formed various pueblos at some distance from their large one, which were subsequently abandoned.

both tributaries of the Arroyo of San Cristobal. This might imply that the villages belonged to the Tanos group, but in default of precise information on that point, I refer to them here, as they lie nearer to Pecos than to the ruins of the Galisteo group.

Near the former railroad station of Fulton, southeast of Rowe, at a place called El Gusano, stand ruins which the Pecos Indians call Se-yu-pä, which they claim as one of their ancient villages. Not having visited the spot myself, I cannot decide whether this ruin may not be the same as the one near Pajaritos to which the Pecos give the name Se-yu-pä-lo. The similarity of the two Indian names is so great, and Pajaritos and El Gusano lie so close together, that I am inclined to believe there is but one ruin in that vicinity.

The distance from Rowe to San Miguel is seventeen miles to the southeast; Fulton lies about midway between. At San Miguel there were two pueblos, and two at San Antonio del Pueblo, three miles to the south; so that, including the great village of Tshiquite, there are along the course of the Upper Pecos River at least seven pueblo ruins within a distance of twenty-five miles.

The two ruins at San Miguel are small, and much obliterated. One lies a quarter of a mile east of the town, and on the slope of a low embankment, quite close to the Pecos. All I could find of it was a long mound, from which a rude stone wall protruded. This wall had a length of 34.5 meters (113 feet), and the mound was 6 meters (18½ feet) wide. Two partitions are also visible, three meters apart, and the end of a long wall parallel to the main one, and two meters distant from it, also crops out. The pottery was corrugated, and white with black decorative lines, — that is, of the older kind. Gray obsidian and much flint were scattered about the mound.

The other ruin, if it had not been for the potsherds with which it was covered, I should have overlooked, so low and indistinguishable had it become. This pottery is decidedly of the older type, corrugated, black and white, and red and black.

For the ruins near San Antonio del Pueblo, three miles southeast of San Miguel, I refer to Figures 18 and 19 of Plate I. Both seem to belong to the "one-house" pueblo pattern. The one on top of the mesa (Fig. 19), east of the little hamlet of San Antonio, is a rectangular stone-heap, from which walls protrude in only one place. These walls are built of pieces of the red sandstone of which the mesa is composed, and are only 0.22 m. (9 inches) thick; three partition walls are also visible, respectively 2.1 and 2.8 m. (7 and 9 feet) apart. No *estufa* can be seen, but in the centre of the chaotic mass of rubbish there is an open space measuring 7 by 4 m. (22 by 13 feet), showing that the pueblo had once an interior courtyard. This pueblo is one of the most compact I have ever examined, and occupied nearly the whole surface of the cliff, which is almost vertical towards the west, but with a less slope on the east. Its height above the Pecos is 32 meters (105 feet), and the distance from its base to the river's edge about two hundred meters, which space is occupied by fields. The situation of the village was such as to command a beautiful view. The valley widens towards the north and northwest, and in the distance loom up the snow-capped summits of the Santa Fé Mountains. In the southeast, wooded heights close in upon the Pecos, and in the west rise frowning and bleak mesas. Everything requisite for secure and prosperous habitation, according to the ideas and wants of the Pueblo Indian, is realized in a small compass.

In the very village of San Antonio, on the west bank of the

Pecos, lies the other ruin, represented on Plate I. Figure 18. It is reduced to flattened mounds, encompassing a courtyard which is open to the southwest. Very little pottery covers those ruins, and, as at the one on the mesa, it is of the older type. I found many flint arrow-heads here, but only a single piece of obsidian. One of the inhabitants of San Antonio, however, presented me with two handsome stone axes that had been found on the spot, which, like those found in all Northern ruins, had the crease or groove for fastening the handle cut all around the axe. The same person assured me that years ago a number of skeletons had been exhumed on the east side of the lower ruin, towards the river. They were rather closely packed, and the bones of each body, including the skull, lay in a heap, leading to the inference that they were buried in a sitting posture, with the face to the east.

The Pecos told me that they called one of the villages at this place Pom-o Jo-ua, leaving me to conjecture which of the two it was. They said at the same time, that the pueblo at El Gusano, nine miles higher up, was the last one of their tribe in that direction. The Pecos also assert that they came into their valley from the south or southeast, gradually moving up, and that Tshiquite was the last village built and occupied by them. There is nothing improbable in this. The incursions of the tribes from the plains tended to drive the Pueblos into the mountains, little by little.

Before turning to the important question of the eastern limit of the Pueblos, I will give a brief summary of what I have heard about ruins said to exist below San Antonio, as well as to the east of the Pecos valley.

I have been informed that on the banks of the Pecos the ruins do not extend much farther than La Cuesta or Anton Chico; and that there are distinct vestiges near the

former of these two points has been repeatedly stated. The character of these vestiges is said to be that of "pueblos," in the sense of communal large-house structures. Beyond Anton Chico remains, in appearance very ancient, and buried beneath the surface, are found in the so called Cañada Pintada: a long, bleak gorge, with natural tanks and water-holes, but destitute of springs. The sides of this gorge, as its name indicates, bear pictographs on the rocky surface. The Cañada lies west of the Pecos River, and on the opposite side there seem to be no ruins in latitude 35°, or farther south. I shall therefore assume that this parallel of latitude is the southern limit of ancient pueblos along the Pecos.

The Rio Gallinas, a mountain creek rising above Las Vegas, joins the Pecos a short distance below Anton Chico. The Pecos flows from northwest to southeast, the Gallinas nearly due south, with a slight deviation to the east. Between the two streams are other watercourses: the Rio de la Vaca, Rio del Toro, and the Tecolote. The country is wooded and mountainous; along the streams are fertile patches, and it is said that traces of ruins are met on all three of these watercourses.

In the Valles de San Gerónimo, eighteen miles west of Las Vegas, I satisfied myself of the presence of former Indian habitations. They seemed to belong to the small-house pattern, were mostly obliterated, and showed very little pottery. Near Las Vegas there were traces of ruins in three places, on both banks of the Gallinas River, between the town and the entrance to the gorge of the hot springs. The pottery of these ruins belonged to the oldest type, corrugated, black and white, and red and black. I found obsidian, flint, and fragments of metates and of slabs that had served as door-sills, the latter appearing very crude and

much worn. From an old resident I learned that two of the villages, at the Plaza Arriba and at Los Vigiles, consisted of about thirty small houses each, irregularly scattered, and that each had a round estufa. The walls were of adobe on rubble foundations, and their thickness exceeded not 0.25 m. (10 inches).¹ On the lower course of the Gallinas, between Las Vegas and the junction with the Pecos, there are said to be ruins at Romero and near the Chaperito. Whether there are traces of pueblos farther east, and as far as old Fort Bascom, I am unable to say.

North of Las Vegas, it seems that neither in the vicinity of Mora on the slopes of the high eastern range, nor in the Sierra de los Ratones, still less in the plains, have pueblo ruins been discovered. On the other hand, Mr. William Kroenig, in his Report to the Territorial Bureau of Immigration of New Mexico, in 1881, makes the following statement in regard to Mora County in general: "The county shows in many places traces of former occupation by an agricultural people. Their mode of building differed in so far from that of the present Pueblo Indians that their villages were of smaller dimensions, and as in all the excavations made earthenware pots filled with charred corn were unearthed, it may be presumed that these villages were destroyed by the wild Indian tribes of the prairies. All these ruins show large quantities of pottery, well made arrow-points of flint and obsidian, hand mills (metates), etc. The cañons also show the remains of cliff houses."²

¹ Possibly every trace of them has now disappeared. Two of the sites lay on the left, and one on the right bank of the Gallinas, all three above East Las Vegas. I was also told that in former times the Pecos Indians were accustomed every summer to spend a short time at the site of Las Vegas. A creek in the neighborhood still bears the name of "Arroyo de los Pecos."

² Wm. Kroenig, *Report as to Mora County*, 1881, p. 4. Mora County lies on the eastern slope of the mountains, and extends as far as the eastern boundaries of New Mexico, embracing also a part of the plains. It lies approximately between latitude $35\frac{1}{4}^{\circ}$ and $30\frac{1}{4}^{\circ}$ N., and longitude 102° and $105\frac{1}{4}^{\circ}$ W.

I place full reliance on Mr. Kroenig's statement, which tends to show that whatever ruins still exist in Mora County belong to the small-house type of architecture, a type which was no longer constructed by the New Mexican Pueblos in the sixteenth century. On the other hand, I have been informed that the ruins at Chaperito are those of a typical pueblo.

Hence the limit of Pueblo architecture seems to extend as far east as longitude 105° , possibly to 104° , between the parallels of latitude $35\frac{1}{2}^{\circ}$ and 35° . North of $35\frac{1}{2}^{\circ}$, their limit appears to follow the western slope of the high sierra, or approximately the meridian of $105\frac{1}{2}^{\circ}$.

There is documentary information of the sixteenth century which bears upon this question as to the eastern limit of the pueblos.

Hernando de Alvarado was the first Spanish officer who visited Pecos in 1540, and his report conveys the impression that Pecos was the last pueblo toward the east.¹ This impression is confirmed by the descriptions of the route taken in the following year by Coronado and his force, when they marched into the plains in search of Quivira. Their course from the Pecos pueblo was to the northeast, and they crossed the Pecos River a short distance beyond the village, but although they must have traversed the Tecolote chain and its partly irrigated valleys, it is positively asserted that no other pueblo was met with by them.² When the main body under Arellano returned from the plains, they struck the Pecos River about thirty leagues (eighty miles) below Tshiquite, and followed it as far as

¹ *Relacion de la Jornada*. Castañeda, *Cibola*, p. 72.

² *Cibola*, pp. 116-188. *Relacion Postrera*, MS. Juan Jaramillo, *Relation du Voyage fait à la Nouvelle Terre* (Appendix to *Cibola*, p. 371). Jaramillo speaks of two streams after the Spaniards had crossed the Pecos. All agree that the direction taken was to the northeast.

the pueblo, without noticing any settlement of sedentary aborigines.¹

In 1583 Espejo descended the Pecos River from Tshiquite to Northwestern Texas, but except the three pueblos which, as I have previously remarked, he ascribes to the Pecos tribe, he saw no trace of villages.²

The most important testimony is that furnished by the journal of Gaspar Castaño de Sosa in the years 1590 and 1591. This officer was Lieutenant Governor of New Leon, and with a force of about one hundred men, a pack train, and a number of carts, he left Almaden in New Leon on the 27th of July, 1590, reaching the Rio Grande on the 9th of September. Crossing that river on the 1st of October, he continued his march to the east under great difficulties, resulting from lack of water and the absence of game, until he reached the Rio Salado on the 26th of the same month. It is needless to prove that the Salado was the Pecos.³

The Spaniards followed the course of this river upwards until the 23d of December, without seeing any trace of Indian settlements. On the 28th of October they met Apaches with troops of dogs.⁴ On the 23d of December a scouting party returned with the news that an Indian pueblo was near by.⁵ Until then the Spaniards had traversed only sandy expanses, with an occasional mountain chain looming up on the horizon; now they were in a country at once wooded and broken. The pueblo lay some distance west of the Salado, in a valley surrounded by forests and

¹ *Cibola*, pp. 135 and 136.

² *Relacion del Viage*, p. 123.

³ *Memoria del Descubrimiento*, pp. 196 *et seq.*

⁴ Previously they had also met some Tepehuanes. *Memoria*, pp. 207, 209. The Apaches, called "Vaqueros," had dogs, and used them as beasts of burden. See Part I. of this Report, p. 179.

⁵ *Memoria*, pp. 220 to 222.

mountains. Castaño was compelled to take the village by storm, for its inhabitants had treacherously assailed the scouting party, wounding several of them, and depriving them of their arms and equipments. The interesting fact appears in connection with the storming of this village, that its natives had not the slightest conception of the nature and effects of fire-arms.¹

The "Rio Salado" flowed "a quarter of a league" from the pueblo, and Castaño observes that its water had lost its alkaline properties "many leagues below."²

Leaving this pueblo on the 6th of January, 1591, with a part of his force, Castaño struck out for the west, crossing a wooded mountain. On the evening of the first day he reached another river, "all frozen." A short distance beyond this river stood a small village; farther on were five pueblos, not far from one another; finally, a large village near the banks of a great river. That river was the Rio Grande, and the Spaniards reached it on the 12th of January.³ As it is certain that Castaño marched up the Salado to a place where that stream flowed through a broken and wooded country, that place must have been north of the parallel of thirty-five degrees. At some point, therefore, above Anton Chico, he must have turned off to the west, marching across the country to the Rio Grande. That this was the great river to which he for the first time applied that name is

¹ In proof of this Castaño relates that only when some of the Indians who accompanied him from Nuevo Leon began to show their arrows did the Pueblos retire to cover. The musket-shots fired into the air produced no effect. *Memoria*, p. 231: "É visto por los dichos Indios que los nuestros les tiraban flechas, se espantaban é mostraban mas temor, que no de la arcabuzeria; y así mandó el dicho Theniente, que les apuntasen por todas partes; y así se hizo." Compare also pp. 232 to 234.

² *Memoria*, p. 141: "Por que debaxo de esta elada, iba alguna agua." *Ibid.*, p. 239: "A un quarto de legua va el rio Salado que decimos, por donde fué nuestro camino, aunque el agua salado se pierde muchas leguas atrás."

³ *Ibid.*, p. 245. On page 259 he calls that river "el Rio Grande."

certain; for on its banks he afterwards visited the Querese (Queres Indians), and on the same river stood the pueblo where Fathers Rodriguez and Lopez were murdered in 1581.¹

There is no stream of any permanence between the Pecos and the Rio Grande and near the former. Consequently, the river which flowed a quarter of a league distant from the pueblo which Castaño had to take by assault cannot have been the Pecos, but some watercourse to the east of it,—either the Gallinas or the Tecolote. The small village next to it, however, was situated on the Pecos. It cannot have been Tshiquite or the “old Pecos pueblo,” for that was the largest Indian town of New Mexico.²

Without attempting to identify any of the ruins described or mentioned in this chapter with the two pueblos first spoken of in Castaño's journal, this much seems probable: that towards the end of the sixteenth century inhabited villages existed southeast of the pueblo of Tshiquite or Pecos and north of the thirty-fifth parallel of latitude. To what linguistic group or special tribe the inhabitants belonged, it is of course impossible to determine.

The statements of Castaño derive some confirmation through one of the documents which Oñate caused to be executed touching the submissions of the Pueblo Indians and the division of New Mexico into parishes. On the 9th of September, 1598, Fray Francisco de San Miguel, one of the missionaries accompanying Oñate, was assigned to “the

¹ *Memoria*, p. 248.

² Pecos is always spoken of as an extraordinarily large pueblo. That the first village, the one which Castaño took by storm, was not Tshiquite, is clear. In the first place it lay only a quarter of a league from the river which Castaño took to be the Salado or Pecos, but which was in reality either the Gallinas or the Tecolote; and moreover the Indians of Pecos would not have been ignorant of fire-arms, as were those of that pueblo.

province of the Pecos and the seven pueblos of the meadow (Cienega) lying to the east of it, and all the Vaqueros (Indians of the cows or buffaloes, the Apaches of the plains) of that chain and district as far as to the Sierra Nevada.¹

It is plain that the enormous parish thus formed lay east and south of the Santa Fé Mountains. But it also appears that it included seven inhabited pueblos situated east of the great Pecos village. It is fruitless to attempt to locate these with any precision.² It is also quite uncertain whether the number seven was correct. At all events there were inhabited villages beyond the pueblo of the Pecos tribe, and it seems probable that they lay west of the line which I have assumed to be the eastern limit of sedentary Indians in New Mexico.

In the Introduction to this part of my Report I stated that traces of sedentary Indians had been found in the plains on the banks of the Canadian River.³ I have seen and examined two ancient flat urns, decorated with dark lines, that were coarsely glazed. It was undoubtedly pueblo pottery, of the kind so common in ruins of the historic period. Both urns were remarkably well preserved, and they had been dug up in an embankment on the Canadian River, about twenty-five miles east of Ocaté (Mora County). This isolated find proves nothing, since I could not ascertain that any ruins had been noticed in the same neighborhood. But former buffalo hunters have repeatedly assured me that along the Canadian River they had come upon stone enclosures and mounds covered with ancient pottery. It would be well to investigate the truth of such statements. Twice at least

¹ *Obediencia y Vasallaje de San Juan Baptista*, p. 113.

² The designation of "Cienega" proves nothing. Cienegas, or meadows, are found in a great many places; Las Vegas was a Cienega, and there is one at San Antonio del Pueblo.

³ *Ante*, p. 12.

within historic times, bands of Pueblo Indians have deserted their villages and established themselves in the plains near such of the Apaches as were on good terms with them at the time. In the middle of the seventeenth century a part of the Taos Indians removed to Cuartelejo in Eastern Colorado, whence they were brought back by Juan de Archuleta.¹ A similar instance occurred in the first years of the eighteenth century; the tribe of Picuries again emigrating to Cuartelejo, whence it returned to its pueblo in 1706.² Such temporary dwelling of Pueblo Indians on the plains, each time extending over a period of several years, must have left traces in the shape of manufactured objects characteristic of pueblo culture. It is well to bear this in mind whenever finds occur like those near Ocaté.

The Pecos Indians were separated from their kindred in the west, the Jemez, by the range of the Tanos, and by the Queres, of the Rio Grande and the Jemez River valleys. Before proceeding to cast a glance at the antiquities of the Jemez, I will devote the next chapter to the district of the Queres, which is very rich in such remains.

¹ This is related by Escalante, *Carta al Padre Morfi*, par. 12.

² I have treated of this temporary emigration of the Picuries in my paper on the *Expedition of Don Pedro de Villanur to the Platte River* (Historical Contributions by the Hemenway Southwestern Archæological Expedition, p. 179).

IV.

THE VALLEY OF THE RIO GRANDE BETWEEN
THE RITO DE LOS FRIJoles AND THE
MOUTH OF THE JEMEZ RIVER.

THE Queres Indians of New Mexico claim the range above described, asserting that the majority of the ruins scattered through it are those of villages of their tribe. At the present day they hold only the banks of two of the streams mentioned, three of their pueblos being situated on the Rio Grande, and two on the Rio Jemez. East of this district extends the former country of the Tanos; south, the range of the Tiguas; west and northwest, that of the Jemez and Navajos; and north, that of the Tehuas. The Rito de los Frijoles, with its numerous cave dwellings, forms what seems to be a boundary line dividing the Tehuas from the Queres stock. To that romantic gorge we will now return, where we left it at the close of the first chapter of this Report.

From the southern edge of the Ziro Ka-uash, or Mesa del Pajarito, we look down into the Rito as into a narrow valley several miles long and closed in the west by rocky ledges, over which the stream descends to the bottom lands of the Rito. Through these it flows for several miles as a gushing brook, enlivened by trout, bordered by thickets of various kinds of shrubbery, and shaded at intervals by groves of pine, and tall, isolated trees of stately appearance. In the east, not far from the Rio Grande, a narrow, frowning gateway is formed by lofty rocks of black basalt, leaving

space for the bed of the stream, the waters of which reach the river only during freshets, while in the valley they are permanent. The slope of the mesa lining the Rito on the south is gradual, though steep; ledges and crags of pumice protrude from the shrubs and grass growing over it. Tall pines crown it above. The average depth of the Rito below both mesas is several hundred feet; in places, perhaps as much as five hundred or more. It is not properly a valley, since its greatest width hardly attains half a mile, but a gorge or "cañon" with a fertile bottom and a brook running through it.

Descent into the Rito from the north is possible in several places, though tedious on account of the steepness and of the vegetation covering the slopes. If we cross the bottom, ascend the southern mesa, and from its brink look down again into the gorge, the northern wall presents a striking appearance. With few intervals, it is a long line of light-colored cliffs of very friable volcanic tufa, in places vertical and smooth, but mostly worn into angles and crags, running in sharp zigzag lines, like the "coulisses" of a stage. A talus of varying height, steep and covered with rocky débris, extends from the bottom of the gorge to the foot of these cliffs. As seen from the brink of the southern mesa, the view of the Rito is as surprising as it is picturesque.

The effect is heightened by the appearance of a great number of little doorways along the foot of the cliffs, irregularly alternating with larger cavities indicating caves, the fronts of which have partially or completely crumbled away. The base of the cliffs rises and falls, so that the line of caves appears to be at different elevations, and not continuous. There are spaces where the rock has not been burrowed into; in some places two, in others three, tiers of caves are visible. The whole length of this village of troglo-

dytes is about two miles, rather more than less. Upon the assumption that all the grottos were occupied simultaneously, the population of the Rito would have been much larger than that of the Pu-yé, and might have equalled that of the Pu-yé and Shu-finné combined, amounting to nearly twenty-five hundred souls; but it is more likely that fifteen hundred represents the number of the inhabitants. Here was a little world of its own. The bottom afforded a sufficient extent of very fertile soil; there was enough permanent water to permit irrigation, and there are even traces of acequias on both sides of the brook. Trees stood in front of their homes, and the mesas above are well wooded. Game of all kinds, deer, elk, mountain sheep, bears, and turkeys, roamed about the region in numbers,¹ and the brook afforded fish. The Rito is cool in summer and not very cold in winter, compared with the surrounding table-lands and the Rio Grande valley. It was a choice spot, admirably fitted for the wants of a primitive people.

It was also excellently situated for protection against a savage enemy. The inhabitants of the Rito could neither be starved out nor cut off from their water supply. Prowling Navajos might render hunting on the mesas very unsafe for months, but only a direct attack in great force could imperil the cave dwellers at home. It was easy for the latter to guard against surprise, since the foot of the cliffs affords lookouts over the whole bottom, up and down.

The cave dwellings of the Rito are so much like those of the Pu-yé and Shu-finné that they scarcely need description;

¹ All the kinds of game mentioned were very abundant around the Rito de los Frijoles in former times, but the communal hunts of the Pueblos, and later on the merciless slaughter of the Apaches, have greatly reduced it. Deer, bears, and turkeys are still to be found. In 1880 I saw the last mountain sheep at the Rito. That beautiful animal has now completely disappeared from the Valles range.

the differences are purely local and accidental. As in the Tehua country, they have artificial floors, and are white-washed inside or daubed over with yellow clay. There are the same types of doorways, air-holes, and possibly loop-holes; the same kind of niches and recesses; but the cave dwellings at the Rito are the most perfect seen by me anywhere.

The hearth or fireplace offers nothing remarkable, being simply made of two slabs set on edge against the outer wall of the cave. Above it, and 0.50 m. (22 inches) above the floor, is a hole serving as a means of escape for the smoke. Here are the only chimneys to be found in caves of artificial make, and since the Rito during the past and present centuries has been inhabited several times, and since shepherds and cattle thieves have repeatedly made the caves their abode, their antiquity is doubtful.¹ There are also some metate frames unquestionably modern, as similar ones can be seen at the Zuñi village, at the village of To-ya or Nutria, inhabited during summer by portions of the Zuñi tribe, and the remains of one existed in 1886 in one of the caves of the Pu-yé.

The same doubt as about the chimneys arises in regard to a cave occupying the corner of a projection of one of the cliffs on the upper part of the Rito, and it stands by no means alone. Three sides of the cave are of natural rock, but the third is closed by a thin wall of blocks of stone laid in mud and well built. The doorway has a frame of stones, and two lintels, the upper one made of half-round strips of wood, the lower of round sticks, laid lengthwise across the opening. Both wood and stone work appeared to me sus-

¹ I have not been able to examine the papers relating to the grant of the Rito; but that cattle and sheep thieves made it their hiding place is said to be mentioned in them. The tale is current among the people of Cochiti and Peña Blanca.





PLATE II. — HOUSES BUILT AGAINST THE CLIFFS, RITO DE LOS FRIJOLES.

piciously fresh; still, the place is well sheltered, and this may account for their preservation.

The caves themselves, like those at the Pu-yé, are poor in relics, except those of the upper tiers, in which a few jars and bowls have been found. The valley of the Rito, especially the ruins, of which I shall speak further on, abounds in fragments of pottery, stone axes, arrow-heads, metates, grinders, and the like. Obsidian, in sharp splinters and chips, is profusely scattered about; and the rock itself contains nodules of that material, so valuable to primitive man in the Southwest. The axes are mostly of basalt. I have been shown a fetich made of lava, which was reported to have been found at the Rito, and pictographs exist in several places. The potsherds are of various kinds, corrugated and plain black, the very ancient black and white, and black and red, and also the more modern kind, decorated with coarsely and thickly glazed designs. In short, we have in the manufactured objects also a repetition of features noticed at the Pu-yé and the Shu-finné.

I measured nearly every cave through the whole length of the cañon as far as traces of former habitations extended, but must confine myself to some details only. Against such of the cliffs as rise vertically, and the surface of which is almost smooth, terraced houses were built, using the rock for a rear wall. Not only are the holes visible in which the ends of the beams rested that supported roofs and ceilings, but in one or two places portions of the beams still protrude. They were round, and of the usual size. Along the base of these cliffs extends an apron, which was once approximately levelled, and on this apron the foundations of walls appear in places. (See Plate II.) It would seem that a row of houses, one, two, and even three stories high, leaned against the cliff; and sometimes the upper story consisted of a cave, the lower of a building.

Chambers nearly circular, larger in size than the majority of caves, are also found in the cliffs, some of which have a low projection around the room like a bench of stone. These were doubtless estufas, as I was told by one of the Indians who accompanied me to the spot. There is a distinct estufa not far from the bank of the brook opposite those caves situated in the upper portion of the valley, and a smaller one still higher up. Including the four estufas connected with the pueblo ruins, of which I will speak further on, I have noticed at least ten such constructions at the Rito.

In describing the Pu-yé, I spoke of the pueblo ruins which lie on the top of the cliff of that name. At the Rito de los Frijoles there are at least three similar ruins, but they lie in the river bottom. Two of them are in front of the caves at a short distance from the talus sloping up to them. One was a one-house pueblo of the polygonal type, which probably sheltered several hundred people; the interior court still shows three circular depressions or estufas. The other, which lies about sixty meters (196 feet) east of it, shows thirty-nine cells on the ground floor; and sixteen meters (23 feet) north of it is an estufa twelve meters in diameter. Farther east are the remains of a circular tank fifteen meters (49 feet) across, and still beyond stand the remains of a round tower, which was certainly built in the past century by Spanish owners of the Rito. There are some doubts in regard to the antiquity of the tank also. The average dimensions of forty-four rooms of the smaller house and of those that can be measured in the larger ruin are 3.2 by 3.8 meters ($10\frac{1}{2}$ by $12\frac{1}{2}$ feet). The three estufas in the courtyard of the polygonal ruin measure respectively 7, 10, and 11 meters across (23, $32\frac{3}{4}$, and 36 feet). The walls of these buildings were of blocks of pumice from the cliffs, of various

sizes, but nearly regular in shape. As usual, they were laid in adobe mud, in courses, without breaking joints.

A third ruin, situated nearly a mile farther down the gorge in a grove of pine trees, formed an L, with a rude stone enclosure on its north side, and connected with it is a small estufa. It is quite as much decayed as the large polygon, and the potsherds covering its surface are similar.

Indian tradition regards both types of dwellings as the work of the same tribe, but I have only obtained the outlines of the elaborate folk-lore attached to the Rito de los Frijoles.

The people of Cochiti told me that the caves of the Rito, as well as the three pueblo ruins, were the work of their ancestors, when the Queres all lived there together, in times much anterior to the coming of the Spaniards. The place is called Tyuo-nyi in the Queres language, a word having a signification akin to that of treaty or contract. It was so called because of a treaty made there at some remote period, by which certain of the Pueblo tribes, probably the Queres, Tehuas, and perhaps the Jemez, agreed that certain ranges loosely defined should belong in the future to each of them exclusively. The Queres also told me that their ancestors, after having dwelt at the Rito for a considerable length of time, began gradually to leave it in bands, in order to build pueblos on the mesas south of the Rito. Whether these bands always consisted of complete gentes, or whether they included fragments of different clans, I could not ascertain. This tale was told me at various times, and by members of different clans and esoteric groups, and therefore seems to be a tradition common to the tribe of Cochiti in general. The medicine-men of Cochiti still visit the Rito frequently, to pay homage to the Shi-ua-na, or spirits that are supposed to be the particular Genii of their pueblo, and still to hover about the caves and ruins. To any one ac-

quainted with Pueblo Indian beliefs, this last custom will appear conclusive evidence that the Rito was, in times long past, the home of that branch of the Queres which now occupies the pueblos on the Rio Grande, Cochiti, Santo Domingo, and San Felipe.

These traditions concerning the Rito do not in anywise conflict with the ancient mythological tales about the origin of the Pueblos, since they relate to subsequent events. The Queres maintain that they, as well as the Tehuas and others, came to the surface of the earth at Shi-pap-u, and that they slowly drifted southward. Their migration legends are, however, but imperfectly known to me.¹ The definite historic tradition of the Queres of the Rio Grande seems to begin near the banks of that river, at the Rito de los Frijoles, which appears as the starting point of a dispersion, of which perhaps all the Queres pueblos, certainly those along the Rio Grande and in the Valles chain, were the result. The general direction of the movement has been from north to south, and I shall follow their traces as far as they become apparent in the ruins of former Queres settlements.

The Mesa del Rito borders on the south the gorge of the

¹ My friend Juan José Montoya, now deceased, called by his Queres name Mat-ya-ya Tihua, during the last interview I had with him at my home at Santa Fé, told me fragments of the migration tales of the people of Cochiti, while the Pueblos and the Navajos still formed one people near the Spanish Peaks (Huatoyas) in Southeastern Colorado. They were headed by two sisters, the elder of whom was called Na-uh Tzit-e, and the younger Osh Tzit-e. The two sisters quarrelled, and the elder, remaining master of the field, took up a line of march with her people to the Rio Grande, and the descendants of that group became the Pueblos; but the younger with her adherents turned to the west. Osh Tzit-e left a peculiar medicine, and a song in the Navajo idiom; and the Jemez and the people of Cochiti, being neighbors of the Navajos, became acquainted with both. The medicine appears to be the peculiar juggling performance of "eating fire," and to it also belongs the imitation of lightning in a dark estufa by means of a peculiar stick and an elastic spiral, called in Queres Po-tsho-ásht. My friend was mistaken when he asserted that only his tribe and the Jemez among the Pueblos had the song, as it is also known to the Tehuas.

"Tuyonyi," and is covered with bushes and with groves of taller trees like Piñon (*Pinus edulis* and *P. Murrayana*). Whether there are ruins on this long and comparatively narrow plateau is doubtful, as I have seen none myself, and the statements of the Indians are contradictory on this point. Across this mesa a trail from east to west, formerly much used by the Navajo Indians on their incursions against the Spanish and Pueblo settlements, creeps up from the Rio Grande, and, crossing the mesa, rises to the crest of the mountains. It seems almost impossible for cattle and horses to ascend the dizzy slope, yet the savages more than once have driven their living booty with merciless haste over this trail to their distant homes.

I estimate the length of the Mesa del Rito at six miles from north to south; it terminates at what is called the Chapero in Spanish, and Kan-a Tshat-shyu in Queres. This is an elevation of trap or basalt, rising almost vertically from the banks of the Rio Grande to the surface of the mesa, above which its slope becomes quite gentle to the top, which is flat and elliptical. On the west, the descent is precipitous for more than a hundred feet. The Chapero in former times was the scene of reckless butcheries of game, termed communal hunts.¹ The adult males of Cochiti, or

¹ A good description of a communal hunt is contained in Villagran, *Historia de la Nueva Mexico* (canto xviii. fol. 163). It took place on the plain of Zuñi, in the fall of 1598.

" Y llegados al puesto estauan juntos,
 Mas de ochocientos baruaros amigos,
 Y assi como nos vieron arrancaron,
 Haziendo dos grandiosas medias lunas
 Y cerrando los cuernos se mostraron
 En circulo redondo tan tendidos,
 Que espacio de vna legua rodeauan,
 La sola trauesia, y en el medio,
 Con toda nuestra esquadra nos tuuimos,
 Y luego que empezaron el ogeo,
 Cerrando todo el circulo vinieron,

sometimes those of that village and of Santo Domingo combined, forming a wide circle, drove the game to the top of the Chapero, from which it could escape only by breaking through the line of hunters. Mountain sheep oftentimes precipitated themselves headlong from the precipice on the west. On such occasions the slaughter of game was always very great, while panthers, wolves, and coyotes, though frequently enclosed in the circle, usually escaped, the hunters not caring to impede their flight.

At the foot of the Chapero, a deep, narrow gorge, the Cañon del Rito, comes in from the northwest. The Mesa del Rito bounds it on the north and northeast, and the high and narrow plateau called Potrero del Alamo (in Queres, Uish-ka Tit-yi Hãn-at) on the west and southwest. This gorge empties into a little basin on the west bank of the Rio Grande, and as low as the level of that stream. From this basin, the geological features of the surrounding heights can be very clearly seen. The cliffs near the stream are of dark-hued trap, basalt, and lava, forming a narrow strip along the river,¹ while all the rocks west of it are of light-colored pumice and tufa. The basin is not more than three quarters of a mile in diameter, and groves of cottonwood trees grow on its fertile soil. A small ruin stands at the foot of the Potrero del Alamo, having twenty-four cells of the average size of 3.5 by 2.9 meters (11½ by 9½ feet), constructed of

A meter donde juntos nos quedamos.
Tantas liebres, conejos, y raposos,
Que entre los mismos pies de los cauallos,
Pensauan guarecerse, y socorrerse."

The product of that hunt was eighty hares, thirty-four rabbits, and other game of less consequence. The "Cha-cu" of the Peruvians were only communal hunts like those of the Pueblos. See also Torquemada, *Monarchia*, vol. i. p. 680.

¹ The formation of black trap, lava, and basalt crosses to the west side of the Rio Grande a little below San Ildefonso, and extends from half a mile to a mile west. Hexagonal columns of basalt crop out near the Mesa Prieta.

parallelopipeds of tufa. Scarcely any pottery was to be seen.

From this basin the cliffs surrounding it on three sides rise to towering heights, and the Potrero del Alamo especially presents a grand appearance. On the east side of the Rio Grande the frowning walls of the Caja del Rio loom up, with their shaggy crests of lava and basaltic rock. The whole country is a wilderness, and will scarcely become anything else. Neither the mesas nor the gorges have any water, but precipitation is greater in the mountains than on the low lands, which explains why the Queres established themselves on heights so difficult of access and so remote from permanent streams. Except at the little basin, the Rio Grande leaves no space for settlement between San Ildefonso and Cochiti. It flows swiftly through a continuous cañon, with scarcely room for a single horseman alongside the stream. The lower end of this cañon afforded the people of Cochiti a good place for communal fishing in former times. Large nets, made of yucca fibre, were dragged up stream by two parties of men, holding the ends on each bank. The shallowest portions of the river were selected, in order to allow a man to walk behind the net in the middle of the stream. In this manner portions of the river were almost despoiled of fish. The same improvidence prevailed as in hunting, and the useful animals were gradually killed off. After each fishing expedition, the product was divided among the clans *pro rata*, and a part set aside for the highest religious officers and for the communal stores.

As we look into the mouths of the Cañon del Alamo and of the Cañada Honda, from the little bottom at the foot of the Chapero, they open like dark clefts of great depth between the cliffs of the lofty mesas. On the south a crest,

perhaps a thousand feet high, rises above the western bank of the river, crowned by battlements of basalt. This is the Mesa Prieta, or Kom-asa-ua Ko-te, from which a steep slope descends covered with volcanic débris, hard and soft. Up this slope toils the almost undistinguishable trail to Cochiti. From the crest we overlook in the south a series of rocks and wooded heights, and in the west a ridge flanked by gorges on both sides. This ridge is the end of a long, narrow plateau, sloping gently toward the Mesa Prieta from the eastern base of the Sierra de San Miguel. The name of this tongue is Potrero de las Vacas, and on it stand some of the most remarkable antiquities in the Southwest.

It requires several hours of steady walking to reach the upper end of the Potrero de las Vacas. The trail leads through forests, in which edible Piñons abound, and in autumn, when the little nuts ripen, bears are not unfrequently met with, and their presence is marked by the devastated appearance of Piñon trees.¹ These trees are also beset by flocks of the *Picicorvus columbinus* (called Piñonero in Spanish and Sho-hak-ka in Queres), a handsome bird, which ruthlessly plunders the nut-bearing pines, uttering discordant shrieks and piercing cries. The forest of the Potrero de las Vacas is therefore not so silent and solemn as other wooded areas in that region, where a solitary raven or crow appears to be the only living creature. To the right of the trail yawns the deep chasm of the Cañada Honda, from which

¹ The bear makes great havoc among the Piñon trees. Climbing into the tops for the nuts, he tears off entire limbs and generally ruins the tree. Three kinds of bears are spoken of by the Indians and the Spanish settlers: the silver-tip, (Platiado, Ko-ha-yo Kash-ya), the brown bear (Oso colorado, Ko-ha-yo Ke-kan-ye), and the black bear (Oso prieto, Ko-ha-yo Moh'-na-ka-nyj). The last two, I am certain, are respectively *Ursus cinnamonus*, or *arctos*, and *U. Americanus*; but whether the silver-tip is really *Ursus ferox*, the terrible grizzly, or some cross, I am unable to tell. I doubt whether the grizzly is found in New Mexico, except perhaps in the northwestern corner of the territory.

every word spoken on the brink re-echoes with wonderful distinctness. Towards the eastern end of the Potrero the forests begin to thin out, and an open space extends until within half a mile of the rocky pedestal of the San Miguel Mountains. On this open space stands the ruined pueblo shown on Plate I. Figure 11.

Like all other pueblos of this region, it is built of blocks of pumice or tufa, nearly rectangular, but now much worn. I counted 280 cells on the ground floor, and the average size of 126 of them proved to be 4.3 by 2.7 meters (14 by 9 feet). Six estufas are visible; four inside the courtyard, formed by the houses, and two outside. The courtyard is open to the southeast, and the whole forms practically a one-house pueblo, the buildings of which were at least two stories in height, and in some places three, and perhaps four. To the southeast of the ruin, on the edge of the woods, stand the remains of an artificial tank. The population of this village cannot have fallen short of five hundred souls.

In the courtyard, not far from the largest estufa, the diameter of which is 14 meters or 46 feet, I noticed a long slab of red stone, 0.26 m. broad and 0.18 m. thick, broken into two pieces respectively 1.60 and 0.87 m. long, the whole length being therefore 2.47 m. (8 feet). The edges were roughly squared, and on one of the broad surfaces it had grooves like rude footmarks. My Indian guide asserted that this slab was a *gua-co*, or ladder, by means of which the roof of the estufa was reached, and that the grooves were carved to facilitate ascent. Not far from the place where this primitive ladder rested was the upper part of a stone post, one end of which was shaped like a colossal arrow-head, but what this was intended for I cannot surmise. It was made of hard lava, and may have stood originally in a different place.

The potsherds on the Potrero de las Vacas belong mostly

to the coarsely glazed kind; but corrugated fragments and the black and white also occur. Obsidian chips abound, together with moss-agates and flint. A very interesting find was made at this pueblo in 1885, by Governor L. Bradford Prince of New Mexico, who obtained a number of stone idols, rudely carved human figures, some of them of large size, belonging to the kind called by the Queres Yap-a-shi.¹ The name of Pueblo of the Yap-a-shi has accordingly been applied to the ruin, but its proper name is still unknown to me, as the designation current among the people of Cochiti, Tit-yi Hä-nat Ka-ma Tze-shum-a, signifying literally "the old houses above in the north," with the addition of Mo-katsh Zaitsh, or "where the panthers lie extended," is subsequent to the abandonment of the village. This name refers to the life-size images of pumas or American panthers (also called mountain lions) which lie a few hundred yards west of the ruin, in low woods near the foot of the cliffs called "Potrero de la Cuesta Colorado." (See Plate I. Figure 14.)

