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Henry E. DeBries
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INTRODUCTION

Archaeology is a fascinating activity. It provides the practicing archaeologist with wholesome outdoor exercise usually taken during the pleasant season of the year. It provides all of the mental fascination of a detective story in interpreting the materials recovered, an activity generally carried on indoors during inclement seasons of the year.

Partly because of this pleasant atmosphere surrounding its active practice, and partly because the modern science of archaeology has developed out of rather unscientific relic-collecting and yet remains oriented primarily toward elaborating man's knowledge of his past, archaeology has generally been regarded as a stimulating and interesting intellectual exercise for a few professional practitioners and an absorbing avocation for many amateurs. It has not gained wide recognition as a practical science contributing knowledge of direct use to the contemporary world except in stimulating and partially satisfying man's seemingly inherent curiosity about his own past.

Yet an occasional archaeologist has arrived at the conclusion that "The value of historical reconstruction and an understanding of the past should not be minimized, yet the
science of archaeology and archaeological methods may be applied to more than the reconstruction of cultures and cultural history.  

Most of the practical applications of archaeological knowledge and techniques probably lie in the field of supplying additional time perspective in some of the physical sciences. Archaeologists can provide important data to the soil conservationist, reclamation engineer, the physiographer, ecologist, etc. But in addition to this, "Several archaeological methods may be used to establish boundary claims."

The study here reported is an attempt to do just that: to apply archaeological techniques to a particular boundary claim problem. The Hualapai Tribe of Arizona is suing the United States under provisions of the Indian Claims Commission Act (60 Stat. 1049). By its suit this tribe seeks to recover monetary damages for lands in northwest central Arizona which its ancestors once possessed and utilized, but which have been lost by them to Anglo-Americans through actions of the United States.

So that a decision may be reached in this case by the Indian Claims Commission, evidence of the location and extent of the lands once held and exploited by Hualapais must be made available to the members of the Commission. This

1/ Bliss, 1955, p. 703.
2/ Ibid., p. 708.
study is designed to furnish archaeological evidence on these points. It may be characterized as a study in applied archaeology, since archaeological techniques are employed and an eminently practical question is at issue: Are the Hualapai Indians to be compensated by the United States for lands once held by their ancestors or not? If so, for what lands, where located? The pages which follow present the evidence obtained for the guidance of the Commission.

This research was initiated in the spring of 1952 by Mr. Felix S. Cohen of the legal firm of Riegelman, Strasser, Schwarz and Spiegelberg in Washington, D. C. Mr. Cohen at that time and until his untimely death served as director of research for the "Joint Efforts Group" of attorneys representing various Indian tribes within the United States before the Indian Claims Commission.

Mr. Cohen was an extremely capable advocate. He was one of those rare attorneys who creates law as well as accepting precedents and interpreting existing law. Always a high moral sense impelled him, and he possessed a capacity rare among lawyers to perceive relationships of seemingly unrelated social data to legal problems. With a basic orientation that law is man's servant, Mr. Cohen combined an extensive command of the factual data and theoretical foundations of social science. Therefore, it did not seem to him extraordinary to attempt to assemble archaeological evidence bearing upon a question before the Indian Claims Commission.
Since Mr. Cohen's unfortunate death, his place in the research firm has been taken by Mr. Arthur Lazarus, Jr., and the firm has become Strasser, Spiegelberg, Fried and Frank.

Mr. Cohen's original approval of the research was heartily seconded by the attorney of record for the Hualapai Tribe, Mr. Royal D. Marks of Marks & Marks, attorneys of Phoenix, Arizona. This firm has directly administered the funds provided by the Tribe for this research, and Mr. Marks has been most cooperative in arranging other matters with the Tribe.

In carrying on this study, the author has had the wholehearted cooperation of a great many people at a number of anthropological institutions, without which its completion would not have been possible. These include Dr. Emil W. Haury, Director of the Arizona State Museum; Dr. Harold S. Colton, Director; Mr. Malcolm F. Farmer, Assistant Director; Mr. Robert C. Euler, Curator of Anthropology; Miss Katharine Bartlett, Curator of Books and Records; and Mr. Milton Wetherill, Superintendent of Buildings and Grounds of the Museum of Northern Arizona; Mr. Galen H. Sayler, Curator of Anthropology at San Diego Museum of Man; Mr. O. L. Wallis at the National Park Service Museum in Boulder City, Nevada; Mr. Albert H. Schroeder, Archaeologist in the United States National Park Service at Globe, Arizona; Mr. Stanley Stubbs of the Laboratory of Anthropology, Santa Fe, New Mexico; Mr. Richard Shutler, Jr., and others.
During the period the study has been underway, many Hualapais have participated as guides to sites occupied by their relatives and as purveyors of their tribal oral traditions. One or more of the members of the Claims Research Committee of the Hualapai Tribal Council has been a companion nearly throughout, acting as guide, interpreter, overseer and Hualapai Emily Post. I am deeply grateful to Mr. Grant Topija, Mr. Fred W. Mahone, and Mr. Carl J. Amis for their long-suffering assistance. The various chairmen of the Hualapai Tribal Council through this period have uniformly lent their support and cooperation, and the good offices of Mr. Sterling Mahone, Leo B. Andrews, Wilson Honga and Rupert C. Parker are gratefully acknowledged.

The Problem

The problem posed by attorneys for the Hualapai Tribe called for bringing archaeological evidence to bear upon the question of the extent and location of territory in northwest central Arizona formerly occupied by this tribe of Indians. (The tribe's legal representatives started from the obvious assumption that the Hualapais had had a homeland; they wanted evidence gathered as to its size.) In his petition to the Indian Claims Commission, Mr. Marks stated his view of this territory:

9. From time immemorial the Petitioner Tribe exclusively owned and enjoyed the sole and undisputed use, occupancy and possession,
in the accustomed Indian manner, of a tract of land in the northwest part of the area presently known as the State of Arizona. This territory, over which the Petitioner Tribe exercised dominion and control, was bounded and described as follows:

Beginning at a point midstream of the Colorado River marked by the intersection of said river with the eastern boundary of the present Hualapai Reservation; thence south on a line following the said boundary of the said reservation and continuing to a place known as Rose Well; thence southeast and south on a line passing along the Aubrey Cliffs, through Round Mountain and Mount Floyd (the western edge of the watershed of Cataract or Havasu Creek), west of Ash Fork, and east of Tucker Spring to a point on Walnut Creek approximately two miles west of its mouth; thence west on a line passing along said Walnut Creek and turning southwest to the high ground dividing the headwaters of Burro Creek and the Santa Maria River; thence southwest and west on a line along the ridge dividing the watersheds of said Burro Creek and said Santa Maria River to Signal on the Big Sandy River; thence west and northwest on a line corresponding to the northern edge of the watershed of Bill Williams River to a point south of Topock, known as Pinnacle Butte; thence northeast on a line to Boundary Cone; thence northwest on a line to the Colorado River at a point near Hardyville, east of All-Spirits Mountain; thence north and east on a line through the center of the said Colorado River to the point and place of beginning. 1/

This boundary is indicated in red on the large base map.

1/ Marks, 1951, p. 3-4.
CHAPTER I
WHY ARCHAEOLOGICAL EVIDENCE IS DESIRABLE

It appeared to Mr. Cohen and to the author that it was desirable to assemble archaeological evidence bearing on the question of the location and extent of territory in Arizona owned and occupied by Hualapai Indians from time immemorial until its seizure through actions of the United States simply because of an obvious scarcity of other types of evidence bearing upon this question.

The most desirable and reliable type of evidence—written historical documents of the type United States courts are accustomed to dealing with—is relatively scarce for the Hualapais compared to that available treating of some other Indian tribes. And the information available documents do contain is highly selective and sketchy.

While U. S. citizens are known to have begun crossing the aboriginal territory of the Hualapai Indians in the 1820's the records of these earlier explorers by and large contain little more than the information that they crossed the area. Not until 1851 did an official United States government exploring expedition come into contact with Hualapai Indians. Thereafter a good many years went by before there are records
of the Hualapais in any detail, and large parts of the area once inhabited by this tribe were not visited by Anglo-Americans until the end of the 19th century after the Hualapais had been forced to abandon them.

During the period of Mexico's sovereignty—throughout which Mexican land use never extended north of the Gila River far to the south—no documentary records of contact with the Hualapais were made which I have been able to locate, although later American records indicate some slave raiding into this region from New Mexico.

Earlier, during the Spanish colonial period, there were a number of expeditions which crossed western Arizona, but the earlier and large scale explorations seem to have skirted the edge of Hualapai territory. It was not until Father Francisco Garces' trip in 1776 that a Spaniard contacted the Hualapais in their own country, and his seems to have remained the only European contact with them until the 1820's.

A. Spanish Records Bearing on Hualapai Location

The reports of most of the major Spanish explorations in the American Southwest have been translated and published in English, so a summary of Spanish knowledge (or lack of it) of the Hualapais relies primarily on published sources. Although an attempt has been made to locate unpublished Spanish manuscript sources dealing with this tribe, none has been discovered. I have personally examined various collections
at the Bancroft Library, University of California, for this purpose, and checked the collections of the Archivo General de Indias in Seville, Spain, and the Archivo General y Público de la Nación in Mexico City as well as published guides to those archives permit. It seems fair to conclude that no significant Spanish contact with the Hualapais took place other than that already known.

The earliest Spanish explorers in west-central Arizona reached this region within the seventh decade after Cortez took Mexico City. Yet all the great early explorations seem to have missed the Hualapais. They will be summarized here to indicate: 1) How little contact took place between Spaniards and Hualapais, and 2) The existing documentary evidence as to Hualapai location during the Spanish colonial period—primarily helpful in fixing the locale of neighboring tribes, thus allowing inferential location of the Hualapais.

1. Espejo—1583

Antonio de Espejo discovered copper deposits worked by Indians in 1583 in Yavapai territory as later known. Dr. Herbert E. Bolton thought these mines were in "the region of Bill Williams Fork, west of Prescott, Arizona." If they had been, they would certainly have been in Hualapai country (and they may have been as it was: tribal identification from these earliest records is a very uncertain process).

H. H. Bancroft had already theorized that these copper deposits were located near Bill Williams Mountain. Both these eminent historians erred apparently through lack of first hand knowledge of the country Espejo traversed. The copper deposit he visited has been identified by Miss Katharine Bartlett of the Museum of Northern Arizona as the one later exploited by the United Verde Copper Company at Jerome.

Publishing a separate account of the Espejo expedition, Dr. George P. Hammond and Agapito Rey pointed out that it could hardly have traveled so far west as Bolton thought in the time spent in travel. They calculated the mines must have been located in the Verde Valley. It remained for Miss Bartlett to lay down with some precision the route Espejo and his men followed. Being more familiar with the region than previous writers, she was able to identify Espejo's route as an old Hopi Indian trail into the Verde Valley. This trail has evidently been used by Indians traveling between the Hopi mesas and the Verde Valley region since at least the 1300's when the last prehistoric pueblos in the Verde area were still occupied. This identification of route has been concurred in by a recent historian of the Yavapai.

1/ Bancroft, 1889, p. 88.  2/ Bartlett, 1942, p. 23.
5/ Ibid., p. 25.  6/ Schroeder, 1952b, p. 112.
2. Farfan--1598

Marcos Farfan de los Godos scouted west from the Hopi mesas in the year 1598 seeking Espejo's discovery. He located "an old shaft, three estados in depth, from which the Indians extracted the ores for their personal adornment and for the coloring of their blankets." These Cruzados Indians have been identified as Yavapais.

Dr. Bolton's "opinion that the mines were on the eastern slope of the Aquarius Mountains" would place them in Hualapai territory. However, Bolton himself wrote that "It seems clear that Farfan, in 1598, went over essentially Espejo's ground." If Farfan did follow Espejo's route and relocated the same workings, then he, too, must have followed the old Hopi trail, and the Indian workings he described were the same ones still visible at Jerome when the United Verde Copper Company began operations in 1883 which destroyed them.

3. Onate--1604

Farfan's commander, Juan de Onate, turned to westward exploration in 1604. He surely followed the same Hopi trail to the mines as Farfan. Then he crossed the mountains west to the Santa Maria, which he followed down to its junction with the Colorado.

1/ Bolton, 1916, p. 244.  
2/ Schroeder, 1952b, p. 113.  
5/ Bartlett, 1942, p. 23.  
Following along Bill Williams Fork after descending the Santa Maria, Oñate indeed skirted the southern edge of Hualapai territory as defined in later years. However, the area along the streams has a relatively low wild food resource potential. Since Oñate passed through in midwinter when agriculture could not be practiced along the river banks, there very likely were no Hualapais within miles of his party. Certainly he did not record seeing any Indians on this part of his journey.

The records of these earliest explorations yield no information on Hualapai location save that they were not seen by these Spaniards unless they were the Cruzados ranging in the vicinity of the mines in the Verde Valley in what was later Yavapai territory.

4. Hopi Hearsay

After these early years of far-ranging exploratory military expeditions, west-central Arizona was not again seen by Europeans for a century and three-quarters. Then only one man ventured through— a line Spanish friar from the south.

But during this long period the Spaniards in New Mexico retained some interest in the western regions. The effective western limit of their knowledge was the Hopi mesas, and it was from the Hopis that New Mexicans received intelligence of the Hualapais and other tribes beyond the pale.
Because of a language factor, it is difficult if not impossible to distinguished the Hualapais from the Havasupais in the Spanish records of this period. The Hopis referred to both tribes as "Cohonina." Or at least this was as much of designation they used that Europeans learned and wrote down. Actually, the Hopis refer to Havasupais as Ko'h'nina, and to Hualapais as Nivak Ko'h'nina, according to a Havasupai informant. (FMS July 29 p 9)

Failure by Hopis or their Spanish auditors to distinguish between Havasupais and Hualapais led to confusion of the groups in extant records. For example, in his recent history of the Havasupais, Schroeder says of Fr. Menchero's figure of 10,000 population in 1752 "The population figure is quite exaggerated." It is if the term "Coconino" is taken to refer only to Havasupai as Schroeder assumed. However, if this estimate is taken to include both Hualapais and Havasupais, the exaggeration would have been only in the order of doubling or tripling the actual population, which is not unusual for Spanish population estimates. Nor could the Havasupai alone have occupied the eleven rancherias attributed to them in this report unless every temporary camp on the plateau was counted a rancheria.

2/ Such references come from my field notes, filed chronologically. See Appendix II for list of informants.
The records of the Dominguez expedition seeking a route from New Mexico to California in 1776 illustrate the New Mexican conception of the Hopi term as referring to a single group occupying the area held by both the Havasupais and Hualapais. With more assurance than accuracy, Bernardo Miera y Pacheca wrote of this area he never saw:

The region below these sites, from the place where the river is joined by the Rio de los Zaguaganas, now called Rio Colorado, is made uninhabitable because the river runs through a tremendous canyon between very high and steep red cliffs. Indeed not even the heathen live on this river for a distance of more than five leagues on either side, because of its extreme sterility, the terrain being rough and broken, and the canyon extending downstream through all the country of the Dosninas as far as the Jamajabas, Galchidunes, and Yumas." 1/

In saying that the Colorado river ran through "all the country of the Cosninas" as far as the Mohaves, Halchidhomas, and Yumas, Miera y Pacheca obviously included far more than Havasupai country--taking in that of the Hualapais, and if the mention of Yumas be taken seriously, some Yavapai territory as well, perhaps.

Having heard about Garces' trip to Oraibi earlier in the summer, and perhaps having other information from friendly Indians, the leader of the expedition informed the Governor of New Mexico before leaving that he intended to "return through Cosnina, to confirm that nation in its good intention..." 2/

1/ Bolton, 1950, p. 246.
2/ Ibid., p. 10.
This usage and perception of the Hopi term Ko’hnina continued well into the period of United States sovereignty when New Mexicans were guiding explorers and immigrants through the region. For example, in 1858 a guide from there, Savedra, called hostile Indians fighting the party of immigrants he was guiding somewhere in or near the mouth of Truxton Canyon in the heart of Hualapai country "Cosenenos." The retreating immigrants surprised and slew three of these Indians, and John Udell, one of the party, wrote that "Since our killing of these Indians, they have nearly all dispersed. Our guide informs us that these Indians are called Cosenenos, a small tribe, but we think they are allies to the Mojaves—at least they are mixed with them. The fact that these Indians were referred to as mixed with Mohaves rules out their having been Havasupais. Given this statement and their location, it is fairly conclusive that the New Mexican guide was calling Hualapai Cosninas. As a matter of fact, some Hualapais may have joined the Mohaves in the skirmish which turned this immigrant party back.

This same Savedra had been with Leroux as a guide of Whipple’s exploration in 1853-54 through Hualapai territory. From them other members of the expedition took over the tribal designation "Cosninos" for the Hualapai-Havasupai group.

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1/ Udell, 1868, p. 41.  2/ Ibid., p. 51.  3/ Mollhausen, 1858, II:166.
Both Savedra and Leroux probably used this term long before they saw Lt. Whipple. Leroux had guided the Sitgreaves party through the same region in 1851. And "On Monday, November 3, about noon, our guide, Mr. Leroux, was severely wounded by the Cojininos Indians" according to the medical report of that expedition. Since this attack took place as the Sitgreaves party crossed the Cerbat Mountains, Leroux clearly was using this term for Hualapais prior to his service with Savedra in 1853-54.

Savedra, on the other hand, claimed "to have accompanied the Moqui Indians upon an expedition against the Mojaves" on which Hualapai territory had to be crossed. He almost surely learned the term Cohonina directly from his sometime Hopi associates. Leroux's use of it is actually better evidence of its general use among New Mexicans to designate both Havasupais and Hualapais.

a. Earliest Knowledge

Possibly the Hualapai and certainly the Havasupai came to the notice of Spaniards in New Mexico under their Hopi generic name prior to 1665. Certainly these upland Yumans were known in New Mexico as "Coninas" before the Pueblo Re-

1/ Sitgreaves, 1853, p. 184.
2/ Foreman, 1941, p. 114.
volt of 1680, "at which time they ranged west of the Hopi." 1/ When Fr. Silvestre Velez de Escalante was assigned to examine existing New Mexico archives a century later, he wrote to his superior a brief history of the province to his time. Discussing the years just before the Pueblo Revolt, he stated that "Nearly all the areas of that kingdom were at that time occupied by the heathen Apaches, having different names according to the lands where they dwelt; and only to the west of the province of the Moquis were neighbors, as today those of the Cosninos nation. In the beginning of the rule of Don Antonio de Otermin, they appeared and held communication with the Spaniards..." 2/ There may actually have been direct contact between Hualapais and/or Havasupais and Spanish priests in their own territory before the Pueblo Revolt, regardless of the truth of Peñalosa's claims. Priests were assigned to a "Coconino" missionary district in 1672. 3/

1/ Schroeder, 1953, p. 46, gives Governor Peñalosa's claim to have made peace with the Cruzados and Coninas and reduced them to two pueblos as "our first definite reference by name to the Havasupai." Schroeder relied on Hackett, 1937, II:264, in stating that Penalosa claimed "to have placed some of them in the Hopi villages under a Spanish friar." Hackett's translation of Peñalosa's defense of himself at this point refers to the "province of Moqui," which does not necessarily mean the Hopi pueblos themselves. One of the points considered favorable to Peñalosa was that "He reduced to peace two heathen nations, the Cruzados and the Coninas, and made them settle by assembling them in two large pueblos in the province of Moqui; there were certificates from Father Fray Josef de Espeleta among the defendant's papers, of those who had already been baptized, who he thinks, numbered thirty-eight or twenty-eight..." Whether Peñalosa did as he claimed or not, he had to know of the "Conina" to claim it.

Velez de Escalante's summary of the position of Cosninos known then could have been amplified by notices of 1686 that "Coconinos" were north of "Apacha" presumed by Schroeder to be Yavapais. These approximations are the earliest positive definition of Hualapai and Havasupai territory, and make it clear these tribes have ranged at least approximately in their immediate pre-U. S. sovereignty territory since at least the late 1600's. This is important in interpretation of archaeological remains in the area.

b. Revived Interest

For about half a century there seems to have been little or no interest in the Coninas. When they again came to the attention of priests in western New Mexico through accounts of Pueblo travelers, it was virtually a new discovery.

In 1744 Fr. Carlos Delgado talked with four Hopis at Isleta about the Sierra Azul, probably the Mogollon Rim if the mixture of fact and fiction Fr. Delgado wrote about it can be trusted. They told him "the nation inhabiting the Sierra Azul is called the Conina Apaches, and they are a people of remarkable character. It is a very large nation with people as numerous as ants."  

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1/ Schroeder, 1953, p. 46-47.
2/ Ibid., p. 47. "Perhaps Mingus Mountain..."
In 1752 the missionary at Sandia reported that the Co

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ninas lived "30 leagues west of the Hopi in 11 rancherias."  

This Fr. Juan Menchero gained his information from one of his 

mission Indians who visited relatives at Oraibi. "He also 

says that he crossed the country of the Cosninos, who are 

distant from the province of the Moquis a little more than 

30 leagues." When Fr. Francisco Garces traveled the 

Havasupai "Moqui Trail" to Oraibi a quarter of a century la-

ter, he estimated 42 leagues between Cataract Canyon and O-

raibi, and 37 leagues from the Havasupai rancheria on the 

plateau east of Cataract Canyon to Oraibi. The distance 

between Oraibi and the easternmost Hualapai settlements was 

only slightly greater by way of the Hualapai--Oraibi trade 

route. Probably the Menchero statement included both Huala-

pais and Havasupais, although his Indian informant, Joseph 

Yachica, probably visited the Havasupais, since Hopi visits 

to them are recorded.

1/ Schroeder, 1953, p. 47 after Twitchell, 1914, II:

230-231.

2/ Twitchell, 1914, II:231.

3/ Coues, 1900, II:346, 347, 353, 354 (2 leagues, 3 & 

4, 4, 4 & 3 1/2 l. or 20 1/2 to the Little Colorado River) II:355 

(8 l. to Havasupai rancheria) II:357 (1 1/2 l. to Moencopie 

Wash) II:358 (6 to Hopi horse pasture) II:359 (6 to Oraibi-- 

21 1/2 l. from Little Colorado River to Oraibi).

4/ Yachica said "having remained among them some time 

and having been honored by them according to their fashion, 

they gave him to understand that they wished to become Chris-

tians...." (Twitchell, 1914, II:231.)
On July 29, 1776, an exploring party led by Fray Francisco Atanasio Dominguez set out from Santa Fe to seek a route to Monterey in California. 1/ The diarist of this expedition was the same Fray Silvestre Velez de Escalante who had previously examined the New Mexico archives and found therein references to the Cohninas west of the Hopis. Whether his knowledge of these people was derived solely from his perusal of documents, or whether he had talked with Pueblo Indians about them, at several places in his journal he mentioned them.

Fr. Velez's references to the "Cosninos" show that he had a fairly accurate idea of their location in some respects. On October 8, 1776, discussing the decision to turn back toward Santa Fe, he wrote "we decided to continue to the south, if the terrain would permit it, as far as the Rio Colorado, and from there proceed toward Cosnina, Moqui, and Zuñi." 2/ where he was stationed. The spot where the party camped on October 8th was almost due north of the present Hualapai Indian Reservation, in Utah.

This decision to turn back was not popular with all the members of the party, and unity was achieved by casting lots as to the route to be followed. One was marked Monterey and the other Cosnina. Then, "we cast the lot, and it was decided in favor of Cosnina" wrote Velez. 3/

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1/ Bolton, 1950, p. 10.  
2/ Ibid., p. 85, 196. 
3/ Ibid., p. 88-89, 199.
Traveling south on October 12th, the expedition encountered some Indians, probably southern Paiutes, who told them of people wearing blue clothes. "But we knew that the Pay-uches traded only for red clothes, and immediately it occurred to us that the Cosninas buy their blue woolen cloth in Mo-qui, so we concluded that it was of these they were talking, from which we inferred that this place was near the Rio Colorado and the Rio Cosnina." When the Spaniards captured one of the Indians, "We questioned him in different ways about the Cosninas, but he gave us no information about them, either because he feared that if he admitted he knew them, we would take him by force so that he might conduct us to them, or, finally, because he did not know them." 

Although Fr. Francisco Garces had only reached Oraibi earlier that year, Velez de Escalante knew of his visit and cold reception, for he was the priest at Zuni to whom Garces sent a letter of greeting. Meeting some other Indians north of the Colorado on October 16th, the Dominguez party engaged guides to put them on the trail to the Colorado, because "we did not wish to give up going south as far as the river, for we suspected that the Moquinos might have become unfriendly toward the Cosninas because they had escorted Father Garces

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1/ Bolton, 1950, p. 201.
2/ Ibid., p. 92, 202.
and that, fearful that they might lead other fathers and Spaniards to Moqui, they had tried to keep them back with threats; and that these people having heard the news, now intended to lead us astray in order that we might not reach the Cosninas or their neighbors, the Jamajabas.¹

Actually, the leader of the expedition, Fr. Dominguez, had from the beginning intended returning through "Cosnina" country, having in mind Fr. Garces' experience with the Havasupais and Hualapais in contrast to his reception at Oraibi. As he wrote the Governor of New Mexico, "We plan to return through Cosnina, to confirm that nation in its good intention to be christianized, and to separate it entirely (if God so favors us) from the Moquinos who are so opposed to the conversion of themselves and of others."² Fr. Dominguez's language shows how little of Garces' first-hand knowledge of the Hualapais and Havasupais had penetrated to the New Mexican priests still necessarily obtaining their information through Indians, for he applied the Hopi term to both groups as a single unit, not differentiating them as did Garces.

Camped opposite Cataract Creek north of Mt. Trumbull on October 19th, the Spaniards talked with Paiutes who told them "That on the other side just across the river were the Anca-

¹ Bolton, 1950, p. 208. Since the Havasupai were not adjacent to the Mohaves (Jamajabas) and the Hualapai were, this statement must include the latter among the "Cosninas."
² Ibid., p. 10.
muchis (who, we understood, were the Cosninas) and that they planted much maize.\(^1\) Most likely these were the Havasupais although the name could equally well have referred to Hualapais planting fields in Diamond Creek Canyon.

Traveling eastward the expedition talked with other Paiutes on October 23 who "gave a clearer account of the Cosninas and Moquinos, calling them by these very names. They also told us where we had to go to reach the river."\(^2\) The Spaniards found the river at the famous "Crossing of the Fathers."

On the mesa above Navaho Creek just south of the Colorado on November 9th they found "some ranchos of Yutas Payuchis, neighbors and friends of the Cosninas."\(^3\) These Indians evaded the Spaniards, but talked to their interpreter. "They told him that the Cosninas lived very near here, but at present were wandering not far away in the woods, gathering pinon nuts, and that a short distance from here we would find two roads, one leading to the Cosninas and the other to the Pueblo of Oraybi."\(^4\) Cosninas living so far east had to be Havasupais—most likely those of the rancheria east of the Little Colorado visited by Fr. Garces.

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3/ Ibid., p. 120, 228.
4/ Ibid., p. 228-229, 121.
Fr. Francisco Garces, one of the great individual explorers of all time, was the first European known to have been in Hualapai country. This intrepid missionary was posted to the mission of San Francisco Xavier del Bac on the Santa Cruz River of Sonora in 1767. After his arrival in 1768, he set his mission in order and began one of the most remarkable series of individual explorations among theretofore unknown Indian tribes in the history of European-Indian relations.

In 1776, Fr. Garces parted from a Spanish military expedition with which he had traveled to the Colorado River and headed upstream. On February 28th he reached the Mohaves. From them he gained what was presumably his first knowledge of the Hualapai. The Mohaves told him that "the enemies that they have are, on the northeast the Yabipais Cuercomaches; on the east the Jaguallapais." Thus was the band designation Whala Pa'a recorded for the first time by a European, and for the first time applied to the entire tribe: a practice which has endured.

1/ Coues, 1900, I:231. Coues took Garces' use of "Yabipai" at face value; said the "Yabipais Cuercomaches" were "A division or mere rancheria of Yavapais, on one of the heads of Diamond creek near the Grand canyon." This is an error. In this region, Garces' usage of "Yabipai" corresponds to Yuman "Nyav kopai" meaning "People to the East." Specifically it refers here to eastern bands of Hualapai. Mohave "Yabipai Cuercomaches" were apparently the Ko'audva kopai band of the Nyav kopai Hualapais--the "People to the East on the Plateau." The Mohaves' "Jaguallapais" were only the Whala Pa'a band, ranging west of the Plateau front, known to eastern Hualapais as "Sutool kopai" or "People to the West."
Guided by Mohaves, Fr. Garces then went to the Pacific Coast. After exploring in California, he returned to the Mohaves May 30. "They had summoned to my arrival the Yabipais Tejua, Jaguallapai, Chemebets, the Halchedunes, in order that in my presence all might speak at great length and celebrate peace firmly."¹ The four tribes summoned were Yavapai, Hualapai, Chemehuevi and Halchidhomas (since absorbed by the Maricopas) of modern orthography. Garces fairly consistently referred to the Yavapais as Yabipais Tejua—the hostile people to the east of the river tribes—or "Apaches" and to the Hualapai eastern bands (Nyav kopai) simply as Yabipai.

At the peace conference which ensued, Fr. Garces "talked much with the Hallaguapais about the distance of Moqui and New Mexico, to which they responded fully, giving me information of all the land that lay hence to the Capital (Santa Fe)."² He wanted to go there, but had received letters which required his presence at the Gila–Colorado crossing. So the following day

I took leave of all, first making some presents, especially to the Jaguallapais. At the departure of these for their lands, when they reached the river some of the Jamajabs set up a yell, wishing to kill them on account of some relatives of theirs whom they (the former) had killed in the previous wars. This determination was repressed by the principal Indians of the rancheria, agreeably with the peace which had just been celebrated through

¹/ Coues, 1900, I:308. ²/ Ibid., I:308-309.
my intervention. They brought the Jaguallapais to where I was; and seeing them so terrified and mistrustful—as I likewise was, having little faith in the Jamajabs—I instantly told them to have no fear, for I was determined to accompany them myself... Immediately went on ahead one Jaguallapai with two Jamajabs to notify the nation of the former that I was coming to their lands.... 1/

On this spur of the moment decision (which, of course, enabled him to make the journey toward Santa Fe he had wanted to make all along) Fr. Garces launched his arduous trip across north-central Arizona to Oraibi in the heat of the summer of 1776.

After crossing the Colorado River on June 5th, Fr. Garces traveled on to the foot of the Black Mountains, which he called Sierra de Santiago. He crossed through Sitgreaves Pass the next day and struck out across Sacramento Valley. Not until June 7th did he reach a rancheria of Jaguallapais, who had provided much game for our refreshment. These people are in the same condition as their enemies the Yabipais Tejua... At this rancheria there is an arroyo with running water, plenty of grass, much game, and much seed of chia... They go dressed in antelope-skins and some shirts of Moqui; they have belts of Castille, awls and other implements that they obtain from Moqui. I saw no crops.... 3/

1/ Coues, 1900, II:310-312.
2/ Ibid., II:313-316.
Tadapa on Walnut Creek on the western side of the Walapai
Mountains near the northern end of the range.

After a day's rest Fr. Garces journeyed on, turning
north along the mountains which he called Sierra Morena to
another rancheria. "There is no water in this rancheria,
and in order (to procure some) to drink an Indian woman went
for it two hours before dawn to the sierra, notwithstanding
the weather was very cold." This was probably a seed-gather-
ing camp at the edge of Hualapai Valley, or perhaps at Tet
Kith'aunyava, some low hills between the Cerbat Range and
Truxton Canyon.

Next day, July 10, Fr. Garces turned east again and
crossed Hualapai Valley to Truxton Canyon which he called
Arroyo de San Barnabe. Passing an unoccupied rancheria, he
met two boys, and camped for the night. On the 11th the boys' parents arrived, and their father borrowed Fr. Garces' mule
to pack in a deer he had killed, and "having cut up the buro
or deer, before packing it he gave one-half to the captain
who was accompanying me, contenting himself with the other.
Both regaled me during the days that I tarried." Garces said

1/ Coues thought this rancheria was "in the vicinity of
Kingman" but admitted that he had never seen any stream there.
Walnut Creek is today still a flowing stream. It also flows
in an arroyo very reminiscent of those in southern Arizona
where Garces came from fitting the meaning of that term much
better than Railroad Pass, which Coues thought was the arroyo
referred to. Coues thought Railroad Spring might be the lo-
cation of this rancheria, but Walnut Creek better fits Gar-
ces' description; Tak Tadapa was a band center where Indian
guides would naturally take him.
This rancheria is of the Yabipais, who only in name differ from the Jaguallapais. The Indian sent a runner reporting my arrival to his relatives, four of whom had seen me in past years among the Halchedunes; and for this reason he sought with insistency my detention until they arrived. On the following day...there were arriving bands now of six, now of eight men, he who came at the head of each one of them making his harangue in my presence, and the Jaguallapai captain who was accompanying me responding to them on my behalf. This address of welcome is a custom among them; and at its conclusion each (speaker) turns to his band, asking them if he has spoken well and if that which he has set forth to them has suited them. I observed on this occasion that all those of the band unanimously responded alike to their respective captains that it was good. Finally the Jaguallapai captain concluded this ceremony, saying: 'This padre has a good heart; he is a great (friend) of our intimate friends the Halchedunes; he has made us friendly with the Jamajabs; and now he begs your leave to proceed to the Moquis.' Responded all that it was good; that I could pass on, since I was an Espanol, and those of Moaqui had friendship with those of New Mexico... Betook themselves back from here those who had accompanied me. 1/

At this rancheria Garces was joined by "an Indian man and woman who said they were from Moaqui. They were well-dressed and so genteel (alinados) that they appeared rational. Both of them, with another who arrived on my departure, offered themselves to accompany me." With these companions, Fr.

1/ Coues, 1900, II:325-326. Coues again erred (II:325) in calling Garces' Yabipais Yavapais. Since Garces clearly states they "only in name differ from the Jaguallapais" it is certain that his Yabipais were the Nyav kopai, or eastern Hualapais. While at the Walnut Creek rancheria, Garces clearly meant Yavapais when he spoke of "their enemies the Yabipais Tejue." (II:318)

2/ Ibid., II:326.
Garces ascended Truxton Canyon, passing another small ranchería and some springs before stopping for the night at another Nyav kopai settlement.

On June 16 Fr. Garces and his Hopi companions climbed into higher pine country. They shared their provision of mescal (probably just bartered from the Hualapais) with the priest and told him they were nearing Grand Canyon. They were skirting the heads of the South Rim side canyons as Garces himself could see.

On June 17 Garces reached another ranchería after a short journey. One of the Hualapais with him lived there. Garces "talked with the captain, who applauded my coming, and soon dispatched a runner, in order that the rancherías of the north should come to see me. Men and women came bringing me various little gifts (regalitos) of mescal, with which the land abounds. All were very festive, men and women dancing at their pleasure..."

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1/ Coues, 1900, II:326-329. Garces called the springs Pozos de San Basilio. They were not Peach Springs as Coues suggested, since Garces did not indicate he left Truxton Canyon to descend deep Peach Springs Draw to reach them. They were probably Ha' Ketakwiva south and east of present Peach Springs station in Truxton Canyon or Shipley Canyon.

2/ Ibid., II:329-331. It is very doubtful if the sierra of red earth almost reached that evening was Aubry Cliffs. Garces would have gone far out of his way to the east and then turned west again to follow the route Coues suggests. More likely it was a cliff on the South Rim of Grand Canyon.

3/ Ibid., II:333.
Spending a day *here* preaching and functioning as a curing shaman (perhaps without realizing it), Fr. Garces went on June 19 past an abundant spring he called *Pozo de la Rosa* to a rancheria in lofty pines. He spent the night at the last Hualapai settlement in this direction five to seven miles beyond the spring—which was apparently Pine Springs. June 20 the missionary reached Havasupai village in Cataract Canyon.

After a short stay there he continued east to Oraibi where he was received with very bad grace by the Hopis. In fact, their reception was so cool that the priest turned back, retracing his steps to Cataract Canyon. From there he climbed onto the plateau again, reaching Pine Springs on his return journey July 16th, 1776.2/

On July 17 Garces started southwest and then turned west on a route differing from the one followed going east. He spent the night in the *Arroyo de San Alexo*, apparently Diamond Creek Canyon or one of the eastern tributaries of Peach Springs Draw, "and therein I found a rancheria of Ya-biapaies Cuercomaches, who received me well, on account of the information that they had received from the other Indians,  

1/ Coues, 1900, II:335.

2/ Ibid., II:409.
and also because I had in my company two principal Indians of the Japesua, who were going to trade at the Jamajab...  

Then on the 18th Fr. Garces continued down the Arroyo de San Alexo, climbed out and traveled west to a rancheria "in which they gave me to eat of pinones, with which that land abounds and made me tarry one day in order that others might come to see me."  

After laying over on the 19th, Padre Garces hit the trail again on July 20th, turning north to the spring of the rancheria and then traveling west again. Descending the plateau front somewhere along the Grand Wash Cliffs, he mistook this steep slope for the Cerbat-Hualapai Mountain range, calling it the Sierra Morena. Crossing Hualapai Valley he turned south along the edge of the Cerbat Mountains to the rancheria he had passed through on June 9 headed east. "Here I tarried two days."