These remarkable stone objects, cut out of the tufa which constitutes the surface rock of the Potrero de las Vacas, have already been noticed in the publications of the Institute.² I give a photograph of them, taken under my direction by Mr. C. F. Lummis. (See Plate III.)

The figures attached to the rock are two in number, and lie side by side, representing the animals as crouching with

¹ Yap-a-shi is a generic name given to fetiches representing human forms. Hence they are distinct from animal fetiches, but are not lares or penates. Other names given to such images in Queres idiom are I-jiar-e Ko, and Uashtesh-kor-o. Many of them may represent the same deity or idol, and they ordinarily serve for magical purposes. The Tshayanyi, or medicine-men, have most of them in their possession, although some are in private hands.

² A preliminary notice of them appeared in the *Second Annual Report of the Committee*, 1881, p. 22; but I had already given some account of them in *The Nation*, February 10, 1881.

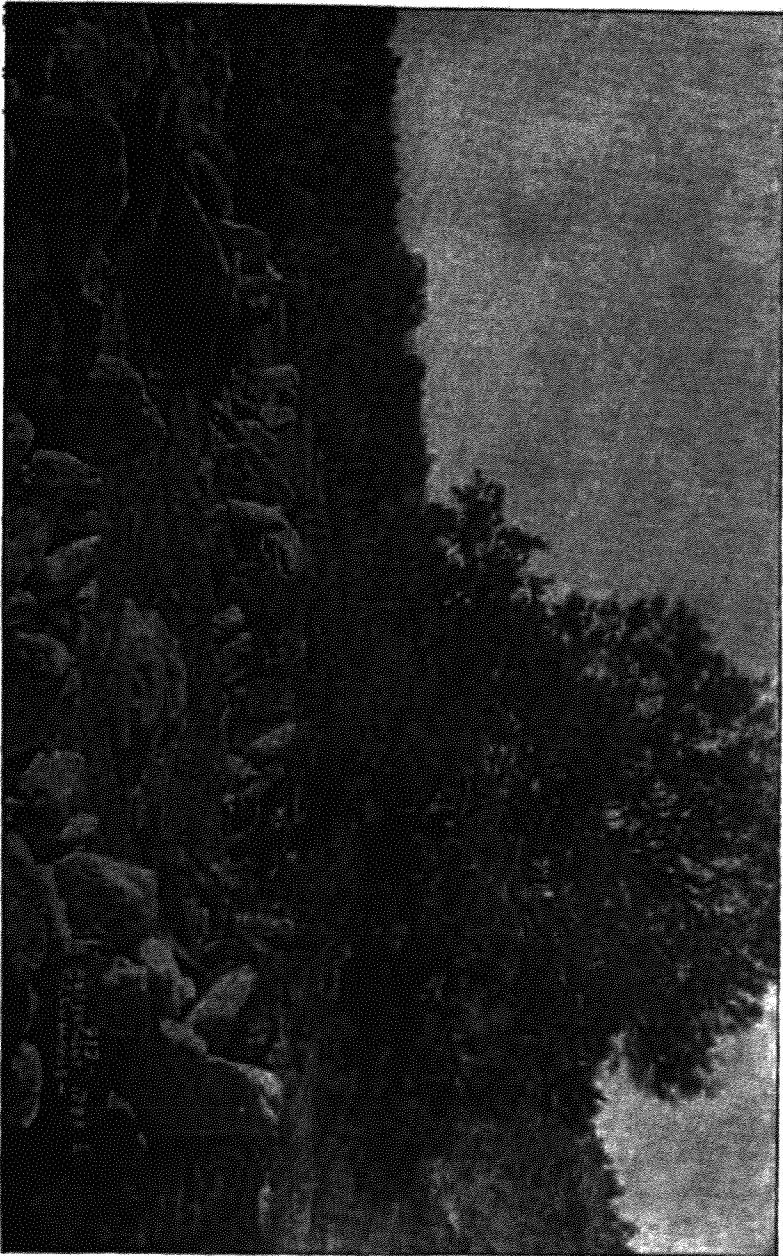


PLATE III.—THE PANTHER STATUE AND STONE ENCLOSURE ON THE POTRERO DE LAS VACAS.

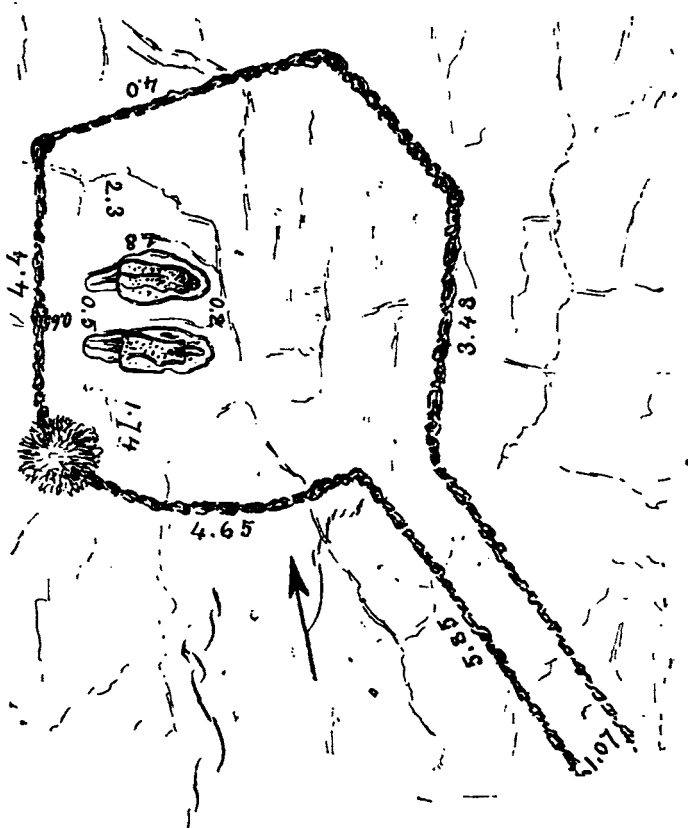
tails extended, and their heads pointing to the east. They are much disfigured, especially the heads.¹ Still, the natural agencies to which the images have been exposed in the open air have rounded the edges of the (originally very uncouth) carvings, and increased their life-like appearance. I recognized at a glance, when I first saw them in the evening twilight of the 25th of October, 1880, the intention to represent panthers preparing for a spring. The length of each statue is 1.80 m. (6 feet) of which 0.74 and 0.71 m. respectively (or a little over one third) make the extended tails; the height is nearly 0.60 m. (2 feet), and the breadth varies between 0.35 m. across the shoulders and 0.43 m. across the hips (14 and 17 inches). The space between the heads and the tails of both figures measures 0.20 m. (8 inches) and 0.53 m. (22 inches).

An irregular pentagonal enclosure surrounds the images, made of large blocks, flags, and slabs of volcanic rock, some of which are set in the ground like posts, while the majority are piled on each other so as to connect the upright pillars. The perimeter of this enclosure is 20.8 m. (68 feet); the height of the tallest post, 1.25 m. (4 feet); and the length of the longest slab, 1.58 m. (5 feet 2 inches). On the southeastern corner is an opening one meter (39 inches) wide, forming the entrance to a passage lined by two stone hedges like the enclosure, running out to the southeast to a distance of 5.85 meters (19 feet). The whole is much disturbed, and its original appearance was certainly more regular than at present. When I last saw the monument, it looked like a diminutive and dilapidated Stonehenge.

In the southwest corner of the enclosure stood, ten years ago, a piñon tree about twelve feet high and fifteen inches in diameter. Whether this tree stood there before the place was

¹ The act of vandalism was perpetrated by shepherds.

abandoned, it is of course useless to conjecture. In the enclosure I found nothing but a few bits of pottery and obsidian, possibly the remnants of sacrificial offerings; but it would have been in the highest degree injudicious to attempt excavations on this spot, as it is still held sacred by the Indians of Cochiti.



PANTHER IMAGES AND ENCLOSURE, POTRERO DE LAS VACAS.

Better than all descriptions, this ground plan will give an idea of the monument. Nothing similar to it has ever been discovered in the Southwest outside of the Queres country.

They are the largest images or statues known to have been executed by Pueblo Indians. But, as will be seen further on, they are not the only ones of the kind still in existence between Cochiti and the Rito de los Frijoles.

Subsequent research will no doubt reveal the purpose and signification of these images more clearly than I am able to give it here. All I could ascertain was, that they were fetiches of the panther, Mo-katsh, and as such belonged to the special esoteric group of the Hunters (Shya-yak), of whom the panther is one of the principal protectors and "intercessors." That a certain devotion is still paid to them I am certain, for my Indian friends acknowledged it to me, and two of them smeared the heads of both images with red ochre in my presence, while they muttered prayers between their teeth. The Indians also asserted that the images were made by the same people who built and occupied the old village.

According to their tradition, the first band or group that seceded from the tribe at the Rito wandered as far as the Potrero de las Vacas, and built there the pueblo which is now in ruins. They also carved the images of the panthers, and made the enclosure around them. What caused the subsequent abandonment of the place I have not been able to learn. I have heard stories about attacks by other tribes, either savage or sedentary, and such tales are quite plausible; but there are also indications that the pueblo was gradually abandoned in the same manner as the Rito de los Frijoles, its inhabitants gradually moving southward and building new residences on other sites. The only thing that seems to me fairly well established is that the pueblo on the Potrero de las Vacas was a former Queres village,¹ built

¹ I am not positive whether the people of Santo Domingo claim to have ever inhabited the Potrero de las Vacas. Those of San Felipe assert that they have resided in the Cañada de Cochiti, some distance south of the Potrero, which would indicate that they had remained until then with the people of Cochiti.

while the caves at the Rito were still partly inhabited by people who had emigrated from the latter site for reasons as yet unknown, and that it was abandoned long previous to Spanish occupation.

In the gorges both north and south of the Potrero are quite a number of artificial caves. Those on the north, in the Cañada Honda and the upper part of the Cañon del Alamo, are fairly preserved. The upper part of that gorge is wooded, and the caves were thus somewhat sheltered. They offer nothing worthy of special mention, and do not compare in numbers with the settlement at the Rito. The Queres say that these caves also are "probably" the work of their ancestors. Those on the south side of the Potrero de las Vacas are much more worn, and are connected with the interesting natural rock shelter called by the Queres Tzek-iat-a-tanyi, and now usually termed Cueva Pintada, or the painted cave. This large cavity measures 17 meters (55 feet) across its entrance, its depth is 14 meters (46 feet), and at an elevation of 17 meters (55 feet) above the floor is a hemicycle of pictographs painted in red ochre, to which there is an ascent by means of old and much worn steps in the rock. The pictographs represent some of the well known symbols of the pueblos, such as clouds, sheet-lightning, the sun, dancing-shields, and male and female dancers. Their execution is very rude. The diameter of this hemicycle is 10 meters (32½ feet). Besides these aboriginal daubs, there are modern ones of equal artistic merit, among which the cross is prominent. Cave dwellings have been excavated in the rear wall of the cave, and 15 meters (48 feet) above the floor are indentations showing that chambers had also been burrowed out at this height. The steps therefore may have been made in order to reach this upper tier of rooms; for it appeared to me that the paintings

were more recent than the cave village, as they are partially painted over walls of former artificial cells, the coating of which had fallen off before the pictographs were placed on them.¹ Most of the cave dwellings are found on the west side of the Cueva Pintada. Some of them have two tiers; and there are also traces of foundations in front of the cliff, showing that houses had been built against the wall. Of the extent of this cave village it is difficult to judge, but enough is left to indicate that it may have contained a few hundred people. The pottery belonged to the oldest types; mostly white and black, and corrugated. Much obsidian lay about in splinters and chips; also door-sills of diorite, broken metates, grinders made of lava, and stone axes, — in short, the usual "relics" accompanying pueblo ruins.

The gorge on the northern side of which this cave village and the Cueva Pintada lie, is called Cañada de la Cuesta Colorada, deriving its name from seams of blood-red iron ochre that appear in cliffs west of it, at the base of the San Miguel Mountains. That cluster is called by the Queres Rätýe, or Rabbit, as its crests on one side resemble the outline of a colossal rabbit, crouching, with its ears erect. The Cañon of the Cuesta Colorada runs along the southern base of the Potrero de las Vacas, and a short distance west of the painted cave another narrow gorge joins it from the southwest. Between the two rises a triangular plateau, called Potrero de las Casas, on the top of which is said to be a pueblo ruin. At the junction of both gorges lies a much obliterated mound, indicating a rectangular building about 25 by 50 meters (80 by 160 feet). The pottery on it is the same as at the Cueva Pintada.

¹ I was informed that in former times, whenever a pueblo was abandoned, it was customary to paint a series of such symbols in some secluded spot near the site of the village. Whether this is true or not, I do not know.

The settlement at the Cueva Pintada is also claimed by the Queres of Cochiti as a colony from the Rito; it may have been anterior to the pueblo of the Potrero de las Vacas, or coeval with it. Some of my informants thought that it was of a later date, and that its builders were a part of the inhabitants of the village of the stone images. Similar statements are made in regard to the ruins on the Potrero de las Casas.

Between the Cañada of the Cuesta Colorada and what is called the Cañada de Cochiti the distance in a straight line is hardly ten miles. But no less than three high mesas,¹ separated from each other by deep cañons, intervene. They are all waterless, and covered with thickets and groves of tall pines. They jut out from the foot of the high mountains like narrow tongues, terminating, at an average distance of two miles from the Rio Grandé, in towering cliffs of light-colored volcanic rock. These cliffs appear like pillars, or gigantic posts; hence their Spanish name "Potreros." The one forming the southern wall of the Cuesta Colorada gorge is an extensive plateau called Potrero Chato, or Capulin, and on its top are many ancient remains. A number of small houses are scattered over it, and near the foot of the Sierra San Miguel lie the ruins of the pueblo shown on Plate I. Figure 13. It stands on a bald eminence, from which, as from the Potrero de las Vacas, an

¹ The orography of this part of the Valles chain is imperfectly known. The nomenclature varies greatly according to the source whence it is obtained. Thus the Potrero Chato is frequently called Capulin, and its upper part is termed Potrero de San Miguel. As it is three-lobed, the three lobes bear different local names. Between them lie, from north to south, the Cañon Jose Sanchez (Tyesht-ye Ka-ma Chinaya), and the Cañon de la Bolsa (Ka-ma Chinaya). Ka-ma signifies house, and Chin-a-ya torrent, or mountain gorge in which runs a torrent. South of the Potrero Chato is the Potrero Largo, with two additions, of which the eastern one is called the Potrero de los Idolos (Shkor-e Ka uash, or round mesa).

extensive view is obtained in all directions except the west and north. The village consisted of five separate buildings disposed around an open square; and its population must have been at least two hundred souls. I saw two estufas outside of the square, one of which measured seven, the other thirteen meters in diameter (23 and 42 feet). Fifty meters southeast of the ruin lie the remains of a large artificial tank. The pottery is mostly coarsely glazed, older kinds being rare. This pueblo the Queres of Cochiti call Ha-a-tze (earth), which seems to be its original name; but they also apply to it the term Ră-tye Ka-ma Tze-shuma (the old Houses at the Rabbit), evidently a more modern appellation. They emphatically claim it as one of the former abodes of their tribe, after they had left the Potrero de las Vacas.

Of the small houses scattered over the surface of the mesa, between this pueblo and the eastern end, I have examined a number. The majority are nearly square, have but one room, and measure 2, 3, and 4 by 4 meters (6½, 9½, and 10 by 13 feet). The potsherds found in these places are all of the older kinds: white with black decorative lines, and corrugated. My Indian companions, as well as the old men of Cochiti, whom I repeatedly consulted in regard to them, affirmed that nothing positive was known of their builders except that they were Pueblo Indians. They may have belonged to an older period of occupation than that represented by the Queres, or to a colony from the Rito that emigrated after the people of the Potrero de las Vacas, and who settled on the Potrero Chiato before the Queres began to scatter again.

Within the small compass of not more than a half or a quarter of a mile, the groups of ruins on the surface of the Potrero Chato represent two varieties of ancient architecture,

each accompanied by a distinct type of pottery. The small-house ruins, of which the potsherds belong to the ancient kind, cannot have been merely summer ranches of the larger pueblo, in which the coarsely glazed variety predominates; for it is not presumable that the Indians used one class of earthenware in winter, and another, more perfect in material and more simply and tastefully decorated, in their temporary summer homes. Hence I consider myself justified in concluding that there were two distinct epochs of occupation, the most recent of which was certainly by the Queres. Wherever the caves stand without pueblo ruins in their immediate vicinity, they show almost exclusively the old kinds of potsherds, the black and white, or gray, and the corrugated. This would seem to indicate that the artificial caves and the small houses belong to one and the same period, anterior to that of the construction of many-storied pueblos. The Indians merely say that all these ruins are those of Queres villages, insisting at the same time that the pueblos were built by that branch of the former inhabitants of the Rito de los Frijoles, and of its cave dwellings, which subsequently became the tribes of Cochiti and of San Felipe.

The buildings on the Potrero Chato, whether large or small, are made of blocks of tufa like those previously described. The walls of the pueblo of Ha-atze seem particularly well built and well preserved. The small houses are reduced to mere foundations and rubbish.

The soil on the surface of the Potrero is fertile, but there is no permanent water; hence the necessity of the artificial tanks. Precipitation, as already stated, is sufficient in ordinary years to permit the growth of Indian corn, beans, and squashes. Game was abundant in olden times, and is not unfrequently encounteredd to-day, — principally deer, bears, and turkeys.

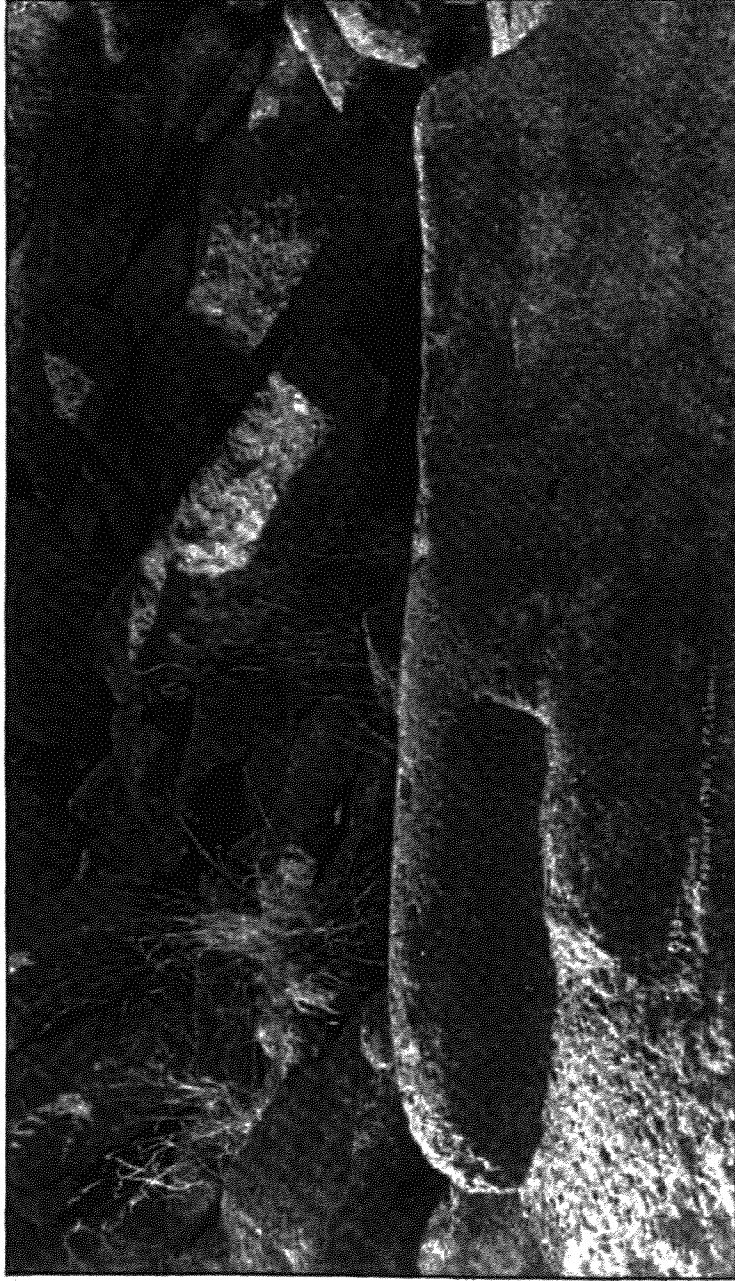


PLATE IV.—THE PANTHER STATUE ON THE POTRERO DE LOS IDOLOES.

The Indians assert that the higher parts of the Sierra contain no ruins, and I have every reason to believe their statement. I am also certain that no ruins exist between the eastern foot of the Potrerros and the Rio Grande. The nearest vestiges of antiquity found to the south of the Potrero Chato are in the Cañada de Cochiti, on the Potrero Viejo, and on the Potrero de los Idolos.

The last is a small round mesa, called in Queres Shko-re Ka-uash, which rises above the Cañada of Cochiti like an easterly spur of the long Potrero Largo that flanks that valley in the north. Its height above the valley is 94.8 meters, or 304 feet, and the summit is oblong, and mostly covered with scrubby conifers. On the open space are the remains of two images of panthers, similar to those on the Potrero de las Vacas. One of them is completely destroyed by treasure hunters, who loosened both from the rock by a blast of powder, and then heaved the ponderous blocks out by means of crowbars. After breaking one of the figures to pieces, they satisfied themselves that nothing was buried underneath.

The other image, although somewhat mutilated, is still in a better condition than those on the Potrero de las Vacas, as the rock out of which it is carved is much harder, and has consequently resisted atmospheric erosion far better. Its size is very nearly that of the two figures formerly described. (See Plate IV.)

The imperfections of the sculpture are very apparent; were it not for the statements of the Indians, who positively assert that the intention of the makers was to represent a puma, it would be considered to be a gigantic lizard. Still, there can be no doubt that it is Mo-katsh, the panther fetich of the Shya-yak (or hunters) of some Queres tribe. There are also the remains of a stone enclosure similar to that on

the Potrero de las Vacas; and a stone post still erect measures 1.32 m. in height (4 ft. 4 in.). A slab lying on the ground near by, and with one end broken off, is 1.58 m. (5 ft. 3 in.) long. Both stones show marks of having been rudely dressed with stone implements, but there are no traces of ornamental carvings. A number of smaller slabs and blocks also lie scattered about.

There is no pueblo ruin, at least to my knowledge, in the immediate vicinity of the Potrero de los Idolos, and I was repeatedly told that the Potrero Largo had no traces of antiquities on its summit. But the ancient Queres pueblo of Kua-pa lies a little over one mile to the southwest, in the valley or cañada, and my Indian informants asserted that the inhabitants of Kua-pa had made the sculptures.

The existence of two sets of images of the panther fetich in the same region, carved in former times by people of the same linguistic stock, and probably of the same tribe, although at different dates, indicates that both places were merely local shrines. The explanations of the aborigines also prove that the statues were not "tutelary deities" of the villages near which they are situated, but simply fetiches of exceptional size, belonging to the circle of worship of one of the esoteric clusters. This may throw some light on the real part played by larger idols in the rites and ceremonies of tribes farther south, as in Mexico, where secluded shrines were frequent, on mountain tops or in forests.

I have not found any allusion in the old writers about New Mexico to places of worship like those just described. Stone enclosures are however mentioned incidentally, and Torquemada¹ speaks of sacrifices performed early in the

¹ *Monarchia*, vol. i. p. 681. The same author, however, speaks of "Demonios," who appeared to the Indians outside of their villages "Nombran á tres Demonios, que les aparecen a estos piden agua; al vno llaman Cocapo, al otro

morning by the women at "rude stones," which I infer were placed outside of the pueblos.

This silence of older authors may prove instructive. Had the early Spanish settlers, and especially the missionaries, known of these sculptures, they would have recorded it. It is true that all the church documents anterior to 1680 are lost, still some trace would be found in works like those of Zárate-Salmeron, Benavides, or Vetancurt. This shows that the rites performed in connection with the images, while certainly continued as they are still performed to-day, were no longer as frequent; and that the places had begun to lose their vital hold on the minds of the people before the Spaniards entered the country. They were still shrines, as they are to-day for the people of Cochiti, but no longer in regular use. This may be an evidence of great antiquity, for the Indian clings to places of this kind with strong tenacity for many generations, regardless of their distance from his home.

Another inference may be drawn from the existence of two sets of images in two distinct localities. It corroborates the Cochiti tradition that they were made by the same people, but implies that the sculptures on the Potrero de los Idolos were made after those on the Potrero de las Vacas. The Indians state that the village of Kua-pa was built by their ancestors after the pueblo on the Potrero Chato had been abandoned, and that it was consequently their third station after the evacuation of the Potrero de las Vacas.¹ Indeed, the tales of historic import are more positive and detailed

Caçina; y al otro Homace; los dos últimos, les aparecen en el Campo; en la figura que quieren." Torquemada is here speaking of the Tehuas. "Caçina" is what to-day is called Ka-tzin-a, or the spirits of game in the clouds. To this kind belonged the images of the panthers, as fetiches.

¹ Counting the settlements in the Cuesta Colorada as the first, and the pueblo on the Potrero San Miguel (Ha-a-tze) as second. About the ruins on the Potrero de las Casas I am not positive.

in regard to the ruins in the Cañada de Cochiti, showing that the past of these places is less remote than that of the more northerly ruins.

The valley of the Cañada is broad and open in comparison with the gorges of which I have had to speak before. It is a sunny vale, sandy, protected on the north by tall potreros, and bordered on the south by gentle slopes dotted with junipers and cedars. Through it flows a stream, the waters of which are permanent. In the east a sombre gateway of lava and basalt affords egress to the Rio Grande. In the west rise the pine-clad slopes and crests of the Sierra de la Bolsa, and in front of them a high and narrow projection or cliff, called Potrero Viejo; by the Queres, Hä-nat Kot-yi-ti. The sides of this mesa are of bare rock, a tufa merging into pumice-stone, and the ascent to the top is steep and laborious. The summit is wooded, and perhaps two miles long. From it expands a wide view, and the little houses of the hamlet of the Cañada appear tiny at a depth of nearly five hundred feet below. The ruins of Kua-pa lie about a mile and a half lower down the valley than the present Mexican settlement,¹ midway between the Potrero Viejo and the Potrero de los Idolos. They occupy a low bluff between the stream on the

¹ The grant of the lands in the Cañada de Cochiti constitutes the original title to the site. This grant was made in 1728, by Governor Don Juan Domingo de Bustamante. *Merced de la Cañada de Cochiti*, MS. In the year 1782 the Cañada was inhabited by 184 Spanish settlers. Morfi, *Descripcion Geográfica*, fol. 104. In the first half of this century the Navajos became so troublesome that the settlers had to abandon their homes for several years, fleeing to Cochiti. Some of the older men now living were among those who remember those dismal times, and many ruins of Spanish ranches bear testimony to the depredations of the savages. In 1833 the Cañada was inhabited by 408 people. Francisco Albino Aragon, *Plano que manifiesta el Numero de Almas que hay en esta Alcaldia de S. Buenaventura de Cochiti*, MS. To-day there are about 150 souls; in 1829, there were 248. José Manuel Baca, *Estadística*, MS. The Cañada was temporarily abandoned in February, 1835. Jesus Maria Cabeza de Vaca, *Carta al Geje Político*, April 9, 1835, MS.

north and a dry gulch on the south, and are very much decayed, many of the mounds being barely distinguishable. I am positive of the existence of five circular estufas, but there may be at least two more. The pueblo seems to have been large, and the potsherds belong to the coarsely glazed, the corrugated, and the ancient black and white and red and black kinds. The last are represented in larger quantities than is usually the case in ruins where the glazed variety prevails.

The ruins of Kua-pa look much more ancient than any of those on the potreros; but this is due to the material of which they are built. In place of blocks of tufa, loose rubble and adobe formed the bulk of its walls. Adobe disintegrates rapidly, and rubble forms heaps of disorderly rubbish. The ancient appearance of Kua-pa cannot therefore be relied upon against the testimony of historical tradition. Both the Indians of Cochiti and the inhabitants of the Cañada, who are well versed in Indian folk-lore concerning their valley, have asserted to me that Kua-pa was an old village of the Cochiti tribe, from which they moved to the banks of the Rio Grande where Cochiti stands to-day. The descendants of Spaniards living at the Cañada also confirmed the more ancient Cochiti tradition, saying that the Queres had successively built pueblos on the potreros between the Cañada and the Rito de los Frijoles, finally establishing themselves at Kua-pa. They attributed this gradual southerly movement of the Queres tribe to the persistent hostility of their northern neighbors, the Tehuas.

In regard to this the Cochiteños only state that the village of Kua-pa was once attacked by the Tehuas and captured. The survivors retreated to the Potrero Viejo; the Tehuas pursued, but their attack upon the lofty cliff signally failed. They were defeated and driven back across the Rio Grande,

many of them are said to have perished in that river, and the Tehuas never troubled the Queres again. In consequence of these hostilities, the survivors established themselves on the potrero for a short time, whence they descended to settle where Cochiti stands to-day.

The attack and devastation of Kua-pa by some hostile tribe is further told in the traditions of the Queres village of Ka-tisht-ya, or San Felipe. According to these, while the Queres lived in the Cañada, a tribe of small men called Pin-i-ni attacked Kua-pa, slaughtered many of its people, and drove off the remainder. They were pursued by the pygmies as far as a place above Santo Domingo called Isht-ua Yen-e, where many arrow-heads are found to-day.¹ I reserve the full details of the San Felipe tradition for a later occasion, and will only state here that the Pinini story is told by the Cochiteños about the village on the Potrero de las Vacas.² It seems probable that the branches of the Queres now constituting the tribes of Cochiti and San Felipe once formed one group at Kua-pa, that some hostile invasion caused their dispersion, one branch retiring to the south, while the other took refuge on the Potrero Viejo and built a temporary village at least on top of this almost impregnable rock. I regard it as not at all unlikely that the aggressors were Tehuas, since this has been told me by the people of Cochiti on many occasions.³ The settlers at the Cañada emphatically con-

¹ From Isht-ua, arrow. This part of the story is possibly a "myth of observation."

² The name Pinini is a corruption of the Spanish Pygméos. The Spanish-speaking inhabitants of New Mexico usually pronounce it Pininéos, whence the Indians have derived Pinini. The tale about these dwarfish tribes, described as "small but very strong," looks to me quite suspicious. I incline to the simpler but more probable story that the Tehuas were the aggressors.

³ But when Diego de Vargas visited the Potrero Viejo for the first time, on October 21, 1692, the Queres of Cochiti and San Felipe, and the Tanos of San Marcos, who occupied the pueblo on its summit, informed him that they had fled

firmed these statements, as having been told ever since their ancestors settled there by the old men of Cochiti as genuine traditions of their tribe. At all events, the valley of the Cañada and its surroundings were the last station of the Queres of Cochiti, and probably of San Felipe, before they established themselves on the banks of the Rio Grande.

The Potrero Viejo is a natural fortress, almost as difficult to storm as the well known cliff of Acoma. In case of necessity, a small tribe could dwell on its top for years without ever being obliged to descend into the valley beneath; for it is wooded and has a limited area of tillable soil, and natural tanks. Only from the rear or southwest is the ascent over a gradual slope; from the front and the north the trails climb over rocks and rocky débris in full view of the parapets, natural and artificial, that line the brink of the mesa.

Two classes of ruins occupy the summit, one of which is the comparatively recent pueblo given on Plate I. Figure 15. It is two stories high in some places, very well preserved, and built of fairly regular parallelepipeds of tufa. The woodwork in it was evidently destroyed by fire, and much charred corn is found in the ruins. The average size of 118 rooms on the ground floor, which are all in the pueblo with the exception of about ten, is 5.0 by 2.8 meters (16 ft. 5 in. by 9 ft. 2 in.). This is a large area in comparison with the size of older ruins. I noticed but one estufa, and the pottery bears a recent character.

thither out of fear of their enemies, the Tehuas, Tanos, and Picuries. *Autos de Guerra de la Primera Campaña á la Reconquista del Nuevo México*, fol. 141, — a manuscript in the Territorial archives in Santa Fé. It is true that the Queres and Tanos, possibly also the Tehuas, were in open hostility during the time the Spaniards were away from New Mexico from 1680 to 1692. But still the truth of their statements to Vargas may be subject to doubt. It is quite as likely that they retreated to the mesa after the successful raid of Pedro Rencros Posada upon Santa Ana in 1687.

There are also traces of older ruins, which mark the existence of small houses, similar to those on the Potrero Chato and on the Tziro Kauash, or Mesa del Pajarito. Possibly these smaller houses are traces of the first occupation of the Potrero Viejo by the Queres.

The Cañada de Cochiti, and especially the Potrero Viejo, was quite an important spot in the history of New Mexico between 1680 and 1695.

It seems certain that when the Spaniards began to colonize the country in 1598 the village of Cochiti stood on the banks of the Rio Grande, almost where it now stands.¹ After the bloody 10th of August, 1680, and the evacuation of New Mexico by Governor Antonio de Otermin, the people of Cochiti remained in their village for fifteen months, until the Pueblos received information that Otermin had again entered New Mexico and surprised the village of Isleta, capturing nearly all its inhabitants. Thereupon the Rio Grande Queres retired to the Cañada.² Otermin, remaining in camp

¹ I infer this from the statements of the Indians themselves, although I have no positive documentary information on this point earlier than 1680, or possibly 1660. Cochiti is first mentioned on the 7th of July, 1598, in the *Obediencia y Vasallaje á su Magestad por los Indios de Santo Domingo* (Doc. de Indias, vol. xvi. p. 102 *et seq.*). It appears in the orthography which has since remained. Again it is found as "Chochiti" in the *Obediencia de San Juan Baptista*, p. 114. Vetancurt, who gives a description of all the pueblos as they were prior to the rebellion of 1680, says (*Crónica*, p. 322) "Está al lado izquierdo del Rio del Norte, tres leguas de Santo Demingo." This is also proved by the *Ynterrogatorio de Preguntas*, 1681, MS., and by the Journals of Vargas, *Autos de Guerra de la Primera Campaña*, fol. 142. Vargas returned from the Potrero Viejo to the abandoned pueblo of Cochiti on the Rio Grande. *Autos de Guerra del Año de 1694*, MS., fol. 119. "Salió de la mesa y llegó á Cochitti el Viejo que despoblaron los Reueldes alzados que se hallaban poblados en la sussodha Messa de la Zieneguilla." The documentary information is slight, but I believe that the testimony of the Indians is almost conclusive.

² *Interrogatorios de varios Indios de los Pueblos Alzados*, December, 1681, MS., fol. 126. One Tehua Indian testified: "Que el dia que se cercó el pueblo de la Isleta andaban de esta vanda del Rio del Norte dos Indios naturales del pueblo de Puaray, los quales así que vieron á los Españoles, vinieron avi-

at Isleta, despatched the Maestro de Campo Juan Dominguez de Mendoza, with sixty men, on the 8th of December, 1681, with orders to penetrate as far north as possible.¹ All the pueblos on the Rio Grande were found deserted, and a few old Indians, whom the Spaniards discovered on their march and interrogated, said that the Queres of San Felipe, Santo Domingo, and Cochiti had removed to the "mountains of the Cieneguilla," or "mountains of Cochiti." Mendoza proceeded as far as Cochiti, which he found deserted, though filled with stores of food. He soon discovered that the reports were true, and that the Queres, reinforced by some Tehuas, Taos, and Picuries, had gathered on the mesa or Potrero Viejo above the Cañada. On the following day, he marched against them, but was met on the road by several hundreds of the Indians in arms, and long parleys ensued, resulting in a truce of three days, at the expiration of which the insurgents promised to return to their homes peaceably

sando á su pueblo, y á otros, y de pueblo en pueblo corrió la voz diciendo que los Españoles habían muerto á los naturales del pueblo de la Isleta, y preso á todos los forasteros de otros pueblos que habían ido á buscar maíz, con cuya ocasion desampararon los pueblos la gente de la Alameda, Puary, Zandia yendose á la sierra, y los de San Felipe, Santo Domingo, y Cochiti á la Sierra de la Cieneguilla." Also *Ynterrogatorio de Preguntas*, December, 1681, MS. Juan Dominguez de Mendoza states that an old Indian of San Felipe told him: "Al qual le preguntó en su lengua por la gente del pueblo, y respondió haberse ido huyendo á la Cieneguilla, ó Pueblo de Cochiti."

¹ I gather these details from the *Ynterrogatorio de Preguntas*, MS. Seven Spanish officers were interrogated, and their depositions agree, except in the estimates of the numbers of the Indians, which vary between 150 and 1,000. The majority of deponents give the number at about 400. The Spaniards advanced to within about four miles of the Potrero. The leaders of the Indians were Alonzo Catité, a mestizo of Santo Domingo, and a certain Ollita of Cochiti; afterwards, Luis Tupatu of Picuries also arrived. The offers to return to allegiance may have been sincere on the part of many, but the chiefs and medicine-men prevailed. The plan of the Indians was to send a number of girls to the pueblo of Cochiti to entertain the Spaniards, while the men fell upon the pueblo in force. All these details were confirmed by the Indians themselves in their depositions taken on the 19th and 20th of the same month (December, 1681). In respect to the plan of using girls for the proposed surprise, one Indian witness is

and submit again to Spanish rule. The truce expired, and the Indians failed to comply. Mendoza received information that they intended to surprise him, and, as his force was too small for an offensive campaign, he retreated to the vicinity of Puaray, whither Otermin had advanced in the mean time. The enemy cautiously followed him, hoping to find an opportunity to stampede the horses of the Spaniards; but they had been warned and were on their guard, so that the Indians effected nothing, and soon retired again to the mountains.¹

very circumstantial and positive: "Que vido en la junto que habían hecho los dichos apostatas en la Sierra de la Cieneguilla, que trataban hacer una paz fingida con los Españoles que fueron allá al cargo del teniente general de la caballeria para matarlos dormidos, y para ello dispuso el dicho Cabeza, Alonso Catité, que se labasen y afeytasen las muchachas mas bonitas, para que bajasen al pueblo de Cochiti á provocar a los Españoles á torpeza, y este declarante se halló presente al tiatole, y oió que les mandaron que aunque fuese de valde ocurriesen al gusto de los Españoles, y las vido labar y componer, y que el dicho Alonso Catité, andaba previniendo la gente, para que aquella noche estaneo durmiendo los Españoles con ellas, fueren entrando los Indios con garrotes, para matar á los Españoles, y otros arrojarle á quitarles la caballada, que con eso les acabarían, y con este pretexto mandaron venir con pena de muerte á los demas Indios que habían quedado en los pueblos para que ayudasen á lo determinado, y estando y a para bajar las muchachas vieron venir un trozo de Españoles hazia el dicho pueblo, sin haber salido ninguno mas, se aterraron y sorprendieron." (fol. 140.) Another Indian deposes (fol. 131) that Catité sent word to the gathering of Indians of whom Tupatu and Ollita were the chief men: "Que ya tenta tratado de engañar á los Españoles con paz fingida disponiendo enviar al Pueblo de Cochiti todas las Indias mas bonitas afeytadas, y limpias para que con pretexto de que bajaban á hacer de comer á los Españoles los provocasen á caer en torpeza, y á la noche estuviesen con ellas, bajar el dicho coyote Catité, y con la gente de toda la nacion Queres, y Xemes tratando platica solo el dicho Catité con los Españoles, á un grito que el diese se avalanzasen todos á matar á los dichos Españoles, y que dió orden que todos los demas que estaban en la otra junta donde asistian el dicho D. Luis, y el Ollita, se arrojasen á un tiempo á la caballada, para concluir con uno y otro, y hallandose este declarante presente á todo, se determinó á venir á avisar á los Españoles como lo hizo, con que se pusieron en arma, y los dichos Indios se boluieron á subir á las cumbres de la sierra, y los Españoles se retiraron." The same witness adds: "Que se viva con cuidado, porque han tratado los traidores de juntarse todos é ir en seguimiento de los Españoles hasta el pueblo de la Isleta, arrojandoseles de noche y quitandoles la caballada, que en quedando á pie, no valian nada, y los matarían."