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1/ Coues, 1900, II:409-410. Garces' Yabipais Cuercomaches were evidently the Ko'audva kopai band of Hualapais. If Garces spent this night in Diamond Creek Canyon, he had to travel very fast to reach the points he did in the days following. As Coues wrote, "we shall have great difficulty in following Garces for the next few days. His language is altogether too short hereabouts to fetch him on to any position whence he can make the northing and westing presently indicated." (II:409) In the 19th century, Diamond Creek Canyon was within the range of the Ha' Kasa Pa'a or Pine Springs Band Hualapais, rather than the Ko'audva kopai who held the canyons to the west.

2/ Ibid., II:411. Apparently Garces traveled from lower Peach Springs Draw via Hindu Canyon up Milkweed Canyon to Hel'. Possibly he went down Spencer Canyon from Hindu, then up Mata Widita, placing him farther north.

On July 23d, Fr. Garces traveled a short distance along the mountain margin to another rancheria at a spring. July 24th saw him crossing the Cerbat range and turning southwest to still another encampment by a spring at the edge of Sacramento Valley. Then on the 25th of the month, the durable Franciscan crossed the Black Mountains—his Sierra de Santiago—by a pass where a spring provided water, descended to the Colorado and turned downstream to the Mohave settlements.

Concise as Fr. Garces' journal of his travels through the Hualapai country is, it is still the most detailed single account of Hualapai rancherias by any explorer. He visited more Indian settlements and met face to face more Hualapais than any later expedition. The fact that this intrepid priest was alone, unarmed and unescorted, seeking only peace, very likely accounts for his relatively greater contact with the Indians—plus the fact that the Hualapais had had no chance to learn not to trust white-skinned men yet. This is the quality which makes his record doubly important along with its early date, for he recorded enough data to enable drawing conclusions on a sure basis.

First, Fr. Garces found the Hualapais in 1776 distributed from west to east in precisely the territory they have in recent years claimed to have been theirs from time immem—

1/ Coues, 1900; II:412.
2/ Ibid., II:413.
orial. From the Hualapai-Cerbat Mountain massif to Pine Springs, Fr. Garces passed through rancheria after rancheria of Hualapais, never more than a day's journey apart, more often much closer. By traveling two routes, he found Hualapai settlements from Tak Tadapa and Truxton Canyon on the south to the south rim side canyons of western Grand Canyon and the plateau they cut on the north.

Second, the Franciscan explorer recorded some of the Hualapai bands in the same positions that they occupied a century later when Anglo-American accounts became detailed enough to fix their locations. The Whala Pa'a band Fr. Garces definitely fixed from Tak Tadapa north along the Hualapai-Cerbat massif. The Nyav kopai he encountered from the mouth of Truxton Canyon to Pine Springs. The Ko'audva kopai he found on the plateau, extending east to Diamond Creek Canyon and west to the northern Cerbats if his identifications were accurate throughout.

The fact that Fr. Garces found two and probably three of the Hualapai sub-groups recognized in later years in essentially the same locations that they occupied a century later indicates that in all probability, the other bands and directional groups were at that time also in the same locations as later. And it indicates a degree of stability in Hualapai land use and settlement patterns which points to a long occupation of the area before 1776 during which adjustments in
territorial utilization and possession had long since been worked out and become customary, and the society settled down into a condition of territorial equilibrium.

Yet, even Father Garces' marvelous record is incomplete, since he did cross Hualapai territory only east-west and within a fairly narrow range, so that the Hualapais north and south of his routes remained unknown to him.

In the absence of other Spanish documentary records of these other Hualapais, and the attrition of Hualapai oral history of those people and their territory, archaeological remains constitute the only alternative type of evidence available as to tribal identification and distribution of these unrecorded Hualapais at this and earlier times.

B. Mountain Men in Hualapai Country During the Mexican Period

After Fr. Garces traversed the Hualapai country from west to east and back again in 1776, no other European of record visited this tribe's territory until after Mexico had won independence from Spain. Then for a quarter of a century Anglo-American Mountain Men periodically crossed Hualapai territory, but little is known of these trappers other than the bare fact that "they were there." Probably other unrecorded contacts took place.

Jedediah Smith probably crossed the northwestern corner of Hualapai territory on his famous journey to southern California in 1826. He was shown one of the rock salt caves in
the Virgin River valley by Indians there (who would have been Moapa Band Paiutes) then followed the Virgin—which he called the Adams—and the Colorado downstream to the Mohaves. Smith wrote "untill I fell in with the Amuchabas our living (was) very hard sometime(s) 2 or 3 days without half a meal 2 times we put in with Indians) of whom I got a little corn & pumpkins in coming through this country of Starvation..." If Smith was west of the Colorado from the Virgin to Mohave Valley, then the Indians he twice obtained corn and pumpkins from were Hualapais, and this passage documents Hualapai agriculture in the least-known corner of Hualapai territory. Most likely he saw the fields at Willow Beach and Amatada which Hualapai oral tradition mentions on the Colorado.

Later in the year the party of trappers with whom James Ohio Pattie traveled after his original outfit had been attacked by Maricopas on the Gila ascended the Colorado from the mouth of the Gila. At some point above Mohave Valley, as best one can tell from Pattie's confused narrative, they turned eastward across Hualapai territory and eventually reached the San Juan River and crossed the Continental Divide to the Plains. However, Pattie obviously confused geographic relationships of incidents recounted in his narrative so that it is impossible to determine which incidents of Indian contact refer to Hualapais.

In 1827 a Richard Campbell traveled with a party from Santa Fe to San Diego, California, via Zuni Pueblo—a route which must have taken him across Hualapai territory.\(^1\)

At some time during the years 1827 to 1830, Bill Williams is thought to have crossed Arizona to the stream now bearing his name, and then turned north past the Great Salt Lake, a route which presumably carried him through Hualapai territory all the way from south to north.\(^2\)

In August of 1829 a party of forty "Americans, Canadians and Frenchmen" commanded by Ewing Young left Taos, New Mexico, for the Southwest. Trapping down the Salt River to the mouth of the Verde, they trapped up to the head of that stream. Just what they considered the head of the Verde, called by them the San Francisco, isn't clear. It might have been the head of the East Verde, Oak Creek, Sycamore Creek, Chino Creek or Walnut Creek. The Sycamore Creek seems the likeliest choice, in view of the streamless character of the country and the distance traversed west of this stream-head to the Colorado. In the words of Kit Carson:

The first four days march was over a country, sandy, burned up and not a drop of water. We received at night a small quantity of water from the tanks which we had been fortunate to have along. A guard was placed over the tanks to prohibit any-

\(^2\) Ibid., p. 71.
\(^3\) Camp, 1922, p. 112-113.
one from making use of more than his allowance. After four days we found water. Before we reached the water the pack mules were strung along the road for several miles. They having smelt the water long before we had any hopes of finding any, and then each animal made the best use of the strength left them after their severe sufferings to reach the water as soon as they could....

After remaining encamped two days we started on our expedition, and for four days travelled over a country similar to that which we travelled over before our arrival to the last water. There was not any water to be found during this time, and we suffered extremely on account of it. On the fourth day we arrived on the Colorado of the West, below the great Canon. It can better be imagined, our joy, than described when we discovered the stream.

We had suffered greatly for want of food. We met a party of the Mohave Indians and purchased of them a mare, heavy with foal. The mare was killed and eaten by the party with great gusto; even to the foal was devoured. We encamped on the banks of the Colorado three days, recruiting our animals and trading for provisions with the Indians. We procured of them a few beans and corn... 1/

From Mohave Valley the trappers struck out to the southwest and in three days reached the bed of the Mohave River, which they followed for six days. Four days more got them to Mission San Gabriel. Unless the Young party met Mohaves north of Mohave Valley, they could not have struck Mohave River by following a southwestern course.

The very fact that this trip was made is thus meagerly documented, and little information about the country traversed and none about its inhabitants other than the Mohaves

1/ Camp, 1922, p. 113-114.
2/ Ibid., p. 114.
preserved. It is probable that the water found four days east of the Colorado was "along the rivulet called by Sitgreaves, Yampai Creek, near the present stations Truxton and Hackberry."

Five years later, in 1834, Jo Walker's party of Mountain Men crossed in the opposite direction from California east. They probably did not cross Hualapai territory, but skirted it. They went from the Mohaves down the Colorado to the mouth of the Gila, then back to Bill Williams Fork which they ascended till they met a Rocky Mountain Fur Company party. Joining forces, the two groups cut across—probably from the Santa Maria or Kirkland Creek—to the Little Colorado and the Hopi mesas.

Again in 1837 old Bill Williams went west from New Mexico to the river named for him, then turned north across the Colorado to turn up in Wyoming the following year.

After Williams passed through Hualapai country, the next non-Indian seen there was evidently a New Mexican, Jose M. Savedra. Later on, he was to serve as a guide to Lt. Whipple, Lt. Beale, and the first immigrant party to attempt Beale's Road.

By his employers, Savedra was generally considered a poor specimen of a guide and almost useless, once on the road.

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In 1858, after being over the route twice, Savedra inspired so little confidence in his knowledge of water sources along the way an immigrant noted he faced a long waterless march "provided we could place confidence in our guide." His faith in Savedra went further down when they "came to Sevadra Springs, expecting to find abundance of water, as our guide had so informed us—the Spring bearing his own name; but, alas! we did not find enough for cooking purposes."

Traveling west of Mount Sitgreaves on September 14, 1857, Lt. E. F. Beale had written: "Our guide has proved so utterly worthless, that I was obliged to send him to the rear yesterday, and only regret that I had not done so sooner. Up to this point he has only served to annoy and mislead me, and it is much better to have no guide, than one in whom you have no confidence, especially as it generally results in your having to do his work for him." On October 12th Savedra finally succeeded in finding water where he had told Beale he expected to, and the latter remarked "I was pleased to hear this... it was the only thing old Saavedra had found, that he started to look for, since our departure from Albuquerque."

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1/ Udell, 1868, p. 35.
2/ Ibid., p. 41
3/ Beale, 1858, p. 53; Lesley, 1929, p. 217.
4/ Beale, 1858, p. 72; Lesley, 1929, p. 254.
Since Savedra had not traveled through this stretch with Whipple, it would seem that his claim to have been in Hualapai country before had some foundation. Since he learned so little traveling with Whipple and Beale, it is not surprising that he had learned next to nothing on his original journey.

Aside from this limited success, the case for Savedra's earlier trip rests on his statements to both Beale and Whipple. On October 12th Beale had written "I started off old Saevedra to look for water, which, he says, he camped at somewhere about here fourteen years ago, but does not remember the exact spot" and added "he told me that if he could only find this water the direction to three others would come directly back to his mind, and that they lay on a good course for us to the Colorado."¹/ Fourteen years before Beale's journey in 1857 would have been 1843 when Savedra made his trip.

Whipple, on January 14, 1854, wrote that "Savedra thought he recognized a point on the route he pursued with the Moquis twelve years since...He was entirely lost."²/ This figure would place Savedra's previous trip in 1842. When he hired Savedra, Lt. Whipple noted "We have conversed with Jose Manuel Savedra, a New Mexico who professes to have accompanied the Moqui Indians upon an expedition against the Mojaves."³/

¹/ Beale, 1858, p. 72; Lesley, 1929, p. 254.
²/ Foreman, 1941, p. 188-189.
³/ Ibid., p. 114.
On December 7, 1853, while still east of the San Francisco Peaks, Whipple added more information:

A spur of the Mogollon mountains, which lies nearly southwest from us, is said to be peopled by warlike Yampais. Our guide, Savedra, has recounted various reminiscences of their bravery and daring. A few years since he joined a party of Moquis and Mexicans for the purpose of stealing children for slaves. Upon entering this country, they were met and attacked with such fury by the Yampais that the whole party fled. 1/

Since Whipple called the Hualapai Yampais, it was evidently that tribe Savedra meant, although he himself referred to them in 1858 as Cosninos, a term obviously derived from his sometime Hopi associates in slave-raiding.

This meager information about Savedra does indicate the presence of Hualapais during the early 1840's where they were found by Garces and the Mountain Men earlier and by government explorers a few years later. What little information can be gleaned from fragmentary references to his slave hunting is consistent with other accounts of the period.

Thus, while a number of non-Indians traversed Hualapai territory at one time or another from 1826 until official exploration began in 1851, they left virtually no records of the Hualapais. Existing documentation being this useless, then archaeological remains and Hualapai oral tradition must be relied upon to provide information as to the geographic range of Hualapai Indians prior to their conquest by the U. S.

1/ Foreman, 1941, p. 158.
C. Error in Oral History

If a person was not personally present during past events he wishes to reconstruct, he can do so only by interpreting objects which remain from them: documents or other artifacts such as implements or oral traditions of them possessed by others. In the absence of extensive documentation of Hualapai geographic distribution in the form of European-written documents, it is natural to turn to these Indians themselves for oral traditions of their past. In so doing, certain precautions must be exercised if the results obtained are to be considered valid.

It must be recognized that the Hualapais are not a people especially oriented toward preserving their own ethnic history. Like other Yuman-speaking societies, Hualapai society seems to be loosely structured and oriented to the present, lacking that strong sense of tribal heritage which characterizes the Yaqui, for example. Nor have Hualapai contacts with Anglo-Americans been such as would encourage them to past-oriented preservation of native customs and traditions. Therefore, Hualapai knowledge of the tribal past is less than it is among more tradition-valuing Indian groups.

Lack of knowledge of their past on the part of Hualapais is a less serious problem when recognized than when unrealized.

1 Cohen & Nagel, 1934, p. 324.
A good many anthropologists have written about Indian cultures and reconstructed tribal histories without recognizing the attrition of tribal knowledge which occurs among Indians oriented toward living very much in the present. With Dr. Julian H. Steward, the author believes that "In American ethnology, a surprising amount of the reconstruction of aboriginal culture has been based upon the knowledge of informants who are removed at least three or four generations and a hundred years or more from native times." Dr. Erminie Wheeler-Voegelin has summarized very well the unhappy results:

The weakness of a basic assumption made by American ethnologists in the 1910's, '20's, and '30's--namely, that through field work with elderly informants they could secure reasonably complete descriptions of aboriginal North American Indian cultures--has turned out, under testing, to have been a false assumption. The published results of this field work of the period 1910-1940 are inadequate and unsatisfactory for answering basic questions about North American Indian groups and their aboriginal cultures, such as arise in Indian Land Claims cases, for example. The results are unsatisfactory chiefly because of a fairly appalling lack, on the part of field workers, of any knowledge of the ethnohistoric background of the peoples whose cultures were being studied.

In carrying out the present study every effort has been bent toward avoiding this particular pitfall. It has been recognized that in order to bring data derived from interviewing aged Hualapais in 1952-1955 to bear upon the problem under

1/ Steward, 1955, p. 296.
consideration, it is sometimes necessary to project backward in time statements made by Hualapais one to three generations removed from ancestors who lived in pre-United States sovereignty and pre-Anglo-American contact times. This sometimes involves projection back over a century or more. The possibilities of error inherent in such projection through time have been recognized and taken into account in making interpretations. Fortunately, the reliability of Hualapai oral tradition in 1952-1955 can be checked by comparison with records of it made in 1950, 1942, 1929, and to some extent in the 1890's and 1870's.

One basis for erroneous projection of interview-derived data into the past is failure to recognize cultural changes which have occurred among the people under study. As Dr. Steward has pointed out

Broadly speaking, there are two principal ways of viewing the acculturation of Indian groups under White influence.

The first view is the normative theory, which conceives culture change as an all-or-none proposition. It holds that the distinctive Indian culture pattern, personality type, and value system mutually reinforce one another so as to preserve what to the Indians is the normal or the essentially aboriginal way-of-life, despite the acquisition of many Euro-American features. Eventually the native pattern is overwhelmed by outside influences, when the Indians are 'assimilated,' that is, when they acquire the national or Euro-American culture pattern, personality, and values. So far as the litigation cases and cultural studies generally are concerned, this point of view leads to the assumption that what is not strictly White American or European in char-
acter must be aboriginal and to the corollary hypothesis that an informant who is not thoroughly assimilated to modern American life is a reliable source of information about aboriginal conditions. 1/

Perhaps the survival of this archaic theoretical approach in anthropology reflects the insularity of departmental structure in American universities which effectively insulates members of one department against intellectual interaction and interchange with members of other departments. Whatever the reasons for survival of such a theory of reconstruction of past events, it demonstrates a naive lack of awareness on the part of its possessors of modern psychological experimentation on perception and memory. Experiments have shown both perception and memory to be importantly affected by the situation in which a person finds himself.

Without attempting to summarize here the extensive literature reporting such experiments, those conducted under S. E. Asch may be cited as relevant to this discussion of the proper theoretical framework in which to analyze information obtained by tapping Indian oral tradition if a valid reconstruction of past events and situations is to be obtained. Dr. Asch investigated the conditions under which individuals resisted or yielded to group pressures that the subject perceived as contrary to actual fact. The experimental task was simple: to match the length of a line with one of three other

lines of unequal length, announcing the judgement to the experimental group. The make-up of the group was varied. In some experiments there was a unanimous majority ranged against a single naive subject. In others, the naive subject was allowed a partner who supported his judgements.

The general results of the series of experiments showed that in spite of social stresses of a minority position during the experiment, many individuals retained their independence of judgement. Significantly, however, a "substantial minority" yielded to group pressure and changed their judgements toward those of the majority group.

The experimental subjects who changed their judgements of observable facts in response to majority group pressure are significant in the interpretation of information obtained by interviewing Indians. Certainly many Hualapais may be expected to have changed their memories and interpretations of past events under the pressure of dominant Anglo-Americans who disapprove of Indian customs—cremation, for example, by which Hualapais disposed of dead bodies in pre-contact time. Similar changes may be expected in contemporary Hualapai community memory of pre-contact territory.

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1/ Asch, 1952, p. 2-3, 7-8, 10.
Findings of psychological experimentation indicate that there is much more validity and much less possibility of gross error of interpretation in projecting data derived from interviewing living Indians into the past if the anthropologist follows the second theoretical approach outlined by Dr. Steward:

The alternative way of viewing Indian acculturation, which may be called the developmental or evolutionary approach, recognizes that even limited contacts with Europeans and American Whites may affect Indian society in a very fundamental sense. The question is not simply one of the duration and intensity of Euro-American contacts with the Indians. It is one of precisely what influences stem from national-level, Euro-American economic, religious, political, military and other institutions and of whether the Indians have had face-to-face contacts with particular sub-cultural groups of Whites. The effects of the special acculturating influences frequently begin while the Indians are still independent and before they have had any extensive personal contacts with whites; and yet they may bring about profound alteration in the aboriginal society. \footnote{Steward, 1955, p. 296.}

This is the basic approach to cultural changes through time and cultural history adhered to in this study. Starting from such a theoretical base, it is possible to be prepared to expect that during the century that Hualapais have been in contact with Anglo-Americans considerable changes have been wrought not only in the overt expressions of pre-contact culture in acts and artifacts, but also in the very memory of the conventional understandings which produced them. When
conventional understandings are inhibited, and cannot be expressed in actions, they become non-functional and tend to be forgotten. Evidence for such changes in conventional understandings shared by Hualapais is abundant.

For purposes of this study, not the least important effect of a century of cross-cultural contact has been attrition in Hualapai knowledge of pre-contact customs and geographic distribution. Living Hualapais often simply do not possess facts about earlier times which would help in accurately defining the territory their tribesmen held prior to their conquest nor recording the uses made of it. Just as acts have to be performed for the conventional understandings governing their performance to be remembered, so territory has to be used for its place names, topography and resources to be remembered. The economic exploitation of a given territory is an act based on conventional understandings which tend to disappear if the territory is no longer useable.

As the theoretical statement quoted above indicates, this is a situation general among Indians in the contemporary U. S. One anthropologist who has explicitly recognized this problem of attrition of information studied the peyote cult among United States Indians. This cult was first described in the scientific literature in 1891, yet the situation

\[1/\] The concept of culture employed here is that presented by Redfield, 1941, p. 132.
is quite parallel to that among the Hualapais in regard to pre-contact times. The date of origin of the peyote cult, the tribe in which it was invented, and the history of its diffusion to other tribes are unknown. "I do not know any documents by which to answer these questions. Most students attempt to substitute tradition and the remote recall of informants, but my own experience leads me to reject them both as unreliable."

Aside from simple attrition, another cause of unreliability in traditional accounts of past events is distortion of both original perception of observed events and remembered accounts of them caused by the impact upon Indian respondents of Anglo-Americans and their ideas.

The military captivity of most Hualapais on the Colorado River Indian Reservation in 1874-1875 is one of those events which has left a very real and important enduring impact on Hualapai perception and communal memory. Very frequently today, the oldest living Hualapais possess an historical sense which extends back to this event and little farther. Partly this is because the oldest surviving members of the tribe were nearly all born immediately after their parents escaped, but mostly it is due to the fact that the captivity has altered Hualapai history and behavior and shaped all subsequent events in Hualapai society.

1/ Slotkin, 1955, p. 211.
The years preceding the Hualapai captivity at La Paz constitute in Hualapai conception an entirely different and quite remote epoch with little relevancy to contemporary affairs. So the period of the captivity constitutes a very real time-block to research endeavoring to reconstruct tribal history and location prior to 1874.

Hualapai respondents, even when they remember a considerable quantity of historical information, may possess a distorted or erroneous tradition of past events and situations arising from the distortion of information inherent in oral transmission and individual memory. This is especially true when events which took place prior to the birth of the respondents are under investigation.

Long before the era of modern psychological experimentation in the laboratory, John C. Cremony, one-time interpreter to the United States Boundary Commission (to locate the boundary with Mexico) conducted a field experiment showing the shortcomings of oral transmission and memory of second hand information among Southwestern Indians. Cremony had for subjects Apaches held captive at Fort Sumner, New Mexico Territory, during the 1860's, but his results can be generalized to all situations of oral transmission of information.

Cremony, one of the first if not the first Anglo-American to learn to speak Apache, prepared a speech which he read
to a selected group of Apache leaders. "I took particular pains to impress them with the importance of remembering what I said, as it was my intention to demand from them a repetition of my words, or their tenor, in a few days from that time." \(^1\) After a three-day interval, Cremony asked certain of his auditors separately to repeat his remarks. "Some of them came very near stating the tenor of my remarks, while others gave very erroneous versions," he reported. When he re-read the written speech to the Apaches, they immediately acknowledged it as genuine.

It is doubtful how highly motivated the captive Apaches were to memorize a speech by an officer commanding troops holding them. Also, the ability of some auditors to remember after three days the tenor of the speech delivered only once speaks rather highly for their powers of concentration and memory, as well as for Cremony's pronunciation of the Apache language.

At the opposite end of the continuum of oral traditions so far as accurate memory goes stand literary or historical works such as myths, legends, tales and epics, particularly those employed in religious ceremonies and rituals. These Indians heard repeated over and over and explained until they were memorized word-perfectly and could be explained in turn.

\(^1\) Cremony, 1868, p. 269-270.
Most of the sort of information desired from Hualapais upon the subject of the location and extent of territory their ancestors occupied in former times falls somewhere between the extremes of this continuum. Probably it is nearer the pole of casual information not deliberately and consciously learned, but still usually repeated often enough to permit accurate learning and memorization.

Another aspect of Cremony's experiment dealt with a different type of distortion of oral history which is more applicable to the problem of Hualapai oral tradition. Upon delivering his speech the first time, Cremony asked his auditors to "convey the substance of my remarks to those who were not present, as I intended to investigate for myself the value of oral tradition." After his three-day interval, Cremony found that "when it came to questioning the parties who had received my speech second-hand from those who had heard it, I could scarcely recognize my own offspring." 1/

Even though the Apaches who heard of Cremony's remarks second-hand were less motivated than his original auditors to grasp and retain his message (which may have been extremely dull in itself—he does not record its contents), still this experiment clearly illustrates one of the major sources of error in oral traditions. This is the often faulty com-

1/ Cremony, 1868, p. 270.
munication between one person and the next in the chain of oral transmission.

Since in the present research the time of most concern is remote from living Hualapais, their information about it has been derived orally from parents, grandparents or other relatives for the most part, and is subject to all the errors inherent in oral transmission, especially oral transmission which occurs casually without attention being focused upon accurate memorization of subjects conveyed.

Given the predictable possibility of all these types of error creeping into Hualapai oral history, it is hardly surprising that no living Hualapai today remembers anything at all about his tribe's occupation of certain areas. The attrition of memory of these areas was greatly accelerated by the extinction of some lineages by Anglo-American military action plus devastating contagious diseases introduced to the Hualapais by their conquerors.

When both documents and Indian oral tradition are incomplete sources of information, archaeological evidence provides the only practical alternative. Indian remains are like documentary records in that they are not subject to the types of errors that verbal history is. To be sure, artifact remains are subject to attrition through actions of construction crews, amateur archaeologists, rodents, etc. But such attrition is probably less than occurs among written docu-
mements. And remains in situ are not subject to errors of person-to-person communication. Once removed, of course, they are subject to the same type of error—so much so that in the hands of an amateur collector they usually become valueless for historic reconstruction of past events.

Because of their relatively imperishable nature, Indian-made artifacts in Hualapai country have indeed been found to furnish information not now available from the tribesmen themselves or from documents. The archaeological record has suffered less attrition than Hualapai oral tradition in regard to certain geographical areas and a few aspects of culture (after the initial loss of detail involved in shifting from live Indians to their debris is made).
CHAPTER II
STATUS OF THE PROBLEM IN 1952

When the research here reported began in 1952 a considerable amount of information on archaeological sites located within the area in question was available as the result of archaeological surveys by several Southwestern institutions. However, the problem posed by the attorneys had not been solved. The hypothesis that the Petition definition of Hualapai territory was correct was subject neither to proof nor disproof with data then available in published form.

A. Existing Survey Collections

1. Gila Pueblo

The earliest survey within the area defined by the Petition as occupied solely by Hualapais was carried out by the Gladwins of Gila Pueblo and reported in 1930. The problem under consideration at that time was the western geographic range of pot sherds painted red on a buff ground. The Gila Pueblo survey material is now housed at the Arizona State Museum in Tucson. These collections suffer two shortcomings for purposes of the present study:

1/ Gladwin & Gladwin, 1930, p. 135, 153.
1) There is no record of precise location of sites which would permit correlating them with Hualapai place names and other surveys. They are located within one of the survey quadrangles within the grid system adopted by Gila Pueblo as the basis for relating its survey materials to geography. This means the Gila Pueblo collections cannot be correlated with the springs or other natural features whence they came.

2) The number of sherds in the collection from each Gila Pueblo site is often arbitrary. Physically, pot sherds from each site are mounted on masonite boards of standard size. The intention in preparing these boards was apparently to mount either 24 or 50 sherds for each site (probably to facilitate computation of type and ware percentages). Many boards do not, however, contain the ideal number of sherds, exceeding or falling short by one or more. I do not know whether only the desired number of sherds were collected in the field or whether more were collected and only a certain portion mounted on the boards. At any rate, whatever the method of arbitrary selection was, it introduced a sampling bias into the computations of ware and type proportions at these sites.

2. San Diego Museum of Man

Somewhat later than the Gila Pueblo survey, Mr. Malcolm J. Rogers of the San Diego Museum of Man made collections from several sites within the area defined in the Petition as Hual-
apai. His collections and field notes are preserved at the Museum. These sites can be precisely located and the sherd samples appear unbiased except as they may have been selectively collected in the field. In 1949 then Curator at the Museum of Man, Mr. Carr Tuthill, surveyed the area above Davis Dam to be inundated by the impounded waters which had not already been explored by Gordon C. Baldwin of the United States National Park Service.

3. National Park Service

Also during the 1930's the National Park Service began what now comprises the most intensive survey within the area defined by the Petition as Hualapai territory—that along the Colorado River. It covers primarily areas inundated by artificial lakes behind government-built dams on the river but includes additional sites farther back from the stream. Mr. Baldwin did most of the surveying north of Davis Dam, and Mr. Albert H. Schroeder surveyed the river south of there.

4. Museum of Northern Arizona

In 1938 the Museum of Northern Arizona cooperated with an ethnohistorian employed by the Santa Fe and Pacific Railroad Company to survey the area defined in the petition as Hualapai territory. This was the most areally extensive survey of the region. The purpose of this survey was the same as that of the present study: to obtain evidence bearing upon the question of Hualapai occupancy of the area. The railroad
was at that time the defendant in a suit brought by the United States on behalf of the Hualapai Tribe. I have been unable to gain access to the report made to the railroad by its ethnohistorian, but the collections are preserved at the Museum and have been examined. In addition, the Museum has a good many collections from sites surveyed in this area at other times by a number of archaeologists. These have also been utilized in the present study. The Museum collections can without exception be exactly located geographically, and the sherd samples are presumably unbiased.

5. Arizona State Museum

Up to 1952 the Arizona State Museum had carried out no survey work within the area defined by the Petition as Hualapai. Collections made by the Tribal Survey are deposited there. Over one hundred new sites have been located during this survey. These collections combined with those from Gila Pueblo give the Arizona State Museum the second largest holding of survey material from this region (after the Museum of Northern Arizona).

B. Survey Interpretation

Despite the number of institutions which had carried out surveys within the area defined by the Petition as Hualapai

territory very little information on these surveys was available in published form by 1952.

The pioneering Gila Pueblo survey, oriented primarily toward defining the westward range of Hohokam ceramics, did recognize that it turned up Yuman sherds. For purposes of this study, however, the site collections had to be examined and sherds classified in accordance with type and ware descriptions arrived at since this very early survey was reported. The San Diego Museum of Man survey results were unpublished, and still exist only in field note form except for Rogers' general conclusion about Yuman prehistory covering a much broader region. The National Park Service survey results were mostly unpublished, particularly those on the Hualapai side of the Colorado River.

The results of the Museum of Northern Arizona--Santa Fe Railroad survey had been published in rudimentary form in 1939 in the Museum's Bulletin 16 by Dr. Harold Sellers Colton, entitled An Archaeological Survey of Northwestern Arizona Including the Descriptions of Fifteen New Pottery Types. The bulk of this brief (30 page) report is devoted to descriptions of the then new types of pottery discovered in the area defined by the Petition as having been Hualapai territory. The

1/ Gladwin & Gladwin, 1930, p. 160.
2/ Rogers, 1945.
conclusions applicable to the problem of this study are briefly set forth: "The sites on which Tizon Brown Ware is most abundant we believe were occupied by a 'tribe' of Indians which we are calling the Cerbat Branch, using the nomenclature of Gladwin."  

Colton's description of the geography of this region did not fit the geographic reality very well when he wrote

It seems that there was a people who dwelt in the Colorado Valley whom we will call the Cerbat Branch of the Patayan Root. (Colton, 1937). These people about 750 A. D. ranged as far east in Arizona as the Aubrey Cliffs and Juniper Mountain. Seligman on the Santa Fe Railroad lies near their frontier. They seem to have been slowly crowded west by the expanding Cohonina Branch, who by 1000 A. D. occupied Cerbat territory as far west as the Big Sandy. The Cohonina occupation of this western domain seems to have been short...  

By no stretch of imagination can the area defined by the petition as Hualapai territory be considered part of the Colorado Valley, yet Colton clearly meant this upland area in describing the range of his Cerbat Branch Indians who used Tizon Brown Ware pots. His report closed with the statement that "the survey has given us no evidence that the Cerbat Branch existed in Mojave County, Arizona, later than 1100 A. D."  

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1/ Colton, 1939, p. 25.  
2/ Ibid., p. 29.  
3/ Ibid., p. 29.
In this report Colton set up the following classification of pottery wares and types:

**Tizon Brown Ware**: Cerbat Brown, Cerbat Red-on-Brown, Aquarius Brown, Aquarius Black-on-Brown, Sandy Brown, Sacramento Brown and Needles Red-on-Buff.

**Topoc Buff Ware**: Topoc Buff, Topoc Red-on-Buff, and Pyramid Gray.

**Prescott Gray Ware**: Aquarius Black-on-Gray, Aquarius Orange, Aquarius Black-on-Orange, Verde Gray, and Verde Black-on-Gray.

**San Francisco Mountain Gray Ware**: Deadmans Gray, Deadmans Fugitive Red, Deadmans Black-on-Gray, Kirkland Gray, and Boulder Gray.

In a paper published in 1945, Colton repeated his conclusions of 1939. He recognized a difference between clay vessels made on the Colorado River flood plain and on the uplands on either side in terms of alluvial vs. residual clays. Despite this, in dividing up the prehistoric "Patawan Root" culture into northern and southern branches he had his "northern branch centering about Needles which he has called the Cerbat Branch." This terminology follows a suggestion made by Hargrave in 1938.

1/ Colton, 1939, p. 3 ff.
2/ Colton, 1945, p. 115.
3/ Ibid., p. 119.
Discussing the age of types made from residual clays, Colton mentioned surface associations with several types of pottery traded west from the plateau region where the dates of their production were known:

<table>
<thead>
<tr>
<th>DOMINANT TYPE</th>
<th>TRADE</th>
<th>DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerbat Brown</td>
<td>Lino Black-on-Gray</td>
<td>500-700 A.D.</td>
</tr>
<tr>
<td></td>
<td>Kana-a Black-on-White</td>
<td>700-900 A.D.</td>
</tr>
<tr>
<td></td>
<td>Deadmans Black-on-Red</td>
<td>950-1050 A.D.</td>
</tr>
<tr>
<td></td>
<td>Tusayan Black-on-Red</td>
<td>1050-1125 A.D.</td>
</tr>
<tr>
<td>Sandy Brown</td>
<td>Kana-a Black-on-White</td>
<td>700-900 A.D.</td>
</tr>
<tr>
<td></td>
<td>Black Mesa Black-on-White</td>
<td>900-1100 A.D.</td>
</tr>
<tr>
<td></td>
<td>Dogoszhi Black-on-White</td>
<td>1075-1150 A.D.</td>
</tr>
<tr>
<td></td>
<td>Deadmans Black-on-Red</td>
<td>950-1050 A.D.</td>
</tr>
<tr>
<td></td>
<td>Tusayan Black-on-Red</td>
<td>1050-1125 A.D.</td>
</tr>
<tr>
<td>Aquarius Brown</td>
<td>Kana-a Black-on-White</td>
<td>700-900 A.D.</td>
</tr>
</tbody>
</table>

Thus all three Cerbat Branch major types were said to have been in production during the 700-900 A.D. period, assuming that Kana-a Black-on-White was deposited on these sites at the same time as Tizon Brown Ware and did not precede the use of the latter. Both Cerbat and Sandy Brown appeared to have been made continuously up until about 1125 A.D., judging from the associated trade wares—assuming their deposition to have been contemporaneous. Colton expanded his previous conclusion regarding the persistence of the Cerbat Branch pottery types east of the river on the basis of Pueblo sherds illustrated by Rogers from the desert areas west of the Colorado, and stated that "there is no evidence that the

1/ Colton, 1939, p. 115.
sites back from the river on either the east or west side were contemporaneous with Pueblo III or later periods. 1/

In a paper published a few months later, Malcolm J. Rogers objected to the terminological practices of Hargrave and Colton at the Museum of Northern Arizona.

My principal objection to the word Patayan is that it is presented as a cultural entity when the material evidence indicates that it is made up of ceramic fragments from diverse cultural complexes, in so far as the western marginal components are concerned. One example is the combining of potsherds of Nevada Puebloan origin (Boulder Gray), historic Mohave (Needles Red-on-Buff), and San Francisco Gray Ware. On the other hand we have documentary evidence that the Colorado River valley was inhabited by Yumans as early as 1540 and archaeological evidence that a material culture similar to that period was in existence as early as the eleventh century. Therefore, I can not believe that any advantage is to be gained by discarding the word Yuman. 2/

Rogers went on to point out that too great a literature had already developed around the term "Yuman" to discard it. This view was in accord with Colton's own Rule 1 of priority for naming of pottery types: that the name first proposed in print be used. 3/

2/ Rogers, 1945, p. 179.
3/ Colton, 1953, p. 54.
Colton advocates following another rule to the effect that a pottery type, series or ware must be given a geographic name followed by a descriptive term. However, archaeological practice has ignored this rule in designating "roots." His root term "Patayan" was obtained by Hargrave from Hualapais as meaning "old people." Actually it means "old persons" living, and does not carry the native meaning of death found in other Southwestern Indian words adopted to designate archaeological manifestations such as Hohokam and Anasazi. (DGS Nov. 26) In this instance, Colton's objection to using a linguistic term for an archaeological root seems pointless, since his proposed substitute refers in native meaning only to members of a single tribe, and has never been extended by Colton west of the Colorado or south of Bill Williams Fork. Yuman covers the Colorado River Valley and adjacent desert regions where Yuman-speaking Indians are known to have lived, as Rogers pointed out, and where the archaeological remains obviously reflect a high degree of cultural similarity. Therefore, the general "Yuman Complex" used by Rogers is used in this report.

Rogers recognized four archaeological sub-areas within this Complex: the Colorado Valley, the California Desert, the

1/ Colton, 1953, p. 53.

2/ Colton, 1945, p. 119. Actually the Hualapai expression is Pa’a Kataya, literally "Persons of Age." (DGS Nov. 26)
Western Area, and the Eastern Area. "Within these large units, which are ecologically as well as archaeologically diversified, smaller culture foci have been recognized with their own peculiar histories and interrelations." Within Rogers' Eastern Area of the Yuman Complex, the smaller cultural foci recognized by Colton were the Cerbat Branch, Prescott Branch and Cohonina Branch. Colton holds that "a branch is a concept of the culture of a prehistoric Indian tribe changing over a long period of years."

Rogers took a view of the dating of Yuman Complex pottery materially different from that of Colton. He believed the second period of ceramic development among the Yumans lasted perhaps from 1050 to 1500 A. D. "Throughout this period pottery-making continued to lag behind Yuman expansion away from the river into western Arizona." Since Colton had claimed no evidence for survival of the Cerbat Branch after 1100 A. D., this later dating of Yuman pottery production in northwest central Arizona was a direct contradiction of Colton's dating—one of the contradictions necessitating this study.

1/ Rogers, 1945, p. 189.  5/ Colton, 1939, p. 27.
2/ Colton, 1939, p. 25.
3/ Colton, 1953, p. 68.
4/ Rogers, 1945, p. 190.
Rogers presented a broader and therefore more realistic view of the brownware problem presented by Yuman Complex ceramics than Colton's Colorado River-limited discussions:

The main problem is connected with an up-river group of brown-wares whose distribution lies in an east-west belt across the Colorado from northwestern Arizona to the western margin of the Mohave desert... Most if not all of these types seem to have been made of residual clays and their distribution from the earliest times was divided by a band of typical gray and buff-burning sedimentary paste-types on the Colorado River. Because the pastes employed present a confusing similarity, very little headway has been made toward solving their origins, sequence, and peculiar overlapping distribution. 1/

Part of this lack of progress Rogers attributed to the scarcity of stratified deposits and part to the lack of whole pots for form studies. "The only intact specimens to have been obtained from this great expanse of terrain have not proved of much value for comparative study, even though their origin is known. As they are historic and proto-historic vessels of Cahuilla origin... they have little or no bearing on the provenience of the earlier brown wares." 2/

Perhaps Rogers was disregarding the value of Cahuilla pots as a key to prehistoric sherds. For he elsewhere says that from excavating stratified cave deposits marginal to Mohave Valley he had found "that some 'browns' were made as late as historic time. These are such late contributions that

1/ Rogers, 1945, p. 191-192.
2/ Ibid., p. 192.
only Walapai or Chemehuevi origins can be considered.\textsuperscript{1} This conclusion that Hualapai pottery—brownware—survived into historic times was again a direct contradiction of Colton's conclusion that Tizon Brown Ware was not made after 1100 A.D. For Rogers clearly correlated Tizon Brown Ware with the Hualapais: "Even Walapai potsherds, which, as Tizon Brown Ware, I believe Colton views as pertaining to the Patayan Root, are by no means plentiful as compared with the amount of potsherds to be found in other Yuman centers."\textsuperscript{2}

Since Rogers' dating was based upon excavation of stratified deposits, and Colton's on surface association only, Rogers' conclusion was archaeologically more reliable. Since he did not identify the types of Tizon Brown Ware recovered, this point was left in the dark.

Rogers' reconstruction of Yuman Complex prehistory indicated increased salinity or drying of Blake Lake around 1500 had accompanied a shift from his Yuman II to Yuman III times. Yet he found no ceramic evidence of disturbance in the Colorado Valley where the dislocated Indians would have had to move. "It is only the accelerated expansion of Yuman boundaries to the east during Yuman III times which seems to give expression to the changed river conditions for by the sixteenth

\textsuperscript{1} Rogers, 1945, p. 192.

\textsuperscript{2} Ibid., p. 196.
century the Walapai-Yavapai speech group in its easterly expansion had moved halfway across the state of Arizona."

Like every archaeologist who has studied the Eastern Area of the Yuman Complex, Rogers remarked upon the scarcity of ceramic remains compared to other Southwestern areas.

The Yuman archaeology of western Arizona, at least in the sections distant from the Colorado and Gila, is notable for its poverty and spottness. What it has produced is so meager that one could readily be led to believe that the Eastern Yumans had not held the territory longer than for a few generations. Probably no comparable area in the Southwest has so little to offer the prehistorian. Judged, however, through the mediums of linguistics, ethnology, and even history it is obvious that the occupation was of some antiquity. The archaeological illusion is no doubt due to a small nomadic population, which possessed little of a non-perishable nature. It is even doubtful that the various groups, with the exception of the Walapai, made pottery before historic time, for on the campsites of the former the potsherds, other than those of Colorado trade types, are of non-Yuman origin...

This statement applies both to scarcity of sites and scarcity of artifacts on sites. As Rogers indicated, river valley remains are much more abundant than upland remains. When Gordon C. Baldwin briefly reported results of National Park Service surveys of the Lake Mead and other Colorado River areas, he had a total of 430 sites "about the shore of Lake Mead and along the Colorado River below Hoover Dam" to refer to. He

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had also located 155 prehistoric sites below Hoover Dam to the site of Davis Dam 67 miles downstream. He concluded "the majority of these sites may be classed as Patayan. Previous surveys in the mountains and plateaus to the east had located an additional 50 or more Patayan sites. Thus, more than 200 Patayan sites have now been recorded."

Baldwin seems to have employed the term "Patayan" in a very general sense, not even distinguishing between riverine and upland components as Rogers had. "These Patayan sites include petroglyph areas, small temporary camps, rockshelters, and small to large village areas...Pottery was shaped by the use of the paddle and anvil...is usually reddish, buff, brown or grayish-brown in color, some types having a glazed or crusted surface. Although much of the pottery is plain, there are a number of decorated types, particularly red-on-buffs..." This very generalized description provided no more information as to the ceramics of the Eastern Area of the Yuman Complex than Rogers had given. This was lamentable from the point of view of the present research. For Baldwin had joined Rogers in correlating the historic tribes of the area with prehistoric remains. While he followed Colton's dating in assuming datable intrusive sherds from the east showed "Patayan culture" reached its widest distribution between 700

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1/ Baldwin, 1950, p. 47. 2/ Ibid., p. 47.
and 1200 A. D., he added, "There are, however, both earlier and later evidences of these or allied peoples within the area." He mentioned finding sherds of Jeddito Black-on-Yellow, a protohistoric Hopi type widely traded during the 14th and 15th centuries. Then,

A century or so later, when the first Spanish explorers and missionaries arrived in the Colorado valley, they found a number of closely related Yuman-speaking groups concentrated along the major part of the valley.

Since these Yuman peoples occupied the same territory and possessed a culture that is, in many respects, strikingly like that of the earlier Patayan, it seems logical to believe that the modern Walapai, Mohave, and Yuma Indian tribes represent the descendants of the prehistoric Patayan groups. 1/

Here Baldwin obviously employed "Patayan" in a sense it had never been used by Colton, to include riverine and upland Arizona Yuman-speaking Indians—but not all of them, nor those in California, so he failed to substitute "Patayan" directly for Rogers' prior "Yuman."

Baldwin's work in the National Park Service administered area along the Colorado River has been carried on by Mr. Albert H. Schroeder, who brought out a report on his survey of the lower Colorado River below Davis Dam as far as the mouth of the Gila in 1952.

One of Schroeder's important accomplishments was naming and describing the main ceramic types found along the lower

1/ Baldwin, 1950, p. 48.
Colorado River. For the first time adequate published descriptions of the alluvial clay paste pots from the river banks which Colton had recognized and Rogers delineated as differing from residual clay pots made in the uplands were available. All the riverine Yuman ceramics Schroeder recovered he grouped in Lower Colorado River Buff Ware, a new term replacing Colton's insufficiently comprehensive Topoc Buff Ware. Within this ware he designated several series of types:

**Parker Series:** Parker Buff, Parker Red-on-Buff (both pre-900 to post-1900 A.D.), Parker Black-on-Red, Parker Stucco, Colorado Beige (post 1150-historic), Colorado Red-on-Beige, Colorado Red (post 1150-historic times).

**Gila Bend Series:** Gila Bend Plain, Gila Bend Stucco, Gila Bend Beige, Gila Bend Red.

**Palo Verde Series:** Tumco Buff, Tumco Red-on-Buff, Tumco Stucco, Black Mesa Beige, Black Mesa Red, Black Mesa Polychrome.

**Salton Series:** Topoc Buff, Topoc Stucco, Topoc Fugitive Red, and presumably Topoc Red-on-Buff.

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1/ Schroeder, 1952a, p. 16.
6/ Schroeder, 1952a, p. 29.
Lower Gila Series: Palomas Buff, Palomas Stucco.


Without designating a series, Schroeder also classified Pyramid Gray as a type of this ware.

This report provided new ceramic evidence on which to accept or reject various interpretations advanced by Rogers and Colton. Schroeder’s conclusions by and large represented a compromise between the viewpoints of both. Schroeder rejected completely the idea that the Eastern Area Yumans have held their territory east of the Colorado for only a few generations—which had not been seriously entertained by Rogers himself.

Rogers does not present his evidence for a postulated shift of Yumans into western Arizona at the end of his Yuman II times. The archaeological picture in Arizona does not appear to support such a move, and in light of the revision of the end date of Yuman II, it appears that the historic Yuman-speaking peoples of Arizona were in or near their present habitat prior to Rogers’ postulated 1450 A. D. shift, and even before the revised 1150 A. D. end date, particularly if one considers the Patayan groups with their about 750 A. D. beginning dates ancestral to the historic Upland Arizona Yuman groups.

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1/ Schroeder, 1952a, p. 31.  
2/ Colton, 1939, p. 12-13 classed as Tizon Brown Ware—an important revision.  
3/ Schroeder, 1952a, p. 32.  
4/ Ibid., p. 17.  
5/ Ibid., p. 52.
Thus Schroeder was in agreement with Rogers that the occupation of the Eastern Area of the Yuman Complex was of some antiquity, but accepted Colton's much earlier dating of that antiquity as extending back to about 750 A.D. Schroeder in general rejected Rogers' theory of Yuman prehistory and his dating in particular, claiming a later appearance of red-ware on the Colorado River than that postulated by Rogers but a much earlier terminal date for Rogers' Yuman II period, which Schroeder correlated with the end of Amacava Branch occupation of Black Canyon. He put this at about 1150 A.D. rather than 1450 A.D., based on the period of production of Tusayan Black-on-Red, which he identified as the latest intrusive at Willow Beach.

Schroeder's dating of the Amacava Branch abandonment of the Willow Beach area around 1150 A.D. coincided with Colton's original view of the disappearance of the Cerbat Branch before 1100. Yet Schroeder followed Rogers and Baldwin in feeling that "it is quite probable that Lower Colorado Buff Ware represents the archeological development of the historic River Yuman groups." And he illustrated a number of historic Mohave vessels to indicate which particular River Yuman group was involved. In short, by attempting to reconcile the da-

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1/ Schroeder, 1952a, p. 49-51.  3/ Ibid., p. 17.
2/ Ibid., p. 51-52.  4/ Ibid., Figures 8, 9, 10, 11, 12, 13.
tes suggested by Rogers and Colton, Schroeder ended up claiming Lower Colorado River Buff Ware types made prior to 1150 or earlier were also made by the historic Mohaves, without much evidence for the seven centuries between 1150 and 1850.

In terminology as in dating, Schroeder again compromised between Rogers and Colton:

The term Yuman, in spite of its ethnological connotations, as Rogers suggested, should be employed to designate the entire complex. The term Patayan Culture should be restricted to the Cerbat, Prescott, and Cohonina Branches of Upland Arizona, and the term Laquish Culture should be restricted to the Lower Colorado River from Willow Beach...the...nomenclature implies circumstances similar to those of historic times—a Yuman speaking people divided into Upland Arizona Yumans (Patayans) and River Yumans (Laquish). 1/

This compromise position does not appear to be a very tenable one violating as it does every set of criteria which can be applied. The term Yuman Complex is satisfactory as possessing publication priority and fitting the linguistic realities of the area. But Patayan Culture is entirely unsatisfactory if Yuman Complex is used. Colton proposed substituting Patayan Root for the prior and accepted Yuman Complex. Schroeder, in accepting Yuman Complex and denoting Patayan to the Yuman-speaking area in Arizona only confused the matter further. He has thus made Patayan synonymous with Rogers' Eastern Area of the Yuman Complex. If Rogers' Yuman Complex is to be em-

1/ Schroeder, 1952a, p. 54.
ployed for the over-all archaeological complex, there is no valid reason why his Eastern Area should not also be accepted. Schroeder's own Upland Arizona Yumans is a perfectly satisfactory designation for the historic Hualapai, Havasupai and Yavapai tribes, and should properly be applied to their archaeological remains when identified. In applying this and Patayan to the Cerbat, Prescott and Cohonina Branches, Schroeder reverted to a classification abandoned by its promulgator--Colton--and assumed a Yuman-speaking origin for three separate ceramic wares which had not been demonstrated as he had demonstrated Lower Colorado River Buff Ware to have been made by Mohaves.

If a term for the Hualapai-Havasupai-Yavapai enclaves east of the Colorado must be coined, Patayan, which has already been used as synonymous with Yuman Complex by Colton and perhaps Baldwin, should not be used to further confuse matters. Schroeder's own Upland Arizona Yumans is accurate enough--as long as it is applied only to the archaeology known to be that of historic Hualapais, Havasupais and Yavapais. It also provides a useful term for the Yuman-speaking Indians in California west of the Colorado: Upland California Yumans.

Ceramically, the main distinction between the various Yuman-speaking groups is that between vessels of the riverine tribes along the Colorado River and the upland groups on both
sides. This distinction was clearly made by Rogers and sensed by Colton. Therefore, if the terminology of Upland Yuman and Riverine Yuman is employed, this historical and archaeological distinction is clearly made. The terms Eastern or Arizona and Western or California, can then be employed to designate clearly which Upland Yumans one has in mind, geographically speaking.

A further basic objection to Schroeder's and Baldwin's use of Patayan Culture is that a single culture did not historically exist in the Yuman speaking area east of the Colorado River. Nor have they used it to designate only one prehistoric culture. A culture is made up of the conventional understandings characteristic of one society. The Schroeder-Baldwin use of Patayan Culture violates the correct meaning of the term culture and should be rejected on this theoretical ground if no other.

Historically, the Eastern Area of the Yuman Complex was occupied by three tribes with three cultures: Hualapais, Havasupais and Yavapais. Granted that these three societies shared most of their cultural traits, they were yet three independent societies characterized by distinctive cultural traits of their own.

1/ Rogers, 1945, p. 191-192.
2/ Colton, 1945, p. 115.
In prehistoric times, this area has been occupied by at least three branches in Colton’s sense of prehistoric Indian tribes with cultures changing slowly through lone periods of time: the Cerbat, Cohonina and Prescott. Since each of these made and used different ceramic wares (Tizon Brown, San Francisco Gray and Prescott Gray) each must be presumed to have possessed other cultural traits distinguishing each from the other. Each term correctly designates one society with a discreet culture. The three are sufficiently diverse that they cannot be linked by the term Patayan in the sense of a great tradition of which they are local manifestations. Nor is there any reason to substitute Patayan for the accepted designation for any of the three branches. In short, Patayan is a term best abandoned.

Ceramic remains immediately north of the Colorado River received Dr. Colton’s attention in 1952 when he published a paper providing additional information on prehistoric pottery types found as trade ware south of the river in the area defined by the Petition as Hualapai territory from time immemorial. These types were produced in and around the Virgin River basin during the Puebloan occupation of that area. Most important perhaps for the present study was his recognition of Moapa Gray Ware. 1/ Classified in this ware was Boulder Gray, which was originally placed in San Francisco Moun-

tain Gray Ware. Various series of previously recognized wares were also described and named.

1. Identification of Paiute Pottery

By 1952 not only many prehistoric ceramic types were named and described, but also a few types known to have been made by modern Indian tribes of the region. Southern Paiute pottery had been identified as long ago as 1926. This pottery has been named Southern Paiute Utility Ware and described on the basis of over 7,000 sherds collected from more than 130 identified Paiute sites. Types within this ware have not been named, although "On present evidence it would be possible to break this utility ware down into two separate types on the basis of presence or absence of fingernail indentation."

The essential characteristic of Southern Paiute Utility Ware for purposes of this study is its rough surface, by which it can be readily distinguished from Tizon Brown Ware. It is "dark brown or black in color, coarse, granular, and rather soft in texture, and irregular as to thickness and surface. When decorated at all it bears merely lines of fin-

2/ Harrington, 1926a, p. 71.
4/ Ibid., p. 54-55.
gernail impressions. The finish is "normally rather rough, particularly on interior surface; exterior partially smoothed, occasionally finger indented."

Although Southern Paiute Utility Ware closely resembles Tizon Brown Ware in color and paste, the surface finishing was quite different among the Paiute and the makers of the latter ware. Tizon Brown Ware was well smoothed on the exterior surface, even scummed. The interior surfaces were also smooth, even when retaining marks of the anvil held inside while shaping the vessel. The rough surface of Southern Paiute Utility Ware thus makes it quite easily distinguishable from Tizon Brown Ware.

Inasmuch as Southern Paiute Utility Ware sherds collected in the Hualapai country almost entirely lack fingernail indentation, they have been uniformly labeled "Paiute Corrugated" in the tables.

2. Identification of Mohave Pottery

One of Schroeder's contributions to ceramic interpretation in western Arizona was his recognition that some Lower Colorado River Buff Ware types were made by modern Mohave Indians. He pointed out that Parker Buff continued to be made after contact: "examinations of historic Mohave ceramics in-

1/ Harrington, 1926a, p. 71.
2/ Baldwin, 1950, p. 53.
dicate this type is still being manufactured on occasion." 1/

Of Parker Red-on-Buff, Schroeder write, "Historic decorated
types probably can be separated from this type on the basis
of designs, blood-red paint, or form." 2/

3. Where This Study Began

This constituted the factual and interpretative foundation upon which the present report was built. For the sake of clarity, the author's perception of the situation will be summarized here before new data and interpretations are presented:

The main archaeological manifestation found in the Colorado Desert region during ceramic producing times was the Yuman Complex. Within it existed two primary ceramic divisions, a buff-ware making population distributed along the lower Colorado River and best termed Colorado Valley—Rogers' term with publication priority—or Riverine Yuman, and a brown-ware making population distributed both east and west of the river on the arid upland desert. These uplanders were Upland Yumans. Judging from the diversity of Yuman speaking tribes known to have inhabited the banks of the Colorado River during historic times, archaeological branches may be identifiable along its course, and Schroeder has already iden-

1/ Schroeder, 1952a, p. 20.
2/ Ibid., p. 21.
tified one with Pyramid Gray pottery which he named the Amacava Branch. On the other hand, the well-documented large scale interchange of personnel among riverine Yuman tribes during historic time by the mechanisms of warfare probably will prevent equation of branches with tribes.

Upland Yuman encompasses three of the four sub-areas within the Yuman Complex designated by Rogers— the California Desert, the Western Area and Eastern Area. Schroeder's term Upland Arizona Yumans is equally descriptive of Rogers' Eastern Area. But both must properly be restricted to archaeological remains of Yuman speaking peoples. Within roughly this same geographic area east of the Colorado River at least three archaeological branches have been identified: Cerbat, Cohonina and Prescott. None had been conclusively correlated with a Yuman-speaking tribe when this study began although Rogers and Baldwin claimed that the Tizon Brown Ware employed by Colton in defining the Cerbat Branch was used by modern Hualapais.

Chronologically, Schroeder and Rogers accepted Colton's dating of the beginning of production of Tizon Brown Ware prior to 750 A.D. Colton concluded it was not made after 1100 A.D. using surface association evidence. Schroeder concluded occupation at Willow Beach ended about 1150 A.D.

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1/ Schroeder, 1952a, p. 54. Amacava approximates Hualapai Wamcava, their term for the Mohaves.
because Tusayan Black-on-Red was the latest trade ware he excavated, so he had no evidence for Tizon Brown Ware after that time. Rogers had concluded that Tizon Brown Ware continued to be made in historic times on the basis of excavation of cave deposits marginal to Mohave Valley but not otherwise identified. Baldwin had concluded some campsites south of the Colorado had been occupied by modern Hualapais.

The ceramic wares characteristic of the prehistoric Cohonina, Prescott, Amaca and Cerbat Branches, and of the modern Paiutes and Mohaves had been established. There was reason to think the ware of the modern Hualapais was the same as that of the prehistoric Branch Cerbat. To repeat, Rogers had written that "from a few stratigraphic excavations of cave deposits marginal to the Mohave valley, I have learned that... some 'browns' were made as late as historic time. These are such late contributions that only Walapai or Chemehuevi origins can be considered." These were identified only as Tizon Brown Ware, not by type. And Baldwin had written of the Mohave and Hualpai: "Campsites of the latter two groups occur throughout the area south of the Colorado River, being characterized by small stone house rings, hammerstones, arrowpoints, and fragments of coarse reddish-brown

1/ Rogers, 1945, p. 192.
2/ Ibid., p. 196.
Neither specified the types considered by him to be Hualapai produced.

A considerable amount of surveying archaeological sites in and around the area claimed by the Hualapais as their ancestral homeland had been done when the present research was initiated. But the central problem of Hualapai prehistory had not been conclusively solved. The pottery made by the modern Hualapais had not been identified except in general terms. Therefore, the problem of identifying historic Hualapai pottery with prehistoric archaeological remains remained to be solved.

C. Excavation Interpretation

When Colton stated in 1945 that "no one has ever reported upon the excavation of a definite Patayan site" using Patayan as synonymous with Yuman Complex, he approximated the truth. To be sure, at that time he had decided that the Cohonina and Prescott Branches were perhaps not part of his Patayan Root as he had originally classified them. In 1945 he wrote "The Cohonina, Sinagua, and Prescott Branches are, nevertheless, distinct cultural units, but it is anybody's guess just how they should be classified at the present."
Therefore, he could rule out reports of excavations in Coho-
nina sites by his own institution and Spicer's Prescott
Branch Kings' Ruin site as Patayan.

The only other excavations carried out up to that time
in the Eastern Area of the Yuman Complex had been done with
C. C. C. labor during the depression. The recording of
these excavations was poor and to date none has been pub-
lished upon by the excavator. The only published report on
any of these sites in 1945 justified Colton's statement in-
asmuch as the site was not reported as "Patayan." M. R.
Harrington's brief notice of the Willow Beach site was pub-
lished a year before Hargrave proposed that term. And Har-
rington, whose view of Southwestern archaeology appears to
be strictly evolutionary—all Indians throughout the region
evolved steadily and uniformly through identical cultural
stages—reported the ceramic levels as Pueblo and the surface
points as Paiute.  

At the time Harrington visited the Pebble Beach excava-
tions on the eastern bank of the Colorado, the C. C. C. crews
had trenches to a depth of 9½ feet. He wrote that "it was
plain that the Southern Paiute or their relatives had been
the last to occupy the site, because their typical small tri-

1/ Harrington, 1937, p. 87.
2/ Ibid., p. 86.
angular arrowpoints, and these only, were found on and near the surface. ¹/₁

This brief report went on with the statement that "before the Paiute, people of early Pueblo culture had camped at Pebble Beach, for their characteristic pottery and narrow-stemmed, wide-barbed arrowheads appeared down to the depth of about four feet."²/ The contribution this report made to understanding ceramic relationships in the area is summarized in the comment: "Some of the pottery may have been Late Basketmaker; but without decoration to guide one, it is often hard to distinguish Basketmaker III and Pueblo II plain ware in this region." It can at least be concluded from this account that the ceramic level at Pebble Beach was four feet deep.

Below the deposits where pottery was found, Harrington reported a sterile layer of sand of varying depth averaging about two feet. Below this layer stone tools were recovered. Elk bones found in the lower levels suggested a moister climate than that of the region today.³/

As the present research was getting underway, Schroeder published a brief estimation of "The Significance of Willow Beach" where he had made further investigations.

¹/ Harrington, 1937, p. 87.  ²/ Ibid., p. 87.  ³/ Ibid., p. 88.
Schroeder agreed with Harrington in characterizing the earliest remains at Willow Beach as those of Basket Maker II people primarily resident north of the Colorado, and probably camping at Willow Beach because it offered the first access to the Colorado River bank below the mouth of the Virgin River. Through time these people came less often and Indians west of the river made more use of the site and became its sole visitors in the final period before pottery came into use there.

According to Schroeder, the first pottery found at Willow Beach arrived from the Muddy River and Virgin Valley Basket Maker III Indians, and the Cerbat Branch of the Yuman Complex at some time before 750 A.D. Then after about 900 Schroeder concluded, the Amacava Branch used the site more than any other group, but burials and artifacts of the Pueblo II people in the lower Virgin River Valley and "Trade pieces from the Cerbat Branch also are in evidence." Schroeder views this site as a trading center for Amacava, Virgin Valley and Cerbat Branch Indians.

1/ Schroeder, 1952c, p. 27.
2/ Ibid., p. 28.
3/ Ibid., p. 28-29. Schroeder used the terms "Cerbat People" and the "Patayan Culture" previously labeled by this report as inaccurate, since the social unit designated Cerbat constituted a society with a culture, while the social unit designated Patayan was a larger aggregate of several tribal societies with distinctive cultures.
This trade he thinks to have been disrupted after 1100 A. D. by an intruding group from the north, apparently the Shoshoneans, who forced the Pueblo people to retreat eastward, and the Amacava out of the Mohave Desert onto the Colorado River below Davis Dam. Schroeder considered the Amacava Branch to be "probably ancestors of the modern Mohave." 1/

Actually, Harrington reported on a site which was in part at least by Indians of the Yuman Complex, although he did not so label it. Detailed publication on this site awaits appearance of Schroeder's Willow Beach report now in press.

Within a few months of Colton's "no reported excavation" statement came Rogers' claim that "from a few stratigraphic excavations of cave deposits marginal to the Mohave valley, I have learned that one or two of these brown types were contemporaries of Pyramid Gray and Topoc Buff which are Yuman II types; also that some 'browns' were made as late as historic time." 2/

This passing mention cannot be considered adequate reporting of Rogers' excavations, and did not significantly alter the situation.

A few years later Gordon C. Baldwin and Barton A. Wright carried out excavations along the Colorado River for the National Park Service. However, the sites excavated in the

1/ Schroeder, 1952b, p. 29.
2/ Rogers, 1945, p. 192.
area to be flooded by waters impounded by Davis Dam turned out to be one-level sites without stratigraphy. Nor have the results been published, although Baldwin's typescript report and Wright's thesis are fairly accessible.

Thus the total available published information on excavated stratified sites within the area claimed by the Petition to have been sole Hualapai territory when this study began consisted of Harrington's and Schroeder's short interpretations of the Willow Beach deposits and Rogers' passing mention of cave excavations not specifically located.

Fortunately, near the eastern edge of this territory a few sites had been excavated where datable pieces of wood had been recovered. These provided time perspective on the Co-honina and Prescott Branches which helped clarify temporal relationships of prehistoric ceramic wares.

A couple of miles down Chino Wash from where Walnut Creek comes in—just beyond the southeastern corner of the area defined by the Petition as Hualapai—a Prescott Branch site was excavated in the early 1930's by the University of Arizona. It yielded evidence of architectural development from pit houses to pueblos, and imported trade wares dating from the 700-900 A. D. period up to about 1300 A. D. Tree-

ring dates obtained from part of the pueblo structure indicated beams were cut from 1026 to 1048 A.D. so the occupation of that portion of the site occurred during the middle of the eleventh century.

Somewhat farther away from the eastern margin of the area defined in the Petition as occupied solely by Hualapais from time immemorial, a University of Illinois expedition excavated several small sites of the Cohonina Branch Indians north and east of Williams, Arizona. Tree-ring dates were obtained from timbers in four of these sites with cutting dates ranging from around 775 to 1090 A.D.

Thus excavations at the eastern and western edges of the area defined in the Petition as occupied solely by Hualapais from time immemorial provided some stratigraphic and some absolute dating information about Lower Colorado River Buff Ware (and Tizon Brown Ware trade), about Prescott Gray Ware, and about San Francisco Mountain Gray Ware. The latter ware was comparatively well known as a result of excavations farther east.

But no Tizon Brown Ware site had yet been excavated. Conflicting theories as to the period of its production and use had not been resolved.

1/ Spicer, 1936, p. 13. Smiley, 1951, Table.
The original research reported here is for convenient reference called the Hualapai Tribal Survey. The personnel of the Tribal Survey consisted primarily of the author as anthropologist, and the members of the Hualapai Tribal Council's Claims Research Committee as guides, interpreters and assistant sherd collectors. The Committee men are Mr. Carl Jim Amis, Mr. Fred W. Mahone, and Mr. Grant Topija. One or another of these gentlemen has accompanied the author on virtually every trip made to search remembered Hualapai sites for artifacts or to interview aged Hualapais.

The present study is primarily a study of artifacts collected from the surface of the ground in an extensive type survey of a large geographic area. The purpose, because of the nature of the problem posed to the author, is to define the territory occupied by the Hualapai tribe of Indians prior to their conquest by the United States. Therefore extensive coverage was necessary. While data on the intensity of Hualapai occupation and utilization of the area would be desirable time has not permitted a sufficiently intensive survey of any
local area to obtain this data in archaeological form. (Information about intensity of land use in the 19th century has been obtained from historical documents and by interviewing Hualapais, however.) This study thus has as objectives the two types of information which a field survey is generally recognized as providing: temporal and distributional evidence.

The identification of the period of a site by surface finds is a type of field survey.... On Eastern tells with their prolonged occupation, with cultures rich in objects, particularly pottery, and with a dry surface which tends to be denuded, there are always traces of the pottery and objects belonging to the periods when the tell was occupied. A careful field survey and analysis of the surface finds on the tells can suggest the areas covered by different cultures. 1/

These are precisely the results desired from the present study—definition of the area occupied by Hualapai society plus some approximation of the length of time it has existed as a recognizable archaeological entity.

A. Methods

In order to bring archaeological evidence to bear upon the question of the accuracy of the Petition's definition of the location and extent of territory used and occupied solely by Hualapais, certain assumptions have to be made. The language of the Petition had to be translated into archaeological terms. This involved operational definition of the Petition's terms in indices of archaeological remains.

1/ Kenyon, 1953, p. 159.
The general theorem that no processes now operate that did not operate in the past, and no processes operated in the past that do not now operate had to be assumed to be true in order to infer anything at all from archaeological evidence. For it is only by inference from artifactual remains to observable processes, and by analogy from artifacts of the present to those of the past, their manufacture and utilization, that historical reconstruction and interpretation of man's prehistory can be accomplished. "The nature of some things in the present must be known before the study of the past can get under way."  

With this general theorem as a starting point, the language of the Petition could be translated into archaeological terms permitting meaningful research.

From observing living humans—Indian and non-Indian alike—archaeologists know that a universal human trait is the creation of artifacts: tools, utensils, toys, etc., which do not occur in nature. Equally universal among men is the habit of breaking or damaging these artifacts in such a way as to render them no longer serviceable for the purpose for which they were originally intended. Thereupon, men universally tend to discard these artifacts, to throw them away. Once discarded, such objects endure according to the nature of the

1/ Cohen & Nagel, 1934, p. 324.
materials from which they were originally manufactured. It is primarily with such broken, discarded artifacts that the archaeologist deals—especially those originally made from relatively imperishable materials such as stone or rendered relatively imperishable during the process of manufacture as is pottery.

These facts are the basis of the idea that archaeological techniques can yield information useful in establishing geographic boundaries of cultures. In summarizing practical applications of archaeological techniques, Wesley L. Bliss write, "One of these methods is by the use of cultural materials or artifacts. For example, if the claim is made that a certain cultural group inhabited a certain area at a certain time this may be checked by the presence or absence of cultural debris associated with the past history of the group. Similar methods may be used to establish historic claims." To translate this idea of employing artifacts to define the geographic area occupied by members of a particular society, Dr. Bliss's statement needs to be re-cast in hypothetical form to permit drawing inferences, since only through inference can knowledge of the past be achieved.  

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1/ Bliss, 1955, p. 708.

1. **Hypothesis I**

**General Form:** If a socio-cultural group has ever occupied a particular territory, then artifacts produced, used and discarded by members of that socio-cultural group exist upon or in the ground within that area.

**Hualapai Form:** If members of the Hualapai Tribe occupied the area defined in the Petition as their ancestral territory, then artifacts produced, used and discarded by Hualapais exist upon and in the ground within that area.

Since Hualapais still reside within a part of the area claimed by the Petition to have once been their exclusive possession, this hypothesis is easily checked. Artifacts produced, used and discarded by Hualapais do exist upon and in the ground of the Hualapai Indian Reservation (within the area defined by the Petition as formerly exclusively Hualapai). Hualapais still reside there and break and discard artifacts every day. The Peach Springs town dump at the head of Peach Springs Draw just north of the town provides ample evidence to verify this general hypothesis.

As stated, this hypothesis is clearly not refined enough to prove useful in verifying or rejecting the Petition's assertions. The time of occupation as well as the artifact-space relationship had to be further specified.
2. Hypothesis II

The first step in sharpening meaning was to specify that the meaning of "produced, used and discarded" was not to be "produced or used and discarded" by Hualapais, but "produced and used and discarded" by Hualapais. By this definition, artifacts produced by non-Hualapais regardless of whether Hualapais later acquired, used and discarded them, were ruled out as evidence of Hualapai occupancy. Thus artifacts produced by modern factories and purchased by Hualapais were eliminated from consideration as evidence of Hualapai occupation of the area in question. Similarly artifacts produced by other Indians were also eliminated. The critical point is whether artifactual remains were originally produced by Hualapais or not. Use is an intervening variable which can effectively becloud the evidence, since marks of cultural difference are placed on artifacts during their manufacture but not during their use.

The second step in refinement was to specify more clearly the period of time referred to. In ruling out manufactured goods, the time period under consideration has been restricted to that when Hualapais produced nearly all of the artifacts they used. While some few types of artifacts are still made by these Indians, such constitute a small proportion of the total artifact assemblage employed by contemporary Hualapais. They would be of small use to an archaeologist attempt-
ing to identify Hualapai-occupied sites a couple of hundred years hence. In other words, contemporary Hualapais are much like their non-Indian neighbors insofar as their trash goes. (The few locally made artifacts are mostly highly valued and carefully preserved, also.)

Since measurements in archaeology are relatively gross and imprecise, one cannot reasonably expect to define successfully areas of Hualapai occupation except during those past times when a high proportion of the artifacts these Indians used and discarded were also produced by them and bore distinctive characteristics identifying them as Hualapai-produced. With these considerations in mind, the working hypothesis could be further operationalized:

**General Form:** If artifacts produced and used and discarded by members of a socio-cultural group during any time period exist upon and in the ground within an area, then that group occupied that area during that time.

**Hualapai Form:** If artifacts produced and used and discarded by Hualapai Indians from time immemorial to their conquest by the United States exist upon and in the ground within all the area defined by the Petition as their aboriginal territory, then the Hualapai Tribe occupied that area from time immemorial to conquest.
3. Hypothesis III

The hypothesis just stated has an obvious corollary which rules out any group whose artifacts do not occur in an area as a candidate for having ever occupied it.

General Form: If artifacts produced and used and discarded by members of a socio-cultural group during a given period of time do not exist upon and in the ground within a given area, then that group did not occupy that area during that period.

No Indian tribe can be considered as a possible occupant of the area defined by the Petition as formerly held exclusively by Hualapais unless artifacts produced by that tribe exist within the area.

Hualapai Form: If artifacts produced and used and discarded by Hualapai Indians from time immemorial to their conquest do not exist upon and in the ground within an area, then Hualapais did not occupy that area during that period.

In other words, the territory occupied by Hualapais had, it may be assumed, definite limits beyond which they did not go, and beyond which, therefore, they could not deposit Hualapai-produced artifacts.

4. Hypothesis IV

The language of the preceding hypotheses does not, it must be noted, convey the same meaning as the language of the Petition. They refer only to occupancy, not characterizing
it as "sole and undisputed" as does the Petition. They are adequate only to demonstrate the presence of Hualapais within a particular area at a particular time.

The Petition asserts, on the other hand, that no Indians but Hualapais occupied the area which was their ancestral homeland at the same time that they did. In order to demonstrate this state of territorial affairs, a rather more rigorous hypothesis is required. Ideally, this hypothesis should state an invariant relationship:

**General Form:** If only artifacts produced and used and discarded by members of a socio-cultural group during a given time period exist upon and in the ground within a particular area, then that socio-cultural group "exclusively owned and enjoyed the sole and undisputed use, occupancy and possession" of that area during that period.

**Hualapai Form:** If only artifacts produced and used and discarded by Hualapai Indians from time immemorial to their conquest exist upon and in the ground within the area defined by the Petition as their pre-conquest territory, then the Hualapai Tribe "exclusively owned and enjoyed the sole and undisputed use, occupancy and possession" of that area during that period.