After the retreat of Otermin to El Paso del Norte, the Queres reoccupied their pueblos on the Rio Grande, and it is stated that in 1683 all the villages, from San Felipe northward, were inhabited, and none of the tribes were living in the mountains.¹ The well preserved pueblo on the Potrero Viejo must therefore have been constructed *after* that year, and previous to the fall of 1692,² when Diego de Vargas made his first appearance in New Mexico.

I need not enter into the details of that brilliant dash, accomplished without any bloodshed; suffice it to say, that on the 21st of October Vargas reached the foot of the Potrero with about sixty soldiers. On the day before, he had met delegates of the Cochiti tribe, and come to a peaceable understanding with them. He ascended to the top, and found the new pueblo to consist of "ten quarters, and another large one fortified." The inhabitants were composed of the Indians of Cochiti, San Felipe, and San Marcos. They all promised to return to their allegiance, and presented for baptism one hundred and three children, born since the uprising of 1680, who had consequently not been baptized. Vargas, satisfied with the promises of the natives, returned to Cochiti on the same day.³

¹ *Declaracion de un Yndio Pecuri que dixo llamarse Juan*, MS.: "Y que ninguna mesa ni cierra no se á fortalecida á biuir gente ninguna que solo quando entró el Sr. Govor y Capitán Genl con los Españoles se fueron á las sierras los Teguas y otras naciones y que quando se retiró . . . y la jente se bajaron á sus pueblos." According to the same Indian only the following pueblos had been abandoned: "Sandia, Alameda, Puarai, Isleta, Sevilleta, Alamillo, Senecu." None of these belonged to the Queres.

² It should not be overlooked that the raid made in 1687 by Pedro Reneros Posada as far as Santa Ana, and especially the expedition of Domingo Gironza Petriz de Cruzate as far as Cia in 1688, may have caused the permanent establishment of the Cochiteños on the Potrero Viejo. The affair at Cia was a bloody one, and placed the Pueblos west of the Rio Grande in imminent danger.

³ *Autos de Guerra de la Primera Campaña*, fol. 141: "Diez quarteles y otro de presidio grande en ella." I have taken "presidio" in the sense of a fortification, or barracks; it also means a certain kind of prison in the South-

But only the Queres of San Felipe proved to be sincere. When Vargas returned to New Mexico in 1693, he found them on the banks of the Rio Grande, anxiously awaiting his coming, but the people of Cochiti and of San Marcos had remained on the formidable Potrero, and they were now threatening their kindred of San Felipe with dire punishment for their fidelity to the Spaniards.¹ Vargas soon found out that the pueblos, San Felipe, Santa Ana, Cia, and Pecos excepted, had broken their pledges, and were planning to destroy him.

How the leniency which the Spanish governor showed in presence of this manifest treachery was rewarded by the Tanos of Santa Fé, and how Vargas was at last compelled to resume military measures, does not belong here. By new year's day of 1694, hostilities had commenced in every

west. Escalante, in what I have elsewhere entitled *Relacion Anbuima del Nuevo Mexico* (p. 132), makes the date the 20th, but I follow the Journal of Vargas, fragments of which are at my command.

¹ *Autos de Guerra de la Segunda Campaña, 1693, MS., fol. 19.* On the 12th of November an Indian from San Felipe came to see Vargas. "Y me dijo que estaban gustosos los naturales del dho su pueblo y que ya estauan para despo-larse los del pueblo de Santana y con la notizia de mi venida se auian estado quietos por tenerlos ynquietos los Xemes, Teguas y Tanos que estaban para entrar á destruirlos." Fol. 21: "Que el capitán Malacate auia dejado su pueblo de Zia, desde que empezó el flote se auia pasado á la Zienega de Cochiti con los Yndios Queres que en ella viuen que este ynduzia á los Yndios no diesen la paz ni fuessen amigos de los Españoles." Fol. 25: "Y se allá viuir en compañía de los Yndios Queres de Cochiti en la mesa de la Zieneguilla." On the 15th of November Vargas was alarmed by the news brought by an Indian woman from Cochiti: "Auer ydo á dho su pueblo y mesa de la Cieneguilla unos Yndios de á cauallo con todas sus armas, Teguas y Tanos, los quales auian dho á todos los capitanes y demas jente de dha mesa que bajasen todos con sus armas que ya se hallaban juntos y preuenidos todos ellos los dhos Teguas y Tanos y asimismo se allaban en su compañía los Yndios de las naziões de los Taos y Pecuries y Apaches del Río Colorado y Nabajoes, todos los quales los auian dejado en el pueblo de la Cieneguilla y salian ya para el de Sto Domingo donde les aguardauan para darme albazo á mi dho Gouor y Capitán General." Nothing occurred, although the fact of the conspiracy is well established. Vargas visited the Cañada and was well received. Escalante, *Relacion Anbuima*, p. 140.

direction. The pueblos of San Felipe, Cia, and Santa Ana were clamoring to Vargas for assistance against the Jemez, the Queres of Santo Domingo, who had joined them, and the people of the Potrero Viejo. The Governor had first to march against the rebellious Tehuas at San Ildefonso.

Failing in his attempts to take the formidable "Black Mesa" by storm, he returned to Santa Fé, where he found a pressing message from his allies among the Queres, beseeching him to come to their assistance. He accordingly left Santa Fé on the 12th of April, with seventy soldiers and twenty armed colonists, to march against the Potrero Viejo,¹ and took the road to San Felipe, where he was reinforced by about one hundred warriors from that village, Santa Ana, and Cia. Leaving San Felipe on the 16th of April in the afternoon, he reached the Cañada de Cochiti about midnight. A council of war was held at once, and in it the war-captain of Cia, Bartolomé de Ojeda gave a description of the cliff and of the three trails leading to the summit. The enemy were on their guard; and fires burned along the upper edge of the mesa, showing that pickets were watching the approaches. The Spanish camp had been located where it could not be descried from the Potrero.² Vargas

¹ *Autos de Guerra del Año de 1694*, fol. 86. He reached San Felipe on April 15 (fol. 88). Escalante (*Relacion*, p. 155) gives incorrect dates, and is very brief. He only says: "Y con la otra marchó para la Cienegui el de Cochiti el día 14 ó 15 de April, é incorporandose con los dichos Queres amigos, en dos avances ganó la mesa." Even the last statement is not correct, since Vargas, as will be seen hereafter, took the mesa at the first assault.

² *Ibid.*, fol. 90, 91: "Hize alto por ser entre onze y doze dela noche y hallarse avistado de la dha messa y por no ser sentido del enemigo qe por sus lumbreras qe en ella tiene se rreconoze tener puestas sus zentinelas, y así para aguardar ora y rremudar cauallo la dha gente hizo alto orilla de vna barranca y arroyo." April 17, fol. 91: "Al salir de la luna y dos de la mañana hauydo aguardado á dha ora yo dho Gour y Cappn Genl y hauiendo resuelto y conferido con los dhos Cauos y el Cappan de los Queres y mi compadre Barme de Ojeda las suvidas qe la dha Messa de la Zieniguilla de Cochitti tenía. Pués

divided his force into four bodies. Captains Juan Holguin and Eusebio de Vargas, with forty men and one hundred Indians under Bartolomé de Ojeda, took the long but easier trail that reaches the mesa from the southwest. That trail was used by the enemy for bringing their sheep and horses to the summit. Captain Roque Madrid with another detachment was to storm the Potrero from the front. Adjutant Barela with ten soldiers guarded the third trail, which descends to the brook in the Cañada on the northern foot of the cliff, and Vargas himself took his post between the last two sections, with a small number of men. Madrid had the most difficult task, as the ascent from the east is very steep and over bare rocks. It was moonlight, and the enemy could inflict heavy loss by merely throwing stones upon the assailants.¹

About two o'clock in the morning of the 17th of April the advance began from the east, while the body guided by Ojeda had already begun to creep up in silence, and unnoticed by

los Yndios reuelde de dha nazione ye pueblo nueso de Cochiti la Tenian Toda con sus trincheras y hoyos qe llaman trampas, para no obstante siendo ella por si sumamte empinada y derecha y juntamte toda de peñas queria qe la hazia ynexpugnable se reconozio por el dho del dho Cappan Barne de Ojeda tener por vn costado dha messa vna suvida. Siendo la que está mas fazil respecto de ser la que trajinan con sus vestias y ganados, de ser la mas corryte para por ella darsela al dho enemigo mucho daño, por podersele cojer las espaldas y la otra suvida tamuien la tenfan estrabiada al otro frente para bajar al embudo y ojo de agua de donde se abastezen." I copy this on account of the very correct description of the different ascents to the Potrero. The location of the Spanish camp must have been below the present settlement in the Cañada, probably near the ruins of Kua-pa.

¹ *Ibid.*, fol. 91: "Y diessen el dicho asalto mientras al mismo tiempo le daua el Cappan y Cauo Roque Madrid por la suvida dha y prinzipal de dha messa." The Adj. Diego Barela occupied the foot of the northern trail, with ten soldiers. "Como asimismo para el asalto por dho rumbo y el otro trozo con las caualladas, quedando asimismo en la ladera y suvida de dha messa, yo dho Gouor &ca, para si el enemigo se despeñase por ella ó bajaba por dha banda qe es la qe tienen y asimismo para estar en dho puesto á socorrer los dhos referidos como el de la cauallada y tren."

the enemy. They, however, soon discovered the detachment under Roque Madrid, and made a fierce resistance; but the Spaniards toiled on, replying with the slow musketry firing of the period to the showers of stones and arrows from above. The handful of men on the north side of the Potrero also made demonstrations of attack, and so diverted some of the enemy to that side, when suddenly the forty soldiers and the Indian allies appeared on top of the mesa in the rear. The news of their arrival before the pueblo itself caused the defenders on the parapets to scatter at once; some sped to the rescue of their homes and families, but the majority fled through the forest. Some resistance was still offered at the pueblo, but it was fruitless, and by sunrise all was over. Twenty-one Indians perished in this engagement. On the side of the Spaniards four men were wounded, but none killed. Three hundred and forty-two women and children fell into the hands of the victors, together with seventy horses and more than nine hundred sheep. A portion of the spoil was given to the Indian auxiliaries.¹

¹ Ibid., fol. 91, 92: "Y en esta disposizion se zerro y se dió asalto, de suerte qe el enemigo se puso en arma, haziendo su rresistencia y bateria por la dha suvida donde me hallaba y el sussodho capitán, ofiziales de guerra y otros soldados de valor le correspondian con repetidas cargas suviendo. . . . A dha messa al mesmo tiempo qe los dhos capitanes de campaña y gentte de guerra amiga le zerraron las espaldas, cuya carga le obligó y berse por los dhos tres angulos y suvidas combattido, le obligó á la gentte de afuera á no aguardar la despedazassen y matassen la nuestra y asi se puso en fuga, tomando diferentes veredas y breñas tenydo á su fauor las dhas peñas y estalaje pedregoso, y viendosse con el desamparo y fuga el dho enemigo de la dha gentte qe en su fauor hauia venido de socorro siguió la mesma fuga rretirandosse, dando algunas cargas qe los nuestros repararon con sus chimales y apoderados de la dha plaza y pueblo y messa, lo hizieron algunos de las cassas y trincheras por cuyas troneras algunos de los dhos reueldes tubieron lugar de herir á quatro de dho campo, aunque no peligró ninguno el perder la vida." Seven Indians were killed in the engagement, and one was suffocated in one of the lower rooms of the pueblo by the Indian allies. "Vno qe se quemó, pegandole fuego en vna cassa la gente amiga sin aguardar a romper la pader del sotano de ella á el qual se hauia bajado." Thirteen were taken with arms in their hands, and executed on the spot.

A considerable quantity of Indian corn in ears was found in the pueblo, which was a precious resource for Vargas, as maize was excessively scarce; for the Spaniards had not had time to plant, and the hostile Pueblos took good care to conceal or remove their stores of grain. In order to facilitate the transportation of this corn to Santa Fé, where it was greatly needed, Vargas ordered the prisoners to shell it on the spot. This compelled him to remain longer on the Potrero than he had intended. By the 20th of April the corn was ready, and the bulk of the Spanish force was sent off to get beasts of burden, and to reinforce Santa Fé, which in the mean time the Tehuas had attempted to surprise. The captives were retained on the Potrero under guard, confined every night in the estufa. Not more than thirty-six men were with the Governor, for the Indian allies had departed on the very day of the assault to protect their own homes.¹ On the 21st, at two o'clock in the afternoon, when the Spaniards thought themselves perfectly secure, the enemy suddenly made a furious attack upon the pueblo, having crept up from the west through a narrow pass where the cliffs behind the Potrero and the woods had concealed their approach. The Spaniards flew to arms, and succeeded in beating off the enemy with the loss of only one man on their side, and of four of the Indians. But during the confusion caused by the surprise more than one half of the captive girls and boys escaped. This was what the assailants principally desired to achieve, and seeing the determined resistance of the whites, and disheartened by the loss of one of their leaders, they retreated as precipitately as their onslaught had been violent and unexpected.² On the 24th,

¹ *Autos de Guerra*, fol. 94, 104.

² *Ibid.*, fol. 105: "Tubo el arrojio de dar suviendo por vno angostura en dha messa qe siendo tan ynmediatta fue repentina su entrada con furiosos alaridos

Vargas at last evacuated the Potrero, with his booty in corn and with the remnant of the captives. Before leaving, however, he set fire to the pueblo, together with all the grain that could not be taken along, "in order that the aforesaid rebellious enemy might not find any sustenance in it, nor be able to take up his abode without being compelled to rebuild."¹ The intentions of Vargas were fully realized, for the Potrero Viejo was never occupied again.

In this description of the storming of the Potrero Viejo I have followed Vargas's own narrative, which is in conformity with the Indian traditions, as well as with the account of the event given by the settlers of the Cañada. I was repeatedly shown the different trails, and I find the report of the Spanish commander to be very exact and graphic. The condition of the ruins resembles that of a pueblo destroyed by fire, and there is considerable charred corn to be seen. As in every other instance where I have compared the Spanish documents with the localities, and with current tales, I have

y guesso numero de gentte, qe se diuidieron entrando por los puestos de dhas dos Plazas y los demas de partte de afuera, zercando dho Pueblo y quartteles y aunque fue al parecer á las dos de la tarde la mesma seguridad de la ora tenia á la dha gentte desarmada sin sus queras." The leader of the Indians who lost his life was one Juan Griego, a mestizo from San Juan. This shows that, besides the Queres and those of San Marcos, there were Tehuas and perhaps Jemez in the fight. Escalante also gives a quite detailed report, *Relacion*, p. 160: "Cayéron en gran numero y cercaron el pueblo, pusieron á los nuestros en gran aprieto, y como los nuestros eñan tan pocos, atendian y solamente á defender las bocas calles del pueblo, y asi tuviéron lugar de huir ciento cincuenta de los prisioneros: lo cual visto por los rebeldes, se retiraron juzgando que ya habian librado á todos sus hijos y mujeres." He also says that only two of the Indians were killed.

¹ *Ibid.*, fol. 110: "Y se pegue fuego á dho Pueblo y Semillas qe en el hubiere para qu el dho enemigo rreuelde no logre en ella su susttentto ni mas hazer assiento, sin que le queste de nuebo el trabajo de su rreedifizio y ejecuttado dho orden salí de dha messa con dho campo." Escalante, *Relacion*, says that Vargas arrived at Santa Fé on the 25th of April with seventy captive women. If his statement that 150 of the prisoners escaped is correct; Vargas still had 192 left.

found them to be of great accuracy, and in substantial agreement with the traditions of the people.

I have been thus circumstantial in regard to the history of the Potrero Viejo, for the reason that the ruins on its summit are frequently spoken of as the "old pueblo of Cochiti," in the sense of the original home of that tribe. It will be seen that this is only partially correct. The oldest ruins on the mesa, which hardly attract any attention, are those of a pre-historic Queres pueblo; the striking well preserved ones are those of a village built after the year 1683, and abandoned in April, 1694.

A distance of six or seven miles in a southeasterly direction separates the Potrero Viejo from the present pueblo of Cochiti. The several roads and trails leading from that village to the Cañada pass through a country which offers, so far as I know, nothing of archæological interest.¹ It is a series of hills covered with the usual vegetation of scrubby conifers. The rocks are a very friable volcanic tufa, and are mostly covered by a mantle of sand produced by the rapid disintegration of the lower strata. Picturesque erosion is seen along the most westerly of these trails. These hills begin to recede from the Rio Grande, at a distance of about five miles from the Cañada, leaving a bleak expanse in the shape of a segment, and on the southeastern end of it, north of the Arroyo de la Peralta and on gravelly bluffs above the river bottom, stands the Indian village of Cochiti. The deep groove of the Peralta is waterless except during very

¹ Artificial caves are said to exist in some of the rocks in the hills visible from Cochiti. In the lower portions of the Cañada is a low cliff famous in witchcraft stories. The people of Cochiti pretend that the wizards and witches meet there on certain nights, assembling at the cliff in the shape of owls, turkey-buzzards, and crows. At a signal the rock opens, displaying a brilliantly lighted cavity. Forthwith the animal shapes disappear, and the wicked sorcerers resume their human appearance and enter the cavern to carouse till daylight.

heavy rains, and on each side of it I have noticed outcroppings of ruins, the remains of the Cochiti abandoned by its inhabitants after the rebellion of 1680.

On the other side of the Rio Grande, within a radius of at most three miles, I have visited three ruins. The great flow of lava surmounted by the Tetilla cone approaches the river banks, and here terminates the cañon that separates San Ildefonso from Cochiti. Almost directly opposite the latter pueblo, on a rocky bluff, stand the ruins to which the Queres give the name of Tash-ka-tze, or Place of Potsherds. An irregular quadrangle, marked partly by rubble foundations, and measuring approximately 56 meters (182 feet) from east to west and 50 meters (162 feet) from north to south, and a round tower 10 meters (32½ feet) across, are its best preserved features. Twelve meters west of this quadrangle appear foundations of two sides of another one, measuring 50 meters from north to south by 31 from east to west. West of the round tower, at a distance of ten meters, stands another structure 30 meters long by 13 wide. The whole seems, therefore, to have consisted of three rectangular houses and one round tower. The latter occupies a good position for observation. The artificial objects consist of obsidian, of glazed pottery with very little corrugated, stone hammers, metates, and corn-crushers.

Some distance to the north, on a long and gravelly slope running almost parallel with the river, stands a nearly obliterated large ruin, called, in Spanish, Pueblo del Encierro. Foundations of rubble denoting smaller structures extend part of the way from its southern wall to the lower apex formed by the slanting bluff on which the ruins stand. On that apex are the remains of another rectangular building, and of a circular structure which I was told was an estufa, although I incline to the belief that it was a round tower. At

the Encierro, although all the other artificial objects belong to a people using stone implements, such as obsidian and flint, are profusely scattered about, the corrugated pottery is very scarce; most of the potsherds belong to the coarsely glazed kind. Two old acequias can be descried in the vicinity, but it is doubtful if they are not of a posterior date.¹ Garden beds, enclosed by upright stones, form part of the ruins. The rubbish is about equally distributed over the whole, so that it would be difficult to determine which were the buildings, were it not for the double rows of stones set on edge 0.30 to 0.40 m. apart, that distinguish the foundations of houses from simple enclosures. The space between the two rows may have been originally filled with gravel or adobe. Although the area covered by the ruins is comparatively large, the pueblo was in fact a small one.

Still smaller ruins stand on the summit of a narrow and abrupt bluff of trap, which rises over the north bank of the Rio de Santa Fé about two miles east of its mouth, opposite Cochiti. The waters of this stream only reach the Rio Grande during freshets, but along the base of this tongue-shaped mesa they are usually permanent. The ruins consist of the foundations of a small house with an enclosure. There are also two circular depressions. The walls of the building were made of a triple row of blocks of lava, and they show a width of 0.75 m. ($2\frac{1}{2}$ feet). The pottery is like that at the Encierro; and flint flakes, and some obsidian, are scattered over the mesa.

The little Mexican settlement of Peña Blanca lies three miles south of Cochiti, on the same side of the Rio Grande

¹ The acequias of Cochiti and of the Mexican settlement of Peña Blanca, three miles south of the Encierro, take their water from the Rio Grande only a short distance higher up that river. It is therefore probable that the vestiges near the old pueblo are those of old acequias belonging to the two places mentioned. The Indians could give me no information.

as the ruins of Tash-ka-tze, of the Encierro, and of that on the Rio de Santa Fé. In the fields of the fertile bottom skirting the river west of the village, ruins of a pueblo were noticed by the early settlers, and a number of stone idols are said to have been exhumed. As far as I could learn, the pueblo was built of adobe, but nearly every trace of it has now disappeared in consequence of cultivation.

On one of the gravelly dunes northeast of the church at Peña Blanca, a large rectangle formed by upright stones or slabs is to be seen. Pottery, flint, and obsidian are strewn over the place, and I found a half-finished stone axe; but this rectangle looks to me rather like a garden enclosure than a former building. On the round eminence of trap and lava that overlooks the Peña Blanca valley, and around which the road from Santa Fé winds downwards like a huge serpent, faint traces of small structures exist. But I found no pottery, only flint and obsidian. The height is such an excellent lookout, and its surface so small, that I suspect it was only temporarily used as a post of observation by the people of one or the other of the neighboring Indian settlements now in ruins.¹

The Tanos of Santo Domingo insisted emphatically that the ruins at Peña Blanca and those opposite Cochiti were not those of Tanos pueblos. South of Peña Blanca, and as far as the banks of the Arroyo de Galisteo near Wallace, there are no ruins. On the west bank of the Rio Grande, between Cochiti and the hamlet of Zile, there is said to be a cave in which the Cochiti Indians concealed their ancient

¹ The "Mesita Redonda," as this eminence is called, rises about 400 feet above the river bottom, from which it is half a mile distant in a straight line. Above the road it is at most 200 feet high. The sides, as well as the slopes behind it, are covered with débris of hard lava and trap. The surface is elliptical, measuring about 100 by 50 meters, and a wide view is commanded from the summit.

idols. On that side of the river, between it and the districts of Santa Ana and Cia, I know of no ruins farther south than those on the Potrero de en el Medio, or Mishtshya Ko-te (Mountain of Ashes), and those on the Potrero de la Cañada Quemada.

To reach these places from Cochiti, it is best to follow the sandy bottom of the Peralta torrent, going almost due west. The Mishtshya Ko-te lies north of the broad gulch, between it and the Cañada of Cochiti. It is a steep rock forming the eastern end of a towering potrero. I have not ascended to its summit, but know on good authority that on it stand the ruins of two buildings. The trail to the Potrero turns aside from the Peralta near where a dark, deep cleft, the Cañon del Ko-ye, runs into it from the northwest.¹ Between Cochiti and this point the north side of the Peralta is lined by very picturesque forms of erosion, — isolated cones of white tufa, each capped by a boulder. At the Barranco Blanco hundreds of these cones cluster together, presenting the appearance of a long border of snow-white tents.

Beyond the mouth of the Ko-ye, the gulch changes its name to that of the Cañada Quemada, and becomes a wooded gorge; but as we go farther west, it appears still narrower, and its sides higher and steeper. At a distance of twelve miles from the pueblo, a partly wooded ridge traverses it, and on the summit of this ridge, called Potrero de la Cañada Quemada, lies the ruin of which Figure 16 of Plate I. gives the shape and relative size.

It stands on a bare space near the eastern brink of the abrupt slope, protected on the west by woods. The view from there is almost boundless to the south, where the Sierra

¹ The Cañon del Ko-ye is a dark, narrow chasm, fearful to look into from above; towards its lower portions the rocks overhang in such a degree as almost to exclude daylight.

de los Ladrones and the Magdalena Mountains are distinctly visible.¹ There is no water on the Potrero, and I was at a loss to find tillable soil. Still this is no proof that the Indians who dwelt there did not have their little fields in some nook or corner, either at the foot or on the summit of the ridge. This Pueblo, with the one near San Antonio in the Pecos valley, is the most compact specimen of the one-house type which I have ever seen. There even appears to be no entrance to the small courtyard in the middle. North of this courtyard the cells are eight deep; south there are nine rows from west to east, and sixteen transversely, the whole number of rooms on the first floor being 296, and their average size about 2.7 by 3.6 meters (9 by 11½ feet).

The walls of this structure are made of rectangular blocks of tufa, like those of the other pueblos heretofore described in this region. The rock is so soft as to break very easily into prismatic fragments, so that an approximate regularity of form could be attained without much effort, and by the use of stone implements only. The thickness of the walls is as usual, but in a few places they are thicker. Three stories are (or were in 1880) still plainly visible at the northern end. In the portion of the ruins that lies south of the courtyard two circular estufas are seen respectively 4.9 and 5.4 meters (16 and 17½ feet) in diameter. They are built in among the rooms, and I saw no doorways leading into them, which suggests the inference that a considerable portion of the building was only one story high.

Not far from this ruin is a small artificial tank large enough for the demands of a population which probably did not much exceed three hundred, judging from the capacity of the largest

¹ In a direct line, the Ladrones Mountains are 90 miles, and the Magdalenas 120 miles distant. The height of the former is 9,214, of the latter, 10,758 feet. I estimate the height of the Potrero at not over 6,500 feet, probably somewhat less.

house at Taos. The artificial objects are the same as on the other Potreros, but glazed pottery is very scarce, as the bulk of the potsherds belong to the black and white and to the corrugated varieties. Considerable moss-agate and flint, and some obsidian, was noticed.

The Cochiti Indians, and also those of Santo Domingo, told me that this was the abode of the latter branch of the Queres tribe in times long prior to the Spanish era, and that the Santo Domingo Indians moved from here to the east side of the Rio Grande, where they were living in the sixteenth century, and live to-day. In regard to the pueblo on the Potrero de en el Medio I was unable to secure any tradition, but the Cochiti Indians "supposed" that it was formerly a Queres village.

The ancient character of the potsherds on the Potrero Quemado attracts attention. After diligent search I did not find more than two or three small pieces of the coarsely glazed kind, but the corrugated, and especially the white (or gray) decorated with black lines, were abundant, resembling the pottery found in connection with the small houses and some of the cave villages. If the Santo Domingo branch of the Queres inhabited the Potrero Quemado in former times, the question arises whether they emigrated from the Rito as a separate band, or moved off jointly with the Cochiti and San Felipe clusters, seceding from these at one or the other of the stations between the Potrero Quemado and the Rito de los Frijoles. There is such a marked difference between the pottery on the former and that at the other ruins of Queres villages north of it (the small houses excepted) that we might conjecture that the separation took place at the Rito before the people there had begun to manufacture the coarsely glazed variety. The greater or less decoration of pottery in the Southwest is owing to local conditions. But the introduction of a new material for decorative purposes is another thing.

It may have taken place at the Rito de los Frijoles; but ruins north of that place (for instance the Pu-yé) also exhibit it. It is a chronological as well as an ethnological indication, pointing to a discovery made at a certain time, possibly by one tribe and communicated by it to its neighbors, until it gradually became the property of several. It would be very interesting, therefore, to discover what this coarse glaze was made of. I have diligently inquired of the Indians, but without success, and it seems to be a lost art. If it was based upon the use of some special mineral ingredient, we might ultimately discover where that ingredient came from, and whether the invention was made at some particular place, or was evolved simultaneously among different tribes. But the glazed pottery shows rather decadence than improvement; it is coarser in texture, and although the patterns of the designs are nearly the same as those of older varieties, the glossy covering is thick and coarse.

At last we leave the mountains, and return to the Rio Grande valley, where, about five miles south of Peña Blanca, we meet with the ruins of another pueblo of the Santo Domingo Indians, called by them Gi-pu-y.

The ruins of Gi-pu-y stand a mile and a half east of the station of Wallace, and south of the railroad track on the brink of the Arroyo de Galisteo. That torrent has water only during heavy rains, when it frequently becomes dangerous. The people of Gi-pu-y experienced this when a part of their village was swept away in one night, and they were compelled to move to the Rio Grande and establish their home on its banks. The first time we hear of Gi-pu-y is in the journal of Oñate in 1593.¹ Previous to Oñate, in 1591, Gaspar Cas-

¹ *Obediencia y Vasallaje de Santo Domingo*, p. 107. *Discurso de las Jornadas*, p. 254. He calls the place Santo Domingo, without stating that he had named it so himself. This implies that the name was given by some previous explorer. The distance which he travelled from San Felipe to Santo Domingo, four leagues

taño de Sosa had named one of the Queres villages on the Rio Grande Santo Domingo, and his Journal leads me to infer that it stood on the east bank of that river.¹ About 1660 it certainly lay on the eastern side of the Rio Grande.² A change in location of a pueblo is not always accompanied by a change of name.³

It would seem, therefore, that the Gi-pu-y near Wallace is not the historical Gi-pu-y, but a village of the same name of the Santo Domingo Queres, abandoned by them in consequence of a disastrous flood previous to 1591. The ruins indeed appear very old, and the southeastern portion has been carried off by the torrent. They consist of low mounds of rubble and rubbish, with a good deal of glazed pottery. At one place there is a wall, apparently of adobe, three feet thick, and traces of foundations of the usual thickness (0.30 m.) are visible in several of the mounds. The site is level, and decay, not abrasion, has reduced the ruins to their present condition. Some of the glazed pottery fragments, however, are still very bright in color. The banks of the arroyo are vertical in most places, and from ten to fifteen feet in height.

Historical Gi-pu-y, of which Juan de Oñate has written, and

(11 miles), is very exact, and shows that the latter pueblo stood on the banks of the Rio Grande on or very near the site it occupies to-day, and not at Wallace. Old Gi-pu-y is $1\frac{1}{2}$ leagues farther east than the Santo Domingo of to-day.

¹ *Memoria del Descubrimiento*, p. 253. It is plain from that Journal that the village stood on the Rio Grande, since he says that it stood "on the banks of a great river," to which he himself afterwards gives the name of "el Rio Grande." That it was on the east bank is also very clear, since he reached the place from San Marcos without crossing the Rio Grande.

² Vetancurt, *Crónica*, p. 315. His information about the pueblos of New Mexico dates mostly from 1660. That the village stood on the river bank in August, 1680, is plainly stated by Antonio de Otermin in his *Diario de la Retirada*, fol. 30.

³ Thus San Felipe has always kept its name of Kat-isht-ya, although its location has thrice been changed. Sandia has remained Na-fi-ap, although it was abandoned in 1681 and reoccupied only in 1743. Isleta is Tshya-uip-a to-day, as it was in 1681. Other pueblos, however, have changed their names.

which, it appears, was the Santo Domingo of Castaño, stood nearly on the site of the present pueblo; but from what the Santo Domingo Indians told me, I infer that the first church, built between 1600 and 1605,¹ was erected on the banks of the Galisteo, north of the village.² It was swept away by that torrent, and the pueblo rebuilt farther west on the banks of the Rio Grande. The new village bore the name of Huash-pa Tzen-a. When the river carried off a part of that settlement also, its inhabitants again moved farther east, always clinging to the river banks. The pueblo was then called Ki-ua, which name it still bears. In 1886 a part of Ki-ua, including both churches, was destroyed by a flood, so that it is now impossible to recognize the ancient sites. The Gi-pu-y near Wallace is the only one of the old pueblos of Santo Domingo, east of the Rio Grande, of which any traces are left.

Santo Domingo is rich in historical reminiscences; but it would carry me too far to refer to them here in detail. The next ruin south of it, which I have not seen, is near the village of Cubero, on the west side of the Rio Grande. It is called by the Indians of San Felipe Kat-isht-ya, or Tyiti Haa, as the site of the ruin itself, or that of Cubero near by, is meant. Tradition has it that the first village of the San Felipe branch of the Queres was built there. The substance of this folk-tale is as follows.

¹ Fray Juan de Escalona, Commissary of the Franciscan Order in New Mexico, was the builder of the first church of Santo Domingo. He died in that pueblo, and was buried in the temple, in 1607. Vetancurt, *Menologio*; also, *Crónica*, p. 316. Torquemada, *Monarchia*, vol. iii. p. 598. Every trace of that church has long since disappeared.

² The Galisteo torrent reaches the Rio Grande a few hundred meters north of the present village of Santo Domingo. The pueblo is much exposed to damage by water, and for a number of years the river has been constantly encroaching on the east bank. Moreover, several torrents on the south, like the Arroyo de los Valdéses and others, do mischief, yet the Indians will not leave the spot.

When the "Pinini" surprised the pueblo of Kuapa, they slew nearly all its inhabitants. A woman concealed herself behind a metate, and a boy hid in a store-room. Along with the woman was a parrot. After the enemy had left, the parrot took charge of the boy and fed him till he was grown up, when he directed him and the woman to go south in search of new homes. So they wandered away, the boy carrying the parrot and a certain charm or fetich, which was contained in a bowl of clay. The Indians of the pueblo of Sandia, to whom they first applied for hospitality, received them coldly. The fugitives accordingly turned to the east, and went to the Tanos, probably of the village of Tunque. Here the woman gave birth to five children, four boys and one girl. The boys of the Tanos often taunted these youngsters with being foreigners, and, nettled by these taunts, they asked their mother about their origin. She told them the story of her past, and acknowledged that the Tanos country was not theirs. She told them that at the foot of the mesa of Ta-mi-ta, a height in the shape of a truncated cone, nearly opposite San Felipe, on the east bank of the Rio Grande, they would find their future home. Thereupon the boys set out, following the course of the Arroyo del Tunque to the mesa indicated, and succeeded in raising abundant crops in the Rio Grande valley. There had been a famine among the Tanos for two years, and therefore the boys carried their harvests home to their mother. In course of time the Queres refugees left the Tanos permanently, and built a village west of the Rio Grande at Cubero. This was the first pueblo called Kat-isht-ya. Subsequently that village was abandoned, and a new one constructed at the foot of the mesa of Ta-mi-ta, to which the same name was given.

There the first church of San Felipe was built by Fray

Cristobal de Quiñones, who died at the pueblo in 1607, and was buried in the temple which he had founded.¹ The Queres occupied this site until after 1683.² Ten years later,

¹ The San Felipe of the Queres must not be confounded with a "San Felipe" mentioned in the *Testimonio dado en México* (Doc. de Indias, vol. xv. pp. 83 and 90) by the companions of Francisco Sanchez Chamuscado in 1582. The latter pueblo was the first one met by these explorers in 1581 on their way up the Rio Grande, and was a village of the Piroos, probably near San Marcial, at least 160 miles farther south. The name San Felipe was afterwards forgotten. The pueblo at the foot of Ta-mi-ta was undoubtedly visited by Castaño in 1591, and it may be that he gave that name to it. Oñate so calls it in 1598, in *Discurso de las Jornadas*, p. 254. He arrived there on the 30th of June, "Pasamos á San Phelipe, casi tres leguas." Also in *Obediencia y Vasallaje de San Juan Baptista*, p. 114: "La Provincia de los Cheres con los pueblos de Castixes, llamados Sant Phelipe y de Comitre." We find here in a corrupted form the Indian names both of the pueblo and of the round mesa at the foot of which it stood. "Castixes" is a corruption of Kat-ist-ya, and "Comitre" stands for Ta-mi-ta. The error was probably made in copying the document for the press. San Felipe again appears in the document called *Peticion á Don Xptobal de Oñate por los Pobladores de San Gabriel*, 1604 (MS.): "Pedimos y suplicamos sea serbido de despachar y echar desta bella á Jua Lopez Olguin al pueblo de San Felipe." Fray Cristóbal de Quiñones had an organ set up at San Felipe. Says Vetancurt, *Menologio*, p. 137: "Solicitó para el culto divino organos y música, y por su diligencia aprendieron los naturales y salieron para el oficio diuino diestros cantores" According to the *Crónica* (p. 315), San Felipe previous to the rebellion had a "Capilla de Músicos." It is well established that many of the Pueblo Indians knew and performed church music in the seventeenth and eighteenth centuries. Fray Cristobal died at San Felipe, April 27, 1609, and was buried in the church. Vetancurt, *Menologio*, p. 137. He had also established a hospital with a pharmacy. San Felipe in 1636 was the residence of the Father Custodian, Fray Cristóbal de Quiros. *Autos sobre Quexas contra los Religiosos del Nuevo México*, 1636, MS. But it was not as a permanent seat; at that time the custodians resided at their respective missions.

² No massacres of Spaniards or priests occurred at San Felipe in August, 1680, but a few Indians who had remained faithful to the Spaniards were killed. *Interrogatorios de Varios Indios*, 1681, fol. 139. All the males of that pueblo, with few exceptions, joined in the butchery at Santo Domingo. At the time there was no resident priest at San Felipe, but the missionaries for the three Queres pueblos of Cochiti, Santo Domingo, and San Felipe resided at the convent of Santo Domingo. The Indians of San Felipe also took part in the frightful slaughter of Spanish colonists that occurred in the haciendas between the pueblo and Algodones. Compare Otermin, *Diario de la Retirada*, 1680, MS., fol. 31. The pueblo was abandoned upon the approach of the retiring Spaniards, and many Indians appeared upon the Great Mesa on the west side of the

Diego de Vargas found them on the opposite side of the river, on the Black Mesa, overlooking San Felipe.¹ A church was built on this site after 1694, the ruins of which present a picturesque appearance from the river banks. In the beginning of the last century, the tribe of San Felipe left the mesa, and established itself at its foot, where the present Kat-isht-ya, the fourth of that name, stands.

Not a trace is left of the old pueblo, near the round mesa of Ta-mi-ta. The village, the church, and its convent have completely disappeared. The floods of the Tunque, on the northern border of which it stood, have combined with those of the Rio Grande to obliterate every trace. Potsherds may occasionally be picked up in the fields near by, or on the sandy hillocks; but I have not been fortunate enough to find any. Only tradition and documentary information enable us to identify the place.

Rio Grande, watching the march of Otermin. It was reoccupied immediately afterwards by its inhabitants. *Interrogatorio*, fol. 137 et seq. In December, 1681, Mendoza found it deserted. *Ynterrogatorio de Preguntas*, MS.: "Y que de allí pasó al pueblo de San Felipe, y lo halló despoblado, y en el solo Yndio llamado Francisco al qual le pregunto en su lengua por la gente del pueblo, y respondió haberse ido huyendo á la Cieneguilla, ó pueblo de Cochiti, y haciendo buscar el pueblo en todas sus casas, se hallaron muchas cosas de la Yglesia, y enparticular vn incensario de plata, y vna naveta, y caxuela de los santos oleos, y cruces de mangas quebradas, y en todas las demas casas cantidad de mascarar de sus bayles diabólicos, y en medio de la plaza montones de piedras adonde hacían sus idolatrías, y toda la Yglesia destruida, y el convento demolido, y en la orilla del rio le digeron, los que ivan en su compañia, que estaba una campana, que quiziern quebrar, y solo le hicieron vn agujero." San Felipe was occupied again, and was inhabited in 1683. *Declaracion de vn Yndio Pecuri*, MS.