Such a rigorous hypothesis is not likely to be verified for the Hualapais or any other human group. Because of the basic acquisitiveness of human beings, virtually every human
group known to science has had some intercourse and trade in artifacts with neighboring groups. In almost no area in the world are the artifacts on and in the ground exclusively those of the local group, even though no other people ever set foot there. In addition to locally produced artifacts, there are nearly always objects traded in from outside the group. Trade is an intervening variable which destroys the invariant relationship between the manufacture of artifacts and their use and abandonment at the end of their useful life.

The handicap this human trait imposes upon the process of bringing archaeological evidence to bear on the question of whether the Hualapai Indians were the sole and undisputed possessors of the area defined as theirs in the Petition is simply that artifacts which were not originally produced by Hualapais cannot in themselves inform the archaeologist how they arrived in Hualapai territory. Various means of arrival were possible:

Artifacts produced by non-Hualapais exist upon and in the ground of Hualapai ancestral territory. This can be assumed even before examining a single artifact. That it is so has already been stated—the Peach Springs town dump is composed mainly of such artifacts of non-Hualapai manufacture. Such artifacts could have arrived

1) In the hands of Hualapai traders who had acquired them in non-Hualapai territory and imported them,
2) In the hands of non-Hualapai traders bringing them from foreign territory into Hualapai country to trade to resident Hualapais who enjoyed sole and undisputed use, occupancy and possession of their lands (other than that use of their trails made by the visiting traders).

3) In the hands of non-Hualapai Indians who used and occupied portions of the area defined in the Petition as occupied solely by Hualapais.

There is nothing about non-Hualapai produced artifacts themselves which tells the archaeologist by which of these three possible methods they arrived in the area defined in the Petition as exclusively Hualapai. To illustrate with a contemporary example: if a tin can be salvaged from the village dump at Peach Springs, there is no way for the archaeologist to discover from that can itself whether it arrived at

1) In the car of a Hualapai who journeyed off the reservation to purchase supplies in Kingman, Seligman, or points more distant, and transported it into the Hualapai Indian Reservation, or

2) In the truck of a non-Indian peddler bringing canned goods from American canneries into the Hualapai Indian Reservation to sell to resident Hualapais who enjoy sovereignty over their reserve to the extent of licensing the peddler for a fee and regulating the conditions under which he may peddle
goods. (In a sense, they enjoy "sole" and certainly \textit{de facto} undisputed use, occupancy and possession of their reserve, although subject to U. S. sovereignty.)

3) In the cars of non-Hualapai residents of Peach Springs who use and occupy portions of land within the exterior boundaries of the Hualapai Indian Reservation in the strip along the Santa Fe Pacific Railroad tracks held by that corporation.

An archaeologist might be able to discover by which of these possible routes a particular can reached the village dump by asking members of the two locally resident ethnic groups, provided the particular can was sufficiently distinctive and its user and discarder happened to remember it long enough. If he considered this an important enough point, he could discover the answer by setting up a vigil over the dump and watching Peach Springs citizens throw out their garbage. He could by this technique discover into which of the three possible classes each can fell only for those cans he actually saw discarded by their users. He could not so discover the route cans discarded before his observations began had traveled. Nor could he discover it if garbage collection service were instituted--in that case, he would have to shift his scene of observations to the collection route.

The point of this contemporary example is that, difficult as the observational task of discovering the truth about such
a minor point would be, it is impossible for the archaeologist dealing with artifacts from the past. He can employ neither observation nor interviewing in his interpretation of any artifact. He has only the artifact itself. The persons who made, used, and discarded it—perhaps traded it—cannot be observed or interviewed. That is why the archaeologist must rely upon the general theorem stated at the beginning of this section and interpret artifacts by inference and analogy from other artifacts he can observe in use and question people about.

Therefore, in bringing archaeological evidence to bear on the question of whether the territory defined by the Petition as exclusively Hualapai was or not, the best the archaeologist can do is to state his conclusions in terms of probability. He can only infer by which of three possible methods non-Hualapai artifacts came to be deposited on Hualapai soil by assuming certain theorems to be true and establishing uniform standards of probability. An hypothesis stating an invariant relationship is in this case not usable; a hypothetical statement of concomitant variation is required.

5. **Hypothesis V**

Since Hypothesis IV above can only serve as an ideal model setting forth conditions which never actually occur in human society, it cannot be employed in research. Therefore,
operational definition of its terms is necessary. Once again the past must be inferred from contemporary situations. Most of the artifacts employed by Hualapais are produced by non-Hualapais outside their reserve today. However, this situation, while not unusual, is "abnormal." That is, Hualapai society is presently subordinated to American society and adjusting to it. Therefore, American artifacts are predominant in Hualapai usage.

If American society is taken as the unit of analysis, one immediately realizes that within the sovereign area of the United States, artifacts produced within that area far, far outnumber those produced outside it and imported, whether by U. S. citizens or foreign citizens serving as importers who live in this country. This same state of affairs exists in any modern industrial nation. Domestic artifacts far and away outnumber foreign ones.

Employing the general theorem concerning uniform processes operating both in the present and the past, one can reason that when human societies were in a pre-industrial stage of development, this predominance of locally produced artifacts was also found in every society. Artifacts produced by members of any society greatly outnumbered those imported from all other societies. This principle is universally employed by archaeologists engaged in historical reconstruction of past events. Thus local social units of the past are re-
cognized and defined in terms of preponderance of locally produced artifacts.

In an analysis of survey collections of pot sherds from the northwestern Papagueria—the area south of the Gila River in Arizona—Dr. Paul H. Ezell took a 4:1 ratio of one ware to all others to be significant of cultural predominance. "By predominantly is meant that 80 per cent or more of the sherds collected are of one ware." That is, if more than 80% of the pottery at a site was of one ware, that site was classified as being wholly of one culture, amounts of less than 20% being considered as intrusive at that site. If no one ware made up 80% or more of the pottery at a site, the site was classified as a mixed one.

In northern Arizona immediately east of the area which is the subject of the present study, Dr. H. S. Colton has taken a 3:2 ratio to be significant of cultural predominance: "The geographical distribution of sites where one or another of these wares compose over 60% of the sherds is indicated in Fig. 3, p. 15." This figure is captioned "A map of Arizona showing the regions occupied by the Sinagua Branch and neighboring branches during the eleventh century A. D...."

1/ Ezell, 1955a, p. 369.
As previously stated, Colton holds that "a branch is a concept of the culture of a prehistoric Indian tribe changing over a long period of years." Thus Colton was taking 60% of all the sherds from a site—apparently from one time level—being of one ware as his operational definition of occupation of that site by the tribe making that ware.

Colton has employed utility pottery as his definition of a branch, using decorated or "index" types for dating. But just how much of a utility ware defines a site as occupied by a particular branch he has not clearly set forth. Colton summarized the results of surveying an area around Sunset Crater in much the same way that the data of this report are presented: in artificial units of terrain, taken directly from the land survey system of the United States. For his area, "the unit area selected in the preparation of the maps is the township as surveyed by the United States Land Office, a square six miles on a side which therefore, contains thirty-six square miles." Since he was presenting the results of an intensive survey—1,460 sites within the small area reported upon—this small geographic unit suited his purpose. The present study covers a much larger region in which only some 600 sites are considered, less than 500 of which are co-

\[1/\] Colton, 1953, p. 68.  \[3/\] Ibid., p. 260.
\[2/\] Colton, 1946, p. 255.  \[4/\] Ibid., p. 10.
ramic. So a considerably larger geographic unit has been employed for analysis: the 16th part of a unit of $1^\circ$ of latitude and $1^\circ$ of longitude.

The choice of a standard for cultural predominance was not so readily made, in view of Ezell's use of an 80% level and Colton's use of a 60% level of significance. In the absence of a generally recognized criterion, the author has attempted to discover an empirical basis for decision.

My own household is an exclusively Anglo-American household located within the sovereign area of the United States. My family has periodic contacts with several foreign countries or cultural enclaves within the United States which result in accumulation of artifacts not of Anglo-American origin. Therefore, this household provides a more or less reasonable analogy to a prehistoric Indian household which imported foreign-made artifacts.

Sampling my own household, I enumerated all the artifacts in a living and dining room. These numbered 504 (excluding the contents of closets). Of the total of 504, 86 objects were known to have originated in the United Kingdom, Mexico, Japan, or with the Navaho or Santa Clara Pueblo Indians, or New Mexico Spanish-Americans. This is a proportion of 17.1% of artifacts of exotic cultural origin in an exclusively Anglo-American household.
A further analysis of these 504 artifacts showed that some 258 were made of relatively durable materials under open-site archaeological conditions—iron, china, pottery, glass, plastics—and the rest of perishable materials—paper, cloth, wood. Of these 258 objects 68 happen to be of exotic origin, which is 26.4% trade goods in the durable material artifacts.

Inasmuch as most of the sites recorded from the area defined by the Petition as occupied exclusively by Hualapais prior to their conquest are open sites where only non-perishable artifacts survive, the larger figure for foreign-made artifacts provides probably the more reasonable analogy. And since metal (nor glass nor plastics) artifacts do not occur on American Indian sites used only in prehistoric times, the larger figure for exotic artifacts seems more reasonable because pottery utensils tend to break into a greater number of fragments than metal utensils.

One objection to inference from these figures to archaeological survey collections, aside from the small size of the sample of households and bias possible from the nature of my own cross-cultural contact pattern, is the fact that whole artifacts were counted. Archaeological remains are predominantly broken, fragmented artifacts, certainly on the surface during ceramic times. However, the degree of fragmentation of one type of artifact is probably relatively uniform for
various examples of the same type. For example, Indian clay vessels probably got broken up into about the same sized sherds on any particular site, so that the original ratio between whole vessels tends to be retained by the sherds except as they may have differed originally in size. Therefore, the arbitrary breaking point of 70% of more locally produced artifacts has been taken as signifying exclusive use and occupancy of a given site by the resident group.

The expression "all artifacts" had also to be specified. The artifacts which an archaeologist has available to him for study from any area can never be assumed to include all artifacts used by the people formerly inhabiting that area. Some artifacts are made from quite perishable materials and are soon destroyed so the archaeologist never sees them (or finds them only in dry caves). Some artifacts made from more durable materials are destroyed nonetheless or removed from the area by the action of water or man, who often carries artifacts of an earlier period of time than his own from one area to another.

Despite accidents of preservation, the surviving sample of artifacts must be considered by the archaeologist to be a valid sample of those originally made from the same materials, and somehow representative of some at least of the conventional understandings comprising the culture of the people who made and used them.
In addition, the archaeologist almost never studies a complete collection of even surviving artifacts from an area. An excavation is seldom 100% complete, so the artifacts actually recovered must be assumed to be a representative sample of all those surviving. And since the horizon of surviving artifacts is unknown, there is no mathematical means of computing the probability of error.

In studying a wider area than a single site, the archaeologist seldom has available to him surface collections from every site within the area. And sites which bear no surface indications of their location are generally entirely unknown to him. Yet, he has to assume that the artifacts he has available to him constitute a representative sample of all those surviving within the area. Therefore, hypothesis V may be stated in operational form as follows:

**General Form:** If artifacts produced and used and discarded by members of a socio-cultural unit during a given time period constitute 70% or more of all artifacts from a given area available for study, then that socio-cultural unit exclusively owned and enjoyed the sole and undisputed use, occupancy and possession of that area during that period.

**Hualapai Form:** If artifacts produced and used and discarded by Hualapai Indians constitute 70% of more of all artifacts available for study which were deposited from time immemorial to their conquest on sites within the area defined
by the Petition as their aboriginal territory, then the Hualapai Tribe exclusively owned and enjoyed the sole and undisputed use, occupancy and possession of that area during that period of time.

6. Hypothesis VI

The Petition, besides making the positive assertion that a certain area was exclusively and solely possessed, used and occupied by Hualapais, also specifically denies that any other Indians permanently inhabited any part of that area:

12. No Indian tribe or nation other than the Petitioner Tribe ever established a permanent encampment in, or used or occupied any part of, the area above described.

13. No Indians other than members of the Petitioner Tribe ever entered upon the area above described except temporarily for friendly intercourse with the Petitioner Tribe or upon occasional raiding parties. 1/

The logic by which these allegations may be evaluated is the same as that contained in the hypotheses previously stated. Hypothesis I in its general form can be employed to demonstrate presence of any tribe within the area defined by the Petition as held solely by the Hualapais. Hypothesis III may also be employed, except that it has to be stated in terms of concomitant variation rather than invariant relationship.

So the final hypothesis may be stated:

1/ Marks, 1951, p. 4-5.
General Form: If artifacts produced, used and discarded by members of a socio-cultural group constitute less than 25% of those available for study from a site from a given time period, then members of that group did not occupy the site during that period.

Hualapai Form: If artifacts produced, used and discarded by non-Hualapai Indians constitute less than 25% of those available for study from any site from time immemorial to the Hualapai conquest by the United States, then no other Indians occupied the site except for friendly intercourse with or occasional raids upon the Hualapai.

7. Definition of Artifact

Problems of selective preservation of prehistoric objects and resultant sampling difficulties have been outlined, and the word artifact employed in the hypothetical statements. However, in the particular part of the world where this study has been carried out, artifact virtually must be given the operational definition potsherd. That this is perhaps an extreme case of narrowing meaning of a concept in operationalizing it is obvious. But the nature of archaeological remains available leaves little alternative. "Archaeologists in the Southwest are frequently criticized for their preoccupation with potsherds, and sometimes accused of ignoring other evidence. Anyone who has worked in this part of the Southwest knows that there is frequently little else left
except pottery in the way of evidence." The author of this observation found, for example, that the wide geographic distribution of the wickiup type structure formerly built by the Hualapais was so great and it was built by so many tribes as to make this trait useless as a tribal index. He also attempted to employ burial patterns and worked shell for analysis, but concluded that like the wickiup remains "the other archaeological evidence is likewise so generalized as to be inconclusive."

Dr. Ezell's purpose in the study just cited was the same as that of this study: location of an inter-tribal boundary. Having pointed out reasons for operationally defining geographic distribution of certain cultural traits such as potsherds, he commented that "the wares are easily distinguished on even a casual inspection and it is the ware, not the individual type, which is important for the theme of this study."

Using the same procedure followed in this report—a comparison of archaeological evidence with historical information—Ezell found that the archaeologically defined geographic range of certain cultural traits did not coincide with the historically established distribution of certain other cultural traits including language. Therefore, potsherds did

1/ Ezell, 1955, p. 368.  
2/ Ibid., p. 368-369.  
3/ Ibid., p. 369.  
4/ Ibid., p. 369.
not accurately index tribal territories, inasmuch as tribal affiliation is reckoned in terms of social structure and language spoken rather than type of pottery used and economic pursuits engaged in.

The outcome of Ezell's study demonstrates that an operational definition of the range of a prehistoric Indian tribe as the distribution of a particular ceramic ware may be wrong because the variable of trade intervenes between manufacture and use. The archaeological evidence must be submitted to ethnographic and historical checks to determine its proper interpretation whenever this can be done.

However, when the archaeologist deals with remains from a time or area from which no other type of evidence is available as a cross-check, then he has no alternative than to assume that pot sherd distribution accurately defines tribal distribution—that production and use are in an invariant relationship with no intervening trade variable. It may also be remarked that the situation found by Ezell is probably unusual since bands using pottery made by Indians of a different linguistic family inhabited the most extreme arid environment in North American and were geographically closer to the Colorado River Yumans than their own tribesmen across the desert to the east.

Archaeological surveys have been carried on under the premise of invariant manufacture-use relationship in the Southwest at least since the intervention of the Gladwins in this region in 1928. It underlay all the surveys made under their direction at Gila Pueblo:

In the spring of 1928 a survey was begun by the staff of Gila Pueblo with the primary purpose of seeking the source of the people who had originally colonized a large part of southern Arizona, of defining their boundaries, and of determining the exchange of influence between them and their neighbors.

At the time that this survey was begun, it was believed that two unrelated peoples had come together in the Gila Basin, one of whom made polychrome pottery (black and white decoration on a red base), the other characterized by buff pottery decorated in red.1/ Implicit in this statement is the operational definition of the geographic range of a prehistoric Indian tribe as the geographic range of a particular type of pottery presumed made by its members. To arrive at valid conclusions about the range of a pottery type or ware (and the range of the Indian tribe which is operationally defined by such sherds) information about many widely distributed sites must be gathered fairly systematically: "Sherds have been collected from the surface of sites regardless of the type or condition of the ruin, emphasis being laid on the number of sites visi-

1/ Gladwin & Gladwin, 1935, p. 203. (Emphasis added)
ted and the character of the pottery... in the Gila Pueblo surveys. And this has been essentially the procedure followed in the Hualapai Tribal Survey.

8. Trade Ware

The form of the hypotheses stated above was chosen because of the difficulty of defining any proportion of the sherds from a site or area as signifying trade acquisition. As previously stated, the proportion of trade goods from outside the local socio-ethnic unit found in a sample of the author's household was 26.4% of non-perishable or 17.1% of all whole artifacts enumerated. This indicates that up to a quarter of the artifacts on a site may consist of trade items without implying any foreign occupation on the site, if the site represents only a short temporal occupation. If it has been occupied over a long period, it becomes necessary to sort the artifacts by periods in order to calculate relative proportions of local and imported artifacts.

In view of the high rate of geographic mobility of the individual in modern Western Civilization, this proportion may appear higher than it would have been in a prehistoric Indian tribe. However, Southwestern Indians are now and apparently have been throughout their history, highly mobile in much the same way, engaging in a tremendous amount of foreign trade.

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1/ Gladwin & Gladwin, 1935, p. 211.
Therefore, in interpreting ceramic relationships within the Eastern Area of the Yuman Complex, any proportion of sherds of one ware on a site or within an area up to 25% of the total is considered as signifying trade and not land-use or occupancy, at least in interpreting non-Hualapai sherds imported into Hualapai territory. This figure is 5% higher than Ezell's 20% level of significance of occupation.

In considering Hualapai sherds on sites outside Hualapai territory, a different significance probably should be attached to ware proportions. Ethnological information concerning the Hualapais indicates that they were a pottery-importing rather than exporting people. So inference from known facts to the prehistoric past should take this characteristic into account.

"Walapai trade was mainly east and west; hostilities to the north and south." The Hualapais, with their limited irrigable acreage, were regarded with some reason by both Mohaves and Havasupais as poor country cousins. "Trade to the west with the Mohave was principally an exchange of foodstuffs, meat for agricultural products. This trade seems not to have been seasonal. Entire families, or often groups of two or three Walapai, would go to the Mohave country, generally to Fort Mohave. The Mohave, less hungry, seldom came to the Walapai, and when they did come, trade was subordinated to
visiting.\textsuperscript{1} Within historic times Hualapais also acquired horses, beads and beadwork from the Mohaves, along with U. S. currency acquired mainly by gambling.\textsuperscript{2} Trade in shells obviously goes far back in ancient times, along with buckskins and Hopi and Navaho textiles (historically wool but previously cotton) which the Hualapais passed along the Rio Grande--Pacific Ocean Trail to the Mohaves. Two Hualapais seen by members of the Whipple expedition in 1854 wore a woolen shirt and Navaho blanket which they said they got from the Hopis, and beads from the Mohaves.\textsuperscript{3} An observer during the period of army contacts write, "their commercial relations with the Mohaves brought them a variety of products of the low lands in the Valley of the Colorado River."\textsuperscript{4} After the Hualapais began receiving government rations they traded flour and beef to Mohaves for agricultural produce.\textsuperscript{5}

The Hualapais also obtained agricultural produce from the Havasupais, as well as imported textiles, trading them deer and other skins.

\textsuperscript{1} Kroeber, 1935, p. 164.
\textsuperscript{2} Mohave County Miner, May 16, 1886.
\textsuperscript{3} Foreman, 1941, p. 206.
\textsuperscript{4} Wells, 1927, p. 415.
\textsuperscript{5} Mohave County Miner, June 27, 1891.
Three of the four autobiographies of Hualapai men recorded by the Laboratory of Anthropology expedition of 1929 include mention of this foreign trade. After Kuni had been taught to hunt antelope, "We took all extra skins to Havasupai canyon and traded them for Navaho blankets. The Walapai traded extra blankets for horses from the Mohave. At St. George we traded with the Paiutes for guns."\(^1\)

Blind Tom related that "my father used to visit a Mohave friend in Fort Mohave, and sometimes his friend gave him beans, corn, pumpkins, mesquite beans, screw beans, and he brought them home, liking them very much." In Blind Tom’s youth, his family visited this Mohave friend five consecutive years between October and May.\(^2\)

Old Mike was raised among the Mohaves from the age of seven until he was fifteen. Then he returned to the Hualapai with visiting tribesmen. "When we all left the Mohave gave us corn, yellow beans, mesquite seeds, and screw mesquite."\(^3\) The documented Mohave friendliness towards Hualapais, and their generosity, throws some doubt upon an early ethnologist’s claim that "ordinary intercourse with other races was regarded with disfavor as being a specific cause of sickness.

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\(^1\) Kroeber, 1935, p. 205-206.


\(^3\) Ibid., p. 222.
Among the races thus to be shunned were included...some of the tribes speaking kindred Yuman languages, such as the Walapais.¹

Although the practical matter of containers for Mohave produce is seldom mentioned, their gifts and trade certainly required containers in which they could be transported out of Mohave Valley to the homes of visiting Hualapais. While trading Hualapais probably came equipped with carrying baskets, it is doubtful that those who visited Mohave friends always went provided with sufficient containers to carry home the spoils. Many times Mohave food gifts must have gone into the Hualapai country in Mohave pottery vessels. The Hualapais also traded deliberately for Mohave pots. Mook observe that although the Hualapais made pottery "the art seems never to have been highly developed."² The Mohaves, on the other hand, made excellent pots, and quantities of them: "Pottery was made in considerable quantities."³ Not only did the quantity of Mohave pots made mitigate against Mohave importation of Hualapai pots, but also their quality.

The art of the Mohave consists chiefly of crude painted decorations on their pottery. These decorations are never realistically carried out;

¹/ Kroeber, 1902, p. 279.
²/ Kroeber, 1935, p. 86.
³/ Kroeber, 1902, p. 277.
generally they are conventional designs, which in their simplicity and their geometric rudeness of representation differ little from the basket patterns of California. As elsewhere, animal and in some degree plant designs are found. Rain, cloud, and rainbow patterns remind one of the rain symbolism connected with the rain-cults of the tribes of the Southwest. Most characteristic of the Mohave pottery designs are those representing various styles of tattooing and of painting the face; these designs are very frequent. 1/

Crude though Mohave ceramic decorations may appear in Anglo-American eyes, they were far and away more elaboration of ceramic art than the Hualapais ever achieved. To anticipate findings to be presented further along, Hualapai vessel decoration never got beyond the stage of a few scrawled simple lines in black and red paints. And precious few Hualapai pots ever felt the touch of a paint brush.

The property concepts Hualapais held in regard to pots are also relevant to this problem. According to a member of the Pine Springs Band, "It's up to the women... Kind of hard to make another new one. Might want to keep to cook food in. If sell it, can't cook. Don't sell their pots... They just make it for their particular need. No woman makes pottery to sell. They just get what they need--not to sell. Not like now, when they make baskets to sell. Then they don't do that--just make it for their own use. Just in the family make it, just as good as can for use." (JM June 2 p 7) Since the

1/ Kroeber, 1902, p. 284.
men were the traders among the Hualapai, it is doubtful that pots entered into intra-tribal commerce, much less foreign trade. So Hualapai pot sherds found beyond the area defined in the Petition as used and occupied exclusively by Hualapais most likely evidence former Hualapai land use in a wider area.

Another indication of the scarcity of ceramic vessels and the relatively high value placed upon them by Hualapais was the ambivalent attitude toward pots belonging to a woman when she died. Aboriginally the Hualapais followed the general Yuman practice of burning the personel effects of a person on his or her death. In some cases this was done, and one instance has been recorded of a woman’s pots being buried in a mescal pit on the rim of the canyon where she had lived after her death. (GT Aug. 22 p 4) However, a woman’s pots might also be preserved for continued use as cooking utensils. "What belongs to her, used all the time like clothes, so they had to burn that up. What they used, they burned. Did not break all the pots--left some to use." (JM June 2 p 6)

If pots were so scarce among the Hualapais that cooking pots were kept even after the woman making and using them died, then there was certainly no surplus for trade. For Hualapais fear nothing so much as the kwidjati or earth-bound spirit of a dead person, which likes to hang around familiar places, people, and things. A deceased person’s possessions
and body were destroyed to confuse the kwidjati and make it hard for the spirit to return to its accustomed haunts to bother survivors. So for pots to be preserved after their user's death and expose survivors to visits from the feared kwidjati, they had to be in extremely short supply, and certainly there could have been none available to trade outside the tribe.

In summary, Hualapai foreign trade sought to dispose of surplus raw materials in exchange for agricultural produce or manufactured products, and in historic time items not locally available such as guns and horses. In other words, in relation to inter-tribal trade, Hualapai economy was a colonial extractive economy.

In this situation, it would have been very unlikely that Hualapai potters ever produced a surplus of pots for foreign trade. Moreover, it is doubtful whether either Mohaves or Havasupais would have desired Hualapai pots. Havasupai pots were just as good, if not slightly better. Mohave pottery certainly was a more colorful and highly decorated product than the Hualapai plain brown ware, and also usually somewhat more durable. Therefore, it seems likely that when Hualapai sherds occur beyond the area held to the exclusion of any other tribes, that those sherds signify former economic land use by Hualapais (either alone or in conjunction with another tribe) rather than trade ware exported by Hualapais.
For these same reasons, a high proportion of intrusive pot sherds on sites within territory occupied solely by Hualapais is predictable. The Hualapais very likely imported more trade ware than would a tribe producing ample supplies of its own pottery.

That the historic poverty of Hualapai vessels extended back into prehistoric times in accord with the general theorem that present and past processes are uniform is indicated in comments by archaeologists concerning the relative scarcity of pot sherds in this area: "The Yuman archaeology of western Arizona, at least in the sections distant from the Colorado and Gila, is notable for its poverty and spottiness. Probably no comparable area in the Southwest has so little to offer the prehistorian...no doubt due to a small nomadic population, which possessed little of a non-perishable nature."1/ Hualapai population was not very dense; neither was it unusually sparse for an Indian group unable to practice but limited agriculture. They just didn't make very many clay vessels to break up into non-perishable debris for archaeologists to find.

While the Hualapais were not nomads in the strict sense of the term, they did move about frequently within a regular seasonal round of springs and gathering territories, so ceramic vessels had ample opportunity to be broken, had many been

1/ Rogers, 1945, p. 195.
in use. This constant travel probably helped keep down pottery production, as other types of containers were more easily carried, perhaps, and required less care in transporting to avoid breakage.

Clearly the Hualapais were always a pot-deficient tribe and a pot-importing group. Hualapai sites predictably should have a high proportion of trade ware from surrounding tribes, the Mohaves, Havasupai (unless they were similarly impoverished) and Hopi in particular.

B. Techniques

1. Tribal Survey

During most of the period of the present study, the main concern in surveying sites was the location of those places remembered by Hualapais as having been occupied by their ancestors. This procedure was followed largely because Hualapai pottery had not been clearly identified up to the time the study began. Also, although Hualapais occupied part of northwest central Arizona during the past century, documentary evidence was lacking and Hualapai oral tradition blank in regard to the previous prehistoric occupation of certain regions. Therefore, artifactual evidence for Hualapai occupation of such areas was also sought.

While a few rock shelters have yielded preserved Hualapai artifacts made from perishable materials, the great majority of Hualapai sites are open sites where only durable
objects have survived. This means for practical purposes worked stone and pot sherds. Since Hualapai stonework resembles nothing so much as the stonework of neighboring tribes, and extremely little is known of tribal differences in this medium, artifacts of stone are presently of virtually no use for solving the problem of this study. As a result, the analysis is almost entirely in terms of ceramic evidence.

The main order of business of the Tribal Survey being to locate and make collections from sites known by Hualapais to have been inhabited by them or their ancestors, sites were visited whenever possible in the company of the Hualapai who possessed the most information about them and could clearly identify and locate the occupation area on the ground. Whenever artifacts were recovered from a site, an attempt was made to obtain as much information about remembered Hualapai utilization of the area as possible through interviewing those Indians who remembered particulars about former Hualapai occupation.

2. Tribal Excavation Program

With information assembled during the Tribal Survey, a selection was made of key sites known to have been occupied by Hualapais within the lifetime of living members of the tribe to be excavated to obtain evidence to identify Hualapai artifacts, place them in temporal relationship to other prehistoric remains, and document their territorial distribution.
In the fall of 1953 two rock shelters in Mohawk Canyon were excavated for the tribe by Mr. Robert C. Euler, Curator of Anthropology at the Museum of Northern Arizona. The smaller of these, Oya Sivli Klavalava, was chosen for excavation because it was located at the edge of the ephemeral stream in the canyon and was being undercut and swept away by periodic floods, and because this erosion had left exposed a face of man-deposited trash some feet thick, indicating that evidence bearing on the temporal placement of Hualapai artifacts could be obtained. The rock shelter had been occupied by Hualapais up until recent years. The larger Mohawk Canyon rock shelter at Whala Kitev Giova was chosen because the talus presented an appearance of considerable depth, and it was an ideal living spot.

In the spring of 1955 Mr. Euler excavated a mound at the former Hualapai irrigated fields on the floor of Mata Widita Canyon containing remains of a burned wickiup identified by the Hualapais as occupied after 1900 whose occupants were known. At that time he also tested the floor deposits in the cave Wha Ha' Vo. (Mr. Euler is reporting his discoveries in detail separately.)

3. Analysis of Survey Collections

Pot sherds collected from each site located by the Tribal Survey have been identified insofar as possible, and counted by types and wares. This information has been enter-
ed on 5 x 8 inch marginally punched cards, and tabulated from these. Initially a cross-filing system was employed, but this rapidly became too cumbersome to maintain as the number of sites analyzed mounted, because of the large number of copies necessary for cross filing each ceramic type. Only one copy is required in the punch-card system, coding information being punched into the margins of the cards so that cards bearing any desired item of information can be quickly sorted out mechanically.

When this study was in its initial stages, the author thought that analysis of the sites located by the Tribal Survey would suffice. As analysis of the collections progressed, and findings at variance with published interpretation cropped up, it became obvious that materials collected by previous surveyors had to be re-analyzed, if for no other reason than to make the type and ware identifications comparable. Various surveyors had used a variety of terms for pottery types, and ceramic classification had changed between completion of earlier survey interpretations and the present study. Finally, the attempt was made to re-work the actual collections from every site recorded within the area asserted by the Petition to have been used and occupied solely by Hualapais from time immemorial to conquest. The only exception has been a few National Park Service sites south of Davis Dam; identifications for these sites have been taken from
Albert H. Schroeder's *A Brief Survey of the Lower Colorado River from Davis Dam to the International Border*. Since the ware analysis is the important item of information, any variance between the author's possible identifications of these sherds and Schroeder's is not important: either of us is quite capable of differentiating a Lower Colorado River Buff Ware from a Tizon Brown Ware sherd.

In reclassifying survey collections at the Museum of Northern Arizona, the author had Mr. Robert C. Euler, Curator of Anthropology, spot check his identifications of about half the sites to check on reliability. Mr. Euler checked every sherd for some sites, and checked nearly all the Kayenta-Hopi branch tradeware identifications. Conferences on sherd classification were held with both Mr. Schroeder and Dr. Colton as well as Mr. Euler.

All the ware and type analyses of sites surveyed by the Museum of Northern Arizona, National Park Service, Gila Pueblo and San Diego Museum of Man have been entered on 5 x 3 inch marginally punched cards in the same form as the Tribal Survey data.
### NUMBER OF SHERDS IDENTIFIED AND EMPLOYED IN SURVEY ANALYSIS

| Area Used and Occupied Solely by Hualapais | 20,361 |
| Area Shared by Hualapais with Havasupais   | 1,552  |
| Area Used and Occupied Solely by Havasupais | 26    |
| Area Shared by Hualapais with Jalchedunes  | 286    |
| Area Shared by Hualapais with Mohaves      | 3,675  |
| Sites of Unknown Location on Mohave Border | 134    |
| Area Used and Occupied Solely by Mohaves   | 550    |
| TOTAL                                      | 26,564 |

### NUMBER OF SITES UTILIZED FROM EACH INSTITUTION'S SURVEYS

<table>
<thead>
<tr>
<th>Institution</th>
<th>Ceramic</th>
<th>Non-Ceramic</th>
<th>Total</th>
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<td></td>
<td></td>
<td></td>
</tr>
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<td>Gila Pueblo</td>
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<td><strong>TOTALS</strong></td>
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CHAPTER IV
IDENTIFICATION OF HUALAPAI POTTERY

No Hualapai now makes clay vessels, and apparently none has been made since around 1900 in the eastern bands and earlier in the western. A statement published as long ago as 1908 reported the loss of the art of pottery making by the Hualapais. "The Walapai woman in ancient times had knowledge of the ceramic art, but none of the present generation attempt to work in clay."1 The Laboratory of Anthropology expedition of 1929 persuaded a couple of western Hualapai women to attempt to make vessels, but the resulting pots were very poor specimens indeed, bearing little resemblance to the Tizon Brown Ware sherds commonly found on the surface of sites in the Hualapai country, and therefore the most logical suspect of having been made by Hualapais. The Tribal Survey did turn up perhaps a dozen similar sherds from the entire area, possibly from vessels made by beginning potters or during the final decline of Hualapai pot production.

1/ Curtis, 1908, p. 93.
2/ Kroeber, 1935, p. 86.
The women who made these pots in 1929 probably had only oral tradition to go on, with perhaps some vague memories of having seen pots made in their childhood. The results may be classed as Tizon Brown Ware, but certainly not typical: the scummed surface finish is absent—apparently the technique for surface finishing had been forgotten or never understood by the would-be potters.

A. Ethnographic Identification

Simultaneously with the search for sites where the Hualapais have lived and remembered their ancestors had resided, the Tribal Survey sought to identify Hualapai pottery by ethnographic techniques. The oldest Hualapais were asked whether they had seen native vessels made until a few were found who in their youth watched old women relatives making Hualapai pots. These old people were then interviewed intensively to attempt to obtain as precise descriptions as possible of the process of pot making in different bands and the appearance of the final product.

It was hoped that sufficiently detailed descriptions would be obtained to facilitate identification of Hualapai pot sherds from archaeological sites. While fairly precise descriptions of the process of manufacture were obtained, the descriptions of the finished pots turned out to be of limited utility. Not that informants were unable to describe pots they had seen made—on the contrary. However, the fea-
tures of a ceramic vessel of interest to a native user and those useful to the archaeologist for identification were not the same. The verbal descriptions could be employed only as a general guide as to what to expect Hualapai pottery to look like, typologically speaking.

1. The Technique of Making Hualapai Pottery

From several abbreviated oral accounts of Hualapai pottery making procedure obtained from these informants who had witnessed the process as children, a fairly complete description of the ceramic art practiced by this tribe has been reconstructed.

a. Kanoo (Clay) Sources

Hualapai potter's clay seems to have been obtained from a few well-known clay deposits of fairly uniform composition. Deposits known to have been used are the following:

Kanoo Waja ("Where Fine Clay to Make Pots" DGN Dec. 4 p 2) The most famous clay bed is located at the top of the bajada slope at the western base of the Cerbat Mountains on the Sacramento Valley side. The bed probably is quite extensive along the mountain edge, but is known to the Hualapais where the arroyo fed by waters gathered in the embayment in the western side of the range where the Anglo-American mining town of Mineral Park was located cuts through the bed.

This deposit was utilized by the local Cerbat Mountain Band, but potters from other western bands also obtained clay
from it. The most complete account obtained refers to the Grass Springs sub-group living immediately south of the Colorado River, yet the Kanoo Waja bed was given as the clay source. (QI May 21 p 1) This was one of the three clay deposits named in the report of the 1929 Laboratory of Anthropology expedition, which obtained samples from it described as "loamy and residual composition, with sand and pebbles exceeding the colloidal material."  

Round Valley. One Big Sandy River Band informant, a man, is now unable to locate the clay source which his relatives used. Another says his grandmother obtained clay at the base of the Aquarius Cliffs fronting on Round Valley in the northern part of the range of this band. (M Dec. 2 p 9) The spot is known as Githke'e (FM Sept. 25 p 6) and is located near a spring in the canyon via which the Cottonwood—Knight Creek tributary of the Big Sandy River reaches the desert floor. (FM Oct. 24 p 1)

Walnut Creek. A Whala Pa'a Band elder whose family centered at Tak Tadapa said in the course of an explanation of inter-band hospitality practices: "Sometimes my grandmother used to make that pottery right away—grind that stones, mix with clay, work in hurry..." (AS June 1 p 10) This clay must have come from the bed on Walnut Creek reported by Mook. "The

only clay pit actually examined was that at Walnut creek. It lay at the base of a small hill on the bank of a wash. The clay was dug from among rocks and proved to be but slight- 
ly colloidal." According to Old Mike, this clay pit was located four miles west of Takatata'pa, and was called Nyimi'ta-

huiwa.

Fort Rock. The Laboratory of Anthropology Expedition of 1929 also reported that Hualapai potters obtained clay at 

Fort Rock.

Pine Springs. Ha' Kasa P'a'a Band members claim that women of their band formerly obtained ceramic clay from two clay pits a few miles north of Pine Springs on one of the ridges representing the northern extension of the Aubry 

Cliffs. This is probably where the Havasupais told Spier they obtained clay. "The best clay, the color of adobe, oc-
curs in a deposit located at Pine Spring west of Cataract Canyon." The deposit is exposed by the modern road to Cat-
aract Canyon, which becomes very slick when wet.

The western Yuman attitude toward clay deposits among the Diegueno was probably held also among the Eastern Yumans: "Clay sources in the Diegueno country were considered public

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1/ Kroeber, 1935, p. 87. 4/ Spier, 1928, p. 139.
2/ Ibid., p. 89.
3/ Ibid., p. 86.
domain; and it has been impossible to find an instance where private tenure was claimed or maintained. Certain clay-beds were so renowned that women often traveled long distances to procure the clays.¹ The Kanoo Waja clay deposit was easily the most famous within Hualapai territory and was used as a source of supply by several bands.

b. Digging the Clay

The first step in producing a pot by the Hualapai process was excavation of sufficient local clay with which to make the vessel. Hualapai women dug out their own clay, working off the overburden of soil and then prying lumps of clay out with a stick sharpened at the end, tapal.² (QI May 21 p 2)

The Laboratory of Anthropology expedition report does not tell how the clay used by its "potters" was obtained. The information gathered in 1929 apparently differed little from that obtained in the present study. "Nowadays, the art has fallen into disuse and it seems impossible to find a creditable Walapai pottery. Our two women informants turned out sorry specimens, and their work will be discussed only because it throws some light on old time methods and processes."³

¹ Rogers, 1936, p. 4. ³ Kroeber, 1935, p. 86.
² A cognate of Havasupai top'o'l, or mescal chisel. (Spier, 1946, p. 48)
Custom of Other Yuman Tribes: When the Havasupais obtained clay near Pine Springs, "As this is very hard, chunks must be pried off with a deer antler pick." Kroeber seems not to have recorded how nor where Mohave potters obtained their clay. Among the Southern Diegueno, "Before the modern pick and shovel were introduced, quarrying was accomplished with jagged rocks and sharpened sticks."

c. Drying the Clay

The clay as it was dug from the ground was moist. The Tribal Survey excavated a sample of the Mineral Park (Kanoo Waja) clay which came loose in round lumps. It felt moist and oily, although the surrounding desert surface was quite dry.

After the Hualapai potter had dug out sufficient of this moist clay, she broke up the lumps and spread it on "something" to dry in the sun. (QI May 21 p 3) In 1929 "When first brought to camp the clay was spread out and allowed

1/ Spier, 1928, p. 139.

2/ Kroeber & Harner, 1955, p. 2; and Kroeber, 1925, p. 737. Two historic sources are given by Schroeder, 1952a, p. 11--"One source was situated a little above Parker, and the clay was described as being relatively poor compared to that obtained from the other source up toward Needles." which would have been the pre-contact source.

3/ Rogers, 1936, p. 4.
to dry so that the lumps might be ground on the metate. The dried clay was known as mekw'na.

Comparison: Among the Southern Diegueno the quarried clay was broken into small pieces by pounding with a rock, in former times on any handy stone, nowadays on a metate with a mano or in a mortar with a pestle. The broken pieces are sun-dried.

d. Crushing the Clay

After the clay had dried out in the sun, the Hualapai potter gathered it up and began to crumble it up on a stone, 'epi'i, or flat Hualapai crunching slab. The clay was ground very fine. (QI May 21 p 3) "This grinding produces a fine powder, for all the stones and non-pulverizable particles are picked out," said the 1929 Laboratory of Anthropology expedition report, although the motion employed was very likely crushing rather than grinding.

Customs of Other Yuman Tribes: The chunks of clay quarried seem to have been generally reduced by a crushing technique by the Yuman-speaking peoples, in keeping with their tendency to pound and crunch with their handstones and crunching

1/ Kroeber, 1935, p. 87.  
2/ Ibid., p. 89.  
3/ Rogers, 1936, p. 5-6.  
4/ Cognate of Havasupai upi'i given as "metate" by Spier, 1946, p. 52, who apparently failed to recognize the difference between a crunching slab and grinding metate.  
slabs, rather than to grind. The clay chunks the Havasupais obtained near Pine Springs "are then reduced to a powder by crushing between two stones." Also among the Western Yava-pai were the "lumps mashed on metate," but Northeastern Yava-pai procedure wasn't recorded. Among the Southern Diegueno, after the broken up clay had been dried, it was "pulverized to the required fineness on a metate or in a mortar, preferably in the latter." Among the Yuma, "clay is reduced in a wooden mortar." e. Sifting the Clay

When dried clay had been ground fine, it was further refined by sifting. Hualapai women formerly fashioned a sifting basket called kotida. The ground clay was placed in one of these baskets and shaken. The motion employed seems to have been a rocking back and forth similar to that used in dry-washing gold. The fine material worked over to one side of the kotida and the gravel and larger particles to the other. The large pieces were thrown away and the fine clay saved to make the pots. (QI May 21 p 3)

1/ Spier, 1928, p. 139.
2/ Gifford, 1936, p. 280.
The account of the procedure followed by two Hualapai women attempting to make pots in 1929 long after the art had been lost does not mention sifting the ground clay. Lack of sifting and sorting would explain the appearance of the paste in the vessels produced, which are preserved at the Laboratory of Anthropology. This paste is coarse—much more so than that in pot sherds found on Hualapai sites occupied during the period that the native ceramic art was still carried on.

Custom Among Other Yuman Tribes: Available information on Havasupai pottery making does not include mention of sifting, due probably to the fact that the oral accounts were gathered about fifty years after pot production had lapsed. The Southern Diegueno now use a metal screen to sift reduced clay. Formerly, they employed a parching tray for this purpose. This was a flat basket manipulated in the manner of a gold pan. Bouncing the tray up and down brought the largest pieces to the surface where they were picked out. Then back and forth rocking brought coarse particles to the center to be picked out. Finally rotation concentrated the fine clay in the center, and the rest of the debris worked out to the edge and was brushed off. The same process was employed by

2/ Spier, 1928, p. 138-140.
This obviously was the technique used by the Hualapais, and the general Yuman practice.

f. Moistening the Clay

Preliminary preparations for making a Hualapai pot included gathering several types of material besides the primary ingredient of clay. One was a supply of small cacti of the genus *echinocactus* called *tapa'a*.

Probably these cacti were cut from their roots with a sharpened stick struck by a rock in the same manner that mescal plants were cut, but this is not specified in informant accounts. At any rate, the external skin and spines were removed, and the sticky pulp mixed with some water. (QI May 21 p 1) The cactus plants were thrown in a fire, charring the skin and spines which were then removed. (RW May 25 p 13) This also probably roasted the pulp to some extent. The sticky mixture of pulp and water was then employed to moisten the clay, which was worked into a dough like consistency. (QI May 21 p 1) The consistency sought by Whala Pa'a Band potters was described as like bread dough. (AS June 1 p 10) Even the Pine Springs Band ranging the high altitude pine plateau used the cactus pulp conditioner. (FB Oct. 14 p 3)

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1/ Rogers, 1936, p. 30.
Besides tapa'a pulp, yucca leaf juice was employed as a moistening agent by at least the southern bands. Manat leaves were gathered into a pile. A fire was built, and the leaves roasted in the flames. Then they were wrung out. As they were twisted, the juice dripped into a container. This was used to mix with the clay, and to moisten the smoothing stone. (M Dec. 2 p 9) The leaves were twisted by putting a stick at one end (FM Oct. 24 p 2) but just how is not clear.

A Truxton Canyon Band informant denied use of water as a moistening agent, saying only tapa'a pulp was used. She mentioned the use of yucca leaf juice as a surface treatment inside and out (TM Sept. 23 p 12) and as sometimes mixed with the clay. (p 13) This may be a result of poor memory.

The accounts obtained confirm the description given in the Laboratory of Anthropology expedition report: "Generous portions of a slimy substance consisting of the green part obtained from the split stalk of a low clustered small barrel-like cactus, ta'pa', are added to the water with which the clay is mixed." The technique of splitting the cactus plants differs from the practice of burning off the spines and charring the skin given by a Red Rock Band respondent. It probably was a short-cut adopted by the women in 1929 who

1/ "menat in Kroeber, 1935, p. 32; amonot (yucca fruit) in Spier, 1946, p. 126) for Havasupai.

had metal cutting tools available, as indicated in a verbal account reported by the Laboratory's expedition: "The stalks are burned to remove the spines, then are broken open and the meat is taken out and put in the water with which the dry clay is kneaded. This makes the water and the clay sticky." 1/

Custom Among Other Yuman Tribes: The Havasupai presumably combined temper and powdered clay, "the whole being kneaded with water into a stiff dough." The tools used in shaping the vessel also were "kept wet with a concoction of boiled antler, weed roots, and other ingredients." 2/

This was used in finishing the vessel surface: "When the vessel is complete, this same pebble is used to smear the concoction over the inner and outer surfaces, rubbing vigorously in order to render the clay hard and prevent cracking." 3/

In the western Yavapai band, "Also small cactus (6 in. high) called tapa, with thorns burned off, was mashed and mixed with clay, and chopped roots of grass were added. These 2 sticky vegetable ingredients made clay hold together." 4/

The Southern Diegueno moisten reduced clay with water in which leaves of yerba santa have been soaked for twenty-

1/ Kroeber, 1935, p. 89.
2/ Spier, 1928, p. 139.
3/ Ibid.
four hours, to improve the plasticity of the clay. "The fleshy stems of the cactus (cactus occidentalis) are utilized in the same manner, except that they are roasted previously to the soaking process." The Yumas moisten their clay with water, but bury it in wet ground.

**g. Tempering the Clay**

Another material needed for Hualapai pottery production was white quartz rock. Quartz chunks were dug out and pounded to break them up, and finally crushed up fine on a slab crunching stone.

One Big Sandy River Band man said his grandmother (probably of the Mahone Mountain Band) mixed clay, water, and ground quartz together, and then added the tapa'a pulp and juice from roasted manat leaves. (M Dec. 2 p 9) The Truxton Canyon Band respondent gave this same procedure, but this may reflect family interchange rather than unadulterated memory. (TM Sept. 23 p 12) Both she and a Mahone Mountain Band member specified that quartz rock was used for the tempering material. (FM Oct. 24 p 2) A Whala Pa'a informant mentioned ground stone not otherwise identified. (AS June 1 p 10) Tempering procedure was probably forgotten by 1929, for, "no tempering is required, as the clay itself is sufficiently

1/ Rogers, 1936, p. 7-8.
2/ Ibid., p. 30.
sandy" reported the Laboratory of Anthropology expedition. If the potters indeed did not add ground quartz temper to the clay they used, this may help explain the poor results obtained, although the main reason seems to have been failure to sift the clay. It certainly explains why the vessels made in 1929 do not have the temper typical of Hualapai pottery.

Custom Among Other Yuman Tribes: Among the Havasupai, after the clay was powdered "fine stones, procured from an ant hill, are added" a procedure involving considerably less work than the Hualapai rock crushing, if true.

In the Western Yavapai band temper was "fine gravel or sherds ground on metate." Among the Mohave "at Parker, the temper for cooking ware is a coarse white sandstone which crumbles easily. It is used in the ratio of two parts of sandstone to three parts clay." Other types had potsherd temper. "Clay is tempered with sandstone crushed on the metate" by the Mohave, according to Kroeber's original statement, modified recently to identify the stone as granite.

1/ Kroeber, 1935, p. 87.
2/ Spier, 1928, p. 139.
5/ Kroeber, 1925, p. 737.
Analysis of Kroeber's sample of this tempering material showed it to be "high in quartz (20-25 per cent) and potash feldspar (35-40 per cent) with perhaps 10 per cent of black mica now chloritized. The remainder is probably soda-rich plagioclase, a feldspar. This is a very acid granite, silica probably constituting around 70 per cent of the total mass. As a result, as the rock surface weathered, it would not wash off as clay but would maintain hard spicules and sharp angles of quartz useful as temper."  

The Yumas downriver added well crushed potsherds to sifted clay before moistening it. "The proportions are roughly guessed at by measuring out amounts with the hand; a scant handful of ground potsherds to one heaping handful of pulverized clay is the ratio most often used." But pulverized granite was used to temper clay for cooking bowls. The addition of tempering material by the Southern Diegueno is not indicated. The clay employed apparently contains sufficient inclusions to furnish adequate tempering.

2/ Rogers, 1936, p. 30.
3/ Ibid., p. 31.
4/ Ibid., p. 7, Table I, Plastic Analyses.
Starting the Vessel

When the clay had been worked to the proper consistency, it was divided into small pieces. To prepare the base of a pot, one of these pieces was placed upon a stone smeared with the tapa'a water mixture to prevent the clay from adhering to the rock. Then the clay was worked over the stone until it was thinned out round and smooth, using the fingers and tapping it with a small flat smooth wooden paddle moistened with tapa'a-water mixture. When this basal piece was large enough, it was removed to the knee of the potter where it was worked with a wooden paddle. (QI May 21 p 1) a habit noted also among the Whala Pa'a band. (AS June 1 p 11)

Whether use of a stone was unusual, or memory has been blurred, both Big Sandy River men with memories of pottery production claimed their grandmothers started their vessels on their knees. (DGS Dec. 1 p 1; M Dec. 2 p 9) The Laboratory of Anthropology expedition also reported "Informants state that formerly the bottoms of the pots were moulded over the knee, a technique which would make them rounded." 1/

The smoothing stone employed came from a river, those from the Colorado River being preferred. (RW May 25 p 12) "For smoothing the inside, a stone got from the Mohave is

1/ Kroeber, 1935, p. 88, 89. (Blind Tom) All these respondents are male.
two stones might be employed in smoothing, one inside and one outside the pot, or a paddle used against the stone. (TM Sept. 23 p 15)

Custom Among Other Yuman Tribes: After the Havasupai potter had kneaded dampened clay with temper, "Cylinders, 2 cm. in diameter, are rolled out between the palms and coiled in a clockwise direction on a tray basket, patted on top the while with a small, flat, smooth stick to make them adhere." 

By potters of the western Yavapai band, "Pot started with flat disk, not coiled, to which coils added." The down-river Yumas started their pots on an oval river cobble. But all Kroeber had to say about the start of Mohave vessels was that "The start of a vessel may be spiral." Among the Southern Diegueno, "The base is begun on the bottom of an inverted cooking pot," which would tend to give them great uniformity of shape. Wood ashes smeared on the cooking pot prevented sticking. A wooden paddle was used to beat a lump of clay into a disk. The Kiliwa started pots on a baked clay anvil.

2/ Spier, 1928, p. 139.
4/ Rogers, 1936, p. 31.
5/ Kroeber, 1925, p. 737.
Coiling and Shaping

When the basal piece had been formed on the Hualapai potter's knee, clay was added until the pot had been shaped. (M May 21 p 2) This was accomplished by a coiling process, clay being added a strip at a time and each rubbed smooth with the smoothing stone before the next was added. (M Dec. 2 p 9) In the south, at least, the smoothing stone was dipped in the juice from roasted yucca leaves. (M Dec. 2 p 9)

As the vessel grew larger it was polished with the smoothing stone while still damp. (RW May 25 p 12) From the clay balls "pieces are removed as needed and rolled into coils. The coils, tei'metamet, are made by rubbing the clay between the palms. They are quite short, and it ordinarily requires three or four such coils to encircle the pot completely. The coils are very irregular but run about three-fourths inch in diameter." Perhaps had practiced Hualapai potters been seen in action in 1929, instead of women attempting to produce pots from remembered observation and without practice, a different description might have been given.

One informant (B) says that the coiling used to be counterclockwise; but his wife (R) coiled in either direction, but generally placed the coil on whichever side was low. The edges and ridges were rubbed smooth with the thumb and fingers. The clay was allowed to set a short time, after

1/ Kroeber, 1935, p. 87-88.
which it was gently rubbed and patted on the outside with a wooden paddle, *i'ita'va*, while a smooth round stone as anvil, *tana'*, was held on the inside. These utensils were always wet with the *ta'pa* water before being used. 1/

After the base had been formed, according to one informant in 1929, it was placed in a shallow hole in the ground. "These holes were previously lined with *tcimawaya* herb to prevent the clay from becoming soiled." 2/

**Custom Among Other Yuman Tribes:** Among the Havasupai

When the flat coil reaches a diameter of 20 cm. the sides are built up by coiling in the same manner; the potter supporting them with a smooth, round pebble inside while the exterior is paddled. 3/

Among the Northeastern Yavapai also "Pottery (was) made by adding coils, squeezed on with fingers. Pot gently beaten on exterior with small cottonwood paddle while hand held pebble inside as anvil." 4/ And the western Yavapai added coils to the basal disk, the pot being "Made by paddle-and-anvil method; stone anvil called tahayi, paddle of hardwood; no pottery anvil." 5/ And "in shaping surface, pot was rubbed

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1/ Kroeber, 1935, p. 88. (Rupert, p. 89)
2/ Ibid., p. 88. (Blind Tom, p. 89)
3/ Spier, 1928, p. 139.
4/ Gifford, 1936, p. 280.
5/ Ibid., p. 281.
many times with wet hands." After the Mohave potter starts a vessel, "its body consists of concentric rings. The paste is rolled out into a slim sausage, the length of which is roughly estimated on the vessel. It is then laid on the last coil, and any excess pinched off. It is beaten, with a light and rapid patting with a wooden paddle, against a smooth cobble held inside, and its edge finished flat by scraping between the thumb-nail and index finger. Then the next coil is added."

The Yumas made coils by rolling clay between one hand and the paddle. The Southern Diegueno apply the first coil to the base while it is still on the cooking pot mold. Coils are rolled between the palms, then a section pushed on the outer wall of the base with a thumb at regular intervals. They are rubbed on with moistened fingers before being beaten down with the paddle. Then the piece is removed from the mold and the first coil smoothed on inside. It is then trimmed and the next concentric coil added. The mold is used for adding the coils until time for recurving the wall--then an anvil is held inside the vessel while the paddle is being wielded. The surface is smoothed and finished by rubbing with the wet palm.

1/ Kroeber, 1925, p. 737. 2/ Rogers, 1936, p. 31.

The shaped vessel (only one at a time being made by Big Sandy River Band potters, it is claimed—M Dec. 2 p 10) or vessels (only a few were made at a time by Plateau Band potters—3 or 4) had to be dried after shaping. Vessels were sun dried, but watched and turned during the drying period. (QI May 21 p 7) "After shaping, the pots were dried in the sun two days or more and were then ready for firing" according to the 1929 report also.

Custom Among Other Yuman Tribes: Among the Havasupai, "The completed vessel is set in the sun for two days or until it has thoroughly dried." This same two-day sun-drying period was a Yuma custom also, terminated by drying by a brush fire. The Mohaves also sun dried for two days. In the Western Yavapai Band, "Pots started in the morning were fired in the evening" if Gifford's informants are to be believed. Among the Southern Diegueno, the residual clays employed did permit firing within four hours after completion of a vessel, and drying was very simple, requiring little

1/ Kroeber, 1935, p. 88. (KC & Rupert, p. 89)
2/ Spier, 1928, p. 139.
3/ Rogers, 1936, p. 31.
4/ Ibid., p. 37.
5/ Gifford, 1936, p. 281.
attention. Finished pots were sun dried except on a very dry hot day. Although the Hualapai clays were apparently quite similar to those employed by the Southern Diegueno, they were not so precipituous about their drying.

k. Decorating the Vessel

Although the sherds recovered from sites in Hualapai country are overwhelmingly plainware, informant descriptions indicate that painting was known to Hualapai potters.

Ko’audva kopai or Plateau Band: The juice obtained from roasted yucca leaves was used as a base for finely ground charcoal and the red mineral pigment obtained from the cave in Diamond Creek Canyon—cookwata. The resulting mixture could be used for painting "if they want to" or the vessels were baked without putting anything on them. Just what color resulted from such a mixture was not remembered by the respondent, who seemed uncertain about this point as about none of the rest of the process. (QI May 21 p 7)

Big Sandy River Band: Large cooking pots were not painted. A stick was used to paint with, designs being meanders or modifications thereof. One informant’s account places the painting after the pots were fired "while turning brown" suggesting a fugitive paint. (DCS Dec. 1 p 1)

1/ Rogers, 1936, p. 12.

2/ Meaning simply "red," cognate to Havasupai akuata, red paint. (Spier, 1946, p. 94)
other respondent of this band, whose pot-making grandmother probably came from the Mahone Mountain Band, stated she painted designs on finished pots which then dried three or four days. The same design elements were employed: tilak til'akaga, a zigzag line, and soo'oo'ooiga, a curved line. (M Dec. 2 p 10, Oct. 22 p 9). Some ollas used to cook meat were painted, others were not. (M Oct. 22 p 8)

Truxton Canyon Band: 00kwata from the Diamond Creek Canyon deposit was used on pots by this band also. (TM Sept. 23 p 16)

Among the Hualapais as a group, "Ceramic decoration was extremely simple, consisting entirely of red paint applied in straight lines and geometric patterns, and with no attempts at realism. Informant B claimed that the larger cooking pots were always undecorated, and that only the smaller drinking and eating dishes were painted." 1/ Black stripes were also claimed.

Custom Among Other Yuman Tribes: Decoration is not mentioned in the available account of Havasupai pottery production. Even surface modeling was denied, although the vessel excavated near the Lagoons and illustrated by Spier has two lugs and surface wiping leaving conspicuous striations that

2/ Ibid., p. 90. (Jim Mahone)
cannot have been other than intentional.\footnote{1} (This is actually a Havasupai jar, as will be explained below.) In the Western Yavapai Band, "After pot was shaped a slip of red paint... was put over outside with bare hands."\footnote{2} Among the Mohaves, "The paint is yellow ocher, which is put on with a little stick and burns dull red... The patterns are carelessly done and often shakily."\footnote{3} The Yumas also employed yellow ocher pigment mixed with water containing dissolved mesquite gum and red ocher obtained from the Hualapai.\footnote{4} The Southern Diegueno painted their vessels red with red ocher and hematite which was ground, mixed with water in which baked mescal had been soaked. The mixture was applied with maguey fiber brushes in designs typically unstructured Yuman, which were derived from the Colorado River tribes relatively recently.\footnote{5} The mixture was applied with maguey fiber brushes in designs typically unstructured Yuman, which were derived from the Colorado River tribes relatively recently.\footnote{6}

1. Firing the Vessel

Hualapai pots were fired with dried yucca plants, \textit{manat kethsmich}. The old plants about two feet high just beginning to rot were preferred. The pots were placed in a bunch up-

\begin{itemize}
  \item \footnote{1}{Spier, 1928, p. 138-139.}
  \item \footnote{2}{Gifford, 1936, p. 281.}
  \item \footnote{3}{Kroeber, 1925, p. 738.}
  \item \footnote{4}{Rogers, 1936, p. 32.}
  \item \footnote{5}{\textit{Ibid.}, p. 12-13.}
  \item \footnote{6}{\textit{Ibid.}, p. 20.}
\end{itemize}
side down and the *manat kethsmich* piled over them. The pots reputedly became "red hot" (However, the vessels were reddish to begin with, and were fired in an oxidizing atmosphere, so they were probably red throughout). The end product is described as sometimes reddish, sometimes whitish and sometimes black (evidently due to fire clouds). (QI May 21 p 2, 8)

The interior of the single pot fired at a time in the south was also filled up with the soft dead yucca. (M Dec. 2 p 10)

This same firing material was employed by the Truxton Canyon Band. (TM Sept. 23 p 13)

In 1929 "This process lasted from three to four hours, preferably all night. Dead yucca root was used for fuel, but in later times cow and horse dung have been substituted. Firing was direct, the fuel being piled around the pots, which were usually placed bottom side up in a small pit." 1/

**Custom Among Other Yuman Tribes:** The Havasupai used wood for firing pots, indicating that the Hualapai use of dried yucca plants is a response to their relatively treeless environment.

A pile of dry wood of any sort, 70 cm. or more in height is prepared and set alight early in the morning. After it has burned down, the coals are raked away from the center, the pot set right side up on the ground, and buried, inside and out, in coals. A small amount of brush is then set ablaze on top of this, presumably to create a draft. Af-

1/ Kroeber, 1935, p. 88. (Rupert & KC p. 89)
ter baking all day and night, the pot may be removed next morning. Only one pot is fired at a time. These vessels are said never to have cracked in firing. 1/

In the Western Yavapai Band, pots "were laid on sides for firing, which was done with any kind of dead wood." 2/ Among the Mohave "The firing is done by an open wood fire." 3/ The down-river Yuma fired one vessel at a time with cottonwood or willow driftwood or, if necessary, mesquite branches or any woody shrub. 4/ The Southern Diegueno pile up brush on the ground, then stand the dried pots in a circle around it. This preliminary firing takes only about a quarter hour. Cracked vessels are discarded. Then a pit-kiln is dug in the side of a hill protected from wind, in as dry a spot as possible. Oak bark was preferred for firing, although historically cow dung has been used for fuel, and on the desert foothills dead yucca leaves were used. The vessels were placed on stones lining the bottom of the pit, and surrounded with bark slabs. "Wherever the fuel rested directly against the vessels, dark, carbonized areas were produced. After the slabs were consumed, if there was sufficient fire left adjacent to the dark areas, they were eliminated by oxidization." 5/

1/ Spier, 1928, p. 139-140. 5/ Ibid., p. 14-15.
4/ Rogers, 1936, p. 31-32.
The desert dwelling Kamia used dead roots of the salt bush for firing their pots, usually one pot at a time on the surface of the ground if it was not to be used for cooking. Cooking ware was "placed in a pit-kiln late in the day, and fired all night."  

m. Hualapai Pot Shapes

i. Hamat Keliye'va (Large Pot)

One of the vessels made in 1929 for the Laboratory of Anthropology expedition was "the shape of a small but high dishpan, flat bottomed, with the sides sloping out at a 70° angle." It is very doubtful that flat bottomed vessels were ever made while Hualapai pottery making was still a practiced art. The equivalent of this vessel in former times was the large cooking pot. In the Truxton Canyon Band "They make big pots to cook in, to put on the fire." (TM Sept. 23 p 14) And in the Plateau Band "They make other kind big round, so high, wide open mouth to boil things with, to cook things." (QI May 21 p 4) A Mahone Mountain Band grandmother would "make big one to cook in." (M Dec. 2 p 10)

The Truxton Canyon Band statement can be verified directly and the others by inference. For when the Sitgreaves exploring expedition traversed Hualapai territory in 1851,

1/ Rogers, 1936, p. 25, 37.
the Indians found near the then-permanent flowing stream below Ha' Pota were cooking in large globular clay vessels with a low neck, if the drawing accompanying Sitgreaves' report is true-to-life.

Use by Other Yumans: The Western Yavapai band made a "deep bowl with incurved rim for cooking" which probably corresponded to this Hualapai form. Gifford illustrates for the Northeastern Yavapai outlines of pot forms drawn by an informant, with their purposes. Figure 9a, which is identified as "imat tisole, boiling pot for venison," corresponds most closely to Harner's Profile shape type V listed by Kroeber as a water jar form among the Mohave, except that the Yavapai drawing indicates a flat base.

The single preserved Hualapai vessel obtained from living Indians happens to be a bowl with a recurved rim which corresponds in shape to this Yavapai drawing except that its base is round instead of flat. While this Hualapai pot had been employed for cooking, it had also been used to store and cool water, the function given by Kroeber for this shape pot among the Mohaves.

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1/ Sitgreaves, 1853, Plate 17. 5/ Ibid., p. 13.
2/ Gifford, 1936, p. 280.
3/ Ibid., p. 270.
Another large pot, "kuumat, boiling pot for seed" is illustrated in Gifford's figure 9b. This informant-drawn pot outline has the depth of Harner's Profile shape type III, but the straight rim of his Profile shape type I. Kroeber terms I simply a bowl, and III a deep bowl.

The single historical example of Hualapai bowl now preserved combines the recurved rim angle seen in Kroeber's Mohave pot illustrated at Plate 5b and Plate 8a. The rim diameter is greater than the greatest body diameter as in Plate 5b. But the Hualapai bowl is globular in body form like the vessel in Plate 5c, the rim of which is not recurved so sharply. Kroeber gives the use of the vessels shown in Plate 5b and Plate 8a water jars, and that in Plate 5c cooking pot.

Since the owner of the preserved Hualapai pot had used it both for cooking and for cooling water, combining the functions of two somewhat differently shaped pots among the Mohave, it would appear that the Hualapai did not elaborate their ceramic vessels so much as the more sedentary tribesmen on the river. Probably the Hualapais never produced the

1/ Gifford, 1936, p. 270.
4/ Ibid., p. 6.
wide range of vessel shapes made by Mohave potters. A relatively few generalized forms probably were multi-purpose vessels just as the preserved bowl was.

ii. Hamat vite!

"A smaller cooking dish also had a flat bottom but more vertical sides. It measured four and one-half inches in height and seven inches in diameter," as made in 1929. Again it is to be doubted that flat bottoms were made in pre-contact times. "They make other ones...open mouth, something like pot." (QI May 21 p 4) In shape, these vessels were probably simply smaller versions of the preserved historic Hualapai bowl.

Use by Other Yumans: A Northeastern Yavapai informant drew two small pot forms which correspond to the form in which Hualapai women made vessels for the 1929 Laboratory of Anthropology expedition. Gifford's Figure 9c and d are "kuukachakunu', small pans for dishing from larger vessels and to carry supplies from granary to cooking place." Both vessels are drawn flat-bottomed. The Mohave produced several forms of bowls, Profile Shape Type I, a single bowl, III a deep bowl, IV a wider based cook pot.

1/ Kroeber, 1935, p. 87.
2/ Gifford, 1936, p. 270.
Hamat Kedje (Small Pot)

Another form made for the Laboratory of Anthropology expedition of 1929 was "a drinking cup without handle...one and one-half inches by four and one-half inches. A round bottomed cup measured one and one-eighth inches by four and one-fourth inches..." The round bottomed form was surely the pre-contact shape, when potters would "make something like bowl shaped to drink, to eat with," (QI May 21 p 4) among the Plateau and Big Sandy River Bands. The latter "sometimes make little kind of cup, drink water out of it." (DGS Dec. 1 p 1) The Mahone Mountain Band potters made "Another small one to drink out of and for water." (M Dec. 2 p 10) And in the Whala Pa' a Band, the people in pot-making times would "use the small size to drink water." (AS June 1 p 8) There can be little doubt, in view of the wide geographic spread of memory of the water drinking cup that such a clay utensil formed an important part of pre-contact Hualapai household equipment. Perhaps each individual had one: at least every household evidently had one.

Other Yumans: The Mohaves by the turn of the century were making handled cups, perhaps modeled entirely on European examples--Profile Shapes VIII and IX on Plate 5 h and i.

1/ Kroeber, 1935, p. 87.

iv. **Hamat itati'ita** (Flat dish)

A round bottomed dish made in 1929 for the Laboratory of Anthropology expedition "measured one-fourth inch by five and three-fourths inches."

This was apparently the equivalent of the Mahone Mountain Band "small ones to eat out of" (M Dec. 2 p 10) and the Truxton Canyon Bands' "other ones, just small ones to put their food in, to eat out of." (TM Sept. 23 p 14) However, this may be a post-contact form.

**Other Yumans:** The "shallow dish for food" made by the western Yavapais probably corresponded to the Hualapai form of vessel for this purpose. The concept of a handleless dish may be entirely an historic product of familiarity with European style dishes. No Mohave form for eating is recorded without a handle.

v. **Mookwa'a**

"Then another one call mookwa'a, bowl shaped with handle, like a scoop or ladle," (QI May 21 p 4) was made by the Plateau People, and the Whala Pa'a Band made them "with a handle like a spoon." (AS June 1 p 11) This was shaped much like the round bottomed dish called Hamat itati'ita in 1929.

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1/ Kroeber, 1935, p. 87.
2/ Gifford, 1936, p. 280.
4/ Ibid., p. 88.
Other Yumans: This style of eating utensil is termed a

1/

spoon by Kroeber, who explained:

These are ladles, dippers, scoops, as one will, but I retain the 'spoon' which the Mohave most often gave as their English term for native kam'ota. They are of course not taken into the mouth, but held to it while gruel flows out; or perhaps more often they serve as a convenient holder of an individual or temporary portion which is scooped into the mouth with two or three fingers which are then sucked off. They also serve to ladle boiled food from large cook pots into bowls or platters. 2/

Harner's Profile Shape types XI through XVI are simply variations of this basic type illustrating differences in the angle of the handle relative to the bowl of the spoon, and the complexity of decoration of the handle. 3/

vi. Hapatooya

The 1929 Laboratory of Anthropology expedition reported that "In addition to the above described vessels which were actually made for us, a large water jar, hamat hapedu'ye, is mentioned. It is described as resembling the twined basketry bottle in size and biconic shape. The lower cone is said to have been truncated. These were carried on the head. Although water baskets are still common enough, the pottery ones are no longer to be found." The term given refers to any

2/ Ibid., p. 5.
large sized pot, not just water pots, and the best remaining respondent on the subject of pottery making used this term for the large cave storage pots formerly used by Hualapais.

"Sometimes big, too, put some other things in there and cover up with sticks to keep: Hapatooya. This Hapatooya is used to put a lot of their things that they eat. They put it in there and cover it up right. Then they take it into a cave--each family own a cave out in the mountains out near where they live. They take this Hapatooya with things in there and cover them up. Sometimes they have the ground dug like cellar...Never use that to boil with or to cook with. They make a regular cover: round flat piece that fits the mouth as a cover. Smooth flat piece just fits that mouth. Then they use what they call apil. That apila is a dried sap that hangs on a branch of greasewood brush that grows in the Hualapai Valley...heat it up and make it soft like gum, and heat it with the fire and then melt that and gum all around the edge of that plate so that would seal that cover around tight. Then when they want to open that, they heat that again, that apil is soft, they get that off again. (QI May 21 p 4-5)

Use Among Other Yuman Tribes: Only one shape of clay vessel has been recorded for the Havasupai, among whom "clay vessels, more often used in cooking than baskets, were displaced by metal products about 1870." This "pot (hamat)is
globular, with a slightly constricted neck turning out in a lip (ya neck and lip?) sufficiently large to permit lifting with the finger tips. The size is reported as usually 30 cm. in greatest diameter, 23 cm. in height, and 23 cm. across the mouth, but ranging down to a height of 22 cm. and a diameter of 12 cm. These lack handles or lugs. This type of vessel corresponds apparently to the Hualapai hapatooya. The whole Havasupai vessel excavated at the Lagoons on the western edge of the area shared between the Hualapai and Havasupai "is of the type described" but Spier hesitated to ascribe it to them because of its greater size and lugs. It is very definitely a Havasupai pot. Another whole vessel of exactly the same type is preserved at the Sharlot Hall Historical Museum in Prescott, Arizona, complete with surface striations, but absolutely nothing is known of its origin.

A "globular bowl with outcurved rim for water carrying" is probably the western Yavapai equivalent of the Hualapai and Havasupai form. The Northeastern Yavapai had "in addition, bottle-necked pot for carrying water, called amatathiwawa, transported inside carrying basket," which was very likely the same basic form with an elongated, constricted neck.

1/ Spier, 1928, p. 138.
2/ Gifford, 1936, p. 239.
Harner's Profile Shape Type VI of a Mohave pot termed by Kroeber a water jar is fairly similar to the shape of the Havasupai jar Spier obtained from the Lagoons north of Pine Springs. The Havasupai jar is globular and not shouldered, with a perhaps narrower mouth.

vii. Handled Jug

Historically the Mohaves have produced a small pottery jug with a handle, Harner's Profile Shape type X. Kroeber's collection included two vessels of this shape illustrated at Plate 5, f and g, and two shorter, squat examples shown on Plate 5, d and e. Kroeber suspects them "of having been devised after contact with Americans, although some specimens show use and the painted designs are in good Mohave style. My doubts are strengthened by my having obtained no specific name for either handled shape: the high jug, 5, g, was called a jar, hapuri; the low jug, 5, e, kwaøki, bowl..." That such pots were made prehistorically is indicated by a surface find made by Mr. Arthur Walker in Pine Springs Band territory on the Hualapai Indian Reservation.