¹ In the fall of 1692, when Vargas made his first dash into New Mexico, the Indians of San Felipe were with those of Cochiti on the Potrero Viejo. *Autos de Guerra de la Primera Campaña*, 1692, fol. 141. I have already stated that the Indians of San Felipe kept their promise of returning to their pueblo, which stood then on the summit of the long Black Mesa west of the present pueblo. There Vargas found them in November, 1693. *Autos de Guerra del Año de 1693*, fol. 22: "Y ayer salí con 50 soldados por todos y 60 mulas con sus arieos y suví á la mesa donde tienen dho pueblo los de Sn Felipe." It still stood there in 1696. *Autos de Guerra del Año de 1696*, MS.

The same cannot be said of the village built on the top of the mesa of Tyit-i Tzat-ya, that rises abruptly above the San Felipe of to-day. Figure 23 of Plate I. conveys an idea of the size and arrangement of the ruin. The east side approaches the brink of the mesa, which is difficult of access. The church is of adobe, and stands on the edge of the declivity in the northeastern corner. The cells of the Indian dwellings, two rows deep, form the north, west, and south sides, so that the pueblo forms three sides of a quadrangle, with an entrance in the southwestern corner. The church measures 20.0 by 6.3 meters (65 by 20 feet); the houses have a total length of 217 meters (712 feet). It was therefore a small pueblo, and the number of rooms (fifty-eight) shows that the population cannot have been considerable. The walls are fairly well built of blocks of lava and 0.45 m. (18 inches) thick, and most of the houses may have been two stories high. When Diego de Vargas visited it in 1693, he found it in good condition.¹ How long the Queres remained on the mesa after that date, I have not ascertained.

There is a tale current among the Indians of San Felipe of the flight of Fray Alonzo Ximenez de Cisneros, missionary at Cochiti, from that village, in the night of the 4th of June, 1696, and his rescue by the San Felipe Indians. The facts are true in regard to the flight of the priest and the kind

¹ *Autos de Guerra de 1693*, fol. 22: "Y los Yndios todos me salieron á receuir sin armas y las mujeres á otro lado muy vien bestidas y todos con sus cruces en la garganta y tenían vna grande á la entrada del pueblo y asimesmo en las casas y la plaza muy barrida, puestos muchos bancos y petates nuevos para que me sentase y nos dieron á todos de comer con grande abundancia y hizieron demostracion de mucha alegria." I am unable to say when the church now in ruins on the edge of the mesa was built, but it was probably soon after 1694. There was a resident priest at San Felipe from 1694 until 1696, when Fray Alonzo Ximenez de Cisneros fled from Cochiti on the 4th of June, 1696, and remained there until the following year. He was succeeded by Fray Diego de Chavarria, and from that time on the list is uninterrupted down to the first half of this century. See the *Libro de Entierros de la Mision de San Felipe*, 1696 to 1708, MS.

treatment extended to him by the people of Kat-isht-ya on the mesa; but the same cannot be said of the siege, which the pueblo is reported to have withstood afterwards. The Cochiti Indians followed the Franciscan, whom they intended to murder, for a short distance, but withdrew as soon as they saw that he was beyond their reach. Then they abandoned their pueblo, and retired to the mountains, — not to the Potrero Viejo, but to the more distant gorges and crests of the Valles range. The San Felipe pueblo was never directly threatened in 1696, and consequently the story of the blockade, and of the suffering from lack of water resulting from it, and the miraculous intervention of the rescued missionary, is without foundation.¹

San Felipe at present is the last of the Queres villages on the Rio Grande towards the south, and beyond the defile formed by the Black Mesa on one side and the high gravelly bluffs above Algodones on the other,² can be seen the beginning of the range of the Tiguas. If the traditions concerning the origin of the San Felipe villages are true, the Tiguas were already established on their range before the dispersion of the Queres at Kua-pa took place, since the fugitives from there applied in vain to the Indians of Sandia for hospitality. A historical fact of some importance would accordingly be established by that fragment of Indian folk-lore.³

¹ Father Cisneros was one of the priests who entered upon his mission among the Pueblos in 1695, but soon discovered that they were bent upon another outbreak. He gave warning of it by letter to the Custodian in the beginning of 1696, *Carta al Padre Custodio Fray Francisco de Vargas*, MS., and joined in the petition of the latter to Diego de Vargas, *Peticion del Custo y Definitorio al Gobernador Don Diego de Vargas*, MS. Vargas disregarded these well grounded cries of alarm, and Father Cisneros fled to San Felipe and was well received there. The Indians of Cochiti left their village at once, and returned thither only in the late fall of 1696. *Autos de Guerra del Año de 1696*, "Primer Cuaderno." Escalante, *Relacion*, pp. 172 and 174.

² This is called "La Angostura," or "The Narrows."

³ Sandia, or Na-fi-ap, is an old Tigua village. From this tradition we may

There exists, to my knowledge, but one Queres ruin south of San Felipe. This does not stand on the river bank, but west of it, in the wild labyrinth of lava, basalt, and trap about the "Cangelon," north of Bernalillo. That ruin, which I have not seen, is claimed by the Queres of Santa Ana as the first pueblo inhabited by their ancestors in this section.¹ The present village of Santa Ana lies southwest of that of San Felipe, on the eastern bank of the Jemez River. We must therefore leave the Rio Grande for the present, and turn to that western tributary where a branch of the Queres, very characteristically designated by Antonio de Espejo as "Pun-a-mes," or "People in the West,"² already dwelt in the sixteenth century.³ This branch is divided into two groups, — the people of Santa Ana or Tam-a-ya, and the tribe of Tzi-a or Cia.⁴ How long before the sixteenth century they may have settled on the banks of the Jemez, I am unable to state, neither am I informed as to whether they claim to have

also infer that the Tanos occupied their country at the same time, and previous to the events at Kua-pa.

¹ I am in doubt whether this ruin stands north or south of the mouth of Jemez River. The "Cangelon," literally prong or horn, is a very prominent rocky pillar rising above a volcanic mesa four miles north of Bernalillo.

² *Relacion del Viage* (Doc. de Indias, vol. xv. p. 11), and *Expediente y Relacion*, p. 178. The proper Queres word is "Pun-ama," but the corrupt version in Hakluyt has "Cuame." *El Viaje que hizo*, p. 9. This leads to an important misconception, as "Ku-a-ma" means "the people in the South." How the mistake was made, while still preserving a word of the Queres idiom, is a mystery, as Cuame is plainly as good a Queres word as Puname, but with an entirely different signification.

³ Cia is mentioned by Castañeda (*Cibola*, p. 110), who calls it "Chia," and says of it, "C'est un gros village, situé à quatre lieues à l'ouest du fleuve." Counting from Bernalillo, Cia lies about fifteen miles to the northwest. Jaramillo, *Relacion du Voyage à la Nouvelle Terre*, p. 371, also speaks of Chia.

⁴ There is considerable variation in dialect between the Queres spoken at Cia and that at Santa Ana. Between the latter dialect and that of Cochiti there is such a great difference that the people of the two villages understand each other with difficulty. There is more analogy between the dialects of Santa Ana and Acoma.

sprung from the cave dwellers at the Rito de Los Frijoles, like the Rio Grande Queres. The latter insist that all the Indians speaking their language are descendants of the tribe at the Rito; still, so long as the traditions of more distant branches do not confirm them, such assertions remain of doubtful value.

The Black Mesa of San Felipe is both long and broad, forming a triangular plateau which in extent and elevation resembles that on which the cone of the Tetilla rises between Santa Fé and Peña Blanca. Its width between San Felipe and Santa Ana is about nine miles, and about midway there is a considerable elevation, on whose summit stand the ruins of the second pueblo of Tan-a-ya or Santa Ana. This is first mentioned by Oñate in 1598 under its aboriginal name.¹ In the rebellion of 1680 it was without a priest, although it had a church and convent. The men of Santa Ana joined those of San Felipe in the massacres at Santo Domingo and in the Rio Grande valley; and the Lieutenant General of New Mexico, Alonzo Garcia, passed through it when he returned from Jemez and Cia with the priests whose lives he had saved.² Santa Ana was not molested by Otermin in 1681, as it lay too far away from the Rio Grande; but in the summer

¹ The *Obediencia de Santo Domingo* (p. 102) speaks of it under the name of "Tamy," as a pueblo of the Queres; again, in the *Obediencia de San Juan* (p. 115) it is called "Tamaya," and a village of the Cia group.

² The outbreak began at Jemez, and the Alcalde Mayor there, Luis Granillo, sent word to the Lieutenant General Garcia, who lived on a hacienda opposite the present site of Albuquerque, to come to his assistance. Garcia had only a few men; but with these he rescued Granillo, and the surviving priest of Jemez, as well as the missionary of Cia. He returned by way of Santa Ana, where he found only women and children. Upon his inquiring for the men, the women replied that they had gone out to kill all the Spaniards. *Diario de la Retirada*, 1680, fol. 51. Deposition of Luis Granillo: "Y allegamos al pueblo de Santa Ana, Indios de la misma nacion de los de Zia, y no hallandolos á estos, sino algunas Indias, y preguntandoles adonde estaban los varones, respondieron con mucho desdoro, y atrevimiento que habían ido á matar á todos los Españoles."

of 1687 Pedro Reneros de Posada, then Governor at El Paso del Norte, made a dash into New Mexico and appeared before it. Its inhabitants refused to listen to the summons to surrender, which compelled the Spanish commander to order an assault. After a desperate resistance, the village was carried, the woodwork of the houses set on fire, and several Indians perished in the flames.¹

The affair of 1687 had a salutary effect upon the Indians of Santa Ana. When Vargas appeared, they were on a mesa some distance to the north.² But they promised to return to their pueblo, and did so. Vargas found them peaceably established in their homes in the following year, 1693, though fearful of the Jemez, who threatened them with vengeance for their adherence to the Spanish cause. Whether the pueblo then stood where it now stands, or

¹ Siguenza y Gongora, *Mercurio volante con la Noticia de la Recuperacion de las Provincias del Nuevo México*, (Mexico, 1693.) p. 4: "Sucedióle Pedro Reneros, quien asoló el pueblecillo de Santa Ana, y desde él de Cia consiguió el volverse." The year is established by the original document signed by Posada, entitled *Sentencia dada contra diez Indios prisioneros del Pueblo de Santa Ana*, October 6, 1687 (MS.): "Dijo que por quanto abiendo hecho entrada á las probincias de la Nueva México y dado asalto en el pueblo de Santa Ana de la nacion Queres adonde sus moradores apostatas, luego que los sintieron, se pusieron en arma y pelearon con pertinancia y reseldia, y aunque se los hizo muchos requerimientos que rriendesen la obediencia á su Magd no lo quisieron . . . asta tanto que mandé poner fuego al dho pueblo y aun biendose abrasar algunos de ellos mas tinos, se entregaron á las llamas que rrendirla obediencia á su Magstad." Also Juan de Dios Lucero (*Peticion para Dispensa de Matrimonio*, 1688, MS.) speaks of the capture of Santa Ana as having occurred the previous year. I have no means of determining the population of Santa Ana in 1680. Vetancurt (*Crónica*, fol. 315) says it was "un pueblo pequeño," and that its inhabitants, together with those of San Felipe, amounted to over six hundred souls. Escalante (*Carta al Padre Morfi*, par. 9) also states that Posada went as far as Cia: "Llegó al pueblo de Cia, quitó algunos caballos y ganado menor, y se volvió al paso sin conseguir otra cosa."

² Escalante, *Relacion*, p. 131: "Hallábanse los Cias y de Santa Ana, en un pueblo que habían hecho de nuevo en el cerro Colorado, distante cuatro leguas de Cia." In *Autos de Guerra*, 1692, October 23, fol. 143, he describes the pueblo on the "Cerro Colorado." This may mean the pueblo opposite Jemez, which the Cias speak of as having been the first.

whether the people of Santa Ana had rebuilt the one on top of the mesa, I am not informed.¹

There were consequently three pueblos of the Santa Ana tribe; one near the Cangelon, which is pre-historic; one on the mesa, erected previous to 1598, and destroyed by Posada in 1687; and the modern one on the banks of the Jemez River. All three are called by the same name, Ta-may-a, but I have not examined either of the two ruined villages.

The course of the Jemez River, from its source five miles north of Jemez to its mouth, is through sandy expanses, although fertile when irrigated. Opposite Santa Ana the sand forms broad white hills, destitute of vegetation. The pueblo almost leans against the craggy wall of the extensive mesa of San Felipe. Higher up, the borders of the plateau recede to the east, and the country opens. On a dune above the river, eight miles northwest of Santa Ana, stands the present Queres village of Cia, or Tzia.

It is said to occupy the same site as in the days of Coronado, and its church is also said to be the one which the Indians ravaged in 1680. I have my doubts about the correctness of both these assumptions.² There are ruins in the vicinity, which I had not time to investigate, of former pueblos of the Cia tribe. Opposite the present town stand the remains of Ka-kan A-tza Tia, and north of the present Cia lies Ko-ha-say-a. I was told that in ancient times war broke out between the two villages, because the people of the former stole the girls of the latter. The people of Ka-kan A-tza Tia were driven to the south by an attempt of those of Ko-ha-say-a to burn their pueblo with turpentine, and the latter moved to the site of Cia. There are also traditions

¹ *Autos de Guerra*, 1693.

² *Autos de Guerra*, 1692 (fol. 143). Vargas found the pueblo completely destroyed by Cruzate. The site may be the same, but the church is probably a more recent edifice, though possibly erected on the old foundations.

about wars between the Cias and the Jemez, and between the Cias and their kindred of Cochiti, at a time when the latter lived on the Potrero Viejo. But I suppose these traditions allude to the hostilities that took place during the years 1694 and 1696, when the Cias espoused the cause of the Spaniards.

Castañeda, who mentions Cia, speaks of but one large village belonging to that tribe.¹ Espejo, who calls the Cias "Punames," mentions a cluster of five, the largest of which was called "Sia."² Oñate, sixteen years later, names four.³ In 1680, only one village was standing. The timely intervention of Alonzo Garcia saved the life of the missionary of Cia, Fray Nicolas Hurtado.⁴

¹ *Cibola*, p. 182.

² *Relacion del Viage*, p. 115.

³ He visited Cia on his way to Jemez, and spent the night of the first of August, 1598, in the former pueblo. *Discurso de las Jornadas*, p. 260: "Durmió aquel dia en el gran pueblo de Tria [Cia] ya dichó." In the *Obediencia de Santo Domingo* (p. 102) Cia is connected with the pueblos of "Comitre y Ayquiyñ," and in the *Obediencia de San Juan Baptista* (p. 115), with the villages of "Tamaya, Yacco, Tojagua y Pelchíu." Comitre is Tamita, and Tamaya is Santa Ana, while Yacco stands for "Y Acco," the Queres name for Acoma. This leaves three pueblos besides Cia.

⁴ *Diario de la Retirada*, fol. 42. Garcia on his way to Jemez met the Alcalde Mayor Granillo fleeing with the surviving priest of Jemez. He entered Cia, "Adonde hallaron al R. P. Definidor Fr. Nicolas Hurtado, ministro guardian de dicho pueblo de Cia, y considerando la muchedumbre de los enemigos Christianos, y el no tener las fuerzas que el caso pedía para la resistencia de dichos enemigos, me fué forzoso hacerle requerimiento al dicho pe Fr. Nicolas Hurtado para que luego saliese de dicho pueblo, como con efecto hicimos, y haciendo mifa los dichos Christianos repicaron las campanas dando grandes alaridos." On folio 51, the Alcalde Luis Granillo testifies: "Y de allí allegamos al pueblo de Zia, donde hallamos al Pe Difiñidor Fr. Nicolas Hurtado, ministro de aquel pueblo, que con tres Españoles estaba fortalecido en lo mejor del convento, y con las bestias encerrado dentro, y con nuestra ayuda fué Dios servido que escapasen con la vida, y se vinieron en nuestra compañía, y á causa tambien que los Indios de dicho pueblo habían salido, á asolar las casas de los Españoles, y cerca de dicho pueblo, asi que nos sintieron, que venian ya á egecutar en dichos religiosos, y Españoles su traicion, comenzaron á dar grandes alaridos, á cuyas voces y alaridos repicaron las campanas en el pueblo, y con gran peligro, y mu-

When Domingo Gironza Petriz de Cruzate marched into New Mexico in 1689, the Queres made a determined stand at Cia. The action fought there on the 29th of August was the most bloody engagement in the wars for the reconquest of New Mexico. Cia was stormed, completely wrecked, and the tribe decimated.¹ I have already stated that they proved faithful to the Spaniards afterwards.

chisimo trabajo salimos." It seems, therefore, that a few Spaniards were settled in the vicinity of Cia in 1680.

¹ I have not been able to find the official reports of this important expedition, which more than anything else contributed to dishearten the rebellious Pueblos. The earliest mention of it which I find is in the so called "Pueblo grants" of 1689. I copy from the *Merced de Pecos*, September 25, 1689: "Que por quanto en el alcance que se dió en los de la Nueva México de los Yndios Queres y los apostatas y los Teguas y de la nacion Thanos y despues de haber peleado con todos los demas Yndios de todos pueblos vn Yndio del pueblo de Zia llamado Bartolomé de Ojeda que fué el que mas se señaló en la vatalla acudiendo á todas partes, se rindio viendose herido de vn balazo. . . . Y dice el confesante que no que ya estan muy metido en terror, que aunque estaban ahilantados con lo que les había susedido á los de el puo de Zia el año pasado." The last sentence applies to the ill success of Posada, and it seems that the action of Cia was fought in 1689; the day and month are taken from Siguenza y Gongora (*Mercurio Volante*, p. 4), who gives the following report on the engagement: "Asegundó D. Domingo Gironza en gobernar aquel reino, y en los pocos años que fué á su cargo rindió á fuerza de armas á los de aquel pueblo (digo él de Zia) muriendo en la batalla, como seiscientos rebeldes, sin muchos otros, que se quemaron en sus propias casas, por no entregarse. Fué esto á veinte y nueve de Agosto de mil seiscientos y ochenta y nueve." The date is therefore the 29th of August, 1689. Escalante places the occurrence in September of that year. *Carta al Padre Morfi*, par. 9: "Por Setiembre del año siguiente entró D. Domingo Gironza á la misma reduccion de los rebeldes. Tuvo una sangrienta batalla en el dicho pueblo de Cia, en que los rebeldes se defendiéron con tal valor y desesperado arrojó, que muchos se dejaron quemar vivos sobre las casas por no rendirse; el numero de Queres, así del dicho pueblo como del de Santa Ana, y de otros que vinieron de socorro á los sitiados, que quedaron muertos en esta batalla, llegó á 600 de ambos sexos y de diferentes edades. Solo cuatro ancianos se cogieron vivos; en la misma plaza del pueblo fuéron arcabuzeados. No consta que en esta espedicion se hiciese otra cosa." That Cia was completely wrecked is proved by Vargas, *Autos de Guerra*, 1692, fol. 143. Escalante, *Relacion*, p. 132: "Pasó al pueblo de Cia que estaba sin gente y asolado por D. Domingo de Gironza. En él se halló una campana enterrada, que quedó del mismo modo hasta la otra venida."

North of the district claimed by the Cias begins the range, both ancient and modern, of a distinct linguistic stock, the Indians speaking the Jemez language. The Queres held and hold to-day about one half of the course of the Rio de Jemez.¹ The other half is a sandy valley, in which stands the Jemez pueblo. The antiquities of this tribe lie mostly in the mountains beyond, in and around the romantic gorges on the eastern slopes of the Sierra del Valle. West of Cia begins the dreary region that extends to the Rio Puerco. Still farther west, the Navajo reservation occupies the entire northwest of New Mexico. The Jemez River therefore constitutes a boundary between a district where history or tradition is associated with pre-historic remains, and one in regard to whose antiquities we have no such means of information.² To the latter region I shall refer in a subsequent chapter, devoting the one next following to a short review of whatever of antiquarian interest the Jemez district offers.

¹ To speak figuratively, since the issue of the so called grants to the Pueblos, each one has only its few square leagues; formerly they rather roamed over than actually held certain ranges.

² There are ruins on the west side of the Jemez, like Ka-kan-a-tza Tia, of which the origin is known. In the Navajo reservation I know of not a single ruin concerning which there exists a tradition or tale assigning its origin to a definite tribe. I hope, however, that the work done by Dr. Mathews among the Navajos will bring to light something more positive about the past of these ruins.

V.

THE COUNTRY OF THE JEMEZ.

THE Valles Mountains separate the northern section of the Queres district from that claimed by the Jemez tribe. Against the chain of gently sloping summits which forms the main range from the peak of Abiquiu to the Sierra de la Palisada in the south abuts in the west an elevated plateau, containing a series of grassy basins to which the name of "Los Valles" (the valleys) has been applied. Permanent streams water it, and contribute to make an excellent grazing region of this plateau. But the seasons are short, for snow fills the passes sometimes till June, and may be expected again as early as September. During the three months of summer that the Valles enjoy, however, their appearance is very lovely. Heavy dews fall daily, and rains are common. The high summits are seldom completely shrouded for more than a few hours at a time, and as soon as the sun breaks through the mist, the grassy basins shine like sheets of malachite. Flocks of sheep dot their surface, and on the heights around the deep blue tops of the regal pines mingle with the white trunks and light verdure of the tall mountain aspens. It is also the country of the bear and the panther, and the brooks teem with mountain trout.

But for agriculture the Valles offer little inducement; for although the soil is fertile, ingress and egress are so difficult that even potatoes, which grow there with remarkable facility, cannot be cultivated profitably. The descent to the east

towards Santa Clara is through a long and rugged gorge, over a trail which beasts of burden must tread with caution, while towards Cochiti the paths are still more difficult. On the west a huge mountain mass, the Sierra de la Jara, interposes itself between the principal valley, that of Toledo, and the Jemez country. Both north and south of this mountain the heights are much less considerable; still the clefts by which they are traversed are none the less narrow, and the traveller is compelled to make long détours in order to reach the Jemez River.

The country inhabited by the Jemez tribe lies west of the Valles, and its upper portions might be described as similar to the region about the Rito de los Frijoles and south of it, were it not that its principal cañons run from north to south, or parallel to the mountain chains, instead of transversely, as in the Queres district. The deep clefts through which the Rio de San Diego, and west of it the Rio de Nuestra Señora de Guadalupe, converge to form the Jemez, are gorges exceeding in depth any of those on the eastern flank of the Valles chain; there is barely room for the trail beside the roaring torrent. Dense forests and shrubbery fill the bottom and line the streams. On both sides the variously colored walls rise to appalling heights; sometimes in crags, pinnacles, and towers, but mostly in huge steps, the highest of which terminate with the long sharp edge characteristic of the flat-topped mesa formation.

While the mountainous parts of the Queres range are dry, the Valles constitute a water supply for the Jemez country. Two streams rise in it, the San Antonio on the eastern flank of the Jara mountain, and the Jara at the foot of the divide, over which crosses the trail from Santa Clara. These unite soon to form the San Antonio "river," which meanders through the Valles de Santa Rosa and San

Antonio for seven miles in a northwesterly direction, and enters a picturesque gorge bearing the same name, and then gradually curves around through groves until, at La Cueva, it assumes an almost due southerly direction. One or two more brooks increase its volume on the way, descending directly from the mesa pedestal of the Jara Mountain, and its name is changed from San Antonio to the Rio de San Diego.¹

I have not seen the head-waters of the Guadalupe Creek, which rises in what is called the Nacimientto district, farther west. Its volume, however, is inferior to that of the San Diego, which may be considered as the main artery of the Jemez country.

The water is clear, limpid, and cool. This is the more remarkable, since all along the eastern rim of the Valles, in the gorges traversing it, on the banks of the San Diego, and even in the very bed of that river, thermal springs rise in great numbers. The Jemez district is filled with medicinal sources, hot as well as cold. In the gorge of San Antonio rises a spring, the temperature of which is 110° F.² About five miles south of it are mud-baths, on the heights that separate the Valles from the San Diego gorge. In that gorge, ice-cold soda springs issue near the river bed, and a short distance above the bathing establishment a huge cylindrical dam traverses the stream, in which steaming currents and cold

¹ The average elevation of the Valles is 8,000 feet, but they rise as high as 8,500. The springs of San Antonio lie at an altitude of 8,586 feet; the Jara Mountain, called also Cerro Pelado, is 11,260 feet high, and the hot springs of San Diego are a little over 6,000. These figures are taken from the topographical map of the United States Geographical Survey. The fall from San Antonio amounts to at least 2,000 feet in seventeen miles.

² The volume of water is very considerable, issuing from the slope on the south side of the gorge at an elevation of perhaps 200 feet. It is considered as of great value for rheumatic complaints, and although no accommodations are to be had there, it is frequently visited by the people of the country.

streams flow parallel to each other, neither affecting the temperature of the others, although only a few inches of rock separate them. At the baths cold sulphur waters lie close to the hot springs. The value of the Jemez springs is abundantly proved in cases of rheumatism and eczema. The principal springs contain lithia, but are not arsenical, like those at the Ojo Caliente of Joseph. Their temperature rises as high as 168°. Chloride of sodium is the prevalent mineral ingredient.¹

Four miles above the hot springs of Archuleta the character of the San Diego Cañon changes. It widens and the forests disappear. Huge deposits of native sulphur are seen above the river banks. The soil is covered with yucca, cacti, and other plants characteristic of the flora of New Mexico. The change is striking, from the picturesque wooded wilderness through which the stream leaps and rushes, to a bleak channel between walls of enormous height, where it flows quietly, while above tower the gigantic mesas with bare walls of light yellow, ashy gray, and red. It continues to maintain this character for twelve miles farther, narrowing towards the end. Five miles north of the present pueblo of Jemez, or Ual-to-hua, the mesas terminate in a sharp point over five hundred feet in height. Below this point the Guadalupe unites its waters with those of the San Diego, forming the Jemez River. The country opens to the south, becoming sandy and barren-looking, resembling the Rio Grande valley in bleakness. The gigantic mesas recede to the eastward, where they loom up like solemn monuments behind the arid hills that separate Jemez from Peña Blanca on the Rio Grande.

Thus the Jemez country is divided into two sections, — the

¹ In 100 parts of water, chloride of sodium, 0.1622; sulphate of soda, 0.0035; carbonate of lime, 0.0641; carbonate of magnesia, 0.0103; potassa, lithia, silicic acid, sulphate of lime, traces. Analysis by Oscar Loew.

northern a series of plateaux intersected by deep clefts, and the southern constituting the low lands. This geographical division is in part also historical, since the Jemez tribe, when first discovered by the Spaniards, clustered around the hot springs, although at present they dwell in the sandy valley of the Jemez River above Cia.

I have made but two short visits to the Jemez country, and had neither time nor opportunity for examining its ruins, except superficially. The first vestiges which I noticed, when coming from the Valles, were at La Cueva, five miles below San Antonio. I was informed by various persons that pottery had been found at that place; also the remains of small houses of stone. Lower down, the cañon becomes too narrow and rugged for habitation; there is no space for cultivation as far as the cold soda springs. On the mesas right and left there are said to be traces of ruins; but the extensive ones only begin about the springs. In the bottom, about half a mile to the north of the baths, on a gentle slope descending to the river's edge from the east, lie the ruins of the old pueblo of Gin-se-ua, with the stately old church of San Diego de Jemez.

The pueblo was built of broken stone, and formed several hollow quadrangles at least two stories high. It contained about eight hundred inhabitants. The church is a solid edifice, the walls of which are erect to the height of ten or fifteen feet, and in places nearly eight feet thick. It is not as large as the one at Pecos, and behind it, connected with the choir by a passage, rises an octagonal tower, manifestly erected for safety and defence. Nothing is left of the so called "convent" but foundations. The eastern houses of the pueblo nearly touch the western walls of the church, and from this structure the village and a portion of the valley could be overlooked, and the sides of the mesas easily scanned.

Ginseua is an historical pueblo. It first appears under the name of Guimzique in 1626.¹ It seems that it was abandoned in 1622, on account of the persistent hostility of the Navajos, who had succeeded in scattering the Jemez tribe. In 1627 Fray Martin de Arvide obtained permission from his superior, the Custodian Fray Alonzo de Benavides, to attempt to gather the tribe again in its old home. The efforts of the monk were successful, and the Jemez Indians settled in two of their former pueblos, — at Ginseua and at Amoxiumqua. Chapels had probably been built at both these places previous to 1617, and the Jemez tribe reoccupied both sites in place of the numerous pueblos of small extent which it had inhabited previous to 1627.² Amoxiumqua lies on the

¹ Fray Gerónimo de Zárate-Salmeron, *Relaciones de todas las cosas que en el Nuevo México se han visto y sabido*, MS., par. 11: "Hice esta diligencia con los capitanes de la nacion Henex, y llamando al capitan mayor del pueblo de Amoxunqua, llamado Dn Francisco Guaxiunzi y al capitan mayor del pueblo de Quiunzique, llamado Dn Alonzo Pistazondi y Dn Gabriel Zanou su hermano y otros viejos." Fray Zárate lived as missionary among the Jemez in 1618. Introductory letter: "Habrá 8 años que no sacrifique al Señor entre los Ynfieles del Nuevo Mexico. Y habiendo deprendido lengua de la nacion de los Yndios Hemeos adonde compuse la Doctrina Cristiana." It seems that Ginseua and Amoxiumqua were then the principal pueblos of the Jemez tribe.

² Benavides, who came as Custodian to New Mexico in 1822, says in his *Memorial*, p. 29: "Passando este rio á la parte del Occidente á siete leguas se topa con la nacion Hemes, la qual quando entré por Custodio, se aúa desparado por todo el Reino, y estaua ya casi despoblada, por hambre y guerra, que la ivan acabando, adonde los mas estauan ya bautizados, y con sus Iglesias, con harto trabajo, y cuidado de algunos religiosos, y assi procuré luego reduzirla, y congregarla en la misma Provincia, y puse religioso, que con cuidado acudió á ello, y lo auemos congregados en dos pueblos, que es en el de San Joseph, que todavia estaua en pié, con una muy suntuosa y curiosa iglesia, y conuento, y en el de San Diego, de la Congregacion, que para este efeto fundamos de nuevo, trayendo allí los Indios que aúa de aquella nacion, que andauan descarriados." The words "de la Congregacion" seem to indicate that the first mission at San Diego de Jemez was due to the Capuchins! It results also from this that the old church at San Diego was built *after* 1622, and probably after 1626. Comparing the above statement of Benavides with that of Fray Zárate, it seems probable that Amoxiumqua was San Joseph de los Jemez, and was never completely abandoned until later on. Vetancurt (*Menologio*, p. 76), speaking of Fray

mesa that rises west of the springs. South of it is another ruin, and still another called Ash-tyal-a-qua.¹ The ascent to the mesas is very steep and long.

At the present stage of our historical knowledge it is impossible to establish with any degree of certainty the number and location of the Jemez pueblos that were inhabited in the early days of Spanish colonization. At the time of Coronado it is stated that there were seven villages of Jemez and three at the hot springs.² Oñate, who visited Jemez and its thermal sources on the 3d, 4th, and 5th of August, 1598, says there were eleven villages in all, of which he saw eight.³ In two of

Martin de Arvide says: "Viviendo en el convento de San Lorenzo de los Pecurios oyó decir que en los Hemes se habían ido los Indios á los montes y andaban vagos por aquellas sierras, y llevado del fervor de su espíritu, con licencia del reverendo Padre Fran Alonso de Benavides, Custodio, y facultad del Gobernador Don Felipe Zotilo, subió entre los fugitivos y con la benignidad de Padre los exhortó y los congregó á sus pueblos." San Diego de los Emex is mentioned also in 1643, in the *Carta de Justicia, Autos y Comisson, cometida al Sargento Mayor Franco Gomez* (MS.).

¹ I am still in doubt about the true location of Ashtyalaqua, but I believe it was situated on the mesa. As to San Joseph de los Jemez I incline to the belief, as above stated, that it was Amoxiumqua. For the statement ascribing the first establishment of churches among the Jemez to the years preceding 1617 I refer to Zárate, *Relaciones*, Introductory letter to Benavides, *Memorial* (p. 29), and to the *Cédula Real* of May 20, 1620 (MS.), in which the King says: "El cabildo de Santa Fé del Nuevo México en carta que me escribió en 3 de Octubre del año pasado de 617, refiere lo que sus vecinos han trabajado para el asiento de aquella nueva poblacion, y lo que han gastado en ella, y que han venido en conocimiento de nuestra Santa Fé, mas de catorce mil almas siendo otras tantas las que estan para recibir el Santo Bautismo, y que hay once yglesias fundadas con pocos ministros." It is difficult to locate these eleven churches without including two among the Jemez.

² Castañeda, *Cibola*, p. 137. Francisco de Barrionuevo is the name of the Spanish officer who first visited the Jemez in the fall of 1541. "Cet officier visita deux provinces; l'une se nommait Hemes, et renfermait sept villages." Further on (p. 182), he assigns seven villages to Jemez and three to Aguas Calientes.

³ I do not mention Espejo, who also visited the "Emeas" in 1582, (*Relacion del Viage*, p. 116,) since he made but a short stay there. The dates for Oñate are taken from *Discurso de las Jornadas*, p. 261: "A quatro, bajamos á otros pueblos de los Emmes, que por todos son honce, vimos los ocho, . . . á cinco, ba-

the "Acts of Obedience and Vassalage" of the same year, nine and eight pueblos respectively are mentioned. Nearly all the names are unrecognizable.¹ In my conversations with the Jemez Indians I noted the names of seventeen of their old pueblos, but was unable to ascertain their location, except that they lie in the mountains north, northeast, and northwest of their present village.²

The few fragments of Jemez traditions I was able to gather are confused, and somewhat conflicting. They speak of a lagune lying in the north, to which the soul travels after death in four days, which they call Ua-buna-tota. There, they claim, the Jemez had their origin. But they also say that the people of Amoxiumqua dwelt first at the lagune of San José, seventy-five miles to the northwest of Jemez, and that they removed thence to the pueblo of Añu-quil-i-jui, between the Salado and Jemez. In both of these places there are said to be ruins of former villages. All these bits of tradition indicate a migration from the north. There are also tales about a remarkable man whom the Jemez call Pest-ya So-de, who

jamos al húltimo pueblo de la dicha provincia, y vimos los maravillosos baños calientes que manan en muchas partes y tienen singulares maravillas de naturaleza, en aguas frías y muy calientes; y muchas minas de azufre y de piedra alumbré, que cierto es, mucho de ver." This is the first description, to my knowledge, that was ever given of the San Diego hot springs, and of the mineral springs and other wonders of the Cañon.

¹ *Obediencia, etc. de Santo Domingo*, p. 102. "Yxcaguayo, Quiamera, Fia, Quiusta, Leeca, Poze, Fiapuzi, Trivti, Caatri." *Obediencia de San Juan Baptista*, p. 114: "Yjar, Guayoguia, Mecastria, Quiusta, Ceca, Potre, Trea, Guatitruiti, Catroo." The misspelling is manifest, and has certainly contributed more than anything else to render the names unrecognizable.

² The following are the names of these seventeen pueblos, as given to me by an Indian at the pueblo of Jemez: Ginseua (San Diego), Amoxiumqua on the mesa between the two streams of San Diego and Guadalupe, Asht-yalaqua or Patoqua (stated to me as having been San Joseph, which I doubt), Quia-tzoqua, Ham-a-qua, Tya-juin-den-a, To-ua-qua, Quia-shi-dshi, Pe-cuil-a-gui, Se-toqua, Añu-quil-i-gui, Osht-yal-a, No-cum-tzil-e-ta, Pem-bul-e-qua, Bul-itze-qua, Uä-hä-tza-e, Zo-lat-e-se-djii, and Se-shiu-qua. Añu-quil-i-gui lies north of Jemez; of the others I can only fix the site of the first three.

derived his "medicine" from the sacred lagune of Ua-buna To-ta, and who introduced the various "customs," as the rites of the secret societies are called in the tribe. He was a famous hunter, and may be the equivalent of Pose-ueve and Pusha-iankia.¹

To return to solid historical ground, it is certain that the numerous small villages of the Jemez were, soon after the establishment of Spanish rule, gradually consolidated into two, and finally into one, larger pueblo.² Amoxiumqua was abandoned previous to 1680; but I incline to the belief that a village of which the ruins are visible on the delta formed by the junction of the San Diego and Guadalupe, was San Juan de los Jemez, and inhabited at that time.³ The Jemez tribe

¹ And of the Push-a-ya of the Queres. I intend to return to this important mythical personage at the close of this Report.

² Vetancurt (*Crónica*, p. 319) says: "De cinco pueblos se hizo uno."

³ I infer the existence of two villages in 1680 from the fact of there being two priests among the Jemez at that time. This is by no means sufficient evidence, still it seems to imply the existence of a "Visita," besides the mission proper of San Diego. San Juan de los Jemez, in the documents relative to the reconquest by Diego de Vargas, appears as an abandoned pueblo, but the fact that a patron saint had been assigned to it shows that it had been occupied during the times anterior to 1680, and that a church or chapel had been erected in it. One of my informants at Jemez assured me that there were ruins on the delta of a pueblo and church, and that these were those of San Joseph. The Indians, however, were positive in locating San Joseph de los Jemez, much higher up on the mesas proper. I have carefully examined all the records of Vargas at Santa Fé, and incline to the belief that San Juan lay on the delta, and not on the heights. In the *Autos de Guerra* of 1696 (MS.) are three letters written to Vargas, giving an account of the bloody action with the Jemez Indians of June 29th, 1696, fought partly in the San Diego Cañon and partly at its mouth, by a Spanish detachment under command of the Captain Miguel de Lara and the Alcalde Mayor Fernando Duran de Chavez, and Indian auxiliaries of Cia. The date of these letters is July 1. The Alcalde Mayor says, *Carta al Gobernador Don Diego de Vargas*, that they attacked the Indians on the mesas, and that they resisted fiercely: "I nos fuimos retirando asta el pueblo de S. Jua, i como nos uian retirar gusgaban ellos qe ibamos guiendo i asi qe salimos á lo esconbrado gunto al mesmo pueblo rebolvimos la rienda i les dimos vn apretton." This shows that San Juan was on a site where a cavalry charge was possible. The Captain Miguel de Lara, *Carta*: "Saliendo por la Siera que está de los Jemes á la parte

was always much exposed to incursions of the Navajos, but, as is often the case with Indians, they sometimes sided with their enemies against the Spaniards, to whom they really owed their safety. In the middle of the seventeenth century a conspiracy on the part of the Jemez was detected, in which they had joined the Navajos. It was repressed with just severity, the Governor, Don Fernando de Arguello, causing twenty-nine Indians to be hung, as they had already killed one Spaniard by the name of Diego Martinez Naramjo, and an outbreak on a larger scale was imminent.¹ A few years

del poniente emboscados con determinasion de ber si podíamos cojer en las milpas alguna jente, quisó nuestra fortuna que adonde fuimos á dormir aquella noche topamos los rastros que abian crusado jente en cantida para centro, dejamos el rumbo y los seguimos entendiendo que estarían en el pueblo de San Juan y no estaban si no que crusaron para la mesa, de allí determiné yr á reconocer el peñol donde estaba la xente y luego que llegamos nos resibieron con polbora y balas . . . de allí salí asta el pueblo de San Diego lidiando con ellos sin poder matar un Indio. . . . Salí de allí para San Juan y como dos tiros de arcabus de allí nos salió una emboscada y biendo la imposibilidad me bine por todo el camino paso á paso con la xente y mas abaxo nos salió otra y al llano." Bartolomé de Ojeda, *Carta*: "Fueron á dar á la mesa adonde estaban esos enemigos, luego tratamos de ir saliendo porque crusaban muchicimos rastros al pueblo de San Juan y biniedo que beniamos, nos binieron coqueando y nostros retirandonos á tierra llana dandoles lugar a que salieran." This indicates: 1. That the pueblo of San Juan was below San Diego; 2. That it lay near or in front of the mouth of the cañon. But the following passage in the *Auto* of Miguel de Lara of August 5, 1696, implies the contrary: "En el pueblo de San Juan de los Jemes que está en la mesa de arriba." Still this is obscure, since it may signify a village on the mesa above that of San Juan, and not San Juan proper. In the *Autos de Guerra* of 1694, Vargas, when speaking of the pueblos on the high mesas which he stormed, nowhere applies to them the name of San Juan (fol. 60 to 84). Escalante (*Relacion*, p. 159) remarks that, when Vargas made the desperate assault upon the formidable mesa on July 24, 1694, he ascended with the main body by a trail "que cae al Sudueste, y es la mas inmediata al pueble antiguo de Gemex." This would indicate that that ancient village lay at the foot of the point, and between the two rivers. On page 173, concerning the uprising of 1696, he states: "Los Gemex de San Diego y San Juan se internaron y aseguraron en la sierra de Gemex." But, after all the testimony quoted, I must leave the final settlement of the location of the pueblo of San Juan to future investigations.