2/ Ibid., p. 13.
4/ Ibid., p. 27.
viii. Pipes

One form of Hualapai ceramic product recorded by the Laboratory of Anthropology expedition in 1929 was ceremonial rather than utilitarian in function: "Clay pipes were from two to six inches long, and from one and one-half to two in bowl diameter. They were straight, tapering from the bowl, and were without wooden or reed stems. The bore was made by inserting a small stick while the clay was damp. When smoked, these straight pipes had to be held almost vertically." 1/

Other Yuman Tribes: The Havasupai also made such pipes. "Clay pipes (amal'hu'u) are made of material obtained from the creek bed. The bowl, 5 cm. high, is fitted with an arrow reed stem, 7.5 in. long, in one side." 2/ The Mohaves also produced pipes of clay quite like those made by the Hualapais. 3/

2. An Ethnographic Specimen of Hualapai Pottery

When investigation was begun among the Hualapais to gather evidence bearing upon the extent of the area formerly occupied by tribesmen, members of the Claims Research Committee had no knowledge of an extent Hualapai pot, and doubt-

2/ Spier, 1928, p. 140.
3/ Kroeber & Harner, 1955, p. 2, Plate 7, 1 and m.
ed that one existed. Inquiry among the Hualapais over long months failed to reveal such a vessel which would be a key to the identification of Hualapai sherds among the various types occurring on sites in Hualapai country.

After the elapse of considerable time, the Claims Research Committee finally discovered that Mrs. Lillie Wilder of Peach Springs actually did possess a Hualapai pottery bowl. This elderly Hualapai lady had been presented the pot by her parents-in-law upon her marriage into the relatively isolated and conservative Pine Springs Band around the turn of the century. (LW June 2 p 1) She and her family had lived in wickiups for many years in the Pine Springs-Diamond Creek Canyon-Prospect Valley area on the South Rim of western Grand Canyon, ranging to Wau Wila Ha' and Ikisa Ha' in the upper Chino drainage. (LW p 2) When she finally came to Peach Springs to live with relatives, she cached the pot at the last wickiup she lived in. Eventually she decided to recover the vessel, did so, and was keeping it to be buried with her when she died.

After lengthy persuasion by members of the Claims Research Committee, the Hualapai Tribal Council, Mr. Robert C. Euler, then Curator of Anthropology at the Museum of Northern Arizona, and myself, Mrs. Wilder agreed that this unique known Hualapai vessel be deposited in the Museum.
This pot is a fairly typical example of Aquarius Brown—the first whole vessel of this type known. About half of one has since been recovered from the rock shelter Ha' Loo in Spencer Canyon. The surface originally was finished in a manner somewhat smoother perhaps than was typical of Tizon Brown Ware scumming. In spots this surface finishing had been worn away by usage, exposing a typical Aquarius Brown paste and temper.

Mrs. Wilder said her mother-in-law told her the bowl had been made by a Hualapai, so this Aquarius Brown bowl constitutes the strongest possible type of evidence that Aquarius Brown was made by Hualapais. By inference, so were the other types of Tizon Brown Ware found archaeologically. Unique though it is, this bowl constitutes the ethnographic key to Hualapai ceramic history. For it is the Hualapai artifact which can be observed in use by living Hualapais by the archaeologist before it has been discarded. Unfortunately the archaeologist cannot observe its manufacture, but there seems to be no reason to doubt the owner's description of its Hualapai origin in the Pine Springs Band around 1900 A.D. (She has been interviewed by both Mr. Euler and the author more than once each separately, and has detailed in every case the same account, unaltered.)

With this known Hualapai vessel in hand, the archaeologist can specify the operational terms of the hypotheses.
In the words of Hypothesis I, if members of the Hualapai Tribe occupied the area defined in the Petition as their ancestral territory then sherds of Tizon Brown Ware exist upon and in the ground within that area. Tizon Brown Ware had previously been identified as the most common ware found in Hualapai country, so the proposition may be regarded as verified. Since Tizon Brown Ware pot sherds occur on and in the ground at sites over a large area of northwest central Arizona, that area was occupied by Hualapai Indians.

Verification of the other hypotheses requires more data, which will be presented below and form the bulk of this report. But with this ethnographic specimen of Hualapai pottery, the archaeologist can reach some conclusions as to the period of production of Tizon Brown Ware or Hualapai utility pottery. Since this is the last known whole vessel of this ware to have survived in use, the date of its making may be taken as the terminal date of Tizon Brown (Hualapai Utility) Ware production. This was around the turn of the century.

The statement of Malcolm J. Rogers that Tizon Brown Ware was used in historic time has been verified.

1/ Colton, 1939, p. 22-25.
2/ Rogers, 1945, p. 192.
The claim by Dr. Harold S. Colton that Tizon Brown Ware was not produced after 1100 A.D. has been refuted. Dr. Colton committed an error of approximately 800 years in dating the end of Tizon Brown Ware production.

B. Archaeological Survey

Before the Wilder pot was located by the Claims Research Committee, the Tribal Survey had been conducted in expectation that the identity of Hualapai pottery would have to be established entirely by archaeological techniques.

1. Purely Historic Sites

In seeking to identify Hualapai pottery using archaeological techniques, the Tribal Survey set out to employ the rigorous methodology advocated by the archaeologist whose conclusions as to the dating of the most abundant utility ware found on sites in Hualapai country had been least rigorous in practice. Dr. H. S. Colton observed in his brief report on the Museum of Northern-Arizona--Santa Fe Pacific Railroad Survey that "sites in northwestern Arizona are found near springs and these springs have been visited by Indians for a very long time so the pottery associations are more confused than in central Arizona where many small sites of short occupation away from water can be found. Such sites on the plateau can be dated easily with little error." 2/

1/ Colton, 1939, p. 29.  2/ Ibid., p. 27.
The Tribal Survey succeeded in locating some small sites of very short occupation during the post 1871 settlement period of Anglo-American domination of the Hualapai country. These sites include a high proportion of those where any evidence of wickiup structures was found during the Tribal Survey—indication of their recentness. And they show the demise of Tizon Brown Ware during the last quarter of the 19th century in the desert regions, and its replacement among the Hualapais by Anglo-American metal utensils and Mohave trade ware pots.

All of the sites in this group are known historic Hualapai camp sites where Hualapais now living and their dead relatives lived while working for Anglo-Americans in mines or on ranches, or visiting them. At each site, there is no reason to suppose that Hualapais lived on the particular sites before the establishment of the Anglo-American settlements, and Hualapai informants deny that they did. So far as can be determined, these are all purely historic sites post-dating the beginning of modern mining operations in Mohave County in 1871 and pre-dating the decline of the camps around 1900.

a. Mineral Park

Arizona F: 12 : 2

Although the Mineral Park area had been prospected early in the War of the Southern Rebellion, Hualapai attacks had
driven the prospectors out. It was not resettled until the spring of 1871 after the defeat of the Hualapais by United States troops. Shortly after, the Hualapais were concentrated at Camp Beale Springs, and then removed to the Colorado River Indian Reservation. When they fled from there in the spring of 1875, Mineral Park was one of the mine camps where they sought work in an effort to sustain themselves within their ancestral territory. In 1878 the Anglo-Americans at Mineral Park were none too fond of the Hualapais. However, the advantages of cheap native labor were not lost upon the miners. Hualapai employment here seems to have increased during the 1880's. And by 1891 the Indians were regarded as willing workers and fairly well off financially.

Arizona F: 12: 2. This site is located near Mineral Park townsite among junipers invading Section 18, Township 23 North, Range 17 West. It consists of a ring of stones mostly covered with soil on an eroding slope northeast of the ghost town. The stones evidently were used to hold in

1/ Wheeler, 1872, p. 53-54.
2/ WP 112.
3/ WP 118.
4/ Alta Arizona, I:24, March 25, 1882.
5/ One family was listed here in 1882 (WP 142), three in 1888. (WP 167-168).
6/ Mohave County Miner, August 22, 1891.
place the brush covering a circular wickiup. The area was identified as the Hualapai residence area of the mining period by Hualapais who had visited the area before the turn of the century while the mines were still operating and Hualapais working in them. They said the Mohaves and other Indian laborers lived on the opposite side of the Anglo-American town, down canyon.

Before the town was established, according to the Hualapais, their tribesmen lived along the base of the mountains north and east of the settlement which is located out in an open space. There were springs at the base of the mountains upon which the Hualapais depended for water, venturing out into the embayment only to hunt or gather food. Therefore, the Indian-made pottery fragments found here date from between 1871 and approximately 1900. In association with the house ring were found tin cans ("Pioneer Baking Powder, Guaranteed Pure"), glass of various colors, iron buttons and wrought iron square nails of American manufacture, and 18 Indian pot sherds. Thirteen are Lower Colorado River Buff Ware types made by historic Mohaves (72.2%) and five are Tizon Brown Ware made by historic Hualapais (27.8%). Three of the former are Parker Buff, Fort Mohave Variant which has already been recognized as an historic type, but the rest ap-

pear to be Needles Red-on-Buff, which must also have been produced in post-contact times.

A surprising amount of Indian-made pottery seems to have been broken on this site considering the short period during which it was occupied, and the probable scarcity of clay vessels among a group abandoning the production of its native ceramic ware. Most of the Indian-made vessels used were acquired from the Mohaves—perhaps from those employed at the mines who lived southwest of the Anglo-American town. "They camped down around the old store building below" the down-town section (CA Dec. 4 p 4) on the opposite side from the Hualapai settlement. The propensity of the local Cerbat Mountain Band for importing Mohave vessels is part of Hualapai oral tradition (DON Dec. 4 p 6) Corroborating statements that the Hualapais long traded some of their pots from the Mohaves have come from respondents for the Red Rock Band (CA Sept. 23 p 2), Mahone Mountain Band (DM Oct. 16 p 1), Big Sandy River Band (M Dec. 2 p 10). "They made some, just enough for their own use. And they used mountain sheep horn. That's all." (DM Oct. 16 p 1)


This site is located on top of a hill beside Fort Rock Creek. Before the Fort Rock Ranch was started in the late 1870's, the Hualapais of this region lived hard by the spring feeding the creek. The early ranchers appropriated the spring
and its immediate vicinity, forcing the Indians to camp along the creek to obtain water when they moved back into the region after the Captivity (1874-1875) to seek work from the ranchers and maintain themselves partly by pre-contact food gathering techniques. The hilltop whereon site Arizona G : 15 : 5 was found was occupied for a time during the 1890's by a group of Hualapais including some still living, among them one member of the Claims Research Committee. It was abandoned when these Indians saw an apparition fly over them while they were dancing in the flat below the hill one night. The occupation was quite short.

Anglo-American artifacts discarded on the hilltop by the Hualapais included a metal bed post knob, iron spoon, brass harmonica reed, a broken rifle, iron pots, a stove, glass, porcelain, etc. Sixty-three Indian-made pot sherds were recovered of which fifty-nine or 93.6% are Lower Colorado River Buff Ware. Only five or 8% bear the blood red paint Schroeder thought distinguished historic Mohave vessels, but all the sherds fall in the Parker Series: Parker Red-on-Buff, Ft. Mohave Variant 76.2%, Parker Buff, Ft. Mohave Variant 14.3% and Parker Stucco 3.2%. The other four sherds (6.4%) are Cerbat Brown, showing that it was one of the types of pottery made by Hualapais and used into post-contact time.

1/ Kroebler & Harner, 1955, p. 16-19. Harner lumped the stucco type in Parker Buff since it occurs on whole vessels.
Supporting evidence was discovered on other hilltops adjacent to the creek which respondents were unable to identify as Hualapai-occupied. Manufactured artifacts of non-Indian origin point to post-contact use, however, at Arizona G : 15 : 3 and Arizona G : 15 : 4. At the former site, glass which had changed color from long exposure to the sun was found with flaked stone projectile points and a couple of sherds of Aquarius Brown, indicating that Hualapais used the hill in post-contact times probably. At the latter site, iron and purpled glass were found with Cerbat and Aquarius Brown sherds from probably post-contact Hualapai occupation, and also sherds of San Francisco Mountain Gray Ware indicating that the pre-1150 A.D. Cohonina Branch Indians camped along the creek.

The evidence from these sites is far from conclusive, but in geographic context, it probably represents post-contact Hualapai occupation of these hilltops before site Arizona G : 15 : 5 was occupied during the 1890's, sometime in the 1870's or 1880's.

c. Camp Hualapai--
Arizona N : 1 : 9

This site is an old army encampment established during the Hualapai War of the late 1860's and abandoned in the early 1870's. The individual stations are rock rings which apparently kept wickiup brush coverings in place, post-dating
the period of hostilities. These were very likely built during the period between the cessation of hostilities in 1869 and abandonment of the encampment. Hualapais camped at the edge of the army post to receive rations then.

The total sherd collection from this site is only twenty-seven, of which thirteen or 48.2% are Tizon Brown Ware, demonstrating once again its historic survival. Significantly, all of the plain types of this ware occur here: Cerbat Brown, Aquarius Brown and Sandy Brown. There are a couple of sherds of Lower Colorado River Buff Ware, Needles Red-on-Buff, confirming the evidence at site Arizona F : 12 : 2 that it was produced in post-contact times. A third of the sherds appear to be the fingernail indented type of Southern Paiute Utility Ware, indicating the historic survival of that type as well.

At the three specific stations Tizon Brown Ware was the dominant ware at two, Southern Paiute Utility Ware at the third, indicating either a visit here by the refugee Shivwits among the Pine Springs Band, or of members of the latter band who had acquired some Shivwits pots by trade.

d. Correlation of Tizon Brown Ware With the Hualapais

The ceramic characteristics of these three post 1871 sites require careful analysis to determine their significance. Lower Colorado River Buff Ware sherds are far and away the
most numerous on all three sites. Tizon Brown Ware sherds constitute only a small minority of all the sherds. Since eye-witness accounts of independent Hualapai respondents identify the occupants of these particular historic sites as Hualapais, they represent the opportunity to identify Hualapai pottery.

If it be hypothesized that these pot sherds are today found on these sites because Hualapai Indians living there between 1871 and about 1900 used the original pots, broke them, and left the debris lying, the logical canons cannot disprove this hypothesis.

In all three available cases of the phenomenon of broken pot sherds on the site, Hualapai post-conquest residence is a common circumstance, thus fulfilling the requirements of the canon of agreement. And in all three cases of the supposed cause—Hualapai historic occupation of the site—the phenomenon of pot sherds is present, fulfilling the conditions of the canon of difference. Thus it cannot be disproved that Hualapais used the original pots and deposited these sherds on these sites.

This conclusion is inadequate for purposes of this study since it does not demonstrate whether the Hualapais who used

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1/ Cohen & Nagel, 1934, p. 255.
2/ Ibid., p. 259.
the pots manufactured those of one or both wares. Taking the most abundant ware first, Lower Colorado River Buff Ware has been independently found to be distributed primarily along the valley of the Colorado River,¹ and to have been made by the Mohave Indians.² The Colorado River tribe most often in contact with the Hualapais in post-conquest time was this Mohave nation. These Mohaves made Lower Colorado River Buff Ware of the Parker Series. The evidence for this consists of many pottery vessels purchased from Mohaves and preserved in several museums in various parts of the United States. In every case of a pot purchased directly from a Mohave as Mohave-made, the pot is Lower Colorado River Buff Ware. Unfortunately, the canon of agreement cannot be employed at this level of generality, for not every instance of a vessel of Lower Colorado River Buff Ware has as a common circumstance a Mohave manufacturer. This ware was made by down-river Yuman tribes also. Perhaps the canon of agreement could be employed at the level of generality of the Parker Series of this ware, but the Halchidhoma probably made vessels classed in this series while still residing on the Colorado.

The available facts do fulfill the conditions of the canon of difference, inasmuch as in every known case of a Mohave-made Lower Colorado River Buff Ware, it has been confirmed by Mohave testimony as being so classified. The canon of agreement cannot be used at this level of generality, but it can be used at the level of the Parker Series of Lower Colorado River Buff Ware, inasmuch as this series is not used by the Halchidhoma.

¹/ Schroeder, 1952a.
having potter making a pot, the product is Lower Colorado River Buff Ware. So it certainly cannot be disproved that Mohave potters are a cause of Lower Colorado River Buff Ware, particularly its Parker Series. The clearest possible evidence for this identification is the collection of pots acquired from their makers by a trained scientist, Dr. A. L. Kroeber.\(^1\)

Since the Mohaves manufactured Lower Colorado River Buff Ware during the period the three historic sites under discussion were occupied by Hualapais, did they also deposit it there? By the canon of agreement they can be ruled out as its local users. For in each case of the phenomenon of Lower Colorado River Buff Ware on historic Hualapai sites, Mohave residence is not a circumstance. It is specifically denied by the Hualapais identifying these sites. Since no Mohaves were present to deposit these Lower Colorado River Buff Ware sherds, they cannot have been the cause of their deposition, despite the fact that Mohave potters undoubtedly originally produced the pots. At this point, the intervening variable of inter-tribal trade explains the presence of Lower Colorado River Buff Ware on these historic Hualapai sites.

The same intervening variable probably accounts for the Southern Paiute Utility Ware sherds recovered at old Camp Hualapai, although it is possible that they can be attributed to the refugee Shivwits among the Ha' Kasa Pa'a Hualapais.

\(^1\) Kroeber & Harner, 1955.
By the time of this study, only the oldest living Hualapais could describe Hualapai pottery making techniques on the basis of actually having seen pots made in their childhood. Individuals born in the 1870's saw pots made by aged female relatives. Younger Hualapais did not. This indicates the general period of termination of native pottery manufacture. Apparently the grandparental generation of youngsters of the 1870's, composed of people born and reared under precontact conditions, continued to make pottery vessels. But the parental generation of youngsters of the 1870's, born during or just before the Anglo-American period began, seems not to have learned to make clay vessels, or to have abandoned the practice, at least among the western bands.

In the lower Truxton Canyon area pottery making seems also to have been abandoned many years before the turn of the century. One of the daughters of the original Crozier who gave his name to the railroad station here (and to some Hualapais) says that she has never seen a Hualapai make a pot. "They got Mohave pottery." (Mrs. George Miller, Oct. 20 p 1) She was born in 1875, and moved to the Fort Rock region after her parents settled there in the middle 1870's also denied ever seeing a Hualapai woman make a pot. (MY Oct. 17 p 10)
The single Hualapai pot still in the possession of a Hualapai family when this study began was made by some member of the most isolated and conservative Hualapai band, the Ha' Kasa Pa'a. Even this vessel probably was not made later than 1900, most likely having been made during the 1890's. And pottery manufacture evidently survived longer on the Plateau in this Pine Springs Band and perhaps in Mata Widita Canyon than in the rest of the tribe.

The use of Hualapai pottery was dying out even before the captivity of the bulk of the tribe at La Paz in 1874-1875, which appears to have dealt native pottery its death blow among those bands imprisoned. A report of material destroyed in a rancheria by U. S. cavalry on October 16, 1867, mentioned: "There was captured here 1 Sharps Carbine, 2 Cans Rifle and a quantity of blasting powder, 2 bullet moulds, 2 Rubber Blankets, 2 large files, 18 Buckskins, tin cups, table knives, pots and spoons. Also destroyed 20 large Willow baskets filled with provisions, 10 Earthen pots, 5 bushels of Grass Seed, 3 Rabbit Skin Coverings..." The sheer quantity of goods of Western manufacture the Hualapais were able to

1/ WP 60. Emphasis added. Significantly this is the only mention of native pottery in available reports of the Hualapai War, unless "20 buckets containing grass seed and other provisions" (WP 31) and "200 buckets, containing provisions" (WP 82) were also pots.
obtain by 1867 before the beginning of permanent Anglo-American settlement within their territory argues for a very large and efficient trade with the Hopis and Paiutes, and probably with U. S. citizens and the Mohaves obtaining such goods from Fort Mohave. And this report shows why Hualapai pottery was on the decline: it could not compete with a large supply of metal utensils.

The Paiutes began to obtain goods of Western manufacture during the 1830's when the New Mexico-to-California "Old Spanish Trail" north of Grand Canyon was opened. Later, with the founding of Mormon settlements within their territory, they acquired a steady source of goods to trade to Hualapais.

Even before the opening of the "Old Spanish Trail" the Hualapais had obtained a lesser quantity of Western-made goods through their own and the Havasupais' trade with the Hopis, who in turn traded manufactured goods out of New Mexico--part of the trade moving along the Indian Rio Grande--Pacific Ocean Trail. As early as 1776 the western Hualapais were acquiring metal tools by this trade. Father Francisco Garces recorded that in the rancheria of the Whala Pa'a Band which he visited on the western side of the Hualapai Mountains, "they have belts of Castile, awls, and other implements they obtain from Moqui." 1/

1/ Coues, 1900, II:319-320.
With the settlement of Anglo-Americans in Hualapai territory in 1871, metal utensils began to become available to Hualpais in ample quantities, and at much less cost in effort than native pots required. Since the metal containers were also much more sturdy and didn’t have to be carefully nursed along to prevent breakage, they quickly replaced the native pottery. With their wages, the Hualpais enjoyed for the first time a favorable rate of exchange with Mohaves, who lacked comparable opportunities to work in mines and on ranches, so they were apparently able to purchase whatever Indian-made pots they required from the Mohaves.

f. The White Hills Sites

The progressive decline in manufacture and use of Hualapai Tizon Brown Ware is well illustrated by a comparison of the Mineral Park wickiup site with a similar site at White Hills mining camp. While Mineral Park was started in 1871, White Hills was not founded until the deposits there were made known to white men by Indian Jeff about 1837.

At the Mineral Park site, Arizona F : 12 : 2 described above, five Tizon Brown Ware sherds were 27.8% of the total recovered. At the later White Hills sites, no Tizon Brown Ware at all was recovered. Along with porcelain, glass, tin, iron, etc., the Indian-made sherds found were all of Mohave

1/ Barnes, 1935, p. 483.
manufacture. Yet the site was pointed out by a member of the Claims Research Committee whose own family had resided on the site.

The sites are located on a small oblong hill southeast of the former Anglo-American town. Site Arizona F:7:4 consists of a ring of large boulders on the northwest brow of the hill overlooking the ghost town below, with sherds eroding down the slope from it. All are historic Mohave sherds of the Parker Series of Lower Colorado River Buff Ware, the Fort Mohave Variant. The same types were found in somewhat different proportions on Arizona F:7:3 which is a dump area on the east slope of the hill about a third of the distance below the brow of the hill. Site Arizona F:7:2, a depression on the south end of the hill, yielded no sherds at all, only Western manufactured artifacts.

Parker Buff. Eleven sherds were recovered from site Arizona F:7:3 and three from Arizona F:7:4 or a quarter of the entire sample. This type was named and described by Schroeder, who dated its survival as post 1900. Harner recognized a Ft. Mohave Variant of the type based on whole vessels collected by Kroeber shortly after the turn of

1/ Schroeder, 1952a, p. 19-22.
2/ Kroeber & Harner, 1955, p. 16.
the century from the Mohaves. These sherds fall within the previously established time span of the type, but document its trade eastward into Hualapai territory.

**Parker Red-on-Buff:** Ten sherds were recovered from site Arizona F : 7 : 3 and thirteen from Arizona F : 7 : 4, or 41.1% of the sample. Schroeder described and named this type with the same dating, and Harner recognized the same variant in the whole vessels collected by Kroeber.

**Parker Black-on-Red:** Five sherds were recovered from site Arizona F : 7 : 3 and fourteen from Arizona F : 7 : 4. In describing and naming this type Schroeder indicated he thought it began to be produced after 1150 A.D., but he did not indicate a terminal date for production. Since Harner did not recognize a Ft. Mohave Variant of this type, it evidently does not occur in any of Kroeber's collection. However, it clearly was made by Mohaves just prior to Kroeber's visits, as shown by these sherds at White Hills dating after 1887. A White Hills Variant of the type might be recognized based on these sherds with a terminal date about 1900 unless later pieces are found—but it seems pointless.

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2/ Schroeder, 1952a, p. 20-21.
4/ Schroeder, 1952a, p. 21.
Since Schroeder set up this type on the basis of only a single sherd at his type site, it is to be doubted that this type was made except during the historic period. The nineteen sherds found at White Hills are a far larger sample than Schroeder's single sherd. Probably this type represents no more than the different paint used in one Mohave family, or perhaps by a single Mohave potter who was active toward the end of the last century.

Since Lower Colorado River Buff Ware of the Parker Series has been identified as pottery manufactured by Mohaves, and since Mohaves are known not to have resided at any of the four purely historic Hualapai sites under consideration, the presence of this ware on these sites must be due to its having been acquired by resident Hualapais by trade.

Since Hualapai oral history, Anglo-American and Spanish documents all combine to chronicle the progressive replacement of native implements by manufactured goods, and the abandonment of pot production by Hualapai women, the Tizon Brown Ware found on these historic sites remains the only candidate for Hualapai pottery.

In fact, while the canons of agreement and difference cannot be employed to eliminate all possible tribes as the makers of Tizon Brown Ware because ethnographic data of the type preserved by Dr. A. L. Kroeber for the Mohaves is not extant, the canon of concomitant variation can be employed.
This canon states that a phenomenon which varies in any manner whenever another phenomenon varies in a particular manner is either a cause or effect of it, or is at least causally connected with it. Since the facts are that the manufacture of Hualapai pottery is known to have declined historically, and the amount of Tizon Brown Ware on these four sites is known to have diminished progressively from earlier to later sites, then Hualapai potters may be taken to have been the cause of Tizon Brown Ware pots, both demonstrably varying in the same direction during the same period of time.

g. Conclusions

As a result of analysis of collections made during the Tribal Survey from four historic sites known to have been occupied only by Hualapai Indians after the invasion of their territory by Anglo-Americans, one dating after 1869, two after 1871, one after 1887, these conclusions have been reached:

1) During the last quarter of the 19th century, the Hualapai Indians abandoned the practice of producing their own pottery vessels. This process was probably completed shortly after 1887 in the west, as indicated by the White Hills mining camp remains, about 1900 in the east, as indicated by the ethnographic specimen of Aquarius Brown.

2) During this period Hualapais imported vessels of Mohave manufacture in increasing quantities for those purposes for which Indian-made ceramic vessels were still used. However, they relied primarily upon metal utensils of Western manufacture, and the availability of such containers in quantity after Anglo-American settlement in Hualapai territory caused the abandonment of domestic pot production, along with the traumatic cultural effects of captivity at La Paz in 1874-1875, military defeat in the Hualapai War, and the expanded wage labor economy which made possible purchase of Mohave pots.

3) Tizon Brown Ware has been demonstrated to have been made and used by Hualapai Indians on the basis of its occurrence on the three of these sites post-dating 1869 but probably ante-dating 1887 in the west and 1900 in the east. The three types of this ware not painted: Cerbat Brown, Aquarius Brown and Sandy Brown, have all been demonstrated to have been Hualapai made. Malcolm J. Rogers' dating of this ware as historic has again been confirmed, and the evidence of the ethnographic specimen of Aquarius Brown augmented.

4) The prediction made that very high proportions of trade ware would occur on Hualapai sites has been fulfilled. In fact, these historic sites show that trade ware can and has on occasion exceeded the 25% level postulated as the highest proportion which could safely be interpreted as trade
ware, and may actually make up 100% of the sherds on a site under exceptional conditions.

At site Arizona F : 12 : 2 Mohave trade ware constituted 72.2% of the sherds. At Arizona G : 15 : 5 it comprised 93.6% of the total, and at the White Hills sites 100%. At Arizona N : 1 : 9 it made up only 7.4% of the sherds, but Southern Paiute Utility Ware brought the foreign made total over 50%. Yet these sites are known to have been exclusively possessed, used and occupied by Hualapais within the post-1871 period (with the possible exception of refugee Paiutes at Camp Hualapai), so the non-Hualapai sherds all were trade goods.

Therefore, the hypotheses advanced for interpreting tribal territorial relationships from ceramic evidence obviously do not apply to the disturbed conditions brought about by Anglo-American contact and settlement. These hypotheses can be expected to yield valid interpretations only under conditions such that the social units under consideration are all producing their own artifacts of the class used as distributonal evidence. The interpretation is invalidated if one social unit adopts and uses artifacts produced by another social unit, ceasing to produce its own.

2. Re-examination of Museum of Northern Arizona Collections

The conclusions just reached to the effect that Tizon Brown Ware was used by the Hualapai Indians during the post-
settlement period after 1871, and that it was made by Hualapai potters up to and for a brief period during that time, are in accord with the earlier conclusions of Malcolm J. Rogers regarding the tribal identity and historic use of this ware. They refute the contention of Dr. H. S. Colton that this ware was not made after 1100 A.D.

Because of the 775 to 800 year discrepancy between Dr. Colton's dating of the end of Tizon Brown Ware production and its established demise, the author felt it advisable to re-examine the Museum of Northern Arizona survey collections on which Colton's conclusions had been based, and the procedure he had followed.

It quickly became apparent that Dr. Colton had arrived at beginning and terminal dates for Tizon Brown Ware by two quite different procedures. While he had determined the date when it was first made on the basis of excavated sherds, he assigned terminal dates on the basis of surface associations on four sites, and primarily at one of these.

The sites used in deriving the terminal date had all been located and surveyed during the Museum of Northern Arizona--Santa Fe Pacific Railroad survey made in 1938. Two were found near Kingman and two near Crozier Station in Truxton Canyon.

Cerbat Brown is dated at the lower end by finding a sherd of Cerbat Brown at N.A. 1293, a Basket Maker III site near Grand Falls of the Little Colorado which was ex-
cavated by the Museum in 1935. This would place the lower end previous to 750 A.D. It is dated at the upper end by finding a Deadman's Black-on-White sherd on a Cerbat site (N. A. 3397). This would make Cerbat Brown extend from before 750 A.D. to between 900-1100. 1/

Besides site N. A. 3397, Colton listed sites N. A. 3396 (Deadman's Black-on-Gray and Tusayan Black-on-Red association) N. A. 3359 (Deadman's Black-on-Gray association), and N. A. 3380 (Deadman's Black-on-Red association) as evidence for his dating of the end of Tizon Brown Ware production. 2/ The Tribal Survey had found many such sites close to springs where manufactured goods, Tizon Brown Ware and San Francisco Mountain Gray Ware and early Kayenta-Hopi Branch trade wares were all mixed on the surface, showing surface association alone on such sites was not dependable for dating purposes.

The next step was to compare the type of site N. A. 3397 was with the three purely historic sites where the Tribal Survey had found Tizon Brown Ware. According to Museum of Northern Arizona survey records, site N. A. 3397 was located on Crozier Wash, the sherds being recovered from an acre and a half area of stone flakes. Actually the site was just below Ha' Pota Spring, which comes up in the canyon next above Crozier Canyon on the north side of Truxton Canyon (since it was above the modern ranch houses). This was

1/ Colton, 1939, p. 27. 2/ Ibid., p. 28. The NA1293 "Cerbat" Brown isn't.
an area the Hualapais are known from their oral tradition to have occupied. Sitgreaves found them in 1851 along the stream fed by Hat Pota Spring, and Fr. Garces had also found them in this area in 1776. Moreover, the Hualapais living here had available to them one of the largest supplies of permanent water in the entire Hualapai country. Clearly Dr. Colton had violated one of his own requirements for dating sites. In the same report where his Tizon Brown Ware dating conclusions were published, he commented that sites in this area are located near springs which have been visited by the Indians "for a very long time so the pottery associations are more confused than in central Arizona where many small sites of short occupation away from water can be found. Such sites on the plateau can be dated easily with little error." 

The three Tribal Survey sites employed in dating the termination of production and use of Tizon Brown Ware were just the kind of site considered by Colton as "dated easily with little error," since all were dated by Hualapai oral tradition and documentary records. In addition, site Arizona F : 12 : 2 at Mineral Park was located far from permanent water, and depended on the water supplies brought to the Anglo-

2/ Coues, 1900, II:322-326.
3/ Colton, 1939, p. 27.
American mining camp to which it was satellite. Therefore, the Tribal Survey dating of the termination of production and use of Tizon Brown Ware appeared to be considerably more valid than Colton's.

The final step in re-examination consisted of checking the survey collections, and these were found to include a piece of European manufactured porcelain. This raised the question as to why Colton should have taken a surface association of Cerbat Brown with Deadmans Black-on-White as any more valid for dating purposes than a surface association of Cerbat Brown with historic porcelain on the same site—a site which the guide employed by the Museum-Railroad survey undoubtedly knew to have been historically occupied by the Hualapais, in an area where Sitgreaves found Hualapais cooking in clay pots in 1851.1/

In view of the nature of the site N. A. 3397, which is such as to prevent accurate dating of artifacts on the basis of surface association since it is located at one of the major water sources in Hualapai country, and in view of Colton's choice of a prehistoric sherd association under these circumstances in preference to equally valid association with an historic artifact, his dating of the termination of Tizon Brown Ware production must be regarded as possessing no valid-

1/ Sitgreaves, 1853, Plate 17.
ity. What he actually had done was to date the period during which San Francisco Mountain Gray Ware was left on this site, probably prior to Hualapai occupation of the area.

Besides his discussion of site N. A. 3397, Colton had presented a table of "Correlation of Northwestern Arizona Pottery Types with Pottery Dated by the Tree Ring Method." In this, additional surface associations of more or less accurately dated tradeware types with Tizon Brown Ware types appear.

Cerbat Brown was reported in this table in association with Kana-a Black-on-White and Lino Black-on-Gray at site N. A. 1293, an excavated site. Mr. Robert C. Euler and the author have examined the sherds from this site which are supposed to be Cerbat Brown. (They are in the type sherd collection of this type at the Museum of Northern Arizona.) Both of us hold the opinion that these sherds are not Cerbat Brown nor even Tizon Brown Ware. They appear to belong to some gray ware which we did not recognize. Therefore, the period when Tizon Brown Ware was first produced must be regarded as still to be determined.

In this same table, Colton showed Cerbat Brown in surface association with Deadmans Black-on-Gray at site N. A. 3397. This association is of as little validity as that

1/ Colton, 1939, p. 28.
with Deadmans Black-on-White at this same site which has already been discussed as demonstrating the inherent error in Colton's procedure. The Deadmans Black-on-White and Black-on-Gray simply show this site was occupied during the period of their production; these sherds do not date the Tizon Brown Ware debris, which was probably all deposited after the users of the trade wares mentioned were long dead.

The neighboring site N. A. 3396 is also listed in this table with surface association of Deadmans Black-on-Gray and Tusayan Black-on-Red with Cerbat Brown and Sandy Brown. This site happens to be across Highway 66 from N. A. 3397, but this modern Anglo-American feature does not prevent its being actually part of the Indian occupation area at Ha' Pota Spring. It should be considered properly with N. A. 3397 as one site. All of the arguments used against dating Tizon Brown Ware at N. A. 3397 with early tradewares apply here, except no historic artifact was found on this immediate sherd area.

The other two sites listed by Colton yielded evidence as to the beginning date of Tizon Brown Ware perhaps, rather than its demise as he claimed. At site N. A. 3359 Cerbat Brown was again found on the surface with Deadmans Black-On-Gray. This was in the area along the foot of Bull Mountain known to Hualapais as Nyi'ita. The Hualapais cremated their dead in precontact times, beginning to bury them only in the
last years of the 19th century, yet Museum of Northern Arizona survey records call this site a burial ground. Therefore, the conclusion that this site was used by the Hualapais into post-contact time, and that Tizon Brown Ware was deposited here by them seems obvious. The Deadmans Black-on-Gray sherds which form 6.2% of the sample probably represent Cohonina Branch occupation prior to Hualapai entry into this region.

At site N. A. 3380, Deadmans Black-on-Red was listed in Colton's table as found on the surface with Cerbat Brown. While no historic non-Indian artifacts were recorded, a number of sherds of Parker Series Lower Colorado River Buff Ware evidence the late prehistoric or historic occupation of this site. There are many sherds of San Francisco Mountain Gray Ware on this site also—which were being produced at the same time as Deadmans Black-on-Red. They are numerous enough to indicate that this site was occupied by Indians of the Cohonina Branch prior to about 1150 A. D. There are also sufficient sherds of Prescott Gray Ware to indicate perhaps occupation by Prescott Branch Indians after the Cohonina period and prior to about 1300 A. D.

Dr. Colton might legitimately have concluded that the surface association of Tizon Brown Ware with these known early wares indicated that it was being produced prior to 1300 and 1150 A. D. Instead, he inverted the relationship and hypothesized it was not made any later than San Francisco
Mountain Gray Ware—not even as late as Prescott Gray Ware was known to have been produced.

Another section of Colton’s table lists sites where dated trade types were found associated with Aquarius Orange or Gray. The author, in reviewing identifications of sherds collected during the Museum of Northern Arizona—Santa Fe Pacific Railroad Survey has consistently found the original identifications overestimated the Prescott Gray Ware and underestimated Tizon Brown Ware. So a brief discussion of certain of these sites seems called for.

The site N. A. 3394 at Cane Springs in the Sandy Valley where Colton listed Aquarius Orange and Gray in association with Flagstaff Black-on-White on the surface is actually over 96% Tizon Brown Ware, with a few sherds of Verde Black-on-Gray and one of Flagstaff Black-on-White. If the latter represent a Prescott Branch occupation here prior to 1300 A.D. it certainly was not intensive. This site indicates that Prescott and Kayenta Branch pots were being imported by another group of Indians living here. These may have been Hualapais (or perhaps pre-Hualapai occupants of the area) without knowledge of pottery making themselves, or they may have been Tizon Brown Ware-producing Hualapais. In the latter case, this ware was being produced here prior to 1300—
in fact, prior to about 1225 or 1200 when Flagstaff Black-on-White went out of production.