¹ *Ynterrogatorio de Preguntas*, 1681, MS. The Maestro de Campo Juan Dominguez de Mendoza testified: "Y en particular en el tiempo de D. Fernando

later Governor Hernando de Ugarte y la Concha put down another attempt at uprising, in which the Jemez were confederated with the Navajos and some of the Tigua villages.¹ During those occasional efforts against the Spaniards in which the Jemez and the Navajos were allies, the latter frequently made themselves a terrible scourge to the former, thus proving the fickleness of Indian alliances.

It is probable that the two pueblos were still inhabited in 1680, for there were two missionaries among the Jemez when the great rebellion broke out in that year,² besides a few Spaniards as an escort with the priests. One of the missionaries, Fray Juan de Jesus Maria, was probably one of the first victims in that terrible massacre. He was killed at Ginseua or San Diego de Jemez, near the hot springs, and buried by the Indians close to the wall of an estufa in the first square of the pueblo.³ The other missionary, Fray Francisco Muñoz,

de Arguello, que en el pueblo de Xemes ahorcó por traidores confederados con los Apaches veinte y nueve Xemes, depositando cantidad de ellos por el mismo delito, y haber muerto á Diego Martinez Naranjo." The Sargento Mayor Diego Lopez Zambrano states: "Desde el Gobernader D. Fernando de Arguello, que ahorcó, azotó, y despositó mas de quarenta Yndios." Don Fernando de Arguello was Governor of New Mexico between the years 1643 and 1646.

¹ *Ynterrogatorio, etc.* Testimony of Mendoza: "Y en el tiempo del Señor General Hernando de Ugarte y la Concha, se ahorcaron por traidores nueve de los dichos pueblos, confederados con los Apaches, Yndios Tiguas de la Ysleta, y del pueblo de la Alameda, San Felipe, Cochiti, y Xemes." The copy in my possession has "Teguas de la Ysleta," but it should be "Tiguas." This affair of the time of Governor Ugarte took place in 1650, and the conspiracy, according to the statements of the Indians themselves, was intended to embrace all the pueblos, although not all entered into the plot. *Interrogatorios de varios Indios, 1681, fol. 135.*

² The priests were Fray Juan de Jesús and Fray Francisco Muñoz.

³ Vetancurt (*Crónica*, p. 319) describes the murder of this missionary as follows: "Aquí, con sentimiento de muchos del pueblo que defendían á su ministro, que veneraban por padre y lo procuraron defender, sacaron á la plaza al reverendo Padre Fray Juan de Jesús. . . . Hincado de rodillas, con actos de amor de Dios, esperaba su santa voluntad con un Cristo en la mano, en interin que altercaban en su defensa; cuando uno de los que le asistían, con una espada le pasó los pechos." Also *Menologio*, p. 275. Fray Francisco de Ayeta, *Nombres, Pu-*

with the Alcalde Mayor, Luis Granillo, and three soldiers, succeeded in escaping in the direction of Cia, hotly pursued by the Indians. But the Lieutenant-General, Alonzo Garcia, with a few mounted men, rescued them at midnight.¹

trias, y Provincias, de donde son Hijos los veinte y un Religiosos que han muerto los Indios Apostatas del Nuevo Mexico, MS., in his letter to the Viceroy, dated Sept. 11, 1680. The remains of Fray Juan de Jesús were exhumed by Diego de Vargas on the 8th of August, 1694. They were found in the first square of the pueblo close to an estufa, and showed that the body had been pierced by an arrow. The shaft of the arrow was found with the skeleton. *Certificazion de los Huessos del Venerable Pe Fray Jua de Jesús*, August 11, 1694, MS.: "Entrando en la primera plaza donde se hallaba la estufa, que señalan á un lado de ella los dichos Indio é India, se halla enterado dicho cuerpo, . . . se halló al levantarlo por las espaldas y parte del espinazo, tener una punta de jara del tamaño de poco mas de un jeme, cuyo palo estaba al parecer en su mero color del que usan y traen los Indios para herir y matar, de dicho genero de flechas."

¹ I have already alluded to this in the previous chapter. The Alcalde Mayor Granillo says of it (*Diario de la Retirada*, fol. 50): "Asistiendo en el pueblo de Indios Xemes tuvo noticia y aviso cierto de un Indio llamado Lorenzo Muza que había entrado un embajador de los enemigos de nacion Xemes, el qual entró en dicho pueblo cantando la victoria, y diciendo, ya matamos al Gobernador de los Españoles, y á otros muchisimos Españoles, y no ha de quedar ninguno vivo, porque es muchisima la cantidad de enemigos así Apaches infieles, como todos los Christianos en general, y así coged las armas y natad Estos Españoles y Frayles que hay aquí, y así con efecto lo hicieron los dichos Indios Xemes, pues viendo el religioso, dicho Alcalde Mayor, y tres soldados que tenía en compañía, montarnos á caballo para retirarnos, envistieron los Indios Xemes con nosotros con tal osadía que nos vinieron siguiendo mas de dos leguas así ellos peleando como nosotros resistiendo, en cuya ocasion, fué Dios nuestro Señor seruido que nos encontrase el dicho Teniente General." The Lieutenant-General Garcia states (fol. 42), that the Jemez pursued the fugitives: "Hasta el pueblo de Cia." On folio 39, he says he met them "en el campo como una legua del pueblo."

The above statements have a bearing upon the question whether there were two Jemez pueblos inhabited in August, 1680, and where they were located. Of one of them we are certain, — San Diego, in the Cañon and about twenty miles north of Cia. Had Fray Juan de Jesús been in the same village as the Alcalde Mayor and his three men, the Indians could not have taken him quietly out of the convent and held a long discussion over his fate. Luis Granillo was not to be trifled with in such a manner. He would have defended the priest at all hazards, and could have done it, and would have mentioned it in his testimony. On the contrary, he says that a messenger from the "Jemez enemies" entered the pueblo, shouting victory and bringing the news of the success of the out-

When Otermin made his unsuccessful campaign into New Mexico in the fall and winter of 1681, the Jemez retreated to the mesas.¹ They soon returned, however, to retire again to the heights, — possibly upon the approach of Don Domingo Gironza Petriz de Cruzate in 1688. In 1692 Vargas found them in a large pueblo on the top of one of the mesas, and he succeeded after long parleyings in entering their village. The people displayed marked hostility, however, and it required all the tact and courage of the Spanish commander to prevent an outbreak while he was there. He succeeded in conciliating them at last, as well as the Queres of Santo Domingo, who were in their company, and one hundred and seventeen children were baptized on the spot. The Jemez gave the usual promises to behave well in the future, while firmly determined, as the sequel proved, to resist the Spaniards to the utmost.²

I have already stated that the southern neighbors of the Jemez, the Queres of Cia, Santa Ana, and San Felipe, remained true to the Spanish cause, and that the Jemez therefore began to threaten, and finally to make war upon

break. Hence there was still another pueblo of the Jemez besides the one in which Granillo was stationed. The distance of that pueblo from Cia did not exceed four leagues, that is, at most, twelve miles, which corresponds to the interval separating Cia from the ruin on the delta between the Guadalupe and San Diego streams. Escalante (*Relacion*, p. 173) says of the outbreak of 1696: "Los Gemex de San Diego y San Juan se internaron, y aseguraron en la sierra de Gemex." I therefore believe that San Juan de los Jemez, was inhabited in 1680, as well as San Diego, and that it lay on the delta below the point where the high mesas terminate.

¹ *Ynterrogatorio de Preguntas, and Interrogatorios*, MS.

² *Autos de Guerra*, 1692, fol. 145. On the evening of the 24th of October he went from the Cerro Colorado to the foot of the mesa where the Jemez dwelt, estimating the distance at two long leagues. On the day following he ascended the mesa "cuya suvida es muy mala," and he describes the pueblo on its top as follows: "Reconozí tiene dos plazas y en cada vna quatro quartteles qe vienen á estar guarnezidas y zerradas teniendo vna entrada la vna de ellas qe passa á la otra."

them. This occurred in the fall of 1693 and the spring of 1694.

Diego de Vargas visited the Jemez on their mesa a second time on November 26, 1693.¹ They reiterated their false promises of fidelity, and as soon as the Spaniards turned their backs sent threatening messages to Cia and Santa Ana, and began to molest the inhabitants by driving off their stock. Vargas at last, after having chastised the northern Pueblos and made several unsuccessful attempts to storm the Black Mesa of San Ildefonso, turned against the Jemez also. On his way thither he received a message to the effect that, on the 21st of July, (1694,) the Jemez and Navajos had attempted to surprise Cia, killing four of its inhabitants, but had been finally repulsed.²

Vargas, as soon as he reached the friendly Pueblos of Santa Ana and Cia, held a council with the leading men of both villages, and then marched with his force, said to have numbered one hundred and twenty Spaniards and some auxiliary natives, for the mesas above the San Diego Cañon. He left Cia at eight o'clock at night, on the 23d of July, and at a distance of four leagues, near the junction of the two streams, divided his men into two bodies. One of these, consisting of twenty-five Spanish soldiers under command of Eusebio de Vargas and the Indian allies, was to enter the gorge of San Diego and climb the mesa on a dizzy trail, so as to reach the rear of the highest plateau, while the main body, led by Vargas himself, ascended from the southwest. The Spanish commander had ascertained that the Jemez had evacuated their village on the

¹ *Autos de Guerra*, 1693, fol. 50. He went from the mesa of the Cias to "la Cañada de los Xemes en cuya messa tienen su pueblo." It seems, therefore, that the Jemez, after having abandoned their villages below, probably after 1688, remained on the mesas until 1694.

² Bartolomé de Ojeda, *Carta d Don Diego de Vargas*, MS., in *Autos de Guerra* of 1694, fol. 58. He says that the men of Cia killed one of the captains of the Jemez.

mesa, and retired to a still higher location north of it.¹ The operations were completely successful, and the Indians were taken between two fires; but they offered a desperate resistance. The total number killed on this occasion amounted to eighty-four, five of whom perished in the flames, and seven threw themselves down the cliffs rather than surrender.² Vargas remained on the mesas until the 8th of August, removing gradually the considerable stores found in the villages, and the prisoners, who numbered three hundred and sixty-one. Then, setting fire to both villages, he withdrew to San Diego, and thence to Santa Fé.³ During his stay on the mesas he discovered a third pueblo, recently built there by the people of Santo Domingo, who had joined the Jemez tribe upon the approach of the Spaniards. That village is said to have been situated three leagues farther north, so that, within a distance of about twelve miles from the southern extremity, three pueblos had been constructed between 1688 and 1694, all of which were abandoned after the latter year.⁴

¹ *Autos de Guerra*, July 23, 1694, fol. 60: "Dijeron haver por las espaldas del peñol donde se han mudado los reveldes Xemes dejando su pueo de la messa vn camino qe por el sin ser sentida la gentte yndiana puede suvir y que para hazerlo y yr resguardada es prezisso mande con ella yr veynte y zinco soldados con vn cauo y que el rresto de dho campo podía yr y suvir por la qe tienen dhos Yndios para bajar á sus milpas como al dho puo de la messa qe han dejado qe será su distancia de poco mas de vna legua desde la dha messa y suvida para dho peñol." He marched (fol. 62) "para el peñol poblado de los Xemes reveldes por las espaldas cuya travesía sería de los leguas largas para tomar el rumbo y suvida de el . . . y hauydo andado al parecer de quatro leguas largas serían la vna de la noche quando se diuidió la dha gentte qe hauía de hazer dha ymbazon por dho rumbo yendo el dho Capitan Evseuio de Vargas y ella la gentte y campo que quedaua conmigo la haría por la suvida prinzipal de la messa del pueo des poblado." Escalante, *Relacion*, says that Vargas ascended from the southwest.

² *Autos de Guerra*, fol. 63, 64: "Á las quatro de la tarde todo estaba terminado."

³ *Ibid.*, fol. 81 to 84.

⁴ *Ibid.*, fol. 70 to 77.

These historical facts warn the investigator not to take all the ruins in the Jemez region for those of pre-historic settlements. At least ten of them are those of villages that were abandoned only between 1598 and 1680, and three, perhaps four, those of pueblos built, occupied, and forsaken between 1688 and 1694. It is possible that some ruin may be a reconstruction of an ancient pueblo, or, it may be, built with material taken from some ancient ruin, so that the original character of the remains has become transformed by modern intrusion, especially in manufactured articles. These are points which the archæologist should not lose sight of when, as I sincerely hope, the ruins of the Jemez region may be made the object of a thorough study.

For the sake of completeness I will add here that San Diego de Jemez was reoccupied after 1694, and inhabited until June, 1696. Again a priest took up his residence at the pueblo, Fray Francisco de Casaus, otherwise known as Fray Francisco de Jesús. He soon noticed the evil designs of his Indian parishioners, and gave repeated warning to his superiors.¹ Vargas, however, paid no heed to them, and on the 4th of June of that year the last important insurrection of the Pueblos broke out. The priest of Jemez was murdered, and the tribe again fled to the mountains.² They had not time, however, to construct a new village on the mesas, but only to rear temporary shelter. Their first step was to secure assistance from the Navajos, from Acoma, and from Zuñi, and to make hostile demonstrations against Cia, Santa Ana, and San Felipe. There was a small Spanish detachment, commanded by the Captain Miguel de Lara, stationed at Cia, and that officer, together with the Alcalde Mayor of

¹ *Peticion del Defnitorio del Nuevo México á Don Diego de Vargas*, March 13, 1696. *Representacion del Defnitorio*, March 22, 1696, MS.

² This event is too well known to require special authorities to be quoted.

Bernalillo, Don Fernando Duran y Chavez, took the field against the superior numbers of the insurgents on the 29th of June. A fierce conflict took place, partly in the San Diego Cañon, partly at the ruins of the pueblo of San Juan, in which the Jemez and their allies were routed with the loss of thirty men.¹ This defeat broke up the confederacy with Acoma and Zuñi, and caused the Jemez to flee to the Navajo country. When Lara reconnoitred the mesas in August following,² they were deserted. For several years the Jemez remained among the Navajos, until they finally returned to their old range, establishing themselves at or near the site of their present village.

In regard to the artificial objects found at the Jemez ruins, I refer to the splendid collections made for the Smithsonian Institution by the indefatigable Mr. Stevenson, and to his description of them.³ On the site of Ginseua I noticed a coarsely glazed pottery, obsidian, and flint.

In conclusion, I would call attention to the name of one of the old Jemez pueblos, given to me by the Indians as "Pe-cuil-a-gui." "Pä-cuil-a" is the name for the tribe of Pecos, and the Pecos spoke the Jemez language. It would be well to investigate whether Pe-cuil-a-gui designates a Jemez pueblo inhabited previously to the secession of the Pecos. The division of the Jemez into two branches, separated from

¹ *Autos de Guerra*, 1696, fol. 70 to 94. The letters of the Alcalde, of Miguel de Lara, and of Bartolomé de Ojeda. The last states the loss of the enemy at forty killed; Lara, at only twenty-eight. It is singular that Escalante, who had access to the official papers at Santa Fé, makes no mention of this engagement, which was the most bloody one of the war, and at the same time the most important, since it broke up the Jemez tribe and frightened the Acomas and Zuñis to such a degree as to cause them to withdraw their warriors. Of the Acomas eight were killed, of the Zuñis none.

² *Autos de Guerra*, fol. 14. Lara captured an Indian, who, in his deposition, stated that the Jemez had mostly fled to the Navajos, and that only a few families were with the fugitive Queres from Cochiti.

³ *Report of the Bureau of Ethnology*, 1880-81, p. 417.

each other by the ranges of two distinct and different linguistic stocks, is an interesting phenomenon, though not unique in the ethnography of New Mexico. It occurred long before the sixteenth century. Nor should it be overlooked, that, according to the investigations of Mr. Gatschet, the Jemez and Pecos language belongs to the same group as the Tehua, Tigua, and Piro idioms, while the Ques, which intervened between the Jemez, Tanos, and Pecos, has not yet been classified with any of the former.¹

¹ *Classification into Seven Linguistic Stocks of Western Indian Dialects*, U. S. Geographical Survey west of 100th Meridian, vol. vii. p. 416. In his former publication, *Zwölf Sprachen aus dem Südwesten Nord-Amerikas* (p. 47), the same authority says that the Jemez and Tigua are only dialectically differentiated: "Bau und Wortvorrath dieser Sprache gleicht durchaus dem des bloss dialektisch verschiedenen Isleta."

VI.

THE TIGUAS AND THE PIROS.

AT the close of the last chapter I stated that the language spoken by these two tribes is related to the idioms of the Tehuas, consequently also of the Tanos, Taos, Picuries, and Jemez. The Tigua language is virtually the same as that spoken at Taos and Picuries, the difference not being greater than that between dialects of Southern Germany and those of some of the northern Cantons of Switzerland.¹ It follows, and is recognized at Taos as well as at Isleta, that the most northerly and the most southerly pueblos in New Mexico are Tiguas, separated from each other by a stock linguistically related, the Tehuas, and by one whose linguistic affinities appear much more remote, the Querés. The phenomenon which we have observed in regard to the Jemez, namely, a division into two branches settled apart from each other, is repeated by the Tiguas. In an air line the most southerly village of the northern Tiguas, Picuries, lies eighty miles north of the most northerly settle-

¹ I have heard Indians from Taos and from Isleta converse with each other a number of times, and always in their respective dialects, without the aid of an interpreter. Benavides, about the year 1629, recognized the Taos and Picuries as Tiguas. Of the latter he says (*Memorial*, p. 30): "Y aunque estos Indios son de nacion Tioas, por estar tan apartados dellos, suponen por si." Of the Taos he states "de la misma nacion que el antecedente, aunque algo varia la lengua." Mr. A. S. Gatschet, the eminent linguist, has termed the southern Tigua "Tano." He has in this been misled by Oscar Loew. The Tanos idiom is a dialect of the Tehua, and has no more in common with the idioms of Isleta and Taos than the Tehua has with the Tigua in general.

ment of their southern kindred. I have already alluded to this geographical division of the Tiguas in the first part of this Report,¹ but mention it again, since it took place at some yet unknown period anterior to the sixteenth century, and is therefore an historical fact coming down from pre-historic times.

The Piros, as far as known, have no kindred in the northern parts of the Southwest; except in as far as their idiom is shown to be related to those of the tribes specified above. Their range lay south, adjacent to that of the Tiguas; and they were, and are to-day, by reason of their single village, Senecú in Chihuahua, the most southerly branch of the Pueblos. Although the Piros and Tiguas were not able to understand each other's speech, they were near neighbors on the Rio Grande, only a few miles formerly intervening between the last Tigua pueblo on the south and the extreme northerly village of the Piros.²

The two tribes were subdivided geographically into two groups: one of these subdivisions of each tribe dwelt in the valley of the Rio Grande, the other east of it, near the Salt Lagunes of the Manzano.

THE RANGE OF THE RIO GRANDE TIGUAS.

(Latitude 35°.2 to 34°.4 N.)

This narrow strip, limited to the immediate vicinity of the river on both of its banks, begins in the north about the

¹ Pages 123 and 129.

² Be-Jui Tu-ay, or the ruin of San Clemente, near Las Lunas, was a pueblo of the Tiguas, but in all probability not the extreme southerly settlement. On the other side, the Piros villages must have been quite near. Espejo (*Relacion del Viage*, p. 112) says that only half a league (1½ miles) separated the Tigua from the Piros country: "Y á media legua del distrito della hallamos otra que se llama la provincia de los Tiguas." In 1680, Isleta was the most southerly Tigua

present town of Bernalillo, and extends as far south as Los Lunas. Ruins are comparatively numerous, and justify the statements of the old Spanish chroniclers, who give the number of the Tigua villages on the Rio Grande at from twelve to sixteen.¹ At an early date in the annals of Spanish domination the number of the villages was reduced; not through depopulation, but through the consolidation of smaller settlements with larger ones, for the security of their inhabitants, as well as to congregate them about the missions. Thus, in 1680, the Tiguas occupied only four pueblos: Puaray, opposite Bernalillo; Sandia, or Na-fi-ap; Alameda, on the left bank of the river; and Isleta or Tshi-a-uip-a, thirty miles farther south, on the right bank. Of these villages, Sandia and Isleta were large, but Puaray was on the decline.² Between Alameda and Isleta were scattered a num-

pueblo, and Sevilleta, to-day La Joya, the most northerly of the Piros. The distance by rail is about thirty miles.

¹ Castañeda, *Cibola*, pp. 167, 182. This applies to Tiguex alone. If Tutahaco was a Tigua country there would have been twenty pueblos in all. I shall examine further on whether "Tutahaco" may be considered as a Tigua district, and for the present limit myself to Tiguex. The *Relacion Postrera* (MS) says: "El que esto dize vió doze pueblos en cierto compas del rio: otros vieron mas, dicen, el rio arriba: abaxo son todos pueblos pequeños, salvo dos que tienen á docientas casas." Oñate (*Discurso de las Jornadas*, p. 253) says that between Sabinal and Puaray there were many villages on both sides of the river. Espejo (*Relacion*, p. 112) mentions eight pueblos between La Joya and Bernalillo. Benavides in 1629 (*Memorial*, p. 22) says that on a stretch of twelve to thirteen leagues the Tiguas on the Rio Grande occupied fifteen or sixteen pueblos, with about seven thousand inhabitants.

² Vetancurt (*Crónica*, pp. 310 to 313) assigns to Isleta 2,000 inhabitants, to Alameda 300, to Puaray 200, and to Sandia as many as 3,000. It is certain that both Sandia and Isleta were comparatively important pueblos. As early as 1617 the former is mentioned as one of the leading missions of New Mexico. *Autos del Proceso contra el Soldado Juan de Escarramad*, 1617, MS. Also by Zárate-Salmeron, *Relaciones de todas las cosas*, par. 11. The first church of Sandia was already in existence in 1614. Zárate says: "El cuerpo del santo Fr. Juan Lopez estuvo oculto mas de 33 años, al cavo de los quales vn Indio del pueblo de Puaray . . . lo descubrió al Pe Fr. Estévan de Perea. . . . El qual cuerpo, ó por mejor decir huesos se llevaron, . . . hasta colocarlos en la Yglesia de Çandia."

ber of Spanish "haciendas" or "ranchos."¹ The site now occupied by the town of Bernalillo was therefore in the hands of the Tiguas until they finally abandoned their pueblos. Bernalillo was founded by Vargas in 1695,² after the

¹ Compare *Diario de la Retirada*, 1680, fol. 35. From Sandia Otermin marched "para la estancia de Da Luisa de Trugillo," three leagues distant from Sandia (8½ miles). Opposite to it stood the hacienda of the Lieutenant General Alonzo Garcia. "De este parage se marchó otras quatro leguas á la hacienda de los Gomez, sin ver inas enemigos y en todo este camino que hay desde el pueblo de Zandia hasta esta estancia, se hallaron todas disiertas robadas, asi de ganados como de las cossas de casa, siendo muchas las haciendas que hay de una y otra vanda del rio." The hacienda of the Maestro de Campo Juan Dominguez de Mendoza lay "en la jurisdiccion que llaman Atrisco tres leguas antes del pueblo de la Alameda." *Ynterrogatorio de Preguntas* (testimony of Mendoza). According to the *Testimonio de Diligencias sobre la Fundacion de Albuquerque de Santa Maria de Grado, de Pujuaque, y Galisteo*, (1712, MS.,) there were, before the outbreak of 1680, nineteen ranchos, haciendas, etc. of Spaniards in the vicinity of where Albuquerque now is. See also *Peticion de los Vecinos de Albuquerque al Cabildo de Santa Fé*, 1708, MS.

² The date of the foundation of Bernalillo is taken from Escalante, *Relacion*, p. 169, sexto cuaderno. In the archives of the Surveyor General's office at Santa Fé there exists a *Revalidacion de la Merced de Bernalillo*, 1704, MS. The original grant to Felipe Gutierrez was presented on December 3, 1700, and claims "un Citio que se alla de esta banda del Rio del Norte en frente de la casa del Capitan Diego Montoya que llaman el Ancon del Tejon que coje legua y media de distrito."

I attach importance to the location of old Spanish habitations, because some of them in other parts of New Mexico have been taken for Indian ruins. For example, on the road from Santa Fé to Peña Blanca, eight miles southwest of the capital, near Bernalillo, there is a ruin which, I am informed, has been regarded as that of a pueblo, while it is in fact only that of a former hacienda or estancia of Juan Ramirez. Its owner was implicated in the assassination of Governor Luis de Rozas in 1642, and, although pardoned, he fled the country in the following year. Thereupon his property was confiscated, and converted into a post for one officer and fifteen soldiers. In 1680 that post no longer existed. See *Carta de Justicia, Autos, y Comisson al Sargento Mayor Franco Gomez*, October 20, 1643, MS.: "Y porque la dha estancia y sitio que esta á la orilla del Rio del Norte entre el pueblo de San Phelipe y el de Sandia y ser el comercio mas principal y por çosso de los poblaciones de este dho Reyno." According to the *Diario de la Retirada* (fol. 32 et seq.), the last Spanish house between San Felipe and Sandia was the hacienda of Cristobal de Anaya, two leagues south of San Felipe, in the vicinity of Algodones.

The three pueblos of Puaray, Sandia, and Alameda were burned by order of

Spanish power had been re-established. Albuquerque dates back to the year 1706.¹

The valley of the Rio Grande is very fertile, but from Bernalillo to Albuquerque the cultivable lands lie mostly on the east side of the river, where the gravelly "lomas," or dunes, lie nearly two miles back from the stream. Beyond these dunes extends an arid table land to the foot of the Sierra de Sandia. The town of Bernalillo lies 5,084 feet above sea level, and the base of the Sandia Mountains is not over five miles distant. The summit is 10,609 feet high, and the western front descends in almost perpendicular cliffs and crags. The appearance of this chain, as seen from the town or from the opposite river bank, is therefore unusually impressive.

There stood at least one pueblo, perhaps two, on the site of Bernalillo during the sixteenth century, and there is no doubt that the group of villages which the Tiguas occupied on both sides of the river, between the Mesa del Cangalon and Albuquerque, was what the chroniclers of Coronado's expedition call Tiguex or Tiguez. Which of the numerous villages was the one destroyed by the Spaniards in the winter of 1540, is not ascertained, but it certainly was not Puaray. The description given by Castañeda of the locality is confused, and conflicting.² The events at Tiguex are a dark stain on

Otermin, in December, 1681. *Ynterrogatorio de Preguntas*. In 1683 they had not been rebuilt. *Declaracion de vn Yudio Pecuri*, August 1, 1683.

¹ *Testimonio del Mandamiento del Virrey Duque de Alburquerque sobre la Fundacion de la Villa de Alburquerque*, 1705, MS. Escalante, *Relacion*.

² Castañeda (*Cibola*, p. 167, chap. iv., part ii.) describes Tiguex as follows: "La province de Tiguex contient douze villages, situés sur les rives d'un grand fleuve; c'est une vallée qui a environ deux lieues de large. Elle est bornée, à l'occident, par des montagnes très-élevées et couvertes de neige. Quatre villages sont bâtis au pied de ces montagnes, et trois autres sur les hauteurs." The great river cannot have been any other than the Rio Grande, but the high mountains to the west of it are somewhat puzzling. I have not the Spanish text of Castañeda at my command, and therefore cannot determine how far the word "occident" may be correct. Ternaux-Compans is a not very re-

the name of Coronado. He erred through weakness and credulity, and his subordinate, Garcia Lopez de Cardenas, displayed cruelty and deliberate treachery. The statements of Castañeda alone would not warrant such accusations, for that chronicler is extremely prejudiced in everything concerning the officers of the expedition, and therefore unreliable. But the fact that Cardenas was afterwards severely punished for his misdeeds at Bernalillo, and the testimony

liable translator. As to the width of the valley, two leagues, or a little over five miles, agrees with the distance from the foot of the Sandia Mountains to the river banks. North of Tiguex was the "province of Quirix," who were evidently the Queres; and from Tiguex Coronado communicated with the Cias. There were no pueblos between Tiguex and the Queres, either those on the Rio Grande or those on the Jemez River. Hence Bernalillo is the only point corresponding to these data. If the statement that the high mountains were west of the Rio Grande is really in the original, then the only places which would agree with the description are Cochiti, thirty miles north among the Queres, and the vicinity of Socorro, ninety miles south of Bernalillo. But neither agrees with the other data, and especially not with that remarkable statement of Castañeda (p. 182), "Tiguex est le point central." The *Relacion Postrera* states: "Desde allí (Acuco or Acoma) al rio de Tiguex ay veinte leguas: el rio es quasi tan ancho como el de Sevilla, aunque no es tan hondo va por tierra llana: es buen agua: tiene algun pescado, nasce al norte." From Acoma to Bernalillo the distance is, indeed, very nearly the number of miles (55) indicated, not by the wagon road, but in a direct line. Conclusive geographical evidence lies in the description of the route from Tiguex to Pecos. From no other point on the Rio Grande could such a route be traced. Socorro lies in an air line 130 miles from Pecos, and no troop of cavalry, however well guided by Indians, could make the trip in four days. Considering the long detours required, the route from Cochiti is entirely different from the one described. In place of only four villages, the Spaniards would have seen at least half a dozen. Castañeda must therefore have made the mistake of placing the Sandia Mountains west of the river instead of east, a mistake quite possible after a lapse of twenty-eight years, or his translator must have committed the error.

For the historical evidences in favor of the identity of Bernalillo with Tiguex I refer to Part I., p. 129, note 2, and would only add that Mota-Padilla (*Historia de la Nueva Galicia*, chap. xxxii. p. 160) says that the village of the Tiguas, where the Spaniards lodged, was called "Cofer"; this I have not been able to identify.

As for the word Tiguex, the Tiguas call themselves Ti-guan; but a woman of Isleta in my presence plainly pronounced the plural of that name Ti-guesh; "x" in old Spanish records of Mexico has the sound "sh."

of other eyewitnesses, prove how reprehensible was his conduct.¹

I will not enter into details concerning this bloody episode. The origin of the conflict is variously stated, and was in all likelihood an inevitable result of the contact of people unable to understand each other, with views and customs directly at variance. Where the first wrong lay I shall not attempt to decide, but the massacre of prisoners after their surrender by order of Cardenas was not, as that officer afterwards alleged, the unfortunate result of a misunderstanding.²

Whether the ruin on the Mesa del Cangelon is that of a Tigua pueblo, or whether it was the ancient pueblo of the Queres of Santa Ana, is still doubtful.³ But it is, at all events, the first of a series of ruins scattered along the right bank of the Rio Grande. The bluffs on that side hug the river bank quite closely, leaving only a narrow strip of fertile bottom, but affording excellent sites for lookouts. A huge lava flow approaches these bluffs from the west, and reaches the river south of Bernalillo, receding from it again near Albuquerque. It is separated from the great lava deposits of San Felipe by

¹ The most circumstantial report on the events at Tiguex, besides the one of Castañeda, is contained in Mota-Padilla, *Historia*, chap. xxxii. He says of the massacre of the prisoners "Esta accion se tuvo en Espafia por mala, y con razon, porque fué una crueldad considerable, y habiendo el maese de campo Garcia Lopez pasado á Espafia á heredar un mayorazgo, estuvo preso en una portaleza por este cargo."

² *Ibid.*: "Mataron con crueldad los nuestros mas de ciento y treinta gándules, teniendolos por bestias porque no entendían, y es que no había interprete." Castañeda throws as much blame upon Coronado as upon his lieutenant. But I think Castañeda is not to be trusted in a case like this. He is quite reliable in everything where his companions are not concerned, but as soon as he treats of the officers or men of the expedition he is either strongly for or violently against them, as his slanders upon Fray Marcos de Nizza plainly show.

³ I have lately been informed that there is a ruin opposite Algodones, in which case the one on the Cangelon must have been a Tigua pueblo. Not having investigated the locality myself, I withhold my opinion.

the sandy bottom of the Jemez stream, and by a low mesa with reddish soil that faces Bernalillo. On the brink of that mesa stand four ruins, directly opposite the latter town.

North of the bridge across the Rio Grande lie the remains of a considerable village. I have not been able to ascertain whether it was one of the historical pueblos of Coronado's time, or whether its abandonment antedated 1540. The name given to me by the Sandia Indians, Kua-ua, seems to designate the site and not the ruin. Still it may also have been the name of the latter. Figure 24 of Plate I. is intended for a representation of its ground plan, and it will be seen that the village consisted of a main building with two wings, and a projection from the middle parallel to the wings. Another ruined structure, measuring 55 by 22.3 meters (168 by 68 feet), stands in front of this building, almost equidistant from the eastern ends of the northern wing and the central projection. The northern wing is 149 meters (455 feet) long, the west side of the house 132 meters (403 feet), and the southern wing 60 meters (210 feet); so that this building is one of the largest of the pueblo houses of New Mexico.¹

It is impossible to determine exactly how many stories this great house originally had, but it seems almost certain that there were more than two in some parts of it; I therefore estimate its population at not over six hundred souls.

I was unable to detect any estufas, yet it is by no means certain that there were none outside the dwellings; the ground is covered with rubbish, and the circular depressions might have escaped my notice or have become filled up; or they may have been built inside among the rooms. The foundations show rubble and adobe, and most of the

¹ The large house at Pecos has a perimeter of 362 meters (1190 feet), and the "Pueblo Bonito" comes next to it; the length of the two wings at Kuaua and of the western side, together, is 350 meters (1063 feet).

walls are of the latter material. Their thickness varies from 0.17 to 0.38 m. (7 to 15 inches), and the average size of fifty-five rooms is 4.1 by 2.8 m. ($12\frac{1}{2}$ by $8\frac{1}{2}$ feet).

The pottery is largely of the type with coarsely glazed decorations, and I saw no corrugated fragments; but common cooking pottery, plain black, was also well represented. Much obsidian, moss-agates, chips of flint and lava, broken metates and "manos," and a few bits of turquoise, were the other objects lying about on the surface. The site also bears the Spanish name of "Torreon"; but I saw no trace of a round tower, as the designation would imply.

South of the bridge a short distance from Kuaua, on a rather elevated dune, are low mounds covered with bits of pottery, obsidian, and rubble. One of them forms a hollow quadrangle about 30 meters square (95 feet), and 300 feet south of it are two others. The mounds show great decay in both places, as if they were the ruins of houses much older than those of Kuaua.

In front of the southern portion of the town of Bernalillo, in a situation very similar to that of Kuaua, on a gravelly bluff overlooking the river, from which a magnificent view is enjoyed of the formidable Sierra de Sandia, stand the remains of the historic pueblo of Puar-ay, or Village of the Worm or Insect.¹ For its ground plan I refer to Figure 25 of Plate I. It was smaller than Kuaua, and I doubt whether its population ever exceeded five hundred souls.² Nothing but foundations and

¹ Vetancurt had heard of this signification of the word. *Cronica*, p. 312: "El nombre Puray quiere decir gusanos, que es un genero de que abunda aquel lugar." Whether by "gusano" a worm or a beetle, a centipede or a julus, is meant, I cannot tell. I noticed at the ruins of Kuaua a number of Coleoptera of a singular species, which attracted my attention the more, as beetles are scarce in New Mexico.

² Vetancurt (*Ibid.*) assigns to it "doscientas personas de nacion Tiguas y labradores españoles."

mounds remain, but recent excavations have revealed fairly well preserved rooms beneath the rubbish. The manufactured objects are like those at Kuaua, and the main buildings were built of adobe. Two smaller constructions, lying east and south of the first, appear to have been built of blocks of lava or trap. The one east may have been the chapel which existed at Puaray until 1681.

This village is also called "Pueblo de Santiago," although the patron saint of Puaray was St. Bartholomew.¹ From what this modern appellation was derived I cannot surmise. That it was really Puaray was asserted by Indians of Sandia, and it also follows from the location of the so called Gonzalez grant.² The correct location of Puaray is not devoid of importance, since it is not only an historical pueblo in the general sense, but a site around which cluster historical reminiscences of an almost romantic character.

That Puaray existed in 1540 may safely be assumed, although

¹ Ibid.: "La iglesia es al apostol San Bartolomé dedicada." Zárate, in *Relaciones de todas las cosas*, par. 7, makes a distinction between the pueblo of Santiago and Puaray. After stating that Fray Fr. Lopez and Fray Agustin Rodriguez had established themselves at Puaray and the former had been killed there, he adds: "El capitan del pueblo dió muestras de sentimiento por la muerte del religioso y porque no sucediese lo mismo con el religioso lego que quedaba, se lo llevó consigo al pueblo que se llama Santiago, legua y media el rio arriba." On the other hand, Espejo, who followed the tracks of the murdered missionaries less than one year after their death, says of the Tigua pueblos, "one of which is called Puala, where we found that the Indians of this province had killed Fray Francisco Lopez and Fray Agustin Ruiz." If Puaray is where I have been told, then the pueblo "of Santiago" is the one on the Mesa del Cangelon.

² *Venta Real al Capitan Juan Gonzalez*, 1711, MS. Vetancurt (*Crónica*, p. 312) locates Puaray "cerca de una legua de Zandia á la orilla del rio." Otermin (*Interrogatorios de Varios Indios*, fol. 124) says: "En este parage del Rio del Norte, y campo que da vista á los tres pueblos de la Alameda, Puary, y Zandia." Nothing can be gathered from the *Ynterrogatorio de Preguntas* except that the three pueblos mentioned lay near to one another. Villagran, who was at Puaray eighteen years after the death of the missionaries, intimates that at least two of them were killed there. *Historia de la Nueva México*, 1610, canto xv. fol. 137.

its name does not appear in the annals of that time. It looms up conspicuously, however, during the second Spanish attempt to penetrate into New Mexico. This was the expedition of 1580, when Francisco Sanchez Chamuscado, with eight soldiers and seven Indian servants, accompanied the Franciscan missionaries Fray Francisco Lopez, Fray Juan de Santa Maria, and the venerable Fray Agustin Rodriguez from Santa Barbara in Southern Chihuahua to the Tigua country about Bernalillo. It was a remarkable undertaking, and accomplished with wonderful tact as well as courage. Not a single conflict with the Indians marred the harmony of Chamuscado's intercourse with the Pueblos, and he succeeded in reaching Zuñi on the west, and in visiting the Salines of the Manzano on the east of the Rio Grande without the slightest opposition. But after the escort had left the friars at their posts, the Indians turned against the defenceless missionaries and slew them one after the other.