The site N. A. 3400 at Peach Springs is over 80% Tizon Brown Ware. Colton listed Flagstaff Black-on-White and Walnut Black-on-White as associated with Aquarius Orange and Gray here. There actually are some Verde Gray sherds, but they were probably traded in like the decorated types although they might represent a pre-Hualapai Prescott Branch occupation. More likely they were imported by early Cohonina Branch inhabitants who also left San Francisco Mountain Gray Ware sherds here, and clearly lived in this area since pure San Francisco Mountain Gray Ware sites are found close by. Flagstaff Black-on-White was, however, produced only during the very last stages of San Francisco Mountain Gray Ware manufacture, if not entirely afterwards. It was made from about 1120 to 1225 or from around 1125 to 1200 A. D.

Dr. Colton here again as at site N. A. 3397 failed to list artifacts of later date than fit his thesis. There are eighteen sherds of proto-historic Hopi trade ware in the col-

3/ Colton, 1939, p. 28.
lection from site N. A. 3400 compared to three of Tusayan and Little Colorado White Ware. The bulk of these later Hopi sherds are Jeddito Black-on-Yellow, a type produced between about 1300 and 1700 A. D. The rest are Sikyatki Polychrome which was made from about 1400 to 1625 A. D.

Here as at N. A. 3397 the collection was made within a few yards of one of the major water sources in Hualapai country, so by Colton's own standards this site N. A. 3400 could be expected to yield little or no temporal information. Yet here, too, Colton selected certain intrusive sherds of early date for publication and other intrusive sherds of later date for omission. He published data supporting his theory that the makers of Tizon Brown Ware were pushed west after 750 A. D. and did not exist after 1100 A. D. He neglected to publish evidence which countered this theory. Thus the theory seems to have guided the selection and presentation of evidence to an extent hardly in keeping with scientific procedure. Failure to publish the fact that Sikyatki Polychrome and Jeddito Black-on-Yellow were found in the same surface associations at N. A. 3400 as Walnut and Flagstaff Black-on-White, and failure to mention occurrence of porcelain at N.

1/ Colton, 1939, p. 27.
2/ Colton, 1953, p. 75.
3/ Colton, 1939, p. 29.
A. 3397 amounted to suppression of evidence which formed a necessary part of the record required for objectively evaluating Colton's reconstruction of the history of Tizon Brown Ware.

The author, having discovered this unpublished evidence by examination of the survey collections, concludes that Colton's claim that no evidence that the Cerbat Branch—that is, the Hualapai makers of Tizon Brown Ware—existed later than 1100 A. D. must be rejected, that such evidence does exist, and was available to Colton at the time he advanced his erroneous reconstruction.

Dr. Colton's disregard of all the applicable evidence from sites N. A. 3397 and N. A. 3400 surveyed by his institution raised a question about the reporting of all the sites surveyed in 1938 by the Museum of Northern Arizona—-Santa Fe Pacific Railroad survey. Were historic American-made artifacts found in surface association with Tizon Brown Ware sherds on any more of these sites?

In his reports, Dr. Colton has made absolutely no mention of the presence of historic Western-manufactured artifacts on any of these sites. However, the Museum of Northern Arizona survey record cards clearly record that the field surveyers considered certain sites to be historic Hualapai sites on the basis of occurrence of historic American-made
artifacts. A number of survey collection boxes at the Mu-
seum still contain historic artifacts picked up with Indian
sherds.

For example, a site originally reported by Colton to be
a pure Tizon Brown Ware site is N. A. 3382 in the Cerbat
Mountains, variously reported to be 100% Tizon Brown Ware
or 94% Sandy Brown and Cerbat Brown. The survey collection
from this site includes besides two hundred fifteen Indian-
made sherds an army issue cartridge casing, a button, and i-
ron of American origin. This historic material was utterly
ignored by Colton, who stated, "Of the eight pure sites of
Tizon Brown Ware, not a single sherd of trade pottery from
the plateau was found" in his section on "Time Correlations."

Since trade pottery from the plateau was not found at
any of the "pure" sites, and historic material was found at
one of the purest, it is hard for this author to understand
why Colton chose to ignore the historic material.

Colton's summary list of sites shows thirteen 100% Tizon
Brown Ware sites. Another of these is N. A. 3410 at Milk-
weed Springs in a cave where another cartridge casing was

1/ Colton, 1939, p. 22.
2/ Ibid., p. 28. (Tizon Brown Ware)
3/ Ibid., p. 27
found with the sherds. (This site is actually only 92.2% Tizon Brown Ware.)

Thus cursory re-checking of the 1938 survey collections showed that Dr. Colton had ignored presence of historic artifacts on the surface of key sites. Most critical of these was N. A. 3397 where he originally assigned an upper limit of 1100 A. D. to Cerbat Brown production on the basis of surface association with Deadmans Black-on-White, but where historic porcelain also occurred.

That this association with historic material was valid is further demonstrated by occurrence of historic artifacts on two of thirteen sites reported by Colton as pure Tizon Brown Ware sites, he himself pointing out that no prehistoric Indian trade ware occurred on eight he considered pure.

Therefore, Colton had before him evidence that Cerbat Brown did continue to be made and used into historic time. Since Milkweed Springs, Crozier and Atlantic Spring are all sites known to have been occupied by Hualapais within historic time and back into their prehistory, this association of artifacts indicated that Cerbat Brown was made by the Hualapais as Rogers, Baldwin and the author have since independently concluded.

In other words, this evidence which was available to Dr. Colton demonstrates that he erred by 775 to 800 years in dating the termination of production and use of Tizon Brown Ware.
by employing faulty procedure. Hualapai Indians occupied these three sites, so Cerbat Brown as well as the historic artifacts obtained from invading Anglo-Americans constituted evidence of their occupation, the sherds being the debris of artifacts produced, used and discarded by Hualapais.

One site which was visited by both the Museum of Northern Arizona—Santa Fe Railroad survey in 1938 and the Hualapai Tribal Survey is located on the western base of a hill called Musthoel Nyuwi'i or Gila Monster's Hill (GW Aug. 16 p 3), at the eastern edge of the Cerbat Range on the margin of Hualapai Valley. Yodman Canyon opens into the valley from the mountains immediately north of this hill, and the canyon known to the army during the 1860's as Difficult Canyon (where Cerbat Mountain Band headquarters spring Ha' Emete' is located) opens out just south of the hill.

The Tribal Survey found several fire-oxidized spots in the soil of the flat just west of the hill which could still be identified by Hualapai guides as fireplaces where fires were built to light the after-dark Ghost dances held here in 1889-1891. (GW Aug. 16 p 2) Several stone rings marked the location of wickiups, and a couple were identified as wickiup latrines—the Hualapais apparently having taken over this concept from the army during their captivity. These apparently correspond to the two "hillside forts" recorded here by the Museum-Railroad surveyors. A good many old wine bottles
and metal objects were observed on the surface, although the previous surveyors had made off with the most impressive relics.

The site is located a couple of miles from the nearest water at Koara Spring, and so far as known to living Hualapais was not occupied at any other time than during the Ghost Dance which took place after the spring had been seized by an Anglo-American cattleman.

During the re-examination of Museum of Northern Arizona survey collections, the site N. A. 3365 was found to be this same site. The earlier surveyors had recovered sixteen Indian-made potsherds. Of these, three are Needles Red-on-Buff, again demonstrating the post-contact production and use of this Mohave Lower Colorado River Buff Ware type. The other thirteen sherds are Sandy Brown. By the same logical reasoning applied previously to the three post-settlement sites found by the Tribal Survey, the Needles Red-on-Buff sherds must be attributed to Hualapai trade with their Mohave makers, and the Tizon Brown Ware sherds to the Hualapais here in 1889-1891, both as to production and use.

This site brings to four the number of post-settlement sites identified by Hualapais as occupied by them only during the post-1871 period to about 1900 where Tizon Brown Ware has been found with Lower Colorado River Buff Ware. The fact that all of the Tizon Brown Ware found here is Sandy Brown
may indicate that this type was produced during the final phase of pottery making among the Hualapais when some degeneration probably occurred. Or it may be entirely accidental.

There is no reason to believe Hualapais lived at this waterless hill before Anglo-American occupation of their springs farther in the mountains forced them to do so. One Ghost dance occurred here during June of 1890 when the Hualapais were reported at Thompson Brothers Ranch at Koara spring—the Thompsons having taken the water, the Hualapais actually held the dance here at Musthool Nyuwi'il. Again in August a dance here was reported.

The following summer a Ghost Dance was again held during June. Then in the fall additional dances were held when it was believed the Devil was preventing the Messiah from coming. By the third of December, winter cold had forced the Hualapais to terminate their dancing, and this is the last Ghost Dance observance of record here. The handful of potsherds and fairly abundant trash of discarded manufactured articles, plus the rock rings and fireplaces, were all left here during a very short period of two years as the result

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1/ Mohave County Miner, 8:34; June 28, 1890.
2/ Ibid., 9:4; Nov. 29, 1890.
3/ Ibid., June 13, 1891.
4/ Ibid., Nov. 21, 1891.
5/ Ibid., Dec. 3, 1891.
of large numbers of Hualapais gathering here for ceremonial expression of a nativistic movement.

On the following pages appear lists of sites located on spots still remembered by Hualapais to have been inhabited by them or their deceased ancestors. Only actual sites where debris of Indian occupation has been recovered are listed. They are divided into ceramic and non-ceramic lists. The latter is lengthy enough to call for comment.

First, there are eight sites in this list where remains of dwellings were found but no pot sherds. Certainly these sites help to point out that the non-ceramic archaeological site is not invariably pre-ceramic in time. Also they support the reconstruction of the history of abandonment of production and use of Tizon Brown Ware vessels previously presented. As metal utensils replaced Indian-made pots, Hualapais could inhabit permanent sites without depositing any broken clay vessel remains on them at all.

Perhaps more important for general anthropological interpretation are the lithic sites in this list which demonstrate that the occupation of various sites by the same group of Indians in pursuit of different economic activities can and does result in different artifact assemblages being deposited on various sites. The eight mescal pit sites in this list are a case in point. Sherds of any sort are scarce in the vicinity of mescal roasting pits in Hualapai country,
CERAMIC ANALYSIS BY WARES OF SITES--REMEMBERED BY HUALAPAI
TO HAVE BEEN OCCUPIED BY THEIR ANCESTORS--WHERE MANUFACTURED
WESTERN ARTIFACTS HAVE BEEN FOUND IN SURFACE ASSOCIATION WITH
INDIAN POTSHARDS

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| DD:16:4      | 95.2         | 2.4        | 2.4        | 83    |            |      |      |    |            |        |
| Arizona      |              |            |            |       |            |      |      |    |            |        |
| A:16:3       | 11.1         | 44.4       | 33.3       | 11.1  | 9          |      |      |    |            |        |
| A:16:4       | 8.7          | 69.6       | 17.4       | 4.4   | 23         |      |      |    |            |        |
| NPS          |              |            |            |       |            |      |      |    |            |        |
| F:7:1        | 47.1         | 51.2       | 2.8        | 51    |            |      |      |    |            |        |
| *F:7:3       | 100.         |            |            | 26    |            |      |      |    |            |        |
| *F:7:4       | 100.         |            |            | 30    |            |      |      |    |            |        |
| F:12:1       | 2.7          | 97.3       |            | 73    |            |      |      |    |            |        |
| *F:12:2      | 72.2         | 27.8       |            | 18    |            |      |      |    |            |        |
| SDA-2-A      | 57.9         | 31.6       | .9         | 9.7   | 114        |      |      |    |            |        |
| F:16:1       | 100.         |            |            | 1     |            |      |      |    |            |        |
| F:16:3       | 62.5         | 31.3       | 6.3        | 16    |            |      |      |    |            |        |
| F:16:4       | 100.         |            |            | 4     |            |      |      |    |            |        |
| NA3381       | 100.         |            |            | 1     |            |      |      |    |            |        |
| NA3382       | 99.5         |            |            | .5    | 215        |      |      |    |            |        |
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| NA3805D      | 4.1          | 91.7       | .8         | 3.3   | 121        |      |      |    |            |        |
| G:2:1        | .6           | 85.1       | 27.1       | .6    | .2         | 6.4  | 622  |    |            |        |
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| G:2:3        | 4.4          | 93.4       | 1.3        | .9    | 527        |      |      |    |            |        |
| NA3796U      | 83.3         | 14.3       | 2.4        | 42    |            |      |      |    |            |        |
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| NA3405       | 7.7          | 76.9       | 7.7        | 7.7   | 13         |      |      |    |            |        |
| NA3407       | 2.4          | 97.6       |            | 41    |            |      |      |    |            |        |
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Forty-Three Sites: 9.7 68.9 13.3 3.1 .8 .4 4. 3,423

* Hu'alapai sites occupied entirely after 1869.
CERAMIC ANALYSIS BY WARES OF SITES REMEMBERED BY HUALAPAI
TO HAVE BEEN OCCUPIED BY THEIR ANCESTORS WHERE NO MANUFACTURED ARTIFACTS HAVE BEEN RECOVERED

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### NON-CERAMIC SITES WHERE HUALAPAIS REMEMBER THEIR ANCESTORS

LIVING WHERE ARTIFACTS OF WESTERN MANUFACTURE HAVE BEEN FOUND

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<td>Silver Hill @ Chloride</td>
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### Non-Ceramic Sites Where Hualapais Remember Their Ancestors

Living where no Western manufactured artifacts were found.

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<td>Bridge Canyon</td>
<td>Mescal pits</td>
</tr>
<tr>
<td>G:7:5</td>
<td>Matkootoo, E. Peach Spr.</td>
<td>Mescal pits, lithic</td>
</tr>
<tr>
<td>G:9:2</td>
<td>Tal Tal Gwa'a</td>
<td>Lithic, burned stumps</td>
</tr>
<tr>
<td>G:10:1</td>
<td>Wright Creek head</td>
<td>Lithic</td>
</tr>
<tr>
<td>G:10:3</td>
<td>Wright Creek @ .5 mile</td>
<td>Lithic, burned stumps</td>
</tr>
<tr>
<td>NA3465</td>
<td>in G:13; Hualapai Spring</td>
<td>Lithic</td>
</tr>
<tr>
<td>NA3773</td>
<td>in G:15; Cottonwood Sta.</td>
<td>-</td>
</tr>
<tr>
<td>H:9:2</td>
<td>Thav Gial Yela (Seligman)</td>
<td>Lithic</td>
</tr>
<tr>
<td>H:9:3</td>
<td>S. of Aubry Cliffs</td>
<td>Lithic</td>
</tr>
<tr>
<td>NA3791</td>
<td>in H:13; New Water</td>
<td>-</td>
</tr>
<tr>
<td>NA3754</td>
<td>in M:2; Francis Creek</td>
<td>Lithic</td>
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<tr>
<td>NA3804</td>
<td>in M:3; Mahon Water</td>
<td>Lithic</td>
</tr>
<tr>
<td>NA3756</td>
<td>in M:3; Oak Spring</td>
<td>Lithic</td>
</tr>
<tr>
<td>SD A-11</td>
<td>in M:10; Signal Spring</td>
<td>Lithic</td>
</tr>
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</table>
except at Quartermaster Canyon village where mescal roasting was carried on on a large scale on the outskirts of an agricultural village. Aside from the fired stone about these pits, the few stones showing the effect of man's use are generally chips. The rare identifiable artifacts probably were used as blade for trimming the agave leaves off the core to be roasted, or pounding stones where the roasted plant was pulverized preparatory to drying. Four of these eight sites had chipped stone, two yielded no artifacts; there were circular clearings at the one at Quartermaster Canyon Village, and crunching slabs at one. When mescal was roasted in places where water had to be carried, it apparently was transported in basketry containers. Therefore, Hualapai mescal roasting areas are by and large non-ceramic, although the mescal roasters used pottery when engaged in other economic activities.

Three of these non-ceramic sites are characterized by crunching slabs of the type used by Hualapais in preparing mescal, manat, and similar foods for drying, and for pulverizing into edible meal harder foods such as pinon nuts and grass seeds. At only one of these sites is there evidence of dwellings, and this consists of burned stumps such as are

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Footnote: Four of the eight sites are near water---NPS G:1:9, G:1:10, G:1:20, G:10:2. ---
left when a temporary Hualapai brush shelter of branches was thrown up against a tree and burned upon departure.

Sixteen of these forty non-ceramic sites yielded flakes of stone showing stone tool manufacture by Hualapais. Of these, seven are located some distance from any permanent water source. One three more are located at or near more or less permanent rock tanks. Six are located at or near permanent water--springs or flowing streams.

There seems to be little difference in the type of site based on distance from or proximity to a permanent water supply. The important variable in differentiating the type of artifacts deposited on these sites appears to have been the economic activity engaged in by the Indians while living in the vicinity of any particular water source. Economic exploitation appears to have been determined by the character of food resources found in a region rather than relative availability of water. Stated another way, the Hualapai country mostly seems to have afforded its inhabitants a sufficient

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1/ A:16:5, G:1:21, G:7:5, H:9:2, SD A-8, G:8:1 & G:8:2 the last two in high altitude pine forest and identified by a Hualapai guide as Pine Springs Band Deer hunters' camps. Crunching slabs at one indicate pinon gathering also.

2/ H:9:1, H:9:3, NA3446, the last non-ceramic only by surveyors' choice as ceramics are found near the same tank.

number of sources of water so that they were not dependent upon a limited number of water sources while engaged in a large number of food-getting activities. There were enough water sources so that the Hualapais could move from one to another during the seasonal round of food-getting and use each only periodically.

Eight of these forty sites showed evidence of dwellings, all wickiup stone rings or burned stump areas where wickiups had been. All the artifacts associated with one were of European origin. At four others no artifacts were recorded. Mescal pits were found at one of these residential sites in Quartermaster Canyon. Stone flakes occurred on the surfaces of the other three and crunching slabs at two of these. Six of these eight sites are located near a permanent supply of water, the other two being high altitude pinon-pine forest hunters' camps.

Thus it appears that while sources of water were relatively abundant in Hualapai territory, so that these Indians possessed considerable freedom of movement in their seasonal round of food-getting.

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1/ Arizona F : 7 : 2.
2/ NPS G:1:5 and G:1:13, NA3351 and NA3352, timbers of the last two being cut by steel axes.
4/ Flakes at Arizona G:8:1, G:8:2, G:10:3; slabs 1 & 3.
5/ Arizona G : 8 : 1 and G : 8 : 2.
round, their habitual dwelling places were close to water. Except in unusually rich food resource areas far away from water, they did not expend the energy necessary for wickiup construction elaborate enough to leave any traces. For most economic pursuits they did not have to move very far away from permanent water. The main exceptions were hunting, pinon gathering on the high plateau and giant cactus fruit gathering on the lowland desert, sometimes agave cutting.

3. Excavation

It was concluded in the preceding section dealing with the Tribal Survey that on the basis of occurrence on the surface of four Hualapai sites known to post-date 1869 and the existence of one ethnographic specimen of Aquarius Brown bowl that Tizon Brown Ware was made and used by the Hualapai Indians.

The results of four excavations carried out by Mr. Robert C. Euler, then Curator of Anthropology, Museum of Northern Arizona, furnished independent and separate evidence that Tizon Brown Ware was the native Hualapai ceramic ware.

a. The Amis Mound

In Mata Widita Canyon Mr. Euler excavated one of the house mounds at the up-canyon end of the fields formerly irrigated by Hualapais with water from Mata Widita Spring. The last family to occupy the last known dwelling built on this mound was related to Carl J. Amis and Grant Topija,
members of the Claims Research Committee of the Hualapai Tribal Council. Therefore, the Tribal Survey termed this the "Amis Mound," and assigned it site number Arizona G : 2 : 3. Mr. Euler assigned it Museum of Northern Arizona excavation site number N. A. 3786 C.

Mr. Euler, who will report separately on his excavations, in brief found that the last structure built upon this mound had been burned, and had fallen in upon the floor. Under the burned material and on the floor he found thirteen pot sherds, twelve Tizon Brown Ware and one Lower Colorado River Buff Ware, and artifacts of Western Civilization.

Like Hualapais living at the four post-1869 sites located in the Tribal Survey, those living on the Amis Mound imported Mohave pots. Here, however, there was more reliance upon native Tizon Brown Ware. A later survival of Tizon Brown Ware vessels here in Mata Widita Canyon seems likely, since the last structure on this mound was occupied probably after the other sites were abandoned— it was lived in after 1915 (the patent date of a mason jar from the floor of the house).

This excavation confirmed the validity of the surface associations at the four purely historic sites found by the Tribal Survey: Tizon Brown Ware, Lower Colorado River Buff Ware and Western manufactured artifacts. It found them in the clearest possible archaeological situation.
In the deep trash mound at the small rock shelter Oya Sivli Klavlava in Mohawk Canyon this same ceramic relationship existed in the levels just below the surface. From surface to 20 cm. of N. A. 4377 a total of seventy-seven sherds were recovered by Mr. Euler and Mr. Wetherill. Of these forty were Tizon Brown Ware (51.9%). Another 13% were Mohave trade ware sherds, somewhat higher a proportion than found on the floor of the wickiup on the Amis Mound, but less than that at two of the four post-1869 survey sites. Here in the area shared by Hualapais and Havasupais during the 19th century, 29.9% of the sherds from this upper 20 cm. are also Tizon Brown Ware, but the wiped Havasupai type.

This upper 20 cm. level containing Mohave trade ware probably represents the historic occupation of this site by the Hualapais with Havasupai visitors. The relative proportions of sherds made by the two tribes indicate, that if all other variables were equal in the two groups, the Hualapais occupied this rock shelter and by inference Mohawk Canyon, roughly twice as often as Havasupais during the time period represented in this 20 cm. of trash.

In the shallower deposit here, N. A. 4377 UO, a Mohave sherd occurs among ten recovered from the top 10 cm. of trash --probably the depth of historic debris in this section. Tizon Brown Ware sherds amount to 60% of the total, wiped 20%.
While Mohave trade sherds were recovered from the surface of this large rock shelter by the Tribal Survey, none was found by Mr. Euler in his test pit into the floor. The historic period here is probably denoted by what are apparently Southern Paiute Utility Ware sherds, most likely left by the refugee band which fled the Mormons in historic times. These constitute 21.7% of the sherds recovered from the upper 20 cm. of this test. Tizon Brown Ware sherds form 69.6% of the total and Havasupai Tizon Wiped only 9.7%.

While this sherd sample is not so large, and therefore not as reliable as that from the upper 20 cm. of the deep trash deposit at Oya Sivil Klavlava, it is nonetheless significant. Whala Kitev Giova is a large, roomy, airy rock shelter suitable for family life. Here Hualapai sherds occur in a ratio of roughly 7:1 to Havasupai sherds. Oya Sivil Klavlava is a very small rock shelter—so small that the existence in it of deep deposits of human trash is quite surprising. It was used by Hualapais, by their own account, primarily as a shelter in inclement weather and as a deer hunters' camp both for far-ranging hunters from other Pine Springs Band settlements and as a spot for men living at Whala Kitev Giova with their families to stop and dress their game. Here the sherd ratio is Hualapai five to Havasupai three.
This difference between the ratios of Hualapai to Havasupai sherds at the two rock shelters with their intrinsic dissimilarity which led to different uses being made of them by Hualapais, suggests that the same dichotomy existed for Havasupais. In other words, the sherds from the upper 20 cm. of both rock shelters suggest that the Hualapais lived in Whala Tev Giova but that Havasupai sherds are no more numerous than to suggest visiting. But the sherds at Oya Sivli Klavlava suggest that Havasupai deer hunters utilized that small rock shelter as did Hualapais, only somewhat less frequently.

In summary, Havasupai resources exploitation of this area of Mohawk Canyon shared with the Hualapais seems from the ceramic evidence to have been more specialized and transitory than that made by Hualapais who resided here at least seasonally.

d. Wha Ha! Yo Cave

Mr. Euler excavated two test pits into the floor deposits in the sacred Hualapai cave Wha Ha! Yo or Kesthat Kanava Nyooowa'a. In one he found 75 cm. and in the other 100 cm. of trash. Tizon Brown Ware extended from top to bottom in both pits, confirming that this cave has been occupied by Hualapais throughout its use by man.

Occupation of the cave for living Mr. Euler felt to have been far removed in time. All the Tizon Brown Ware excavated
is Aquarius Brown, which may be significant. The most important discovery in the tests was the Tusayan Polychrome in the 50-75 cm. level of both pits. This type was made by Indians of the Kayenta-Hopi Branch between about 1150 and 1275 A.D. This was the level of heaviest occupation of the cave. In one test, Verde Black-on-Gray sherds were also found at this level, yielding information upon the period of production of this Prescott Gray Ware type. It must have been roughly contemporaneous with Tusayan Polychrome, a conclusion supported by tree-ring dates and tradeware found at Kings Ruin on the Chino just below the junction of Walnut Creek with that stream.

A painted cotton blanket preserved in the cave apparently dates from the same period as Tusayan Polychrome. Both together document local Hualapai trade relations with the Kayenta-Hopi Indians, and prove Aquarius Brown was produced prior to 1275 A.D.

C. Conclusions

1. Definition of Hualapai Geographic Range Prior to Conquest

Tizon Brown Ware has been identified as the ceramic ware made by Hualapai potters during the period when native pots

1/ Colton, 1953, p. 75. Colton, 1946, p. 252, 253 and McGregor, 1941, p. 373 placed terminal date around 1300 A.D.

were produced by several independent types of evidence:

1) An ethnographic specimen of Hualapai pottery was obtained from an elderly Hualapai woman who had received it as a wedding gift and preserved it. This is Aquarius Brown.

2) Sherds of Cerbat, Aquarius and Sandy Brown were recovered from the surfaces of four Hualapai sites in symbiotic relationship to Anglo-American settlements made after 1869.

3) Sherds of Cerbat and Aquarius Brown were excavated from under the burned superstructure of a Hualapai wickiup occupied by members of the Amis family after the turn of the century, found on the floor associated with machine-made objects.

4) Sherds of Cerbat and Aquarius Brown were excavated from the top levels of trash in the Mohawk Canyon rock shelters Oya Sivli Klavlava and Whala K'tev Giova used by Pine Springs Band Hualapais and their Havasupai relatives, also in association with Mohave trade ware and machine-manufactured artifacts.

Therefore, the geographic range of the Hualapai Indians during the pre-conquest period of Tizon Brown Ware production is operationally defined as that area within which all sites yield 70% or more Tizon Brown Ware sherds where Hualapai use and occupancy was sole and exclusive, between 25% and 70% if shared with a friendly tribe.
2. Definition of Time Immemorial in Hualapai Prehistory

The Petition asserts that "From time immemorial the Petitioner Tribe exclusively owned and enjoyed the sole and undisputed use, occupancy and possession, in the accustomed Indian manner" of the tract therein defined as Hualapai territory. Exclusive ownership, sole and undisputed use, occupancy and possession has already been operationally defined as 70% or higher predominance of Tizon Brown Ware in all the sherds recovered from any site. Now the concept of time immemorial must be operationally defined so that the territorial claims made by the Petition may be verified or rejected.

Following the statement quoted above, the Petition reads "No Indian tribe or nation other than the Petitioner Tribe ever established a permanent encampment in, or used or occupied any part of, the area above described." In view of the preceding language, the "ever" in this passage evidently was intended to mean "from time immemorial."

In order to define the span from time immemorial, then, it becomes important to know when the Hualapais came to occupy their historic territory. Unfortunately there is little evidence available upon this point, but perhaps enough to enable a satisfactory operational definition to be made.

1/ Marks, 1951, p. 3.  
2/ Ibid., p. 4.
The Hualapais appear to have reached the approximate limits of their territory toward the northeast about 1100 to 1150 A.D. and toward the southeast after about 1300 A.D. and to have then stabilized in about the same position for up to six centuries. It is this period of stabilized territory after the exterior limits of historic Hualapai territory were reached which is suggested as the operational definition of time immemorial in Hualapai prehistory.

This reconstruction of prehistoric migration is based primarily on information yielded by the excavations carried out in Mohawk Canyon on the Hualapai Indian Reservation by Mr. Robert C. Euler, plus his tests in Wha Ha' Vo Cave in Mata Widita Canyon. Tizon Brown Ware was found from the top to the bottom levels of all three rock shelters, except that a single non-Hualapai sherd was the only one found in the lowest level at Whala Kitev Giova. Thus the continuity of Hualapai occupation of this border area back to the beginning of human utilization of these rock shelters has been demonstrated.

However, at the very lowest levels of the two rock shelters in Mohawk Canyon, Tizon Brown Ware was not the only ware present. Mr. Euler's excavations recovered two Aquarius Orange sherds at the lowest levels of Cya Sivli Klavkava and three San Francisco Mountain Gray Ware sherds from the lowest levels in Whala Kitev Giova. The non-Hualapai sherds recover-
ed were so few that they could easily be remains of vessels traded into Mohawk Canyon from elsewhere and broken there by Hualapais. However, both non-Hualapai wares occur at the lowest levels in the deposits, and both ceased to be made several hundred years ago, so they may represent pre-Huala-
pai occupation of these rock shelters. This seems particu-
larly probable in the case of the Cohonina Branch Indians whose San Francisco Mountain Gray Ware occurs on pure sites even farther west, indicating a pre-Hualapai Cohonina occu-
pation of much of what later became Hualapai territory.

The position of these non-Hualapai sherds in the rock sheller deposits indicates that the Hualapais reached the near-limits of their historic territory here in Mohawk Canyon during the period when those wares were still being produced -- possibly displacing the makers of those waters. (Or else Hualapais arrived so soon after the previous inhabitants left that they mixed their trash with the pre-Hualapai trash.) Since there is no way of telling exactly when during the period that the non-Hualapai wares were being made Hualapais arrived in Mohawk Canyon, the date of their arrival can be placed no more precisely than at the date of termination of production of these early wares. This seems to have been approximately 1150 A. D. in the case of San Francisco Mountain Gray Ware and 1300 A. D. in the case of Prescott Gray Ware.
a. Prescott Gray Ware Position

The Oya Sivli Klavlava excavation provides one line of evidence on dating, Whala Kitev Giova another. At the smaller rock shelter, Cerbat and Aquarius Brown seem to have been made and used sometime before 1300. This dating is based on dating at one remove from the source of absolute year-dates: tree rings. Aquarius Orange sherds were recovered in the 160-170 and 180-190 (the lowest) cm. levels at Oya Sivli Klavlava. Between the lowest 40 cm. of trash in this site and the higher layers, a 10-cm. ceramically sterile strip intervenes. The 40 cm. below this sherdless zone is here interpreted as the "Prescott Branch" Period of occupation or trade.

Unfortunately, Aquarius Orange is one of the many types not as yet accurately dated by association with tree rings, except insofar as it was dated in the mid-11th century at Kings Ruin. ¹ From this fact arises the necessity for dating at one remove. Aquarius Orange happened to be fairly regularly associated with Tusayan Black-on-Red sherds on the surfaces at mortarless stone masonry "forts" in Walnut Creek valley and adjacent regions. These ruins are on the edge of historic Hualapai territory. They are uniform in appearance and ceramic associations, and Tusayan Black-on-Red is

¹ Spicer, 1936, p. 13-14.
DEPT OF TIZON BROWN WARE SHERDS IN ROCK SHELTER DEPOSITS

Percentage of unaltered Tizon Brown Ware sherds in total found at each excavation level.

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>0-10</td>
<td>66.7</td>
<td>60.</td>
<td>70.</td>
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<td>10-20</td>
<td>44.</td>
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<td>77.8</td>
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<td>0.</td>
</tr>
<tr>
<td>50-60</td>
<td>66.7</td>
<td>100.</td>
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</tr>
<tr>
<td>60-70</td>
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<td>96.</td>
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<tr>
<td>90-100</td>
<td>23.6</td>
<td></td>
<td>100.</td>
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<td>100-110</td>
<td>100.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>110-120</td>
<td>no sherds</td>
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<td>120-130</td>
<td>100.</td>
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<tr>
<td>130-140</td>
<td>50.</td>
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<td></td>
</tr>
<tr>
<td>140-150</td>
<td>no sherds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150-160</td>
<td>100.</td>
<td></td>
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</tr>
<tr>
<td>160-170</td>
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<td>170-180</td>
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<tr>
<td>180-190</td>
<td>75.</td>
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frequently found on these sites. They seem to have been in use during the time that widely traded type was made. Tusayan Black-on-Red has been dated by association farther east with wooden material yielded absolute chronology tree-ring-count dates. These place the period of production of this type at about 965 to 1130 A.D. 1

By inference, then, the Aquarius Orange sherds at the bottom of the Oya Sivli Klavlava deposits arrived there during the period of manufacture of Tusayan Black-on-Red from about 965 to 1130 A.D., or possibly later if it continued in production after the index type.

In thus employing Tusayan Black-on-Red as an "index fossil" to date the lowest levels of Oya Sivli Klavlava, the author may appear to have employed somewhat tortuous reasoning. In the absence of wood material from which absolute dates can be directly obtained, the archaeologist has no other choice than to employ the index pottery types dated elsewhere, relatively inaccurate though this procedure may be:

In prehistoric times the painted pottery manufactured in northern Arizona was widely traded to other areas. Because the application of the tree ring method was limited to the study of certain trees that did not grow all over the Southwest, such as the Western Yellow Pine and Douglas Fir, in many areas it was impossible to date sites directly by the tree ring method. Therefore, archeologists in other areas have

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
more and more depended on the dated pottery types traded from northern Arizona to date sites that have not been or cannot be dated directly by the dendro-chronologist. 1/

However, the possibility of considerable variance from the dates suggested for Aquarius Orange is indicated in the time-span assigned Verde Black-on-Gray, another type of Prescott Gray Ware. This has been variously dated as having been made between 1000 A. D. and 1300 A. D., and as having been produced between 1150 and 1400 A. D. Since Verde Black-on-Gray is often found associated with Aquarius Orange on sites analyzed in this report, and both are Prescott Gray Ware types, the author inclines to the belief that they were contemporaneous. The difference between Verde Gray—the unpainted portion of Verde Black-on-Gray vessels—and Aquarius Orange is only a difference in firing. 4/ If they were contemporary, Verde Black-on-Gray and Aquarius Orange must have been made during the earlier part of the period first suggested by Colton, between around 1,000 and 1,150 A. D. (as well as earlier). They were made at King's Ruin on the Chino when the part of that pueblo was in use for which beams were cut from 1026 to 1048 A. D. 5/

2/ Colton, 1939, p. 27.
On the other hand, there can be little doubt that the later dating for Verde Black-on-Gray is also correct, and that it was made long after 1150 A. D. Mr. Euler found this type in association with Tusayan Polychrome sherds in one of his test pits in Wha Ha' Vo cave in Mata Widita Canyon. Tusayan Polychrome was produced from around 1150 to 1275 A. D. In both Euler's tests in this cave Tusayan Polychrome was recovered from the 50-75 cm. level, the lowest in one and next to it in the other. This indicated that Hualapai occupation of this cave began not much before this time, since little trash had accumulated, containing few sherds. Trade ware excavated from Kings' Ruin pueblo included Flagstaff Black-on-White which was produced between 1120 and 1225 A. D. and Kayenta Polychrome which was made from 1250 to 1300 A. D. Thus the Kings' Ruin and Wha Ha' Vo excavations showed Verde Black-on-Gray in use in rooms dated after 1026-1048 A. D. by tree rings and associated with trade ware types produced in 1120-1225 A. D., 1150-1275 A. D., and 1250-1300 A. D. This type was obviously in continuous production from at least the

3/ Colton, 1953, p. 75.
early 11th century to the opening of the 14th century. Since Aquarius Orange is only a Verde Gray vessel fired in an oxidizing atmosphere, it probably continued in production throughout this same period. At neither Kings' Ruin nor Ha Ha Vo—nor at any of the surveyed sites—was there evidence that Prescott Gray Ware was made much after 1300 A.D.

Generalizing the results of these excavations to sites surveyed, Prescott Gray Ware may be assigned a temporal position roughly between 1000 and 1300 A.D. Then Tizon Brown Ware may be assigned with surety the time span after the termination of Prescott Gray Ware production around 1300 A.D. up until its own demise around 1900 A.D. This may be taken as the operational definition of time immemorial in Hualapai prehistory: from 1300 A.D. to Anglo-American settlement in Hualapai territory which made such a supply of metal utensils available as to signal the end of Tizon Brown Ware production.

Since Tizon Brown Ware was made for some years prior to 1300 some sherds found on surveyed sites must have been made during this earlier period when makers of Prescott Gray Ware were still living in some areas which became exclusively Hualapai after 1300. But because no temporal difference in Tizon Brown Ware has yet been recognized, it is impossible to discern at what point during the long period of its manufacture any particular sherds of this ware were made.
As has been pointed out previously, the cultural relationships of Prescott Gray Ware are little understood. The makers of this ware are termed the Prescott Branch and are assumed to have been a prehistoric tribe. This group of Indians can in no way be correlated with any surviving Indian group. It may have become entirely extinct centuries ago.

b. San Francisco Mountain Ware

The relative position of sherds in the deposits at the big rock shelter at Whala Kitey Giova in Mohawk Canyon is not as clear as in Oya Sivli Kjavlava because sherds were recovered only to a depth of 50 cm. compared to 190 cm. However, three San Francisco Mountain Gray Ware sherds were recovered from the three lowest 10 cm. levels. One of these sherds was the only one recovered in the bottom level. No sherds of this ware were found in the upper 20 cm., which seem to post-date termination of production of this ware.