Of the murder of Fray Juan de Santa Maria I have already spoken. Fray Francisco Lopez was certainly killed at Puaray, and it is not unlikely that Fray Agustin Rodriguez met death at or very near the same pueblo. This occurred in the winter of 1580, but the exact dates are not known.¹ The reports of this massacre reached Santa Barbara in the following summer,

¹ I have treated at length of this episode elsewhere. All the authorities except Zárate-Salmeron mention the death of Father Rodriguez as having occurred at Puaray. Villagran (*Historia*, fol. 137) is perhaps the most positive witness, and he antedates Zárate by nearly thirty years. Yet the latter deserves great consideration, for he came as a missionary at a time when the history of the murder of the monks was much talked of in New Mexico, owing to the recovery of the body of one of them. I regard them as conjectural, as there was no means of fixing the day, and scarcely the month. Vetancurt (*Menologio*, pp. 404, 412) places the death of Father Lopez on the 21st, and that of his companion on the 28th of December. In this he only copies the martyrologies. Artur von Munster, *Auctarium Martyrologii Franciscani: Das ist Vermehrung dess Franciscanischen Ordens Calenders*, 1659, pp. 675, 691. Upon what grounds the dates were established I do not know.

and brought about the expedition of Espejo, which was as successful and conducted with as much skill as that of Chamuscado. Espejo had only fourteen Spaniards with him, and it is well established that he penetrated farther west than the Moquis. At Puaray the Indians fled on his approach, fearing he might take vengeance for the murder of the friars; but he succeeded in allaying their fears in time.

In 1591 Castaño de Sora also visited the Tigua country, and held peaceable intercourse with its people.¹ This was the case also when Oñate moved up the Rio Grande valley, in 1598, with his body of soldiers and colonists. He spent a night at Puaray. In one of the larger rooms, in which the priests who accompanied him were quartered, they discovered a painting on the walls partially effaced representing the killing of the missionaries in 1580. Oñate gave strict orders not to show any resentment at the sight, but to act as if the painting had not been noticed.²

¹ *Memoria del Descubrimiento*, p. 256: "Y por lo que allí había y en toda la tierra nos habían dado, que eran estos pueblos los que habían muerto los padres que á nos dijeron, habían andado por aquí." He saw fourteen pueblos "á vista deste pueblo y á la orilla del rio." Some of the inhabitants fled upon Castaño's approach, but others were friendly.

² Oñate arrived at Puaray on the 27th of June. *Discurso de las Jornadas*, p. 254. The story of the painting is related by Villagran, *Historia*, fol. 137. The Indians had covered the painting with whitewash, but the colors shone through:—

" Y haziendo jornada en vn buen pueblo,
 Que Puarai llamauan sus vezinos,
 En el á todos bien nos recibieron,
 Y en vnos corredores jaluegados,
 Con vn blanco jaluegue recien puesto,
 Barridos y regados con limpega,
 Lleuaron á los padres, y allí juntos,
 ueron muy bien seruidos, y otro dia,
 Por auerse el jaluegue ya secado,
 Dios que á su santa Iglesia siépre muestra
 Los Santos que por ella padezieron,
 Hizo se trasluziesse la pintura,
 Mudo Predicador, aquí encubrieron

Up to 1680 there is nothing important to relate concerning Puaray. The Indians of that village participated in the outbreak of that year, and they, as well as those of Sandia and Alameda, evacuated their pueblos upon the approach of Otermin's forces in 1681. When it became known to the Spanish commander that negotiations at Cochiti with the rebels had failed through their duplicity, he ordered the three Tigua villages of Puaray, Sandia, and Alameda to be burned. Puaray was never reoccupied; it became the property of Captain Juan de Uribarri, and, later, of Captain Juan Gonzalez. It is to-day a bleak and desolate spot, treeless and barren, exposed to the high winds that sweep through the Rio Grande valley and to a scorching sun. The view from it eastward is highly impressive and grand; to the west it embraces only arid plateaux and forbidding crests of black scorixæ and lava.

Where the church and the school of the Christian Brothers at Bernalillo now stand, vestiges of a former pueblo which had been destroyed by fire were exhumed; also metates, skeletons, and jars filled with corn-meal. In addition to these remains I was told of a ruin near Sandia, of one near Los Corrales south of Bernalillo, and of the old pueblo of Alameda, about midway between Bernalillo and Albuquerque; but I visited none of these places.

Con el blanco barniz, porque no viessen
 La fuerza del martirio que passaron,
 Aquellos Santos Padres Religiosos,
 Fray Agustin, Fray Iuan, y Fray Frâncisco.
 Quios cuerpos illustres retratados,
 Los baruaros tensan tan al viuo,
 Que porque vuestra gente no los viesse
 Quisieronlos borrar con aquel blanco,
 Quia pureza grande luego quiso,
 Nostrar con euidencia manifesta,
 Que á furo azote, palo, á piedra fueron,
 Los tres Santos varones consumidos."

If the ruin at the Cangelon is that of a Tigua village, we should then have at least eight pueblos on a strip about thirteen miles long, from north to south, and quite narrow transversely. There are few localities in New Mexico where there are so many villages in such close proximity to one another. These villages were mostly built of adobe, and the testimony of the chroniclers of Coronado's time is unanimous, that the houses at Tiguex were of sun-dried brick, and not of stone or rubble, like those of other Pueblo groups.¹

It is also noteworthy that the number of pueblos mentioned by Espejo as inhabited by the Tiguas in 1582 corresponds to the number of ruins pointed out to me about Bernalillo. Most of them are of pueblos of ordinary size, and the number of inhabitants they could shelter is in conformity with the number of people who are said to have inhabited in 1680 the three remaining ones of Puaray, Sandia, and Alameda.²

I have no knowledge of the existence of ruins in the immediate vicinity of Albuquerque, nor of any south of that town on the bleak level extending east of the Rio Grande between it and the northern end of the Manzano chain. The Sandia Mountains terminate north of the latitude of Albuquerque, or rather they merge into the Sierra del Manzano. The two are but the beginning of a long cordillera that runs in sight of the Rio Grande as far south as El Paso del Norte.³ Opposite Albuquerque the river

¹ I limit myself to quoting Castañeda, *Cibola*, p. 169. *Relacion Postrera*: "Estas casas con las paredes como á manera de tapias. De tierra é arena muy recias: son tan anchas como un palmo de una mano." Mota-Padilla, *Historia*, p. 159: "Los pueblos de Tzibola son fabricados de pizarras unidas con argamasa de tierra; y los de Tigües son de una tierra guijosa, aunque muy fuerte."

² I judge of the size of the pueblos which I have not seen by descriptions. Vetancurt (*Crónica*, p. 312) estimates the population of Sandia, Alameda, and Puaray at 3,500. This would give for the eight original pueblos the reasonable average of four hundred souls each.

³ The elevation of Albuquerque is 4,919 feet (Wheeler); of Isleta, 4,881

bottom on the west is comparatively narrow, and hugged by abrupt volcanic cliffs. I have inquired at Atrisco, the settlement opposite old Albuquerque on the west bank, and invariably received the answer that there are no ruins nearer than the Mesa de las Padillas, a few miles north of the present pueblo of Isleta.

The Mesa de las Padillas is a projection from the rim of the volcanic plateau that lines the Rio Grande on the west. It is only 36 meters (119 feet) high, and quite steep. On its summit stands a small ruin in the shape of an L, one wing of which is 55 meters (180 feet) the other 53 meters (174 feet) long. Each of these wings, which stand not exactly at right angles to each other, contains two rows of cells, the longer having in all thirty-two, the shorter twenty-eight rooms. An estufa, circular and 6.6 m. (22 feet) in diameter, stands about eight meters from the longer wing. The pottery is of the glazed kind, mingled with corrugated and the ancient black and white. I found no obsidian, but fragments of trap and lava, and flint chips. The buildings were of lava, and probably but one story high.

This small pueblo is called by the Tiguas of Isleta, according to the investigations of Mr. Lummis, Pur e Tu-ay, but the mesa itself is named Hyem Tu-ay. Mr. Lummis also heard a tradition that the village had to be abandoned in consequence of the number of venomous snakes on the mesa.

I am informed that there is a more extensive ruin at the

feet. The highest peak of the Manzano chain is 10,086 feet. The cordillera mentioned divides south of the Sierra del Manzano into the following sub chains: Sierra Oscura, Sierra de San Andrés, Sierra de los Organos (9,108 feet), Sierra de la Soledad, and Sierra del Paso. Formerly the whole chain, including the Sandia, was called Sierra de los Mansos. Rivera, *Diario y Derratero*, etc., 1736, p. 29: "Con la diferencia de haverse terminado el curso de la Sierra de los Mansos. Que desde el Presidio de el Passo, sin intermision corre hasta la vanda de el Ueste de la uilla de Alburquerque."

foot of the Mesa de las Padillas, on its northern side; that there are ruins on the east side of the Rio Grande, at the Ojo de las Cabras; and at least one ruin on the flanks of the volcanic heights west of Isleta. Adding to it Isleta, and the ruins of Be-jui Tu-ay, or San Clemente, near Los Lunas, this southern group of Tigua settlements, provided they were simultaneously occupied, appears to have consisted of at least six villages.

The earliest mention I find of Isleta dates from the year 1629; it was then already a mission with a resident priest.¹ This leads me to infer that the pueblo existed in the sixteenth century, although positive proof is wanting. In 1680, the village is credited with 2,000 souls.² Its inhabitants did not participate in the butchery of 1680, owing to the fact that the Spanish settlers in the lower Rio Grande valley took refuge in that pueblo as soon as the uprising occurred, and their communications with Santa Fé became interrupted. Their position at Isleta, however, was untenable, and they marched hurriedly southward.³ When Otermin on his retreat from Santa Fé came in sight of Isleta, he found the place already abandoned by the Indians, who were joining the rebels.⁴ In 1681 Otermin succeeded in surprising Isleta,

¹ Vetancurt, *Crónica*, p. 302: "En 22 de Julio, el año de 629, llegaron al convento de San Antonio de la Isleta, donde estaba entonces el custodio, algunos cinquenta Xumanas á pedir religiosos que les enseñasen la ley del Evangelio." The Custodio must have been Fray Estéban de Perea, since he arrived in 1629, with a number of priests. In 1636, Fray Francisco de la Concepcion was resident priest there. *Autos sobre Quejas contra los Religiosos del Nuevo México*, 1636, MS. Fray Juan de Salas is credited with the erection of the "convent" of Isleta. *Crónica*, p. 311: "El convento es de claustros altos y bajos, que el venerable Padre Fray Juan de Salas edificó." This must have been between 1628 and 1643; probably about 1630. In 1643 Father Salas was priest at Cuaray.

² Vetancurt, *Crónica*, p. 311.

³ *Diario de la Retirada*, fol. 43 et seq.

⁴ *Ibid.*, fol. 35: "Y otro dia prosiguió su marcha para el dicho pueblo de la Ysleta, y pasando á el lo halló despoblado de toda la gente y naturales, y sin

and capturing it without resistance; and upon his return he took several hundreds of the Tiguas along to the south, where they were subsequently settled at Isleta del Sur, in Texas, where there is to-day a pueblo of Tiguas. Northern Isleta remained vacant and in ruins until 1718, when it was repeopled with Tiguas who had returned from the Moquis, to whom the majority of the tribe had fled during the twelve years of Pueblo "independence."¹

Previous to the uprising Isleta had received accessions from the Tigua settlements near the Manzano, when those pueblos were abandoned in consequence of the Apaches.² This explains why the southern Tiguas of Isleta in Texas claim to have descended from Cuaray at the Salines. The fugitives from the latter village fled to Isleta, and were subsequently transported thence to the south. Old Isleta, the one abandoned after 1681, stood very near the site of the present village, on a delta or island between the bed of a mountain torrent and the Rio Grande, from which comes its Spanish name. I am not informed whether any remains of this pueblo are yet to be seen.

It is not unlikely that the cluster of Tigua villages near Isleta was the group of pueblos called Tutahaco by Castañeda and others; but the evidence is not sufficiently clear to warrant the assertion. The number of villages credited to

persona ninguna así religiosos como vecinos." Vetancurt (*Crónica*, p. 311) states that there were seven "ranchos" of Spaniards in the immediate vicinity of the pueblo previous to the insurrection.

¹ *Documentos formados por Don Antonio de Otermin sobre el levantamiento del Nuevo México*, 1681, MS. Escalante, *Carta al Padre Morfi*, par. 5. The latter states the number of Indians brought from Isleta by Otermin at 385, 115 having fled while Otermin marched northward. This explains the discrepancy between Escalante and Vetancurt (*Crónica*, p. 311), who gives the number of Tiguas carried south by Otermin at 519. The settlement of the Tiguas at Isleta del Sur is too well known to need quotations. See Part I., p. 86.

² I shall treat of this more extensively later. The Indians of southern Isleta told me that they had originally come from Cuaray.

Tutahaco is variously stated as from four to eight, and I have no means of determining how far from Tiguex to the south these were situated.¹

It is also impossible to establish which was the last Tigua pueblo on the Rio Grande below Isleta. Be-jui Tu-ay is a Tigua name, signifying the village of the rainbow, and it was in all probability inhabited by Tiguas. Farther south, as far as La Joya, it is uncertain which pueblos were Tiguas and which belonged to the Piros. As stated in the beginning of this chapter, the two tribes were near neighbors, — unusually near to each other for the custom of tribal seclusion and isolation peculiar to Indian institutions.

¹ Castañeda assigns to Tutahaco and to the lower course of the Rio Grande eight villages (p. 182): "Tutahaco, huit (on trouve ces villages en descendant le fleuve)." Tutahaco must therefore have been on the Rio Grande. It was also below Tiguex, since he says (p. 76): "Le général remonta ensuite la rivière et visita toute la province jusqu'à ce qu'il fut arrivé à Tiguex." This number of villages included those of Tutahaco, and four villages much lower down, which were seen by a Spanish officer in the fall of 1541 (p. 139): "Un autre officier suivit la rivière en descendant, pour aller reconnaître quelques autres cours d'eau qui suivant les habitants de Tutahaco, se trouvaient de ce côté. Il s'avança pendant quatre-vingts lieues, découvrit quatre grands villages qui se soumièrent, et parvint jusqu'à un endroit où le fleuve s'enfonce sous terre." Deducting these four pueblos from the number given by Castañeda collectively, it leaves four for Tutahaco alone. Tutahaco is identified with Acoma by Jaramillo, *Relation du Voyage fait à la Nouvelle Terre* (French translation of the Spanish original, p. 370): "Entre le village de Civola et Tihuex, à une journée ou deux environ est un village situé dans une situation très-forte sur un rocher taillé à pic; il se nomme Tutahaco." Mota-Padilla (*Historia*, p. 159) calls it Atlachaco, and also confounds Acoma with the Tutahaco of Castañeda, since he places the "fortified pueblo, or surrounded by cliffs," in the "province" of Tiguex: "D. Francisco Vazquez Coronado pasado el invierno, trató de salir de Tzibola en demanda de la provincia de Tigués, que distaba sesenta leguas, en cuyo medio se halló un pueblo fortalecido y cercado de peñas, al que se le puso por nombre Atlachaco, y se llama Tigués la provincia, por un rio muy caudaloso, que los Indios conocían por este nombre." I am convinced that Castañeda is right in as far as he speaks of a cluster of pueblos south of the region of Bernalillo on the Rio Grande; but I suspect that he was mistaken in regard to the name. Tutahaco sounds suspiciously like Tuthla-huay, the Tigua name for the pueblo of Acoma.

THE RANGE OF THE PIROS ON THE RIO GRANDE.

From the country of the Tiguas on the Rio Grande it might seem more appropriate to pass over to the range occupied by Indians of the same stock, east of the Sierra del Manzano, rather than to turn to the territory held by a tribe speaking a different language. Still I prefer the latter course, in order to remain in the same geographical section, and because the fate of the Tiguas and Piros of the Salines carried them back to their kindred in the Rio Grande valley, whence possibly they had originally drifted into the valleys and plateaux surrounding the eastern salt lagunes.

The stretch of ruins lining the river, to which I alluded in part in the preceding section of this chapter, continues south of Los Lunas, and as far as the northern extremity of the Jornada del Muerto. That is, ruins are scattered at irregular intervals, sometimes fronting each other on both banks, again alternately situated on the east and on the west. The Rio Grande bottom below Isleta in former times was covered largely with shrubbery and groves of cottonwood trees. Names like La Joya, Sabinal, and Alamillo, indicate the former existence of a denser vegetation than that which is found at these places at present.¹ Its disappearance is due, not to a change in the amount of atmospheric precipitation and an increase of aridity in the climate, but simply to the necessity of clearing the fertile bottom for agricultural purposes. This growth of trees and bushes was not continuous; it appeared in patches and strips, interrupted by expanses of

¹ The chroniclers of Coronado's journey speak only in general terms of the Rio Grande valley south of Isleta, and as far down as Mesilla. But when Chamuscado ascended the course of the river in 1580, the Indian settlements and their cultivated patches were noticed from San Marcial on to the north. *Relacion Breve y Verdadera* (Doc. de Indias, vol. xv. pp. 147, 148): "A veinte é un dias del mes de Agosto, descubrimos un pueblo que tenia quarenta y cinco casas de dos y tres altos; y así mismo descubrimos grandes sementeras de maiz, frisoles

arid sand, and by the plots where the Indians of the pueblos raised their crops by means of irrigation. The number and extent of these fields, and of the irrigating ditches connected with them, attracted the attention of Spanish explorers at an early day.

The Rio Grande bottom widens about Los Lunas, and remains broad until it approaches the mouth of the eastern Rio Puerco. The muddy waters of this stream reach the river only during heavy storms, when it suddenly becomes a dangerous torrent. The settlement of La Joya has suffered repeatedly from such floods; but it has also suffered from drought, since in rainless years even the Rio Grande dries completely between Sabinal and the mouth of the Rio Puerco. Regular water supply for purposes of irrigation cannot be relied upon much farther south than Belen, twelve miles south of Los Lunas. In former times, when the State of Colorado was still a wilderness, the river "sank" occasionally at Mesilla, below the Jornada del Muerto. The Piro villages, however, were not exposed to this danger. On the contrary, everything points to the fact that the Indians were afraid of floods, and most of the ruins are situated on ground much higher than that occupied by modern settlements. Tomé stands on the site of a former pueblo, as the results of excavations have proved; and at the Casa Colorada, also on the east side of the river six miles south of Belen, stands the Pueblo del Alto, which, as its name implies, is situated above the reach of inundations. At the Sabinal there is at

y calabazas. . . . Y desde allí caminamos cincuenta leguas el río arriba donde en él y á los lados, como á una jornada, descubrimos y vimos y paseamos sesenta y un pueblos, poblados todos de gente vestida, y los dichos pueblos, muy en buen lugar, llanos y en buena tierra." Espejo, *Relacion del Viage*, p. 112: "Y de todo esto hay sementeras de riego y de temporal con muy buenas sacas de agua y que lo labran como los Mexicanos." According to him, the Piro occupied ten villages along the river, but more were in sight: "En dos dias hayamos diez pueblos poblados, rívera de este río, y de una y otra banda junto á él, de mas de otros pueblos que parecían desviados."

least one ruin.¹ There are indications that these villages may have belonged to the Piros tribe; still it is not certain, and the first ruin which can be identified as that of a Piros pueblo is the one near La Joya, or that of the old village of Sevilleta, a pueblo well known in history. Oñate arrived there about the middle of June, 1598, and found the village to be small. On account of its situation, he called it New Sevilla;² a name afterwards changed to Sevilleta.³ Thence he proceeded sixteen miles north to the next village, which he reached on the 24th of June, and called it San Juan Baptista. The distance agrees with that between La Joya and Sabinal, so that the ruin at the latter place can be considered as that of a pueblo still inhabited in 1598.⁴

¹ I speak from information given to me by various persons.

² *Discurso de las Jornadas*, p. 251: "Andobimos tres leguas al pueblecillo que llamamos Nueva-Sevilla por su sitio."

³ Vetancurt (*Crónica*, p. 310) explains the name of Sevilleta: "Por la multitud que se halló de Piros." I prefer to adopt the explanation given by Oñate.

⁴ *Discurso*, p. 252. He says the village was "nuevo, y despoblado por nuestra ida." Villagran, *Historia*, fol. 136:—

"Y por ser otro día aquella fiesta,
Del gran San Juan Baptista, luego quisó,
El General que el campo se asentase,
En vn gracioso pueblo despoblado,
De gentes vezinos, y abundoso,
De muchos bastimentos que dexaron,
Aquí con gran recato preuenidos."

The Spaniards held a tournament in honor of the day, and while they were engaged in it there came three Indians, who, to the great surprise of the whites, pronounced the names of some of the days of the week in Spanish, and also mentioned the Spanish names of two Indians who had been baptized during one of the previous expeditions into New Mexico, and had remained in the country. *Ibid.*, fol. 137:—

"Y estando junto del, algo risueño,
El vno dellos, dixo en altas voces,
Iueues, y Viernes, Sabado, y Domingo.

El mismo Baruario algo temeroso,
Dixo Thomas, Christoual, señalando,
Que los dos destos nombres, dos jornadas,
Estauan de nosotros, bien cumplidas."

These two Indians were afterwards met at Santo Domingo, where they had

Sevilleta was subsequently depopulated and destroyed by fire, in consequence of intertribal wars;¹ but I am unable to say whether these hostilities were between Pueblo tribes or with nomadic Indians. In 1626, it was resettled, and a church built, dedicated to San Luis Obispo. It became the seat of a mission, which embraced several other Piro villages; being then the most northerly pueblo of that tribe.² This would lead to the inference that the pueblo at the Sabinal was either Tigua, or else abandoned between 1598 and 1626. In 1680, Sevilleta was reduced to a mere hamlet, its inhabitants fled with the Spaniards to El Paso del Norte, and the place was never resettled.³

Oñate makes no mention of the Piro village of Alamillo, situated a few miles south of La Joya, on a bluff not far from the banks of the Rio Grande. That bluff overlooks a pleasant bottom dotted by cottonwood trees, from which the place derives its name. Until the uprising of 1680, Alamillo had a church dedicated to Saint Anne, and its population in that year amounted to three hundred.⁴ It is known that the Piro did not participate in the general uprising of the Pueblos.⁵ The Spanish fugitives from the Upper Rio Grande valley, forced to leave Isleta, therefore retreated as far as

been left by Castaño in 1591, and they became the interpreters of Oñate. *Discurso*, p. 254. Villagran, *Historia*, fol. 139.

¹ Benavides, *Memorial*, p. 16. "Estaua desipoblada por guerras con otras naciones que le quemaron."

² *Ibid.*: "Otro en el de Sevilleta, dedicado á San Luis Obispo, de mi religion."

³ Vetancurt, *Crónica*, p. 310: "Y le habitan tres familias, hoy está asolado." Alonzo Garcia, *Autos presentados en Disculpa* (in *Diario de la Retirada*, fol. 45): "Y habiendome llegado al Pueblo de Sevilleta donde hallé á los naturales de dicho pueblo quietos y pacíficos al parecer, pues dejaron su pueblo, y me fueron siguiendo hasta el del Socorro, que unos, y otros son de nacion Piro."

⁴ Vetancurt, *Crónica*, p. 310.

⁵ They had not been invited to join by the other pueblos. *Interrogatorios de varios Indios*, 1681, fol. 125: "Que [Pope] cogio un mecate de palmilla, y mar

Socorro at first, passing through Alamillo. Notwithstanding the friendly attitude of the Piros, the frightened colonists did not consider themselves safe until they were beyond the reach of the Pueblos, and so they hurried on to the Jornada del Muerto, where they established a camp, while Lieutenant General Alonzo Garcia with a few men returned to meet his superior, of whose escape from Santa Fé and retreat down the Rio Grande valley he had been informed. At Alamillo he met the Governor, and, one league south of that place, about thirty soldiers commanded by the Maestro de Campo Pedro de Leyba also reinforced the slender forces of Otermin. It seems that at least a portion of the Indians of Alamillo joined the Spaniards on their retreat.¹ In the following year, however, the remaining inhabitants of the pueblo fled upon the approach of Otermin; whereupon the pueblo was set on fire, and destroyed.²

Passing by Limitar, where I was told there is a ruined pueblo, I now reach the vicinity of Socorro. There I investigated some of the numerous ruined pueblos on both sides of the river, and the vestiges of small houses scattered over the hills opposite the town of Socorro.

Between Alamillo and Socorro the Rio Grande flows through a defile, shut in by picturesque mountains on the west.³ At Socorro, or rather at the Escondida, three miles north of it, the country opens again, and the peaks of

rando en el unos nudos, que significaban los días que faltaban, para la egecucion de la traicion, lo despacho por todos los pueblos hasta el de la Isleta sin que quedase en todo el reyno, mas que el de la nacion de los Piros."

¹ *Autos y Dilijencias hechas por dhos de algunas Personas: de Orden del Gobernador Don Antonio de Otermin*, 1681, MS. Testimony of the Maestro de Campo Francisco Gomez: "Saliendose todos con la fuersa que tenfan siendo la morcandidad y mejores soldados del rno, lleuandose consigo la jente del puo de la Ysleta, Seuilleta y Alamillo, dexando los pueos desiertos y despoblados."

² Vetancurt, *Crónica*, p. 310.

³ There are, however, openings of fertile and well cultivated soil along the pass, like Limitar, on the west side.

Socorro, steep and imposing, stand out above the plain on which the town is built. The Sierra del Socorro is only three miles from the river, but its summit rises 2,700 feet above it, and this difference of level, coupled with the abruptness of the mountain slopes rising in several high terraces, contributes to render the scenery interesting; while the east side shows only sandy and gravelly hills of dull monotony. Mezquite (*Prosopis juliflora*) and cacti characterize the dusty and scanty vegetation. The river flows between dense thickets of willows and cottonwoods; but this fringe is narrow, and the little plain of Socorro, sloping gently down from the base of the mountains, imparts to the landscape an apparent air of bleakness. The mines of Socorro were noticed early in the seventeenth century, but not worked to any extent.¹ On the site of the town, which was founded in the beginning of this century, stood the Piro village of Pil-o Pué, or Pil-abó; but no traces of it are visible, the spot having been built over. Still metates and pottery are occasionally exhumed. It was a considerable mission, founded in 1626, and had a church and convent, dedicated to the Virgin of Relief.² The abandonment of the pueblo dates from 1680 and 1681, most of its inhabitants following the Spaniards to El Paso del Norte.³ In 1692 the church was still standing,

¹ Zárate-Salmeron, *Relaciones*, par. 34: "Hay minas en el Socorro." Benavides, *Memorial*, p. 53: "El cerro del pueblo del Socorro, principal y cabeça desta prouincia de los Piros, que todo el es de minerales muy prosperos. Que corren de Norte á Sur mas de cinquenta leguas; y por falta de quien lo entienda, y gaste en su beneficio, no se goza de las mayores riquezas del mundo, y V. N. pierde sus quintas reales." This was in 1630.

² Benavides, p. 16: "El otro en el pueblo Pilabo, á la Virgen del Socorro." This dedication to the "Virgen del Socorro" was made in memory of Oñate, who in 1598 found stores of maize in the pueblo of Teypama, or Teypana, which stood opposite Socorro, on the east bank. *Discurso*, p. 251: "Dormimos frontero de Teipama, pueblo que llamamos del Socorro porque nos dió mucho maize."

³ Vetancurt, *Crónica*, p. 310. He credits the pueblo with six hundred in-

except the roof, which had been consumed by fire.¹ In 1725 the ruins of the pueblo could be plainly seen from the hills on the east side of the river.²

That Pilabó existed in 1598 is certain.³ Opposite, on the left bank, there then stood another village, called Tey-pam-á.⁴ Possibly, even probably, it is the ruin of a many-storied pueblo four miles west of Socorro, in the Cañada de las Tinajitas, where there is said to be still another old village. I was further informed of at least one ruin in the Cañada de la Parida, northwest of Socorro, and of traces of small houses scattered along the hills.

The ruins which I have examined near Socorro are: —

1. The pueblo at El Barro, three miles north of the town.
2. The ruins at the Socorro hot springs, three miles west.

Both of these places lie on the west side of the Rio Grande.

On the east side: —

3. The pueblo at the rancho of Juan Domingo Silva, at the mouth of the Cañada de la Parida; not to be confounded with the Parida proper.

4. The small-house ruins opposite Socorro, and as far north as the previous site.

1. The ruins at El Barro are represented on Plate I. Figure 26. The pueblo was a small one, and its walls were of stones or rubble. Only one circular estufa accompanied the buildings, and its diameter is 8.8 meters (25½ feet). The four

habitants. That they followed Otermin to El Paso in 1680 is stated in *Diario de la Retirada*, fol. 45.

¹ Escalante, *Relacion*, p. 137.

² Rivera, *Diario y Derrotero*, p. 28.

³ It is mentioned under the name of Pilopué in the *Obediencia de San Juan Baptista*, p. 115, as lying on the west bank of the Rio Grande.

⁴ Teypama is also located on the west bank in the *Obediencia*. But in the *Discurso de las Jornadas*, p. 254, it appears on the east side, which is correct since Ofiate marched up on that bank.

houses of which the rooms were exposed showed on the ground plan fifty-nine cells, measuring on an average 2.6 by 1.9 meters ($8\frac{1}{2}$ by $6\frac{1}{4}$ feet), — a remarkably small size. The largest rooms measure 3.3 by 2.2 meters ($10\frac{3}{4}$ by $7\frac{1}{4}$ feet). The site is well selected for defence, being a bare promontory, the base of which is separated from the river only by the width of the railroad track and of an irrigating ditch. The pottery at this ruin is the same as at the Tigua ruins at Bernalillo, — plain, and with coarsely glazed ornamentation.

2. The ruins at the hot springs of Socorro are almost obliterated. They stand on two bare knolls, separated from each other by a gulch, and their surface is covered with flint chips of various hues and some obsidian. I also found a few plain red and black potsherds, but no decorated ware. With the exception of two places, there was nothing left but low mounds much worn by time and abrasion.

3. Opposite the promontory of El Barro, in the fertile bottom at the mouth of the Arroyo de la Parida, lies the ruin shown on Plate I. Figure 27, and which I have located "at the house of Juan Domingo Sylva." This Mexican adobe dwelling has been erected in the courtyard of the largest building of the former pueblo. The village consisted of at least three edifices: the main quadrangle, another one distant from it 25.7 meters (84 feet), and a low mound 75 meters (246 feet) to the north of the principal building. This measures 51.5 meters (170 feet) from east to west, and 69.4 (227 feet) from north to south. The only entrance to the interior square was on the east, through a narrow passage not more than $1\frac{1}{2}$ metres (5 feet) wide. The surface of this square has been so disturbed by modern constructions that it is impossible to determine whether it contained any estufas. The hollow quadrangle to the west measures 31 by 36 meters

(102 by 118 feet), and the northern mound 47 by 11 meters (153 by 36 feet). There is no doubt that the main building was at least two, perhaps three, stories high, for longitudinal partition walls are still traceable on the surface that show six rows of cells; the transverse partitions are obliterated.

This pueblo was built of adobe, and the pottery fragments were of the same description as those at Bernalillo and at the historic Tanos ruins, with glazed decorations; but there were also a number of plain black and plain red potsherds. Mr. Sylva informed me that at the foot of the range of bluffs which overlook his home he found a burial place. There were a number of bodies having the head to the south and the feet towards the north; but there were no traces of stone graves. This cemetery may have been that of the "Pueblito" at his house, or it may have belonged to another quite different ruin, of which I shall now speak in connection with specimens of ancient small-house architecture about Socorro.

4. During my ineffectual search for the Cañada de las Tinajas, I came upon at least five ruins of small isolated buildings on the sandy heights above the east bank of the Rio Grande. One of them was 6 meters (19 feet) square, another measured 4.4 by 6 meters (14 by 19 feet). These buildings had stone foundations, but I am in doubt as to the material of the superstructure. Very little pottery accompanied these ruins, and what there was of it was of the ancient black and white, and of the corrugated varieties. No trace appeared of potsherds with glazed ornamentation. The corrugated specimens were made of a dark red micaceous clay, which is found in the bluffs about the mouth of the Parida.

While I was at the house of Mr. Sylva, he called my attention to a ruin on the ridge or bluffs not over half a mile east of his home. This ridge is about 20 meters (65 feet) high, and

although the base of it and the river bottom are of red clay, the brow is gray and sandy. Scrubby mezquite dots both summit and slope, but along the river the growth is more vigorous. I soon found the locality; but instead of large houses of the communal or Pueblo type, I was surprised to see a complete village of small buildings, irregularly scattered on the brow of the height, at intervals of from a few to over seventy meters. See Plate I. Figure 28. I counted not less than fourteen little mounds, or flat knolls, varying in size from 3 meters to 19 in length, and mostly oblong (10 to 62 feet). In one of these mounds charred corn had been dug up, and was lying about.¹ What, however, more attracted my attention was the character of the potsherds: not a single glazed specimen could I detect, but gray pottery, decorated with fine black lines, corrugated, indented, — in short, those types of Southwestern earthenware which Mr. Holmes recognizes as being the most ancient, — lay around in profusion. The contrast in architecture and in pottery between this ruin and the one below was so striking, that I could not resist the inference that they represented two distinct settlements. I concluded that I had before me the dwellings of a people, whose culture was probably on the same general plane as the historic Pueblos, but who had either disappeared from New Mexico previous to the Spanish occupation, or had changed the architecture for reasons of which we know nothing.² To which of the two types the burials before spoken of belonged, I am utterly unable to surmise.

I afterwards ascertained that small houses occur quite

¹ The ears of this corn, of which I sent some specimens to the Peabody Museum at Cambridge, were of the small variety.

² I will call attention to the remarkable article of Mr. F. H. Cushing on *Pueblo Pottery, as illustrative of Zuñi Culture Growth*, in the Fourth Annual Report of the Bureau of Ethnology, 1886.

numerously along the eastern bluffs of the Rio Grande, lower down than Socorro. I desire to call the attention of future investigators to one point: previous to the insurrection of the Pueblos, Spanish farm-houses, haciendas, and what may be called cattle ranches, existed at various places along the Rio Grande from above Socorro to about nine miles below, where the hacienda of Luis Lopez probably indicated the most southerly Spanish dwelling in New Mexico.¹ The houses of such establishments were like the adobe buildings on isolated ranches of this day, and the mounds formed by them through decay in course of time would be quite similar in size and appearance to those of ancient Indian small-house abodes. The investigator should also bear in mind that in many small-house ruins pottery is rare on the surface; so he is exposed to the double danger of regarding as very ancient what is in fact modern, or of disregarding as modern what really belongs to the most ancient type of aboriginal architecture in the Southwest.

The country west of the Socorro Mountains is unknown to me from personal inspection, but I have been told that there are no ruins in that direction nearer than thirty miles. In the mining district of the Sierra de la Madalena ruins of pueblos exist to which I shall refer in a later chapter.

In an easterly direction it is thirty-three miles from Socorro

¹ I infer this from Vargas, *Autos de Guerra*, 1693, fol. 16: "En quarto dias del mes de Nobiembre, etc. Yo dho Bouor llegué con dho campo á esta hazienda despoblada y cayda que dizen fué de Luis Lopez, que se alla doze leguas del puesto dho de Fray Christóbal y tres antes de llegar al pueblo del Socorro." No previous mention is made of ruins of Spanish houses along the Rio Grande. Rivera, *Diario y Derrotero*, p. 28, mentions the first remains of Spanish houses as near Socorro, on the east bank of the Rio Grande, during a journey of twelve leagues as far as Alamillo. "Y á la del leste, se encontraron varias ruynas, donde hubo haziendas de labor antes de la sublevacion." Twelve leagues, or thirty-five miles, south of Alamillo would locate the place from which he started on this journey at Valverde, twenty miles south of Socorro, and the ruins of Spanish houses appeared farther up, in the vicinity of Socorro.

to San Marcial, where the Atchison, Topeka, and Santa Fé Railroad crosses the Rio Grande, and begins to ascend the dismal northern slope of the Jornada del Muerto. Between the two places the Rio Grande valley presents a monotonous appearance; low gravelly hills skirt the bottom on both sides; vegetation is scrubby, except an occasional grove of cottonwood; the soil, however, is fertile wherever it is not covered by drift. Since the opening of large irrigating canals in Southern Colorado, this region has suffered considerably from lack of water in the months when irrigation is most needed. Even before this condition of affairs, complaints about drought are not uncommon in older documents. Dry years seem to recur in New Mexico with a regularity that perhaps indicates a decennial period. So long as the natives raised only corn, beans, and squashes, the Rio Grande always afforded a moderate supply of water. Their pueblos, small as they seem to have been, extended as far south as the vicinity of San Marcial, or of Fort Craig, some fourteen miles farther south. I have not examined any except at San Marcial. The most important of them during Spanish times stood near the present station of San Antonio, thirteen miles south of Socorro. Its ruins lie on an eminence west of the little village, and its situation is well described by Vetancurt as "on a height of gravelly cliffs."¹

The name of this pueblo was Senecú, or Zen-ecú, and its past history, from the time of Oñate on, is better known perhaps than that of any other of the Rio Grande villages. The organization of the Piros into missions began in 1626, and the most southerly church and convent of New Mexico were constructed there in that year. Saint Anthony of Padua was made the patron of the place.² The founders of the mission

¹ *Crónica*, p. 309: "En una montaña de escollos pedregosos."

² So it is claimed by Benavides, *Memorial*, p. 16. Vetancurt (*Crónica*, p. 309)

of Senecú appear to have been Fray Antonio de Arteaga, a Capuchin monk, and Fray Garcia de Zuñiga, alias "de San Francisco." To these two friars the planting of the first vines in New Mexico is probably due, and the manufacture of wine. The last named priest is also credited with having placed an organ in the church of San Antonio ¹

places it in 1630. I follow Benavides, who was an eyewitness of the events in New Mexico. He left that territory for Mexico in 1628, and San Antonio must have already been in existence as a mission. The date of his departure is given by himself as 1631, in *Carta que embió á los religiosos de la Santa Custodia de la Conversion de San Pablo*, in the *Relacion histórica de la vida y apostólicas tareas del Venerable Padre Fray Junipero Serra*, by Fray Francisco Palou, p. 331. The name was probably Tzen-o-cué, whence "Senecú" or "Zenecú."

¹ Benavides does not mention either of these monks, but attributes the establishment of the missions to himself, which is true in the sense that he, as Custodian, directed them. Vetancurt (*Crónica*, p. 309): "El año de 630, fué hecha la conversion de los Indios de Senecú por el Reverendo Padre Fray Antonio de Arteaga, Provincial que fué de la Provincia Santa de los Descalzos de San Diego, y un templo y convento á San Antonio de Padua dedicado. Dejó allí á su compañero el venerable Padre Fray Garcia de Zuñiga, alias de San Francisco, que lo adornó de organo," etc. The same author (in *Menologio Franciscano*, p. 24) says that the two monks came to New Mexico in 1628. Fray Garcia de San Francisco died at Senecú, and was buried there, on January 22, 1673. From Senecú, Fray Garcia founded the mission of El Paso del Norte in 1659. *Auto de Fundacion de la Mision de Nuestra Señora de Guadalupe de los Mansos del Paso del Norte*, MS., December 8, 1659. The last entry in the handwriting of this missionary bears date January 15, 1671, and is found in the *Libro primero de Casamientos de la Mision de Nuestra Señora de Guadalupe del Paso del Rio del Norte*, MS., fol. 13. According to Fray Balthasar de Medina, *Chronica de la Santa Provincia de San Diego de México, de Religiosos des Calços de N. S. P. S. Francisco de la Nueva España*, 1682 (lib. iv. cap. vii. fol. 168 *et seq.*), Fray Antonio de Arteaga and Fray Garcia de San Francisco converted the Piroes between the years 1650 and 1660. This manifestly relates to the conversion of the Mansos only. In regard to the introduction of the grape into New Mexico, the statements of Vetancurt (*Crónica*, p. 309) appear plausible: "Y una huerta, donde cogió uvas de sus viñas y hacía vino que repartía á los demas conventos." See also Medina, *Chronica*, fol. 169. Villagran (*Historia*, fol. 140), speaking of the domestic plants cultivated since the arrival of the Spaniards, does not mention grapes, although he enumerates wild grapes among the native plants of the province: "Y vbas en cantidad por los desiertos." Zárate, *Relaciones de todas las cosas*, is silent on the matter of grapes.

This mission gradually attracted the inhabitants of the smaller pueblos, and induced them to congregate around its place of worship. In 1630 the Piroos still held fourteen villages, with an average population each of four hundred souls.¹ Fifty years later they were reduced to four. This was due not only to the efforts of the missionaries to gather their flock into larger pueblos, but also to the danger to which these Indians were exposed from the Apaches of the "Perrillo" and the "Xila,"² as the southern bands of that restless tribe were called. They harassed the Piroos as much as the Navajos did the Jemez. All efforts at taming them utterly failed; for, although willing to make peace with the Spaniards, they persisted in preying upon the pueblos, which the Spaniards were bound to protect.³ This hostile relation between them and the Piroos and their Spanish protectors continued for more than forty years; yet this did not hinder some malcontents among the Piroos from entering into occasional conspiracies with their hereditary enemies against the Spanish power. During the government of Don Fernando de Villanueva, some Piroos of Senecú killed the Alcalde Mayor of the jurisdiction of Socorro and four Spaniards in the Madalena Mountains. This massacre was originally attributed to Apaches; but the participation of the Piroos being detected, six of them were executed for the

¹ Benavides (*Memorial*, p. 83) estimates the population at 6,000 souls, which gives about 400 for each one.

² These names were current in 1630. Benavides, *Memorial*, pp. 13 and 54 *et seq.*

³ *Ibid.*, p. 52: "Es nacion tan bellicosa toda ella, que ha sido el crisol del esfuerço de los Españoles, y por esto los estiman mucho, y dizen, que solo los Españoles merecen el titulo de gente, y no las naciones de los Indos poblados." Speaking of the Navajos he adds: "Porque algunas vezes, que allí han ido á pelear los Españoles, en castigo de los muchos Indios Christianos que matan." He attempted the conversion of the Apaches from Senecú (page 54), going to the Gila Apaches, fourteen leagues from that pueblo, but his endeavors proved fruitless in the end.

crime.¹ With the usual fickleness of the Indian, the Apaches subsequently turned against their former allies, and on the 23d of January, 1675, surprised the pueblo of Senecú, killed its missionary, Fray Alonzo Gil de Avila, and slaughtered so many of the inhabitants of all ages and both sexes that the survivors fled in dismay to Socorro, and the pueblo remained forever deserted.²

On the east bank of the river, in front of San Antonio, will be found the ruins of the former Piro's pueblo of San Pascual. This village was already deserted in 1680, and probably was abandoned previous to Senecú.³

Whether there are any ruins between San Antonio and

¹ *Ynterrogatorio de Preguntas*, MS., testimony of Juan Dominguez de Mendoza: "Y en particular en tiempo del Sr. General D. Fernando Villanueva en la Provincia de los Pyros por traidores y echizeros ahorcaron, y quemaron en el pueblo de Séne." Testimony of Diego Lopez Zambrano: "Y despues acá se hizo otro castigo con los Pyros, por el mismo delito, gobernando el Señor General D. Fernando Villanueva, que se ahorcaron seis Yndios y otros fueron vendidos, y depositados, porque á mas de sus delitos y conjuraciones, se hallaron en una emboscada con los enemigos Apaches en la Sierra de la Magdalena, donde mataron cinco Españoles, y entre ellos al Alcalde Mayor, el cual lo mató uno de los seis Yndios Christianos que se ahorcaron llamado en su lengua el Tambulista."

² The oldest mention of this massacre at my command is found in the *Parecer del Fiscal*, dated September 5, 1676 (MS.): "Pasaron á dar muerte . . . y al Pe Fr. Alonzo Gil de Avila, Ministro del pueblo de Zennecú en el dia 23 de Enero del año pasado de 675." Fray Juan Alvarez, *Peticion al Gobernador Don Francisco Cuerdo y Valdés*, 1705 (MS.): "Tambien el pueblo de Senecú, mattaron al Pe Pr. Fr. Alonso Gil de Auila y destruyeron lo mas de la gente indiana." Vetancurt only says (p. 309): "Hoy está el pueblo despoblado y arruinado en la tierra de los enemigos."

³ San Pascual is frequently mentioned in documents between 1680 and 1690. Indians from this pueblo were living at El Paso del Norte. Its site is indicated by Rivera, *Diario y Derrotero*, p. 27: "El dia veinte y ocho . . . caminé ocho leguas, siguiendo la rivera de el rio, y haziendo noche en vn despoblado, como los antecedentes, que llaman de S. Pascual, tomando la denominacion de las ruinas de vn pueblo situado á la vanda de el leste de el rio, que lo fué antes de la Sublevacion General. Y desde este mismo parage se miran los uestigios de otro, que se nombraba Senecú, situado á la vanda de el Veste de el rio." San Pascual lay thirty-three miles south of Alamillo.

San Marcial I am unable to say. At San Marcial, however, on the site owned in 1882 by Estéban Gonzalez, I found vestiges of a former pueblo, in the shape of rubble foundations marking the end of a large rectangular building, and a low oblong mound. The pottery was red, and black, with faint traces of coarsely glazed decorative lines; but these vestiges have now doubtless disappeared. San Marcial lies in a fertile valley, and from it the view of the distant mountains, especially at sunrise, is quite striking. The lofty Madalena, the dark San Matéo, and in the far southwest the Mimbres, loom up with picturesque profiles. To the east the view is not attractive, as a black mesa of volcanic rock facing San Marcial, past which the Rio Grande ordinarily rushes with considerable velocity, is the last spur of the Jornada del Muerto, and from its top the eye surveys a dreary plain extending southward indefinitely. Pale mountains skirt the eastern horizon, and above them rise the peaks and crests of the Sierra Blanca in solemn grandeur. The pine-clad slopes of that mountain chain are almost the only tokens of vegetable life descried from the top of the mesa of San Marcial in the directions east and south.

This Black Mesa was a landmark even in the days of Juan de Oñate, and is spoken of as the "Mesilla of Guinéa," or the black rock.¹ Near its foot stood the most southerly pueblos of New Mexico in the sixteenth century. Trenaquel of the Mesilla was the last Piros village on the west bank of the Rio Grande, Qual-a-cú the last on the east; consequently they were the first ones met with on that river when coming from Chihuahua.² The region of San Marcial

¹ *Discurso de las Jornadas*, p. 249: "A veinte y siete, andobimos siete leguas hasta la Cienega de la mesilla de Guinéa, por ser de piedra negra."

² *Obediencia de San Juan Baptista*, p. 115: "Y ultimamente Trenaquel de la Mesilla que es la primera poblacion de este reyno, hacia la parte del Sur y

not only indicates the southern limit of the Pueblos in the sixteenth century, but it seems also that the many-storied Pueblo type of architecture at no time extended farther down the Rio Grande valley. I have diligently inquired, and have always been told that the ruins along the little streams running into the river from the west, the Cañada Alamosa, the Palomas, and others, are of a different type. The latitude of San Marcial therefore indicates the southern geographical limit of the Pueblo tribes, as well as of specific Pueblo architecture in New Mexico.¹

The Piros, in times anterior to the Spanish discovery, had extended their settlements to the east of the Rio Grande valley, beyond the cordillera which begins with the Sierra de Sandía in the north, and terminates in the south at El Paso del Norte. Around the salt lake basin of the Manzano they had become the neighbors of the Tiguas. I must

Nueva España." This would lead to the inference that the ruins on the site of San Marcial are those of Trenaquel. Qualacú is mentioned in the same document as situated on the east bank. In *Discurso* (p. 250) it is stated still more explicitly: "Y dormimos frontero del segundo pueblo llamado Qualacú, hácia la banda del rio por donde nosotros íbamos."

¹ This is the conclusion to be drawn from the reports of all Spanish expeditions to New Mexico between 1580 and 1600. Whoever follows attentively the itineraries of Chamuscado, Espejo, and Oñate will find that the vicinity of San Marcial was the spot in the valley of the Rio Grande where the first pueblos were seen. The pueblo which Chamuscado and his men named Sant Felipe was probably Qualacú. Very conclusive testimony is also furnished by Benavides, *Memorial*, p. 14. The first Apaches were found at the Perrillo, and thence on began the Jornada del Muerto, at the northern end of which "hasta llegar á encontrar otra vez con el Rio del Norte, á orillas del cual comiençan las poblaciones del Nuevo México. . . . Llegado á este rio por esta parte, comiençan las primeras poblaciones, por la provincia y nacion Piros."

There may possibly be some pueblo ruin a few miles south of San Marcial, near Fort Craig; I have not examined the locality. West of it all the ruins belong to the peculiar small-house type connected with courtyards and garden plots, which is characteristic of the Salado and Gila in Eastern Arizona. Farther south in the Rio Grande valley the small-house variety alone is found, as far as El Paso del Norte.

therefore turn to that region and to its ruins, several of which are among the most picturesque in New Mexico.

THE SALT LAGUNES OF THE MANZANO, AND THE MESA
DE LOS JUMANOS.

A. *The Tiguas from Chilili to Cuaray.*

At the close of Chapter II., I stated that the Tanos had penetrated as far south as the valley of San Pedro, and had thus become the northern neighbors of the Tiguas of the "Salines." The "Sierra de Gallego," also called "Sierra de Carnué," divides San Pedro from Chilili. The Carnué range is not very high, and pine forests cover its slopes, reaching to the crests and summits. In ancient times these pine-clad heights must have been solitudes, as they are to-day. The old grant of Carnué mentions a ruin in the mountains, west of the Spanish settlement, that was founded and soon abandoned towards the end of the past century.¹ While descending from the crest of Carnué, the traveller obtains an occasional glimpse of the region to the east and south, a vast expanse of singular bleakness.

Desolate plains spread to the east; dismal hills border them along the horizon; only two or three springs rise to the surface between Galisteo and the salt marshes. One of these bears the name of "Ojo del Cibolo."² This seems to imply that

¹ The grant of Carnué was made by Governor Tomas Velez Cachupin in 1763. *Real Posesion de San Miguel de Laredo*, MS. In 1771 the settlers petitioned for leave to abandon the place, which had become untenable on account of the Apaches. *Representacion de los Vecinos de San Miguel de Carnué para despoblar y Diligencias sobre esto*, MS. In the first of these documents occurs the following passage: "Que es para el Oriente vn pueblo antiguo al sentro de la cierra." In *Merced á Juan Ignacio Tafoya*, (1819, MS.) that ruin is called "las ruinas antiguas del pueblo que llaman de S. Antonio." I find no other trace of such a pueblo; it must have been occupied within historic times.

² "Buffalo Springs," fifty-seven miles south of Galisteo. The other springs

the buffalo once ranged as far as the base of the San Francisco and San Pedro Mountains. The southeast presents the appearance of a yellowish basin, the saline deposits of the Manzano, — a series of lagunes whose waters are charged with salt, or the dry deposits of such pools. This region is at least thirty miles from north to south, and irregularly oblong. Beyond it rise the low cones of the Pedernal range.¹ South of the salt lakes the dark front of a vast mesa skirts the depression in which they lie, covered with forests on its brow and northern slopes. It is the Mesa de los Jumanos, behind which high mountain chains loom up, the Sierra de la Gallina in the southeast, and farther south the Sierra Capitana² and the Sierra del Carrizo. From the higher ridges of Carnué a lofty chain can be seen in the distant south, the Sierra Blanca, the culminating elevation between Santa Fé and the boundary line of Texas.³

The basin of the salt lakes is bordered on the west by hills and valleys rising to the densely wooded eastern slopes of the Sierra del Manzano. The lowest spurs of the chain, as far as the northern base of the Jumanos Mesa, were the country of the Eastern Tiguas. It is a narrow strip with a few unimportant watercourses.⁴ The heart of the mountains appears to be without vestiges of human occupation, as are the salt lakes proper and the plains north of them as far as the Galisteo basin. I have heard ruins spoken of between the Pedernal and the Pecos River, and of ruins of pueblos

are "Ojo del Verrendo" (Antelope Springs), 41 miles, and "Ojo Hediondo" (Stinking Spring), 27½ miles south of Galisteo. There are scattered woods about the Ojo del Cibolo.

¹ The height of the Pedernal is 7,580 feet.

² The Sierra de la Gallina is 9,798 feet high; the S. Capitana 10,023; and the S. del Carrizo 9,360.

³ The Sierra Blanca is about 12,000 feet high.

⁴ Like the arroyos of Chilli and Tajique. None of these watercourses reach the basin of the salt lakes; they sink some distance to the west of it.

in the Capitana and the Gallina. The Tiguas tell fairy and goblin tales about an ancient pueblo called "Car-far-ay," which they place in the distant east, somewhere beyond the Salines of the Manzano.¹

The little village of Chilili lies in a nook on the slope, well sheltered to the north and west, but open to the east; and a permanent streamlet, the Arroyo de Chilili, runs through it. The former Tigua pueblo of Chilili stood on the west side of the creek, but its site is now built over, and only a few traces of the small chapel are visible. That chapel, dedicated to the Nativity of the Virgin,² stood on the east bank. The inhabitants of Chilili say that metates and arrow-heads are still occasionally found. I noticed some black and red potsherds, and later I saw a handsomely decorated water-urn, well preserved and ornamented with symbols of the rain, the tadpole, and of fish, painted black on cream-colored ground, which had been exhumed at Chilili. It is in possession of the Hon. R. E. Twitchell of Santa Fé.

The brook running through Chilili extends only about a mile beyond that hamlet; farther down it sinks, like all the watercourses that descend from the Manzano chain towards the Salines. These constantly fill up their own beds with drift and sand, and thus, in course of time, gradually recede. Years ago, so old residents affirm, this brook had permanent water for one mile and a half farther east. It is well to note such local peculiarities, for they tend to explain changes of locality of Indian villages in former times. The settlement of modern Chilili dates from 1841; that is, a grant was issued in that year for lands on that site.³ But the first

¹ I owe the information about this mythical village to Mr. C. F. Lummis.

² Vetancurt, *Crónica*, p. 324: "El templo era á la Navidad de Nuestra Señora dedicado. Es el primer pueblo del valle de las Salinas."

³ *Merced á Santiago Padilla, etc.*, March 29, 1841, MS.

houses were built some distance lower down the arroyo than the present village. Subsequently they had to be abandoned on account of the filling up of the bed of the stream with solid matter.

Chilili was an inhabited pueblo until about 1670. It appears first in 1630;¹ but there are indications, amounting almost to positive evidence, that it existed in the sixteenth century.² The conversion of the people to Christianity and the building of the chapel are attributed to Fray Alonzo Peinado, who became Custodian of New Mexico in 1608.³ This would assign a very ancient date to the establishment of the church at Chilili. In 1680 it is said to have contained five hundred Tigua Indians.⁴ Whether it was the seat of a mission or only a "visita," I am unable to say.

The persistent hostilities of the Apaches caused the abandonment of Chilili, and of all the pueblos about the Salines, previous to the uprising of 1680.⁵ The exact date of their

¹ Benavides, *Memorial*, p. 23: "Dexando el Rio del Norte, ya partandose de la nacion antecedente azia el Oriente diez leguas, comiença la nacion Tompira por su primer pueblo de Chilili." The name of "Tompiros," as I shall prove further on, is a misnomer when applied to the Tigua Pueblos of the Salines.

² *Obediencia y Vasallaje á su Magestad por los Indios del Pueblo de Acolocú*, (Doc. de Indias, vol. G, p. 118). This document bears date October 12, 1598. It mentions four villages, "Paáco, Cuzaya, Junétre, and Acolocú." In Chapter II., I have identified the first one with the Tanos pueblo at San Pedro; Chilili is mentioned as "captain of Acolocú." The "province" is called "Cheálo." If Chilili existed in 1630, it is quite likely that it was in existence forty years previous.

³ Vetancurt, *Crónica*, p. 324: "Tenía la nacion Piros mas de quinientos Cristianos que convirtió el reverendo Padre Fray Alonso Peinado, cuyo cuerpo está allí enterado." *Ibid.*, p. 300: "El año de 1608 . . . fué por custodio el Padre Fray Alonso Peinado, con religiosos, por cuenta de su majestad." Father Peinado was alive in 1617. *Autos de Proceso contra Juan de Escarranud*, 1617, MS.

⁴ Vetancurt, *ut supra*.

⁵ See the remarkable complaint of Fray Francisco de Ayeta, *Memorial en Novere del Gobernador, Cabildo Justicia y Regimiento de la Uilla de Santa Fe*, 1676 (MS.,) and the confession alluded to in the *Parecer del Fiscal* of September 5

evacuation is unknown to me; but it certainly took place previous to 1676 and after 1669.¹ The inhabitants retired mostly to the Rio Grande Tiguas; but some joined the Mansos at El Paso del Norte.

The next ruin on the eastern slope of the Manzano range is at the village of Tajique, about fifteen miles south of Chilili. The road goes mostly through woods, with the dismal basin of the Salines in view to the east. I have diligently inquired for ruins both right and left of this route, but have invariably received the answer that only a few small mounds or knolls, indicating the former presence of "small houses," have been met with, and that there are no traces of regular pueblos.

The situation of Tajique is similar to that of Chilili, — a small valley open to the east and rising in the west. The ruins of the former pueblo border upon the present settlement on the north and west, lying on the south bank of the Arroyo of Tajique, which is here a permanent, though very modest stream. The houses of the pueblo were of broken

of the same year. The Licentiate Don Martin de Solis Miranda says (MS.): "Por no pasar de cinco hombres Españoles los que hay en cada frontera, y ser solo diez los que han quedado en la cabecera, Villa de Santa Fé, estando muchos de los Españoles sin armas algunas, y casi todos sin caballos por haberse los llevado el enemigo."

¹ That it was prior to 1676 is proved by the *Parecer del Fiscal*: "Que á demas destruido totalmente poblaciones pasaron á poner fuego á las yglesias, llevandose los vasos sagrados," etc. After mentioning these depredations, he refers to the destruction of the village of Hauicu, near Zuñi, in 1672, and of Senecú, in 1675. Escalante, *Carta al Padre Merfi*, 1778, par. 2: "Destruyeron los enemigos Apaches con casi continuas invasiones siete pueblos de los cuarenta y seis dichos, uno en la provincia de Zuñi, que fué Jahuicu, y siete en el valle de las Salinas, que fuéron Chilili, Tan que y Cuarac de Indios Tihuas, Abó, Jumanacas y Tabirá de Tompiros." That it occurred previous to 1669 is established by a letter of Fray Nicolas de Freytas, contained in the *Dilixencias sobre la solitud del cuerpo del venerable Pe Fray Gerónimo de la Llana*, dated October 26, 1706, (MS.,) from which it appears that in 1669 Father Freytas officially visited the pueblos at the Salines.

stones, but the chapel was built of adobe. The pottery is of the glazed variety; but I also found one fragment of the ancient black and white, or gray. In 1680 Tajique is credited with three hundred inhabitants, and the ruins do not point to any greater number.¹

I doubt if the word Tajique belongs to the Tigua language; it strikes me as rather pertaining to the Tehua idiom, and to be a name given to the pueblo by its northern neighbors, the Tanos. Tûsh-yit-yay is claimed by the Isleta Tiguas, as Mr. Lummis informs me, to be the proper Tigua name for the place. It seems almost certain that the pueblo was in existence prior to the sixteenth century. Whether the word "Cuza-ya," used in the "Act of Obedience and Vassalage" of the villages of the Salines, (October 12, 1598,) is a corruption of Tuh-yit-yay, I do not venture to determine.² Chamuscado caught a glimpse of the Salines in 1580, and says that there were around that basin eleven villages similar to those in the Rio Grande valley.³ The year after, Espejo also possibly went to the Salines; but the text of his report is not clear enough to render it absolutely certain.⁴

Tajique was abandoned for the same reasons as Chilili and the other pueblos of the Salines. Possibly its evacuation took place previous to that of the most northerly Tigua village. The Indians from Cuaray, a Tigua pueblo situated about ten miles southeast, retired to Tajique, taking with them the corpse of the founder of their mission, Fray Gerónimo de la Llana, which they buried again in the church of that pueblo.⁵ There is a statement to the effect that the last

¹ Vetancurt, *Crónica*, p. 324: "Donde habla cerca de trescientas personas."

² *Obediencia del Pueblo del Acolocá*, p. 116. It may be a corruption of Cuaray, but I doubt it.

³ *Testimonio dado en México*, p. 86.

⁴ *Relacion del Viage*, p. 114.

⁵ *Dilixencias sobre la solizitud del cuerpo del venerable Pe Fray Gerónimo de*

priest of Tajique escaped from the pueblo in company with two Spaniards, which would imply that the village was abandoned in consequence of a direct onslaught made upon it by the savages.¹

Ruins of "small houses" are said to be visible at Torreon,² and a few miles higher up; but the existence of large-house villages nearer than Manzano was positively denied.

The country between the Manzano and Tajique becomes more barren as the road approaches the edge of the salt basin. Manzano itself lies in a fine valley, fairly well watered, near the foot of a high range, which from there presents a picturesque appearance, with its densely pine-clad slopes. Like Tajique it is a modern settlement.³

la Llana, 1759, MS., fol. 5: "El Yndio Tano de el Pueblo de Galisteo llamado el Ché tambien mui racional dixo: Que el sauía, y avía oydo varias vezes, que el Indio llamado Tempano mui viejo y que avía sido de aquellos pueblos arruinados, contaba que aquel pueblo llamado Quara se havia perdido primero. Y que los que quedaron de él se avían juntado con los Yndios de el immediato pueblo llamado Taxique, y que quando se perdió Quara sacaron de él un cuerpo de un religioso difunto, pero que no sabía donde lo avían puesto." From the investigation made at that time by direction of Governor Francisco Antonio Marin del Valle, it appears that the body of Fray Gerónimo de la Llana was found buried in the ruins of the church of Tajique, and not at Cuaray. The Indian Tempano here referred to was from the Salines, and well known in the beginning of the past century as a faithful and reliable man. His name appears in several documents of the time.

¹ Vetancurt, *Crónica*, p. 324: "Que administraba un religioso que escapó del rebellion con otros dos Españoles." If it is true that the priest escaped in the manner indicated, it was certainly at least four years prior to the rebellion, for Tajique was in ruins in 1680. Escalante, *Carta*, par. 2. Fray Juan Alvarez, *Memorial*. That the Apaches, and not the insurrection, caused the loss of the place, is beyond all doubt.

² Torreon is a small place situated between Tajique and Manzano, and about three miles from the former. Its grant dates from 1841. *Merced á Nerio A. Montoya*, MS.

³ The Tajique grant dates from 1834. *Merced á Manuel Sanchez*, MS. The Manzano grant, *Merced á Jose M. Trujillo*, was issued in 1829, MS. The elevation of the village above sea level is given at 6,961 feet, or almost exactly that of Santa Fé.

During the whole of my stay at Manzano the weather was peculiarly unfavorable for archæological explorations, deep snow covering the ground, and one snow-storm following another. The few days of relatively calm weather I had to improve for the examination of more remote localities, like Abó and Tabirá. My information about ruins at Manzano is therefore from hearsay, and I cannot vouch for its absolute reliability. I was told that a pueblo existed on the hill, west of the place where a "Morada" of the so called Penitents stood in 1882.¹ Another pueblo is reported as having stood a few miles down the valley, at "Ojitos," and a third one opposite Ojitos, on the hills; small-house ruins were also mentioned. Of all these pueblos no trace appears in documents at my command; but it should be remembered that both Chamuscado, in 1580, and Benavides, in 1630, mention quite a number of occupied Indian villages about the Salines.² It is therefore unsafe to affirm that the Manzano ruins are prehistoric; they may antedate the sixteenth century, but they may be the remains of villages still occupied during the first century of Spanish domination.

There stands at Manzano a grove of tall apple trees, surrounded in 1882 by a wall of adobe. The trees are manifestly very old, and entirely neglected. It is probable that they were planted by some of the missionaries during the seventeenth century, which would give them quite a vener-

¹ The "Penitentes" are a branch of the "third order" of the Franciscans, but much degenerated. Their practices are partly secret, and for that reason they erect small buildings without windows, which they call "Moradas," or dwellings. The Church strongly disapproves of the ways of the Penitents, and they have repeatedly been excommunicated, and are now on the decline.

² Chamuscado, *Testimonio dado en México*, p. 86. Benavides, in *Memorial*, p. 23, says: "Quince pueblos en que auia mas de diez mil almas. Con seis conuentos y iglesias muy buenas." The six churches are easily found: Chilili, Tajique, Cuaray, Abó, Tenabó, and Tabirá.

able age. There does not seem to have been a mission at Manzano, and I could not find out whether traces of an old chapel have been noticed; still the name of the place, "El Manzano," is derived from these apple trees. Consequently, they stood there when the settlement was made in the first quarter of the present century, unless, what is hardly probable, some of the settlers planted them before the municipal grant was issued in 1829. Probably the apple orchard of Manzano dates from prior to 1675. After that date, and until the foundation of the village of to-day, the Salines were a very dangerous region. An occasional hunter or large armed parties ventured into the valley, and beyond, at rare intervals; but nobody dared to establish himself permanently, for the Apaches held undisputed sway. I inquired diligently about the apple orchard, but not even the oldest inhabitants of Manzano, Torreon, or Abó were able to give me any other reply than that it was much older than the recollections of their fathers and grandfathers. Six miles east of Manzano stand the ruins of the mission of Cuar-ay, also called Cuarrá and Cuar-ac. It was a Tigua pueblo, and had a large church, dedicated to the Immaculate Conception.¹ The earliest mention of Cuaray in my possession dates from 1643, when Fray Juan de Salas was resident priest.² Among its missionaries, Fray Gerónimo de la Llana, 1659, whose remains lie buried within the walls of the old parish church of Santa Fé, is best known.³

¹ Vetancurt, *Crónica*, p. 324: "La iglesia era de ricos altares y vasos de plata proveida."

² According to the authority quoted above, the conversion of the Tiguas of Cuaray is due to Fray Esteban de Perea. This would put it between 1617 and 1630, probably in 1628, since Benavides mentions six churches at the Salines in the *Memorial*, p. 23. I have the originals of two short notes written by Fray Juan de Salas to Governor Alonzo Pacheco de Heredia, dated "de este Pueblo de Coarac," September 24 and 28, 1643.

³ Fray Gerónimo de la Llana was a native of the city of Mexico, and came to

Cuaray was abandoned on account of the Apaches before the insurrection of 1680. Its inhabitants fled to Tajiique,¹ and at last gradually drifted to El Paso del Norte. If the people of the village of "Isleta del Sur" on the Texan side of the Rio Grande are asked whence their forefathers came, many of them point to the north in reply, saying, "From Cuaray."

Cuaray is among the few picturesque sites in New Mexico that deserve the epithet of lovely. Situated almost on the

New Mexico after 1629. He was at Santa Fé in 1636 according to a certificate signed by him, a copy of which is in my possession. *Carta de Fray Gerónimo de la Llana*, in the *Autos sobre Quexas contra los Religiosos del Nuevo México*, 1636, MS. According to Vetancurt he died at Cuaray, on July 19, 1659. *Menologio*, p. 240. Ten years after, Fray Nicolas de Freytas, noticing that the body was injured by moisture, had it taken up, and buried again in a rude coffin made of pine wood. *Certificacion del Padre Fray Nicolas de Freytas*, October 26, 1706 (in the documents upon the exhumation of the body of Father de la Llana, MS., 1759): "Y despues de diez años le hallé yntacto y incorrupto, con su hauito y le colocó en un caxon de madera de pino y lo puso en la mesa del altar mayor y entre las manos le puse un pergamino en que está escripto la notizia de dho Padre que fué varon apostólico." There is hardly any doubt that the body, when exhumed one hundred years after his death, was found at Tajiique, and not at Cuaray, according to the testimony of the Indian Ché, contained in the same documents. Vetancurt, however, inverts the order of the pueblos, by placing Cuaray three leagues (nine miles) south of Chilili, and Tajiique six miles farther south. The distances are of course incorrect, and the order in which the pueblos are enumerated still more so. From Chilili to Tajiique is at least twelve miles, and thence to Cuaray or Punta de Agua the same (military measure 11.51 miles). Furthermore, it is well established that the pueblos were then where they are now. Such inaccuracies are numerous in Vetancurt's otherwise valuable book. He errs in geographical statements, and sometimes in dates. This is not to be wondered at, since he himself was never in New Mexico, and wrote at a time when that province was still inaccessible to Spaniards and priests. But it is well to call attention to such mistakes, as they might mislead students who are not well acquainted with the localities.

¹ *Dilixencias sobre la solizitud del Cuerpo de Fray Gerónimo de la Llana*. In 1671 Indians from Cuaray were married at El Paso del Norte by Fray Garcia de San Francisco. *Libro Primero de Casamientos*, MS., fol. 12. The road to the Salines was then blocked by the Apaches, and it is possible that some of the pueblos were already abandoned. In 1669 Cuaray certainly was still inhabited. Freytas, *Certificacion*, "Y despues de diez años," since Fray de la Llana died in 1659.

southwestern edge of the dismal salt lakes, it is separated from them by wooded hills, while to the west and northwest the valley of Manzano and the mountains beyond are in full view. The red sandstone formation of the rocks that crop out in the neighborhood is in pleasant contrast with the sombre green of the trees and shrubbery covering the hills. I saw Cuaray several times, always in winter and under the most unfavorable circumstances, and yet carried away with me a vivid impression of its singular beauty. Above the low mounds of the former pueblo rise the stately ruins of the old church, a massive edifice of stone, the walls of which are still at least fifteen feet high, and four thick. It measures 16.4 by 34.1 m. (50 by 104 feet), and had two towers on the eastern façade. All the wood-work of the interior has been burned. The convent is reduced to indistinct foundation lines measuring 15 by 17 m. (49 by 58 feet). The pueblo is built of sandstone slabs, and the walls have the usual thickness of 0.25 to 0.30 m. (10 to 12 inches). The average size of a dozen rooms which I could measure was 3.3 by 4.5 m. (11 by 14 $\frac{3}{4}$ feet). The pueblo formed at least three squares, surrounded by the usual large buildings. I am not sure as to the existence of estufas, as deep snow filled every depression, and covered the mounds with a layer at least a foot deep. But on a second visit, when there was less snow on the ground, I think I noticed traces of a circular estufa. On the same occasion I also had an opportunity of examining the manufactured objects. The prevailing pottery was coarsely glazed, but there were also corrugated fragments, and quite a number of thin orange-colored shards with a fine glaze, decorated with black lines. This latter pottery, and potsherds of the ancient black and white and corrugated varieties, were exclusively represented on the top of a hill at the southern extremity of the pueblo ruins. This locality,

with pottery so distinct from that on the other mounds, and still not farther than twenty meters from the last of them, looked as if small houses had formerly stood on it. Much flint and some obsidian was scattered over the mounds indiscriminately.

Cuaray is credited with having had six hundred inhabitants,¹ and I should not consider this to be an exaggeration, as the houses were probably two and three stories high. There is an arroyo running past the village, and a spring near by with permanent water. The soil is fertile, but I think it probable that most of the fields of the pueblo lay higher up towards the Manzano. Possibly the apple grove at Manzano was the orchard of the former mission of Cuaray. Gardens, fruit trees, and vineyards in New Mexico, in the seventeenth century, were mostly connected with missions, except at Santa Fé and perhaps in the Rio Grande valley, where were the largest haciendas of the Spanish colonists. If there was no mission at Manzano, then the old fruit trees must have belonged to the mission of Cuaray. There were some Spanish ranchos in the district of the Salines, but cattle and horses, and not fruit raising, occupied the attention of their owners.²

The bitter hostility of the Apaches to the Pueblo Indians of the Salines did not prevent the latter from occasionally courting their friendship and even entering into alliances with them against the Spaniards. One of the best planned attempts at insurrection, previous to the successful outbreak

¹ Vetancurt, *Crónica*, p. 324: "Tenía seiscientos Cristianos de nacion Tigua, que hablaban el idioma de los Piros." The last sentence is one of the customary inaccuracies of Vetancurt.

² There seems to have been an Alcalde Mayor in the vicinity of Cuaray. This is indicated in the *Villetes* of Fray Juan de Salas, 1643, MS. At the estancia north of Cuaray there was a rancho inhabited during the lifetime of Fray de la Llana by Doña Catalina de Salazar. *Dilixencias sobre el Cuerpo, etc.*

of 1680, originated at the pueblo of Cuaray, between the years 1664 and 1669. An Indian of that village, known under the Spanish name of Estéban Clemente, was the soul of this conspiracy, and was in secret communication with most of the other pueblos. The plan was first to deprive the Spaniards of their horses by having them all stolen by the Apaches, and afterwards, on the eve of Holy Friday, to fall upon all the whites simultaneously. But the plot was detected, the leader executed, and the danger thus averted.¹

Cuaray is the last pueblo on the borders of the Salines positively known to have been inhabited by the Tiguas. On the southeastern corner of the basin are ruins which I have not visited, but which I presume are those of a Piros village. The range of the Tiguas was limited to a narrow strip along the eastern slope of the Manzano chain, beginning with Chilili in the north, and ending with Cuaray in the south. Considering each site of these pueblos separately, they were all well selected; for each had its permanent water supply, sufficient wood, tillable land within easy reach, and an open view towards two at least of the cardinal points. But none of them occupied a very strong position for defence, nor are there any traces of defensive constructions other than the many-storied houses. The pueblos were at such short distances apart

¹ This plan of insurrection is mentioned in the *Ynterrogatorio de Preguntas* (MS.), by Diego Lopez Zambrano: "Y no obstante todos estos castigos, otro Yndio Gobernador de todos los pueblos de las Salinas, á quien en secreto obedecía todo el reyno, dando orden á los Yndios Christianos, hizo otra conjuracion en general, y éste se llama Estévan Clemente, haciendo que todas las caballadas de las jurisdicciones las echáron á las sierras para dexar á pié á los Españoles, y que Jueves Santo en la noche como se había tratado en el gobierno del General Concha, se había de consumir la christiandad, sin que quedára Religioso, ni Español, y habiendo descubierto esta traicion ahorcaron al dicho Yndio Estevan, y sosegaron á los demas, y en los bienes que sequestraron del dicho Yndio se halló dentro de su casa cantidad de idolos, y ollas enteras de polvos de yerbas idolátricas, plumas y otras porquerías."

that they could easily assist one another in case of attack, and yet they had to yield to their hereditary foes, and the feeble protection of the Spaniards could not save them. They were merely outposts of the Pueblo country, separated from their brethren on the Rio Grande by a forbidding mountain chain, through which only two passes lead, which an enemy could easily occupy. The destruction of the Pueblos of the Salines became inevitable as soon as the Apaches spread in that direction, which they had begun to do previous to the advent of the white man. When the Pueblos had received from him new domestic plants, and above all new domestic animals, the inducement for the nomads to prey upon the house-dwelling Indians was greatly increased. Only rapid colonization of New Mexico could have saved the villages on the east side of the Manzano chain, which was impossible, as Spain was too weak and New Mexico not sufficiently inviting to warrant extraordinary exertions.

Aside from the ordinary natural advantages which the Tigua pueblos of the Salines enjoyed, the region afforded some peculiar inducements. Not the least was its proximity to a country rich in game. The levels between the Salines and Galisteo were favorite haunts of the antelope, and the buffalo also may formerly have approached the Salines. The mountains in the west abound in bears, deer, and turkeys.

To what extent the great deposits of salt may have been an inducement to the Tiguas for establishing themselves in their vicinity is uncertain. The natives were acquainted with salt as a condiment in times anterior to the Spanish era, and it is not unlikely, therefore, that this commodity may have been one cause of the original settling of the Tiguas east of the Manzano chain. That a limited commercial intercourse resulted from it seems quite probable.

To the Spaniards in Southern Chihuahua the Salines soon

became very important. Salt from Manzano was carried in the seventeenth century as far as Parral for the reduction of silver ores,¹ and the salt trains had become a resource for the Apaches also. But by 1670 the Apaches had intercepted all communication with the Salines, and the trains returning from Southern Chihuahua were compelled to remain at El Paso del Norte.² They were probably the last that carried salt to Parral, for in that year, or very soon after, the missions at the Salines had to be abandoned.

The Tiguas shared the neighborhood of the salt lakes with the Piros. It is probable that the ruins on the southeastern corner of the basin were those of a Piros village, because the pueblos on the so called "Médano," or great sand-flow, of the Salines at that corner, according to a dim tradition, were also Piros pueblos. Tabirá, situated on the Médano, of which I shall speak presently, was an historic Piros settlement. The old pueblo at the northeastern end of the Jumanos Mesa appears to me, therefore, to be the most northerly settlement made by the same tribe. For the definitive settlement of such questions, we must wait until the folk-lore of the Tiguas and Piros becomes the subject of systematic investigation.

¹ Compare *Real Cédula*, June 30, 1658, MS.: "Pero que haudo treinta y cinco años que se pobló el Parral y siendo considerable su comerzio a y gran cantidad de ellos que conduzen bastimentos y ropa al Parral y traen plata y otros generos y pasan de Vazio al Nueuo Mexco para traer sal á las minas con que," etc. Vetancurt, *Crónica*, p. 325: "Que en diez leguas que coge de circuito toda la agua llovediza se convierta en dura sal, que sacan como tablas y cargan para toda la Custodia y aun para las minas del Parral."

² *Libro Primero de Casamientos de el Paso del Norte*, fol. 12. In 1670 many Indians from the pueblo of the Jumanos were at El Paso, but the roads to the Jumanos country (the Salines) were closed by the Apaches. In the following year, many Indians from Abó also were living at El Paso for the same reason.

B. *The Ruins of the Piros Pueblos, and the former Country of the Jumanos.*

Until within a few years previous to the great outbreak of the Pueblo Indians in 1680, the Piros occupied not less than three villages in the vicinity of the Salines: Abó and Tenabó southwest of the Manzano, and Tabirá about thirty miles southeast of it, on the so called Médano, in the southeastern corner of the Mesa de los Jumanos.

Besides these three pueblos there is mention of a fourth, the location of which I have not been able to ascertain, that of the Jumanos. In addition, there are several other ruins of large-house villages, some of which may have been still occupied in the seventeenth century, or at least at the close of the sixteenth.¹ Besides the Piros, the Jumanos inhabited, or roamed over, the country. To what extent the Jumanos of New Mexico were village Indians, I am unable to say. In Eastern Chihuahua they seem to have dwelt in huts or small houses of a permanent character, covered with roofs of sod or earth, similar to those of pueblo buildings.² There is much contradiction in the older authorities concerning the true condition of the Jumanos of New Mexico. Oñate, in 1598, speaks of the "three large pueblos of the Xumanas, or striated Indians, called, in their language, Atri-puy, Genobey, Quelotetrey, Pataotrey, with their subjects." Among these villages one is described as being very great.³ Thirty-two years later, the Jumanos of

¹ I refer to the statements of Espejo, Chamuscado, and of Benavides, regarding the number of the inhabited pueblos in the neighborhood of the Salines.

² Espejo, *Relacion del Viage*, p. 105: "Y con pueblos formados, grandes, en que vimos cinco pueblos, con mas de diez mil Indios y casas de azutea, bajas y con buena traza de pueblos." *El Viaje que hizo Antonio de Espio* (page 4) corrupts this original text by adding, "y de calicanto." This means "of stone and lime."

³ *Obediencia de San Juan Baptista*, p. 114. *Discurso de las Jornadas*, p. 266.

New Mexico are spoken of as living in tents and leading the life of nomads.¹ The same must be inferred from the diary of Juan Dominguez de Mendoza, in 1684.² But in 1700 a "pueblo of the Jumanos" is mentioned.³ There are depositions of Indians from this pueblo of the Jumanos in the years between 1681 and 1684; but they declared themselves to be Piros.⁴ I cannot determine, therefore, whether any of the ruins south or east of the Salines are those of permanent villages of the Jumanos tribe.⁵

The name "Mesa of the Jumanos" is given to the extensive plateau bordering the basin of the Salines in the south, which rises rapidly to about four hundred feet above the level of the salt lakes, and then gradually slopes down to the south and southeast. Its northern brow lies higher than Manzano, but the so called Gran Quivira, as the ruins of Tabirá are popularly called, lies five hundred feet lower, so that the slope, in its whole length of seventeen miles, is about nine hundred feet. The northern slope and brow of the mesa are covered with trees, but the southern declivity is a grassy plain without permanent water. On the north side, however, there are a few inconsiderable springs.

On the east, the mesa is bordered by a long flow of sand, resembling the bed of an ancient river. This "Médano," as it is called, runs in a southwesterly direction. The western rim of the mesa is cut off rather sharply, and its brink is wooded to some extent. The Médano, as far as known, is

¹ Benavides, *Memorial*.

² *Diario de las Jornadas*, 1684, MS.

³ Escalante, *Relacion*, p. 180.

⁴ These documents are interrogatories concerning insurrections of the Mansos and Sumas now at El Paso del Norte.

⁵ The pueblo of the Jumanos is said by Escalante, *Carta al Padre Morfi*, (par. 2,) to have been destroyed by the Apaches. Vetancurt (*Crónica*, p. 325) says that fifteen leagues from Abó there were a few "Xumanas, que eran de Quarac administrados."

waterless, and on the whole surface of the mesa no traces of springs have been found. South of Quivira lies an arid waste. East of it, it is many miles to the nearest watering place, at the foot of the Sierra de la Gallina. The valley of Abó, west of the Mesa de los Jumanos, offers the only exception in this otherwise very unprepossessing section of New Mexico. It is a long depression, partially wooded, with a tiny stream, the Arroyo de Abó, running through it for some distance. The village of Abó itself lies twenty miles south of Manzano, in a pleasant valley, which, both higher up and lower down, narrows to a cañon of moderate depth. The site is quite romantic. Cliffs of red sandstone rise along the little brook, crowned by clusters of pines, cedars, and junipers. In the northwest, the Manzano chain like a diadem, silvery white in winter, dark green in summer, crowns the wooded landscape.

Nearly in the centre of this valley rise the picturesque ruins of the church of San Gregorio de Abó,¹ with the remains of its convent; and adjacent to it are the rubbish mounds of the former pueblo, forming several quadrangles communicating with one another. It was a pueblo similar to Cuaray, but larger, and built of stone and mud. Abó lies nearly a thousand feet lower than Manzano, and there was consequently less snow on the ground, so that I could make at least an approximate ground plan of the ruins. But I had the misfortune afterwards to lose the detailed field-notes upon which this ground plan was based.² The church is smaller

¹ Vetancurt, *Crónica*, p. 325: "San Gregorio Abbo. . . Tiene su sitio en el Valle de las Salinas." This is another of the erroneous geographical statements of this author; Abó lies twenty miles south of the most southerly edge of the salt basins.

² When I surveyed Abó, on December 31, 1882, it was so cold that I could scarcely write in the open air, so I made but short notes, which I transferred to other sheets from time to time in the nearest house. From these sheets I drew a

than that at Cuaray, and built mostly of stone, with some pillars of adobe. The stones from the pueblo ruins have been used for building the houses of the modern hamlet of Abó, so that these ruins show traces of only one story. But the inhabitants informed me that forty years ago¹ there were three stories still visible in places. I saw two circular estufas, and judge the pueblo to have contained as many as a thousand souls, provided all the houses were simultaneously occupied. The pottery is of the coarsely glazed kind; and flint and some obsidian was also noticed by me. Old residents of Abó informed me that, when they first opened the lower cells of the pueblo, they found in some of them unburied skeletons.

I will quote here the earliest published description of the ruins in the English language, by Lieut. J. W. Abert, who visited the place on the 4th of November, 1846, and says: "At sundown we reached Abó, where I found my party comfortably encamped. This town is also one of the ancient ones; there are most extensive ruins scattered around in all directions, all built in the style of those at Quarra. Here, also, is a large cathedral. Its ground plan is in the form of a cross; the short arm is twenty-two and a half feet wide, the long arm is thirty feet wide; their axes, respectively, twenty-seven feet and one hundred and twenty feet; and at the head

ground plan in colors, which, together with the remainder of my water-color sketches, are now in the Vatican Library at Rome. They were presented to Pope Leo XIII. by the Archbishop of Santa Fé on the occasion of the pontiff's jubilee. The Archæological Institute had not the means for publishing them, and very kindly left me at liberty to dispose of them for my own benefit. All my endeavors to place the collection in this country failed, owing to lack of interest in the subject. But the ground plans of Cuaray and Abó will be carefully preserved in the Vatican Library. The sheets of field-notes I afterwards lost, together with a few other pages of my Journal; but this was after I had painted the ground plans in detail.

¹ The settlement at Abó, which consisted in 1882 of half a dozen houses, was made after 1849.

of the cross there is a projection about nine feet square; this makes the total length one hundred and twenty-nine feet. The areas, intersected at a distance of thirty-four feet from the head of the cross, or forty-three, including the projection. The areas of the cross coincide with the lines that pass through the cardinal points. In the east end of the short arm there is a fine large window, the sides of which have what is called a flare, a style often used in Gothic windows. The walls of the church are over two feet in thickness, and beautifully finished; so that no architect could improve the exact smoothness of their exterior surface."¹

The rocky bed of a small mountain torrent, called Arroyo del Empedradillo, separates the church and the ruins adjacent to it from another pueblo ruin consisting of several connected rectangles with faint traces of estufas in their interior squares. These ruins are much more obliterated than those about the church; the mounds are lower and more flattened, and gave me the idea that they were the vestiges of an older pueblo of the same tribe. According to the size of the mounds and their number, this second village contained more people than the first. I cannot decide whether there were two pueblos of the Abó tribe successively inhabited, or whether there was but one, built on both sides of the arroyo. The pottery is the same in both, with coarsely glazed decorative lines and symbols, plain red, and black. Some corrugated and indented shards also occur. If the size of the church be any indication, I should presume that the historical village was the one near it, and that the ruins beyond the Arroyo del Empedradillo are those of a more ancient town, abandoned previous to the establishment of the mission, or

¹ *Executive Document, No. 41. Report of Lieut. J. W. Abert of his Examination of New Mexico, in the Years 1846 and 1847, p. 488.* The accompanying view of the church is quite well executed.

soon afterwards. If, however, both settlements were occupied contemporaneously, that would make Abó a very large pueblo, probably equal in population to Pecos.¹

No information on this question is found in the documentary material at my command. Abó is mentioned as early as 1598;² but the foundation of the mission dates between 1625 and 1644. Fray Francisco de Acevedo is credited with having caused the erection of its church, who died at Abó on the 1st of August, 1644, and his body was buried within the temple.³ The Apaches compelled the abandonment of the mission and of the pueblo before the insurrection of 1680, and many of its inhabitants were already at El Paso del Norte in 1671.⁴ To-day the Piros of Senecú in Chihuahua claim to be the last descendants of the Abó tribe.

I cannot sufficiently insist upon the necessity of studying the folk-lore of the small remnant of the once numerous stock of the Piros which to-day inhabits Senecú. With the help of these traditions we may possibly be able to determine which of the other ruins in the Abó valley are prehistoric, and which belong to the historic period. The dispersion of the Piros, the long period of complete abandonment of their country owing to the Apaches, and the absence of documentary material concerning the missions,⁵ have created

¹ I may overrate the population of Abó in placing it at two thousand souls. This estimate of course includes both ruins.

² It appears first in the *Obediencia y Vasallaje por los Indios del Pueblo de Cuéloce*, October 17, 1598 (Doc. de Indias, vol. xvi. p. 123). Abó is mentioned in company with "Xenopué," "Cuéloce," and "Patasce." These last I cannot identify. Previously, in the *Obediencia de San Juan Baptista* (p. 115), it is mentioned as "Abbo."

³ Vetancurt, *Menologio*, p. 260. Fray Francisco de Acevedo was a native of Seville, and took orders at Mexico in January, 1625. "Hizo la iglesia en San Gregorio en Abbo." Also *Crónica*, page 325.

⁴ *Libro Primero de Casamientos del Paso del Norte*.

⁵ This is due to the destruction of the church records by the Indians in 1680.

a blank which could be partly filled only in Spain, unless the folk-lore of the Piros at Senecú comes to our rescue.

Abó is not the only historic pueblo in that vicinity. Fray Francisco de Acevedo is said to have built a chapel at a pueblo called Ten-abó,¹ but where it stood I am unable to determine. I have thought that the ruins at Siete Arroyos, to the left of the road that leads from Abó to the Rio Grande, may be those of that village. I was informed of the tradition that there had formerly been a church on this spot. The ruin at Siete Arroyos, which I was prevented from visiting by the state of the weather and by sickness, is described as that of a pueblo smaller than Abó, but larger than the other ruins found elsewhere in the valley. Of these I visited four with better success than I had at the main ruin.

Three miles south of Manzano begins a wooded ridge, on the summit of which stands a little settlement called "La Cienega." It is a very cold spot in winter, but there is permanent water and fertile soil. Precipitation is also greater at that altitude than lower down, so that irrigation was not required for the corn, beans, and squashes which only the Indian cultivated previous to the introduction of other plants by the Spaniards. I saw pottery found at Cienega, belonging exclusively to the most ancient kinds. I was not surprised, therefore, to hear that remains of small houses have been found scattered over the site of the present Mexican settlement. Such ruins also occur farther south, near the Abó road, at the "Loma Parda," and east and south of Abó.

About a mile east of Abó, on the "Cerro Pelon," a bare hill in the centre of a basin partly overgrown with trees and shrubs, stand some mere flat mounds, which were houses of

¹ *Menologio*, p. 260: "Y en dos pueblos pequeños de Tenabó y Tabira otras dos menores iglesias." *Crónica*, p. 325: "Tiene dos pueblos pequeños, Tenabó y Tabira, con ochocientas personas que administraba un religioso."

the small type. The pottery on their surface is characteristic, not a single glazed specimen appearing among it.

At the base of the western front of the Mesa de los Jumanos, about four miles northeast of Abó, at what is called "Torneada," I examined the ruins of two houses. The foundations are plainly visible, and from the number of cells I infer that at least one of these houses, if not both, had two stories originally. The walls were of irregular blocks of the red sandstone common in the country, of the usual thickness. The pottery was distinctly of the large-house kind, having a thick glaze over the decorative lines and symbols. Traces of a circular *estufa* appeared near one of the buildings.

There is an extensive view from the spot on which these ruins stand. The whole valley of Abó spreads out, and west of it loom up the peaks along the Rio Grande, from the Sierra de los Ladrones in the north to the Fra Cristobal in the Jornada del Muerto. The Mesa de la Torneada, at whose base the ruin lies, is an advanced post of the great Jumanos plateau, and the nearest watering place, the "Aguaje," is about a mile distant. For the few families, perhaps sixty people, which the two houses could shelter, there is sufficient arable soil in the neighborhood. As to the tribe to which this little pueblo may have belonged, I conjecture that they were Piros, since the latter held the entire valley, and I have no knowledge of any other stock preceding them that dwelt in buildings of the large-house type. The ruins do not show as much decay as some of the mounds at Abó.

If we follow along the western front of the Mesa of the Jumanos to the southward, a series of dry "cañadas" are crossed, all of which contain patches of very fertile soil, although there is no water. But the summer rains suffice for the growing of corn, and other vegetables, and the present inhabitants of Abó remove to these spots in summer, rather

than rely upon the scanty water supply afforded by the inconsiderable Abó Creek. The Cañada del Puerto Largo is the most considerable of these gulches, which all descend from the Great Mesa, and through two of which old trails lead to the famous ruins of Gran Quivira, or Tabirá. Not far from the Puerto Largo I found a number of ancient summer lodges, or ranchos, of Pueblo Indians, which were indicated by posts stuck in the ground, and by forked branches, half buried, scattered about them.

At the first glance these vestiges resembled those of huts of nomadic Indians; but a number of glazed potsherds scattered about indicated that earthen vessels had been used on the spot for a certain length of time; and, besides, the appearance of foundations of rubble proved that I had before me the remains of ancient summer ranchos of sedentary Indians. At this day the people of Abó spend part of the summer there to watch their crops.

There is a very characteristic cluster of small houses on a wooded mesa above the bottom in which the ruins of the church and pueblo stand. This cluster lies in a direct line not over a mile from Abó. A number of foundations of rubble, little mounds of rubbish, round as well as elongated, indicate buildings varying from 3 meters ($8\frac{1}{2}$ feet) square to 3 by 6 meters ($8\frac{1}{2}$ by 17 feet). The potsherds are characteristic, and as different from those at the large pueblo as is the pottery of the small-house village above the mouth of the Parida, near Socorro, from the pottery of the compact ruin in the bottom below. Here also were vestiges of the two types of buildings in close proximity to each other, indicating two successive occupations, perhaps by tribes distinct from each other, perhaps by one and the same tribe changing its architecture and house life in the course of time.

The mesa or "loma" on which these small houses stood

overlooks a gorge bordered by low cliffs, called the Cañon de la Pintada. The name is derived from a number of aboriginal pictographs, executed in red, yellow, green, black, brown, and white, in sheltered places on the walls of the cliffs. They are mostly human figures, and their colors lead me to suspect that they date from the historical period, for the yellow looks like chrome-yellow, and the green is far too bright not to be some paint unknown to the primitive Pueblo Indian. Some of the figures are interesting; for example, a man in yellow, with a round cap on his head. This figure is called by the people of Abó "El Capitan." Really important are two figures of Indian dancers, one of them masked, showing the naked and painted chest and the gaudy kilt worn by the men on solemn occasions. The other plainly represents a "delight-maker," or jester, with his body painted black and white after the manner of the Koshare, Kosare, Kuenshare, or Shi-p'hung, as these clowns are called among the Queres, Tehuas, Jemez, and Tiguas.¹ By the side of the human figure stands a snake, apparently rising to, or descending from the face of the dancer. When I showed a copy of this pictograph to one of the leading Shamans of San Juan, he appeared startled, and finally confessed that it was a record of the snake dance, in the shape of a Kosare playing with the reptile.² As the paintings are probably of the time when New Mexico was already Spanish, I believe that the Piros of Abó made them. The snake dance is a Cachina, and these pictographs therefore confirm what my Indian friend from Cochiti stated in regard to the paintings

¹ Part I. pp. 286, 303, 307, and 315.

² It forcibly recalls the observation recorded by Espejo, *Relacion y Expediente*, p. 180: "Hicieronnos un mitote y baile muy solemne, saliendo la gente muy galana y haciendo muchos juegos de manos, algunos dellos artificios con vitoras vivas, que era cosa de ver lo uno y lo otro." This was at Acoma. The pictograph seems to prove that the snake dance was also practised by the Piros.

at the Cueva Pintada, — that such records of the Cachina were usually executed whenever a pueblo was to be forever abandoned. Should this hold good in the light of future investigations, it is quite likely that the paintings in the Cañon de la Pintada date from the time when Abó was definitively abandoned, or from about 1671. Besides the human figures, there are various symbols, such as the rain, shields, and head-dresses, all of which figure in Pueblo Indian dances, and more particularly in the Cachinas.

An arid plain separates the pass of Abó from the Rio Grande bottom, and neither on that plain nor in the pass itself have I heard of or noticed any vestiges of Indian habitations. Absence of permanent water and lack of precipitation, combined with the want of arable soil, render it likely that these sections will be found to contain no ruins. West of Abó there were Piroso pueblos along the Rio Grande, at Sabinal and La Joya; but at least twenty miles in a straight line separated them from the nearest village in the Abó valley, at Siete Arroyos. This separation of the two clusters is interesting. It may bear upon the problem of how and from which direction the Piroso reached Abó and the Salines, in times anterior to the sixteenth century; and whether their pueblos on the Rio Grande are not the result of a gradual withdrawal from earlier settlements established still farther east.

I will now turn to the ruins about the Mesa de los Jumanos, and the long mysterious Gran Quivira.

Along the western rim of the Médano extends a line of pueblos, among which the Pueblo Blanco, the Pueblo Colorado, and the Pueblo de la Parida are best known. On account of continuous snow-storms, I could not visit any other of them than the so called Quivira, and two smaller ruins, three or four miles south of it. Southwest of these,

Chupaderos is the next place where pueblo remains are found, and thence on towards Socorro the ruins on the Parida gulch continue the series. Indian villages of the large-house type, seem to have extended on a line from Socorro northeastward, as far as the southeastern corner of the salt lake basin. Presumably they were Piros, and the line indicates either an advance of that tribe from the Rio Grande valley towards the Salines, and perhaps beyond, or the contrary.

A volcanic mesa rises east and south of Chupaderos. This plateau has been regarded by some as of modern origin, and the destruction of the pueblos on the Médano, especially of Quivira, has been attributed to its upheaval. That seismic disturbances may have proved disastrous in such remote regions, and remained unnoticed by the inhabitants of the Rio Grande valley except as violent but harmless earthquake shocks, is not impossible, but there is no doubt that Quivira, for instance, had to be abandoned on account of the Apaches, and not owing to volcanic phenomena of a destructive character.¹

Of the ruins south of Chupaderos I shall treat hereafter. I have already noticed the ruins east of the Médano, at the Sierra Capitana, and perhaps beyond, nearer to the Pecos River. On the Mesa del Camaleon, towards the Sierra de la Gallina, there is said to be a considerable ruin, which was described to me as that of a large-house or typical pueblo.

¹ See Introduction to Part II, page 24. I also refer to my letter to the committee of the Institute in the *Fifth Annual Report*, page 88. My friend, Mr. R. B. Willison of Santa Fé, told me of a legend current among the Indians of Senecú in Chihuahua, that when their ancestors were moving from Abó to the Rio Grande they saw in the east or southeast a mountain burning. Some of the Apaches also speak of mountains being on fire in that region. I have not discovered any trace of such phenomena in my documentary material.

The ruins on the Médano north of the so called Quivira have also been described to me as regular pueblos, and as provided, each of them, with one or more artificial water tanks. There are no traces of springs near any one of them. Aridity is characteristic of the Mesa of the Jumanos and its surroundings, and it has perplexed all those who have investigated the region and paid some attention to its antiquities. Many have been the hypotheses resorted to in order to explain how agricultural Indians could subsist in such a waterless country, destitute not only of means for artificial irrigation, but even of the water necessary for personal use. The Médano has been imagined to have been a large river during historical times, which dried up in consequence of the volcanic upheavals at Chupaderos. I repeat here what I wrote to the Institute on this subject in February, 1884: —

“The tale that within historic times a great river flowed southward east of the Sierra Osdura, Sierra de San Andres, even of the Sierra de los Organos and of the Paso range, which stream had been interrupted by the upheaval of the great lava bed south of the Gran Quivira and north of the Sierra Blanca, is deeply rooted and often told. There is very positive evidence to the effect that within the documentary period no such cataclysm has occurred, and the cause of the abandonment of what is called Quivira now is well known.”¹

To this I will add, that, since it is well established that the Salines were visited by Chamuscado in 1580, probably by Espejo in 1582, and certainly by Oñate in 1598, one of them could not have failed to notice this river had it existed; for a stream of such magnitude, second in size only to the Rio Grande, must have attracted their attention, and would have become an important factor in the subsequent settlement of the country. There is no trace of it in

¹ *Fifth Annual Report*, p. 88.

any of the documents of these periods. Hence it is legitimate to conclude that, if the Médano ever formed a considerable stream, it was prior to the sixteenth century, and if the obliteration of that river was due to the upheaval of the Chupaderos Mesa, that disturbance also took place before the Spaniards arrived in New Mexico. Lastly, since, as I shall hereafter establish, the pueblo called Quivira was in existence as late as the seventeenth century, its destruction cannot have been due to volcanic phenomena at Chupaderos.

I should not be surprised if, in the course of future historical investigations, it should be found that the pueblos of the Médano, or some of them besides Quivira, were occupied as late as the middle of the seventeenth century. That they were Piro villages is almost certain; and we must remember that Chamuscado, in 1580, saw eleven pueblos around the Salines, and Benavides, half a century later, speaks of fourteen or fifteen. Even allowing three pueblos to the Tiguas at Manzano, it leaves for the Piros a greater number than are positively identified as having belonged to them. The cause of the abandonment of these settlements was doubtless the inroads of the Apaches.¹

¹ Allowing three villages (an exaggerated number) to the Tiguas at Manzano, one at Chilili, one at Tajique, and one at Cuaray, it leaves to the Piros from five to nine. Only three are positively known, — Abó, Tenabó, and Tabirá, or Quivira. Adding to these the problematic "Pueblo de los Jumanos," there are still from one to five to account for. Therefore it seems to me probable that one or more of the pueblos called to-day "Blanco," "Colorado," and "Parida," were still inhabited after the Spanish occupation of New Mexico.

It is possible that the danger to which the Piros on the Médano were exposed from the Apaches caused the smaller pueblos to unite in a larger one, where a mission had been established, and where a small escort of soldiers did what was usually called "frontier" duty. Tabirá, or Quivira, was probably that mission; afterwards Abó. That there was such an escort at the Salines, not far from Cuaray, is proved by Fray Juan de Salas in his *Villetes* to Governor Pacheco de Heredia in 1643.

I have also heard of vestiges of detached houses on the eastern edge of the mesa, but this needs confirmation. The chief interest for the antiquarian, however, lies in the ruin called "La Gran Quivira." In the first part of this Report, I have already stated that this designation is a misnomer, and that these remains, long a mystery, are those of the Piro village and mission of Tabirá.¹

A ground plan of the ruins is given on Plate I. Figure 29. It will be noticed, —

1. That the pueblo, although considerable, by no means justifies the extravagant descriptions of tourists and prospectors. The population of Tabirá cannot have amounted to more than fifteen hundred souls.

2. That it was a scattered large-house village, — a long, narrow pueblo, with many-storied houses, similar in its arrangement to the pueblos of Santo Domingo, Jemez, and Laguna, of to-day.

3. That there were two churches, each with its convent attached.

For a corroboration of my ground plan, as well as of some of the details which are to follow, I refer to the plat published by Lieutenant Morrison, U. S. Army.² It will be seen that his survey agrees with mine in the main, and that I have not underrated the extent of the settlement. Tabirá presents nothing unusual to one who is familiar with pueblo architecture, either of the past or of the present time. And yet for nearly a century these ruins have been looked upon as something unique among the antiquities of New Mexico, in size and in manner of construction, and as mysterious on account of their situation in a waterless waste.

¹ Page 131, note 2.

² *Annual Report of the Chief of Engineers for 1878*, Appendix N M (App. F.), Part III. p. 1558.

I have already said that Quivira was situated near the southern apex of the triangle formed by the Mesa de los Jumanos. From Manzano the distance is about thirty-five miles, and it is seventeen from the northern rim of the mesa. The space between that rim and the ruins is a gradual slope, covered with grass and without permanent water. At the foot of the ruins, on the west, lies the Médano, a sandy gulch, above which rises a hill of gray limestone, a promontory of the ridges bordering the Médano on the east. On this hill, which is quite narrow and dotted with the usual scrubby conifers, lie the ruins, the larger church occupying its westerly brow and overlooking a vast expanse of singular bleakness. In the west, the summits of the Socorro and Madalena Mountains peep over the wooded border of the Jumanos plateau; in the south, an undulating level dotted with black shrubs stretches towards the dim mass of the Sierra Blanca; in the east, over dreary ridges and hills, rise the mountains of the Carrizo, the Sierra Capitana, and the Gallina, rugged, dark, forbidding; while the north is occupied by the sloping surface of the plateau. Not a trace of a spring has been discovered near the ruins; not a brook trickles down from the heights in their vicinity.

In this arid solitude the massive edifice of the church, with the mounds of the pueblo, look strangely impressive. From the west the church can be seen miles away, a clumsy parallelepiped of gray stone; from the northeast, through vistas of dark cedars and junipers, the ruins shine in pallid light, like some phantom city in the desert.

An examination of the details dispels the illusions created by distance and surroundings. We find in all eighteen Indian houses of various sizes, and six circular estufas. The largest houses measure respectively 14 by 70 m.; 5.7, 7.8, and 17 by 60 m.; 58.3 by 33.6 m.; and 14.7 and 51.3 by 8.8 m.

The walls are of irregular pieces of gray limestone, laid in adobe mortar, and from 0.33 to 0.35 m. thick. As the stone is quite hard, the work on these walls looks more carefully executed than in many other ruins, but on the whole the difference is not considerable, and the statements that the stones were hewn are utterly without foundation. The pueblo had certainly three stories, in some places perhaps more. The estufas vary in diameter from 6.6 to 8 meters. They are still quite deep, and may have been, like those of Taos, completely under ground. Among the rooms I measured one which was 6.2 m. long by 2.3 m. wide (19 by 7 feet). But the average of 196 cells is 2.8 by 3.7 m. (9 ft. 2 in. by 12 ft. 6 in.). I saw some doorways, low and narrow as at Pecos, with lintels of stones. Traces of the roofs, consisting of occasional beams, of pieces of brush, and of frozen earth, proved that the roofing was the usual one. The estufas had thin stone walls. In short, after three days spent in examining every part of the ruin, I found nothing that was not strictly in accordance with the characteristics of ordinary pueblo architecture. That the village is longer than pueblos of the older kind usually are, and does not appear so compact, is not surprising, since the configuration of the ground compelled the inhabitants to build the houses along the crest of the ridge, and therefore to stretch them out, instead of arranging them in squares. To a certain extent, it might be said that Quivira consists of two rows of houses, forming an alley or narrow street.

A great deal of pottery was strewn over the ruins, the kind with glossy ornamentation largely prevailing; but there was also some corrugated, indented, and plain ware, and a few pieces of black and white. Much flint and some obsidian lay about, and arrow-heads were comparatively numerous. I also found a flint awl, and broken metates and grinders were abundant. In short, the artificial objects fully sustained the

impression conveyed by the architecture, that Quivira was an ordinary pueblo of considerable size, whose inhabitants stood on the same level as the other Pueblo Indians of New Mexico.

Southeast of the smaller of the two churches, I noticed a structure forming approximately a hollow square, and measuring 19.2 meters from north to south and 18.2 meters transversely. It had but one entrance, in its southeastern corner, which was one meter wide. The walls were 0.22 m. wide and only 1.6 m. apart. What this construction was intended for I am unable to conjecture.

I have stated that there were two churches at Quivira. The smaller one stands south of the main rows of houses, the larger on the brow of the hill, overlooking the western plain and the Médano. Connected with the former is a yard, some of the circumvallation of which is still visible. The church is much ruined, only the corners standing erect to the height of a few feet.

The larger, and from all appearances newer, church at Quivira is a building of considerable size, since it measures 35.6 meters (116 $\frac{3}{4}$ feet) from east to west, and 7.4 meters (23 feet) from north to south. Adjacent to it, on the south, are the ruins of a convent, containing a number of cells and a refectory, all built around an interior courtyard. This convent is 30 meters (98 $\frac{3}{4}$ feet) long from east to west, and 40.8 metres (133 $\frac{3}{4}$ feet) from north to south. The temple is therefore somewhat smaller than those of Cuaray and Abó, while the convent is larger, — so large even as to suggest the thought that it was destined for the residence of several missionaries. Both edifices are built of the same material as the pueblo houses, but the work is a little more carefully executed, and the walls are much thicker. The east front of the church is nearly two meters (six feet) in thickness, and flanked

by two buttresses or towers 4.4 meters (14½ feet) square. Huge beams, quaintly carved like those at Pecos, but more massive, fairly hewn, and approximately squared, are still in place across the doorways and in some parts of the interior of the church, but the roof is completely gone. Much rubbish fills the interior, and from appearances I should judge that the roof was never completed over the whole church, and that the walls of the convent had not been reared to their full height when work on them was given up. The whole has an unfinished appearance, and the same impression has been made by the ruins upon several other visitors. It looks as if the work had been suddenly interrupted, and was never resumed.

After examining the two churches, I turned my attention to the question of the water supply. The most diligent search revealed no trace of springs in the neighborhood, yet there appeared in the middle of the narrow street formed by the principal buildings of the pueblo a groove not unlike a channel. Following this channel in the direction of the northeast, that is up the crest of the eminence, I noticed that it was in places from two to three meters wide (6½ to 9½ ft.) and about 0.50 m. (22 in.) deep. Potsherds lined its course. Three hundred meters (980 feet) northeast of the most easterly house of the pueblo the ditch terminated in an artificial pond thirty-five meters in diameter (115 feet).

A short distance southwest of this pond I found another, thirty meters (98 feet) in diameter and nearly three meters (9 feet) deep. Fifty meters to the eastward of the first was a third reservoir, forty meters (130 feet) across and two meters deep. It stood on the highest point of the ridge, and still shows traces of a rim of stones. In several places this rim is broken through by gullies. The fall from this uppermost tank to the first house of the village is ten meters (32½

feet) in a distance of a quarter of a mile. The rims of all three tanks and of the channel were covered with fragments of pottery, showing that much water had been carried from them to the pueblo; also that washing and cleansing had been performed along the channel and at the ponds.

This system of reservoirs, so arranged that the highest one emptied into the others, fully explained the mystery of the water supply for the Gran Quivira. From the lowest tank the water was led not only to the pueblo, but through it, to the western slope of the ridge on which the village stood. I followed this channel back, and found that it emptied at its lower end into a fourth artificial pond constructed about thirty-five meters west of the northwestern corner of the pueblo, on the declivity, some distance below the church and northwest of it. This last reservoir is as wide as the largest of the upper ones. Its depth is still three meters, and the rim of stones around it is perfect, from northeast by north to west. In the direction of the north and northeast, two artificial channels run from it down the slope, by means of which the small garden plots could be irrigated.

As the aggregate area covered by the four ponds is about 4,100 square meters, or 44,075 square feet, that is, very nearly one acre, it follows that they afforded enough water for the daily supply of a population of fifteen hundred souls, but for the irrigation of the fields which this number of people would require they were of course inadequate.

But Quivira, as well as all the other pueblos in that region, did not require irrigation for the crops which they raised before the Spaniards brought them wheat, barley, and other European plants. The grass on the Jumanos plateau shows, as all those acquainted with the country know, that the precipitation is ample in ordinary summers for raising corn, squashes, and beans. All that was needed, therefore,

was water for drinking, cooking, for making adobe mortar, and for the limited amount of washing performed by the Indian. For such purposes the reservoirs sufficed, and they were in such close proximity to the houses that it was not easy for a prowling foe to cut off the water supply. The fact, repeatedly stated to me, that the other ruins on the Médano were all provided with artificial reservoirs, further shows that it was not a device peculiar to Quivira, but one generally adopted by the Pueblo Indians of that region.

On the last day of my stay at Quivira I satisfied myself of the truth of this conclusion. About three miles south-south-west of it, at the other end of a level covered with splendid grass, rises the Loma Pelada, a hill thirty-five meters (98 feet) above the surrounding plain. This bald eminence bears the remains of a pueblo similar to that of Quivira, but considerably smaller and much more decayed. The mounds are shapeless, flat; and, instead of being in long rows, are disposed in a circle around the top of the hill. I noticed two estufas, and only nineteen meters southwest from the village an artificial pond twenty-two meters in diameter. About one mile farther, at Lagunitas, is another pueblo ruin with an artificial water reservoir. It seems, therefore, that all over this arid region the villages relied upon such contrivances, in the same manner as they do to-day at Acoma.

Well may we ask, What could have induced the Indians to settle and to remain in a region where they had to forego the great convenience of a natural water supply? We may conjecture that necessity, the result of being driven back from other points, had something to do with it; still it cannot be denied that, however unprepossessing to the eye, the country offers many advantages to the sedentary native. The soil is far from sterile, wood is everywhere within reasonable distance, and game abundant; and every pueblo on the

Médano stands, as far I could ascertain, so as to be easily defended and to afford excellent lookouts. They are all specimens of that peculiar kind of Indian defensive positions, in which the absence of obstacles to a wide range of view becomes the main element of security. The roving Indian seldom could have taken a pueblo by surprise, still less by direct assault; against both, the villages on the Médano were almost impregnable; against persistent attacks on a small scale, however, the sedentary Indian could not long hold out.

Having shown that the ruins of the famous Quivira not only have nothing mysterious about them, but that they belong to the category of ordinary Indian pueblos, and that the water question can be solved in a very simple manner, it remains to investigate what Quivira was during historical times, and to which stock or tribe of Pueblo Indians it belonged. There is no doubt that it was an historic pueblo, for its churches and their convents are of Spanish origin, but that Quivira was not its true name is also certain, since the Quiviras, as I have elsewhere proved, were a nomadic tribe, and no permanent mission was ever established among them, still less churches built and convents erected.¹

As it has been ascertained that "Quivira" was not the proper name of the place, and that the village was still inhabited after the year 1600,—and as we know that up to that date the Spaniards had built but a single church in New Mexico, the one at Chamita on the Upper Rio Grande,—for the identification of the place we must inquire which were the missions founded in the seventeenth century east of the Rio Grande valley and south of the Tanos region, where

¹ Compare Part I., page 170 *et seq.* Also my essay in the "Catholic Quarterly Review," July, 1890, *Fray Juan de Padilla, the first Catholic Missionary and Martyr in Northeastern Kansas*; and articles in "The Nation," October 31 and November 7, 1889, entitled *Quivira*.

they were located, their names, and which of them were provided with churches and with abodes for resident missionaries. In addition to the Tigua missions already spoken of, to wit, Chilili, Tajique, and Cuaray, there existed in the seventeenth century in the vicinity of the Salines three missions of the Piros, Abó, Tenabó, and Tabirá. A pueblo of the Jumanos is also spoken of, but, while repeated efforts were made to Christianize that tribe, I have nowhere found any mention of a permanent mission with a church or chapel. A priest had in his charge several "ranchos," or gatherings of lodges of the Jumanos, who lived about fifteen leagues (forty miles) east of Abó;¹ but the distance does not agree with that of Quivira from Abó, and still less does the fact that these Christian Jumanos were ministered to from Cuaray tally with the two churches and convents at the Quivira. Our choice is therefore limited to Tenabó and Tabirá; since at both places small churches had been erected by Fray Francisco de Acevedo, and a special priest attended to them.² Tenabó appears in but one document of the seventeenth century, while Tabirá is repeatedly mentioned; the latter, therefore, must have been the more important settlement. If the report is true that at the ruin called "Siete Arroyos" in the Abó valley there are the remains of a chapel, I hold that this was the pueblo of Tenabó; in which case Quivira can have been no other than the pueblo of Tabirá. Thus far documentary evidence from the time anterior to the uprising of 1680 has been followed.

On a map of New Mexico bearing date 1705, the original draft of which was transmitted to the French Academy by a Spanish grandee, Tavira is marked at a short distance south of Abó, but southeast of Cuaray.³ On a manuscript map,

¹ Vetancurt, *Crónica*, page 325.

² *Ibid.*

³ *Carte de Californie et du Nouveau Mexique*, par N. de Fer, Géographe de

however, of the second half of the past century, preserved in the National Archives at Mexico, Tabirá appears exactly in the position which the Quivira occupies; and the name is also accompanied by the figure of a large church.¹

Lastly, an Indian of San Ildefonso, now deceased, but with whom I was well acquainted, assured me most positively that Quivira was the old pueblo of Tabirá; and this was afterwards repeated to me emphatically by an old Indian of Santo Domingo, who was well acquainted with the locality.

From all these indications I conclude that Tabirá is the proper name of what to-day is called "La Gran Quivira."

Tabirá was a settlement of Piros beyond all doubt,² and was abandoned, probably before Abó and the Tigua villages of the Salines, in consequence of the Apaches.³ Its evacuation therefore dates from between the years 1664 and 1671. The smaller and older church had been erected during the lifetime of the founder of the mission, Father Acevedo, prior to 1644, though after 1628.⁴ The new church must be subsequent to 1644, and was probably commenced, but never completed, between 1660 and 1670. With these scraps of historical information touching the past of Tabirá, alias Gran Quivira,⁵ I take leave of the place to cast a glance at ruins farther south.

A large pueblo exists at Nogal, about twenty-five miles north of Fort Staunton, near the Sierra Blanca, which a Piros

Monseigneur le Dauphin, 1705. On the same map "Humanos" is marked distinct from Tabirá and south of Cuaray. The directions are of course wrongly indicated.

¹ Tabirá is also spoken of as a former mission, but abandoned, in Morfi, *Descripcion Geográfica*, 1782, fol. 107.

² Part I. page 131, note 2.

³ Escalante, *Carta*, par. 2.

⁴ Vetancurt, *Crónica*, p. 325. *Menologio*, p. 260.

⁵ For the manner in which the name "Quivira" came to be applied to Tabirá in the latter part of the past century, see my articles on *Quivira*, in "The Nation," already referred to.

Indian told me was in times long past a settlement of his own people. I doubt whether it was inhabited in the sixteenth century. Ruins are mentioned as being numerous about Tularosa, and thence eastward to the Pecos River. Precisely how far south such vestiges extend I am unable to say, but I have been repeatedly told that the Sierra del Sacramento contains no traces of ancient human occupation. That mountain chain lies very near the confines of Texas, and is outside of the territory assigned to me for investigation. It seems, however, that Southeastern New Mexico was not inhabited by sedentary Indians farther east than the Pecos River, or farther south than the thirty-third parallel of latitude.

If the ruin at Nogal is that of a Piros pueblo, and the ancient pueblos on the Médano north of Tabirá were also Piros villages, it points to a withdrawal of that stock from the north, east, and south towards the Rio Grande, in times anterior to the first appearance of the Spaniards. I reserve a discussion of such indications for a later chapter of this Report.