The particular San Francisco Mountain Gray Ware types recovered in Mohawk Canyon have not as yet been dated. However, other types of this ware have been dated after a fashion. These are all utility ware types which were made over relatively long periods compared to the fancier and widely traded index types made in pueblos farther east. Thus only the dates of termination of production are of much significance, but fortunately, these are what is significant to
this study. In the Cohonina Branch site nearest to Mohawk Canyon which has not only been excavated but published upon and where tree ring dates were obtained, Deadmans Gray was found to have been in use after 1090 A. D. 1/ Deadmans Fugitive Red was found at the same period, and has been elsewhere dated as having gone out of use around 1150 A. D. 2/ Deadmans Black-on-Gray fell in the same time range and has been dated elsewhere as going out of production about 1100 A. D. 3/

This cluster of terminal dates around 1100 up to about 1150 A. D. can be inferred for the types found in Whala Kitev Giova. These dates are entirely consistent with those suggested for the Aquarius Orange sherds at Oya Sivli Klavalava.

It hardly seems likely that one tribe, the Cohonina Branch, lived in the big rock shelter at Whala Kitev Giova and another, the Prescott Branch, at the small Oya Sivli Klavalava a few hundred yards up the canyon at the same time. Therefore, it seems likely that both wares are represented at these sites by traded-in vessel remains. Perhaps Hualapais entering this canyon region did not know how to make pottery themselves, and were dependent on importing supplies

1/ McGregor, 1951, pp. 20, 32.
from their Hualapai relatives to their west or from any available source of supply.

An alternative explanation is that Hualapais reached the large, comfortable Whala Kitev Giova at some time during the production of San Francisco Mountain Gray Ware between about 700 A.D. and 1100 or 1150 A.D. Perhaps they displaced the Cohonina from Mohawk Canyon, perhaps they occupied vacant territory and traded in San Francisco Mountain Gray Ware vessels. These Hualapais then may not have used Oya Sivli Klav lava for some time until San Francisco Mountain Gray Ware was no longer being made. Then they began to import Aquarius Orange at the same time they began to use Oya Sivli Klavalava after 1100-1150 A.D. but before 1300 A.D. when Prescott Gray Ware went out of production.

On the other hand, if the non-Hualapai sherds were all traded in, the immigrant Hualapais could very simply have fallen out with the Cohonina while San Francisco Gray Ware was still being produced, and switched their trading expeditions to the Prescott Branch Indians making Prescott Gray Ware at the same period. In this case, both wares could have come into Mohawk Canyon prior to 1150 A.D. and the occurrence of one at Oya Sivli Klavalava and the other at Whala Kitev Giova may be purely accidental.

To summarize, in the present state of knowledge of the temporal position of San Francisco Mountain Gray Ware and
Prescott Gray Ware, the former seems to have gone out of production at approximately 1150 A.D. and the latter about 1300 A.D. Hualapais appear to have entered Mohawk Canyon on their northeastern frontier somewhat before 1150 A.D. and imported both wares, or followed close on the heels of their departing producers. This date is the nearest the archaeologist can place their effective stabilization of this northeastern frontier so that the Hualapais occupied their historic territory in this direction to the exclusion of other tribes.

This dating is somewhat earlier than that suggested by Miss Katharine Bartlett: "The Walapai, Havasupai and Yavapai appear to have migrated eastward from the Colorado River some time after 1300..." But the association of San Francisco Mountain Gray Ware sherds with Tizon Brown Ware sherds in the lowest levels of the deposits at Whala Kitev Giova indicates that the Hualapais did reach the Mohawk Canyon region prior to the disappearance of San Francisco Mountain Gray Ware around 1150 A.D.

This dating is also slightly earlier than that suggested by Malcolm J. Rogers for the eastward spread of pottery production among the uplanders of the Eastern Area of the

---

1/ Bartlett, 1945, p. 42.
Yuman Complex. And the nature of the Mohawk Canyon and Ha! Vo cave deposits indicates that the Hualapais arrived as more or less full-fledged pottery makers during ceramic time, not considerably earlier as pottery-less paleolithics.

c. Time Immemorial

The concept time immemorial in Hualapai prehistory is for purposes of this study operationally defined as that span of years after the Hualapais reached approximately the limits of their historic territory until the Anglo-American conquest. On the northeastern frontier with the Cohonina Branch Indians that limit may have been reached shortly before San Francisco Mountain Gray Ware went out of production about 1150 A.D., and this date may be taken as the beginning of time immemorial in this region.

However, toward the southeast the Prescott Branch Indians survived a century and a half after 1150 A.D., until approximately 1300 A.D. In that direction, the Hualapais did not reach the limits of their historic territory until after the disappearance of the Prescott Branch occupants. Therefore, in that region, 1300 A.D. may be taken as the beginning of time immemorial.

The use of two absolute dates for the beginning of time immemorial would be unnecessarily confusing in discussions.

1/ Rogers, 1945, p. 190, 193.
which follow, so the earlier date will be ignored, and the
concept time immemorial further operationalized as that span
of years after 1300 A.D. until the Anglo-American conquest
and imprisonment of the Hualapais in 1874-1875 A.D.
CHAPTER V
DEFINITION OF THE AREA SHARED BY THE HUALAPAIS
WITH THE MOHAVES

Having in preceding sections presented ethnographic evidence plus evidence from archaeological surveying and excavation of a burned wickiup and rock shelters which demonstrates that Tizon Brown Ware clay vessels were manufactured and used by the Hualapai Indians, the geographic distribution of this ware can now be defined. This distribution is the main point of interest in this study for the Hualapai Tribe of Arizona, its attorneys, the Department of Justice defending the United States, and the Indian Claims Commission of the United States. For this study makes the geographic distribution of sites bearing 70% or more Tizon Brown Ware its operational definition of the territory occupied and used solely by Hualapai Indians from time immemorial to 1874-1875.

The area defined in the Petition as Hualapai ancestral territory is a large one. In order to verify or reject the hypothesis that this Petition correctly defined the geographic area occupied and used exclusively by Hualapais from time immemorial, it will be necessary to break this large region
up into geographic units of smaller size. Within these smaller units, the proportion of Tizon Brown Ware sherds to sherds of other ceramic wares will be compared at each site and for each area.

A. The Arizona State Museum Survey

Geographic units of a size convenient for presenting distributional data and yielding significant results have already been defined. The University of Arizona and Arizona State Museum archaeological survey system, derived from an earlier Gila Pueblo system, employs geographic units based on the latitude and longitude divisions. The area one degree of longitude by one of latitude, a 60' quadrangle, is assigned a letter in the Arizona State Museum survey system. The 15' quadrangles within this larger unit are then numbered consecutively from upper left to lower right in the order that a page of English text is read:

1  2  3  4
5  6  7  8
9 10 11 12
13 14 15 16

As an archaeological site is located within one of these numbered 15' quadrangles, it is assigned a site number in the order of its discovery. Thus, if it was the first site recorded in a 15' quadrangle, it became site number one within that quadrangle. Therefore an Arizona State Museum site num-
ber expresses three items of information: the 60° quadrangle in which the site is located, the 15° quadrangle within that, and the order of its discovery within this. An Arizona State Museum site number is expressed as a letter followed by two numerals: W : 10 : 51.

All or part of the 60° quadrangles Nevada DD and Arizona A, F, G, H, L, M, and N fall within the area defined in the Petition as occupied solely by Hualapais from time immemorial. To bring the individual site data to bear upon the demonstration or refutation of this definition, the 15° quadrangles within these 60° quadrangles will be taken as the primary unit of analysis. Within each 15° quadrangle the individual sites will be analyzed, and the results summarized for each quadrangle. For broader geographic analyses, these will be combined into geographic units meaningful in terms of ceramic ware predominance. The reasoning behind this procedure has been succinctly stated by Colton:

A surface collection of potsherds from a single site is usually relatively small and the sherds may be slightly selected for ones attention is often attracted to some bright colored decorated sherds. Therefore, the data from a single site is not always great in itself. However, if the sherds from contemporary sites in a limited area are combined, the data becomes much more valuable because the errors for one site will be averaged in the data for the whole area.  

Since collections made by a number of archaeologists for sev-

This photographic reproduction of a section of the Archaeological Survey base map of the Arizona State Museum at the University of Arizona includes the entire area formerly inhabited by the Hualapai Indians. 15' quadrangle numbers have been added for convenient reference. This map is used throughout the report.
eral institutions provided data for this study, the combination of individual sites has also served to balance whatever biases one surveyor may have had in collecting sherd samples with the biases of the others.

1. Presentation of Data

In presenting the enormous amount of data which must be considered in this report, a uniform procedure will be followed. In discussing each 15' quadrangle, a map indicating the location of the quadrangle will appear first, followed by tables presenting basic data on the ceramic composition of sites within it, then narrative discussion and conclusions.

In preparing the ceramic analysis tables, certain conventions have been followed. The only absolute figures which appear are the total numbers of sherds recorded from each site and the area total. All type and ware proportions are given as percentages of these totals. Information for each site is given on the same line, or on lines in the same relative positions when more than one line had to be employed, so that the sherd sample on which the percentages are based is readily checked.

Abbreviations were used in identifying sites. Those labeled with a letter and two following numerals, such as F : 12 : 8, are sites located by the Tribal Survey. These may also appear with only the final digit. These collections are stored at the Arizona State Museum on the University of
Arizona campus. NPS stands for National Park Service, and the numeral following these letters is the final serial number of the site, corresponding to the final numeral in the Arizona State Museum system. The Boulder City, Nevada, survey employs the same 60' and 15' survey units and designations as the University of Arizona system. These numerals can and do overlap, since both organizations began numbering sites in each 15' quadrangle at number one.

Any site identified by the letters NA with four subsequent (sometimes three) numbers was surveyed by the Museum of Northern Arizona and the collections are housed there.

Any site identified by the letters SD followed by A and a number was surveyed by Malcolm J. Rogers of the San Diego Museum of Man. The SD stands for San Diego and has been adopted for purposes of identification in this report. It is not used by that institution. Rogers' sites were numbered serially as he visited them in the same manner as Museum of Northern Arizona sites are numbered. The "A" was Rogers' identification for sites in Arizona. The San Diego Museum of Man has not been entirely consistent in assigning site designations. That institution carried out a survey for the National Park Service of the area immediately above Davis Dam as that structure began impounding water. The sites located were labeled DD for Davis Dam and numbered serially in San Diego Museum records. They were also given National
Park Service numbers according to the 15' quadrangle in which they were located. Since the latter system gives approximate geographic location of the site in the label, these sites appear in this report under their National Park Service designations.

Any site identified by the letters G P was surveyed by Gila Pueblo. The subsequent number is the Gila Pueblo serial number within the quadrangle. The Gila Pueblo survey employed the same geographical survey units as the Arizona State Museum and National Park Service, at least in the area covered by this report, giving names to the 60' quadrangles rather than letters.

In order to present the distributional data concerning Hualapai prehistory, it will be necessary to select a geographical starting point. Data concerning sixty odd 15' quadrangles will be presented, and needs to be set forth in an orderly, understandable manner. The area chosen for this beginning is the Mohave-Hualapai frontier region. The main reasons for this choice are that Mohave pottery had been clearly identified prior to and independently of this study, and it is quite distinct from Hualapai pottery in appearance.

B. Identification of Mohave Pottery

Identification of Mohave pottery had presented no great problem, inasmuch as the Mohaves continue to produce clay
This outline map shows the 60' and 15' quadrangle names and numbers employed in the Gila Pueblo Survey in the area covered by the present study.
vessels. It was necessary to make a correlation between such ethnographic specimens and the sherds found on the ground. This correlation had been made by Schroeder. Since this study began, Harner and Kroeber have published descriptions of Mohave pots purchased by the latter around the turn of the century. Harner based his archaeological-style descriptions of historic Mohave pottery upon a sample of seventy-seven whole vessels collected by Kroeber. These he concluded to be local variants of the types Schroeder had called Parker Buff and Parker Red-on-Buff. Harner called this the Fort Mohave Variant.

The Tribal Survey has added to the identification of historic Mohave pottery types by its location of the purely post-settlement satellite sites where the Hualapais imported Mohave trade vessels as production of native Tizon Brown Ware was abandoned. The Lower Colorado River Buff Ware types found on these post-1869 sites included Parker Buff, Parker Red-on-Buff, Parker Stucco, Parker Black-on-Red, and Needles Red-on-Buff. With this list of historic Mohave pottery types to work from, it seemed feasible to demarcate with some accuracy the Mohave-Hualapai ceramic-cultural frontier.

1/ Schroeder, 1952a, p. 20-21.

THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

THE MOHAVE VALLEY

15' Quadrangles Arizona F: 14 and F: 15 south of Pyramid Canyon and west of Black Mountain summit; Arizona L: 2 and L: 7 east of the Colorado River and north of THE NEEDLES and Mohave Mountains in pink. 15' Quadrangle Arizona L: 2 west of the Colorado River in green.
CERAMIC ANALYSIS BY WARES OF SITES ON THE WESTERN BANK OF THE
COLORADO RIVER IN MOHAVE VALLEY IN 15° QUADRANGLE ARIZONA L:2

(Taken from Schroeder, 1952a, p. 9, Table 1)

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>TIZON UNIDENTIFIED</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>PARKER SHERDS</td>
<td>LA PAZ SHERDS</td>
<td>PALO VERDE SHERDS</td>
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<tr>
<td>NPS 2</td>
<td>100.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPS 3</td>
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<td></td>
<td></td>
</tr>
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<td>NPS 4</td>
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<td>5.3</td>
<td>13</td>
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<td>6.6</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>NPS 8</td>
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<tr>
<td>TOTAL</td>
<td>91.3</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>WARE</td>
<td>93.2</td>
<td>1.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

PROPORTIONS OF CERAMIC SERIES WITHIN LOWER COLORADO RIVER
BUFF WARE FROM SITES IN THE MOHAVE VALLEY EAST OF THE
COLORADO RIVER

<table>
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<tr>
<th>SITES</th>
<th>PARKER</th>
<th>LA PAZ</th>
<th>PALO VERDE</th>
<th>SALTON</th>
<th>PYRAMID</th>
<th>OTHER</th>
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<td></td>
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<td>SERIES</td>
<td>SERIES</td>
<td>SERIES</td>
<td>SERIES</td>
<td>SERIES</td>
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<td>F:14</td>
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<td></td>
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<tr>
<td>NA4043</td>
<td>78.8</td>
<td>11.5</td>
<td></td>
<td></td>
<td></td>
<td>9.6</td>
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<td>F:15</td>
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</tr>
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<td>NA3375</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L:2</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NPS 1</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>L:7</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
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<tr>
<td>% OF WARE</td>
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<td>4.1</td>
<td>2.9</td>
<td>1.2</td>
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</table>

*86.4%
## CERAMIC ANALYSIS BY WARES OF SITES IN THE MOHAVE VALLEY ON THE EASTERN (ARIZONA) SIDE OF THE COLORADO RIVER

<table>
<thead>
<tr>
<th>SITES</th>
<th>RIV. BUFF WARE</th>
<th>TIZON BROWN WARE</th>
<th>PRESCOT R/B STUCCO</th>
<th>TOTAL SHERDS</th>
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<td>F:14-NA4U43</td>
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<td>-</td>
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<td>52.0</td>
</tr>
<tr>
<td>F:15-NA3375</td>
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<td>-</td>
<td>-</td>
<td>7.0</td>
</tr>
<tr>
<td>*L:2--NPS</td>
<td>100.0</td>
<td>-</td>
<td>-</td>
<td>5.0</td>
</tr>
<tr>
<td>*L:7--NPS</td>
<td>95.7</td>
<td>4.3</td>
<td>-</td>
<td>23.0</td>
</tr>
<tr>
<td>NPS</td>
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<td>-</td>
<td>-</td>
<td>10.0</td>
</tr>
<tr>
<td>NPS</td>
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<td>12.5</td>
<td>-</td>
<td>8.0</td>
</tr>
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<td>SD A-3</td>
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<td>20.4</td>
</tr>
<tr>
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<td>86.4</td>
<td>-</td>
<td>-</td>
<td>198.0</td>
</tr>
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</table>

## CERAMIC ANALYSIS BY TYPES OF SITES IN EASTERN MOHAVE VALLEY

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
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<td>25.1</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>11.3</td>
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<tr>
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</tr>
<tr>
<td>SD A-3</td>
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<td>7.5</td>
<td>16.1</td>
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<td>-</td>
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<tr>
<td>TOTAL</td>
<td>22.2</td>
<td>22.2</td>
<td>25.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ware %</td>
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<td>25.7</td>
<td>24.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

## CERAMIC ANALYSIS BY TYPE OF SITES IN EASTERN MOHAVE VALLEY (Topo.)

<table>
<thead>
<tr>
<th>SITES</th>
<th>Salton Series</th>
<th>Pyramid</th>
<th>Cerbat</th>
<th>Aquarius</th>
<th>Verde</th>
<th>Pres-</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA4043</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9.8</td>
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<td>NPSL:7</td>
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<td>NPSL:7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>SD A-3</td>
<td>2.2</td>
<td>2.2</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ware %</td>
<td>1.3</td>
<td>1.3</td>
<td>1.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* from Schroeder, 1952a, p. 9, Table 1.
C. Ceramic Series in Mohave Valley

The presentation of data on the ceramic characteristics of sites in northwest central Arizona will be initiated with a discussion of the distribution of ceramic types in the Mohave Valley, the ancestral homeland of the Mohave tribe along the Colorado River.

Information on seven sites on the California shore of the river in 15' quadrangle Arizona L : 2 has been published by Schroeder. Lower Colorado River Buff Ware sherds make up 97.9% of all those collected from these sites, showing that occupation of the Valley area has been entirely by riverine Yumans. Furthermore, since 91.3% of all the sherds fall into the Parker Series of this ware, clearly the Mohaves in the historic sense were the occupiers of these sites. Parker Series sherds constitute 93.2% of the Lower Colorado River Buff Ware sherds from these sites, so that they may be regarded as evidence of the 19th century Mohave occupation of the valley. The La Paz Series sherds add another 1.5% to the total historic Mohave contribution.

There is no need for analyzing each site. The lowest percentage of Parker Series sherds at any is 86.7%. All well exceed Ezell's 80% level of significance of cultural predominance. Therefore, the hypothesis that the historic

1/ Schroeder, 1952a, p. 9, Table: 1.
Mohaves enjoyed sole and exclusive use and occupancy of each and all of these sites is accepted, as is the hypothesis that no other tribe established a permanent encampment in or used or occupied this portion of Mohave Valley prior to the foundation of Fort Mohave in 1859.

On the east side of the Colorado River in Mohave Valley seven other sites have been recorded, six of them near the river, and one on the western slope of Sitgreaves Pass. Lower Colorado River Buff Ware constitutes 86.4% of the sherds collected from these sites, so the hypothesis that the Mohaves and their ancestors held sole possession of these sites is accepted. Parker and La Paz series sherds make up 74.2% of the total, so the hypothesis is accepted for the historic Mohaves specifically. Hualapai pottery was present at only three of these sites, in very small amount. More pre-1300 Prescott Gray Ware indicating early occupation in this region occurs, but at only two of these sites.

Two of these sites east of the river can be correlated more or less with Mohave settlements recorded by Kroeber around the turn of the century. National Park Service site Arizona L : 2 : 1, just north of Powell Lake on the mesa is probably Va'orve or just above it on the terrace. San

1/ Schroeder, 1952a, p. 41, Table 6, Map.
2/ Kroeber, 1951, Map 1.
Diego Museum's site A-3 located a mile and a half north of the Topock bridge and just north of the mouth of Sacramento Wash on a sandy beach about twenty-five feet above the river is probably Sampuly-k-uvare although the indicated age of the site and the abundance of sherds indicate it may correspond to Atsqaqa, a very important Mohave settlement:

Atsqaqa (site Y, Valley map 1, E) is one of the most frequently mentioned spots at the foot of the valley. It appears to have been the first farming settlement reached as one traveled upstream on the E side of the river. My Mohave friends generally associated it with Mellen on the railroad: "half a mile N of Mellen," the interpreter said here. Mellen, now Topock, is the station just E of the Santa Fe railway bridge at the foot of the valley.

Here in the Mohave homeland is a clear picture of native ceramic predominance—92.8% types known to have been historically made west of the river and 74.2% east of it. One pure Mohave site is located on the western slope of the Black Mountains above the common boundary between Hualapai and Mohave contiguous territories stated in the Petition and agreed upon by members of both tribes as their conceptual frontier. This site raises a suspicion that Mohave land use extended up the western slope of the Black Mountains beyond the conceptual boundary stated in the Petition to demarcate lands used only by Hualapais.

1/ Kroeber, 1951, Map 1.
D. Black Mountain Pass Summits

A number of sites have been recorded at or near the summits of the passes leading across the Black Mountains between Mohave Valley and the Hualapai uplands to the east. The sherds collected from these sites are 44.9% Lower Colorado River Buff Ware and 47.4% Tizon Brown Ware. There is no predominance of ceramic wares nor associated cultures at these sites. The sherds indicate, instead of predominance, a mixing of peoples, a sharing of sites. In other words, this area apparently was visited and used by two tribes with different ceramic traditions on approximately equal terms.

In view of the relative abundance of Mohave pottery per capita, and its relative per capita scarcity among the Hualapais, the ceramic picture of site utilization presented by the sherds is undoubtedly weighted against the Hualapais in favor of the sedentary Mohaves. Even so, the pass summits clearly lay at the eastern edge of a zone of overlapping Mohave and Hualapai land use patterns.

Although the Mohaves and Hualapais both conceptualized their common frontier as a "line" from The Needles at the south end of Mohave Valley straight to Boundary Cone at the southern edge of the western slope of Sitgreaves Pass, then to the northern end of the valley in a "line" toward New-
berry Mountain (Mohave Ayikame), the ceramic evidence shows that Mohave land use extended to the summits of the passes through the Black Mountains, and by inference to the summit of the range in general.

The generalization has been advanced that intertribal frontiers follow watersheds where a non-sedentary Indian group occupies mountains adjacent to a sedentary agricultural group in a valley. "The division becomes that of what is hill with springs and game, and what is farm land." Although advanced in testimony concerning the Yuma Indians lower down on the Colorado River, it was formulated by its proponent from his experience with the Mohaves. This concept of a sedentary riverine Indian group also utilizing the surrounding bajada slopes has been employed by Ezell in interpreting historical data on the Gila River Pimas: "Although their villages and fields were primarily located within a comparatively limited area along the river, the Gila Pimas may be said to have occupied the lowland valley..."  

Available evidence on Mohave-Hualapai frontier behavior indicates that this generalization has considerable validity, but requires specification, particularly in regard to the re-

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2/ Kroeber, July 28, 1953.
The relationship of land use patterns to available drinking water, which is the single most important inhibiting factor to human settlement and land use in the semi-arid southwestern environment.

The Needles--Boundary Cone--Avikame frontier between contiguous Mohave and Hualapai territories has been repeatedly agreed upon by members of both tribes, supporting Kroeber's idea that Indian boundaries were generally easily observable natural features.\(^1\) This line approximates the top of the bajada slope at the western base of the Black Mountains. Despite this intertribally accepted location of their contiguous territories' conceptual frontier, the actual land use patterns of both tribes ignored it. Hualapai informants remember gathering grass seeds from the bajada slope within conceptual Mohave territory as far as they could range out from the springs on the western slope of the mountains. On the other hand, the ceramic evidence on the site on the western slope of the Black Range clearly indicates that Mohaves also exploited the resources--probably game and wild vegetal foods--of the mountains within conceptual Hualapai territory, undoubtedly depending on the same western-slope springs used by the Hualapais. The Mohaves could not very well gather on the

\(^1\) Kroeber, July 28, 1953, obviously referring to conceptual, not land use boundaries.

\(^2\) Conceptual and land use frontiers distinguished in Dobyns, 1955.
upper bajada without coming up to the mountain springs for water—it was too far from their river supply of drinking wa-
ter. Historic evidence likewise shows the Mohaves came up to the mountain edge if not on the western slope. In 1857 they met Lt. E. F. Beale's party either on the western slope of Sitgreaves Pass or on the very top of the bajada slope immediately below it where the arroyos draining the mountain slopes still run in deep channels. Thus Kroeber's generalization appears to be inadequate. A more complex generalization seems required to state the land use relationship: that a sedentary agricultural river-dwelling group extends its supplemental food gathering and hunting activities to the summits of the surrounding mountains if available water permits, and the adjacent non-sedentary group extends its gathering and hunting activities onto the bajada slope as far as available water permits, creating between the river flood plain agricultural area and the surrounding mountain summits an area exploited by both groups: the bajada and mountain slope. If drinking water were not available (either non-existent or not available because held by a hostile tribe) the riverine sedentary Indians would be restricted to such use as they could make of the lower bajada by carrying water from the river.

1/ Beale, 1858, p. 75.
This is a more complex statement than Kroeber's assertion that when farming tribes occupy a river bottom and adjacent non-farmers a desert, their territorial division is simply a matter of hill land with springs and game vs. farm land. In reality, sedentary agricultural tribes primarily reliant upon river bottoms retain patterns of using surrounding arid lands as sources of materials not obtainable on the river flood plain such as stone, special foods not available on the river, and as a subsistence base in years of water failure in the stream. Kroeber himself has pointed out that the Mohaves obtained eagle and hawk feathers from birds taken from nests in the mountains surrounding Mohave Valley, including the Black and Mohave ranges on the eastern side. "And those feathers were of great value and significance to them, and some of the clans tell how they took this mountain or that mountain and claimed it to be theirs forever..." 1/

Since these bird nests were located up on the slopes above the mutually agreed upon intertribal conceptual boundary between Mohaves and Hualapais, these clan ownership claims could only have been relative to other Mohave clans. They could hardly have prevented the Hualapais from raiding the same nests for birds. But this land use practice demonstrates clearly how the actual land use pattern of the sedentary

1/ Kroeber, July 28, 1953.
river-bottom agriculturalists extended to the crests of the surrounding mountains regardless of the location of the conceptual boundary between them and neighboring non-sedentary tribes. In the same way, these latter tribes actually exploited the resources of lands right down to the vicinity of the flood plain regardless of the conceptual frontier.

In annotating the Mohave tale accounting for the origin of the historic clans of that tribe, Kroeber emphasized the knowledge of geography surrounding the Mohave Valley displayed in its narration:

East of the Colorado, the Walapai territory east and northeast of Mohave Valley enters little into the story. On the contrary, a great area to the southeast of Mohave Valley is repeatedly being traversed in the narrative or lived in, connected with Mohave Valley by a sort of wedge which takes in the south end of the range of the Black Mountains, the lower Sacramento Wash, the lower slopes of the eastern flank and southern end of the Hualpai Mountains on to Williams River, as well as westward to the Colorado below Mohave Valley. This wedge has been mapped as Walapai territory on the basis of Walapai statements, but the Walapai appear to have had no permanent settlements within it. It was therefore probably a no-man's land in the sense of being unoccupied, though it was perhaps visited more often for food by the Walapai, for traverse by the Mohave. 1/

The implied use of the epic as evidence of Mohave or Hualapai land use is difficult to justify in view of Kroeber's own introductory statements that

1/ Kroeber, 1951, p. 137.
there is nothing to show that any of the events told of did happen, or that any of the numerous personages named ever existed... I doubt whether any of the specific incidents were really handed down by tradition. In short, the story is pseudohistory. It is a product of imagination, not of recollection; and therefore an effort at literature.

In my opinion the one item of possible historical fact in the tale is that it may reflect a time when the Mohave were not yet permanent residents of Mohave Valley...

Viewed as a literary, imaginative product, the epic's scene-laying in southern Hualapai country can be readily accounted for as reflecting the sedentary, river-oriented culture of the Mohaves. Bill Williams Fork and the lower Big Sandy River and the Santa Maria and its tributaries were simply the flowing water nearest to the Colorado, and it was naturally to these riverine areas Mohave imagination was drawn across the desert—that from lower Mohave Valley between the Hualapai and Mohave Mountains to Bill Williams Fork. As a region for supporting a population as the epic would have it, the Bill Williams Fork basin leaves a good deal to be desired, so the epic apparently reflects Mohave preoccupation with running water and an unrealistic estimation of the resource potential of the area probably due to lack of familiarity with it.

1/ Kroeber, 1951, p. 72.
Undoubtedly Mohaves had traversed the area between Mohave Valley and Bill Williams Fork on raiding expeditions directed against the Jalchedunes in the Bill Williams Fork area and later on the Gila River. But they recognized that they were crossing Hualapai territory, as recorded by Kroeber many years before land use patterns became monetarily significant. The Hualapai Petition does not deny that other tribes raided across and into Hualapai territory, but does deny that this gave them any rights there.

Kroeber erred in saying there were no Hualapai settlements in the area between the Hualapai and Mohave mountains. The maps he cited, which were prepared by one of his own students on the basis of interviews carried on under his own direction, show one Hualapai settlement west of the Hualapai Mountains in this area. The present study has confirmed the existence prior to Anglo-American conquest of a large center of Hualapai population west of the Hualapai range at the cienega or small marsh known as Teki'aulva (sites Arizona M:5:1 and M:5:2) where there is no ceramic evidence of Mohaves at all. In addition, much oral traditional information about Hualapai land use in this desert area extending across the flats to the slopes of the Mohave Mountains has been ob-

1/ Kroeber, 1925, p. 753.
2/ Kroeber, 1935, Maps 2 and 3.
tained which amplifies the incomplete data gathered by the Laboratory of Anthropology expedition of 1929 under Kroeber's direction.

Therefore, Kroeber's suggestion that the area between the Hualapai and Mohave mountains was a no-man's land must be rejected as not in accord with available facts as to Hualapai or Mohave land use, or Hualapai and Mohave conceptual frontiers, as shown by his earlier statement that Mohave war parties returning from the Gila River slept one night "among the Walapai" and traveled another day to reach Mohave Valley. He was correct in saying Mohaves traversed the area: low density of Hualapai population in this arid region did not allow them to contest passage of heavily armed war parties of the populous Mohaves. But the Mohaves recognized that the country they crossed was Hualapai territory.

1. Site Analysis

Proper analysis of the pass ceramics is complicated by lack of available records on some sites. The San Diego Museum records for this area are deficient. San Diego sites with whole numbers can be identified from extant records as sites surveyed by Malcolm J. Rogers. Sites with an added letter or number may be additional sites surveyed in the same area at a later date or they may be excavation levels.

1/ Kroeber, 1925, p. 753.
CERAMIC ANALYSIS BY WARES OF SITES LOCATED ON OR NEAR THE SUMMITS OF PASSES THROUGH THE BLACK MOUNTAINS ON THE PRE-CONTACT MOHAVE-HUALAPAI FRONTIER

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Cottonwood Spring

| F: 11 | 1 | 33.3 | 22.2 | 22.2 | 22.2 | - | - | 9 |

Union Pass

| SD A-123 | 100. | - | - | - | - | - | - | 1 |

Secret Pass

| SD A-1  | 35.1 | 52.6 | 2.1 | 1.1 | 7.2 | 2.1 | 97 |
| SD A-1-A | 65.8 | 29.8 | 6.4 |      | 47  |     |    |
| SD A-1-C | 3.6  | 92.9 | 3.6 |      | 28  |     |    |
| SD A-1-D | 29.2 | 58.1 |      | 12.9 | 31  |     |    |
| SD A-1-E | 73.6 | 24.5 | 1.9 |      | 53  |     |    |
| SD A-1-H | 100. | - | - | - | - | - | 3 |
| SD A-1-I | 14.1 | 85.9 | - | - | - | - | 64 |

Bass Total:

| Secret | 37.8 | 55.7 | 1.9 | 1.9 | 2.2 | 1.9 | 323 |

Sitgreaves Pass

| SD A-2  | 32.8 | 51.6 | 12.5 | 3.1 | 64  |     |    |
| SD A-2-A | 37.9 | 31.6 | .9  | 5.3 | 114 |     |    |
| SD A-2-F | 58.8 | 41.2 |     |     | 114 |     |    |
| SD A-2-FT100 | - | - | - | - | - | - | 8 |

Sitgreaves Total:

| 54.3 | 39.7 | .5 | 2.7 | - | - | 2.0 | 2.3 | 350 |

Pass Total:

| Summit | 44.9 | 47.4 | .5 | 2.2 | .6 | .5 | 2.1 | 2.1 | 623 |

Area Total:
CERAMIC ANALYSIS BY TYPES OF SITES LOCATED ON OR NEAR SUMMITS OF PASSES THROUGH THE BLACK RANGE ON MOHAVE-HUALAPAI FRONTIER

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CERAMIC ANALYSIS BY TYPES OF SITES LOCATED ON OR NEAR SUMMITS OF PASSES THROUGH THE BLACK RANGE ON MOHAVE-HUALAPAI FRONTIER

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CERAMIC ANALYSIS BY WARES OF SITES ON THE MOHAVE-HUALAPAI FRONTIER OF UNKNOWN LOCATION IN 15' QUADRANGLES F:15 & L:7

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<td>GP 1</td>
<td>53.3</td>
<td>46.7</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 2</td>
<td>60.7</td>
<td>40.2</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 3</td>
<td>39.2</td>
<td>54.2</td>
<td>3.4</td>
<td>59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
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<td>1.3</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L:7</td>
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<td>72.4</td>
<td>4.5</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 1</td>
<td>24.4</td>
<td>76.6</td>
<td>25</td>
<td></td>
<td></td>
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<tr>
<td>GP 2</td>
<td>24.4</td>
<td>76.6</td>
<td>25</td>
<td></td>
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</tr>
<tr>
<td>GP 3</td>
<td>24.4</td>
<td>76.6</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>36.6</td>
<td>59.7</td>
<td>1.5</td>
<td>154</td>
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</tr>
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</table>
of the original sites. Rogers is known to have excavated rock shelters in both Secret and Sitgreaves Passes, but records of these excavations have not been obtained. Therefore, each numbered collection of sherds has been treated as a site.

a. Sitgreaves Pass

Lower Colorado River Buff Ware constitutes 54% of the sherds known from the summit area of Sitgreaves Pass, compared to only 38.7% Tizon Brown Ware sherds, indicating that Mohaves were in the area somewhat more than Hualapais, although much of the river ware was undoubtedly traded to Hualapais before it was broken.

i. San Diego's A-2

The sherd sample is reliable and shows mixed use by the Hualapais and Amacava-Mohave Branch. The Hualapai sherds cannot be distinguished temporally as can the Amacava-Mohave sherds. So all the Lower Colorado River Buff Ware must be compared to all the Tizon Brown Ware: 32.8% to 51.6%. Parker Series sherds make up only 11% of the total, and probably late Hualapai usage was in about the same proportion as the Tizon Brown Ware.

The hypothesis that this site was occupied and used solely by either Hualapais or Mohaves must be rejected: it was used by both tribes.
ii. San Diego's A-2-A

The sherd sample is very reliable and shows mixed Hualapai and Mohave utilization of the site with 57.9% Lower Colorado River Buff Ware to only 31.6% Tizon Brown Ware. Parker and La Paz Series sherds are 32.5% of the total, signifying identifiable Mohave use almost equal to the entire Hualapai occupancy. The hypothesis that the site was occupied exclusively by either Hualapais or Mohaves must be rejected.

iii. San Diego's A-2-F

The sherd sample is very reliable with 58.9% Lower Colorado River Buff Ware vs. 41.2% Tizon Brown Ware. Parker Series sherds make up 12.3% of the total, representing identifiable Mohave use. While there seems to have been relatively heavier Hualapai occupation here, the hypothesis that the site was occupied exclusively by either Mohaves or Hualapais must be rejected.

iv. San Diego's A-2-FT

The sherd sample is unreliable but entirely Lower Colorado River Buff Ware with 37.5% Parker Series sherds of the modern Mohave. The hypothesis that this site was occupied exclusively by the Amacava-Mohave Branch cannot be rejected. There is no evidence for Hualapai occupancy of this site.

v. Summary of Sitgreaves Pass Summit

Of four sites, one with an unreliable sherd sample is a pure Amacava-Mohave Branch site, and three mixed frontier
sites show use by both Mohaves and their riverine ancestors and Hualapais. The hypothesis that either group enjoyed exclusive use or occupancy of the summit area of Sitgreaves Pass must be rejected.

b. Secret Pass Summit Area

The proportion of Tizon Brown Ware to Lower Colorado River Buff Ware in the summit region of Secret Pass is in the Hualapais' favor, 55.7% to 37.8%, indicating considerably more Hualapai use than Amacava-Mohave, but not exclusive Hualapai land use.

i. San Diego's A-1

The sherd sample is reliable and 52.6% Tizon Brown Ware compared to 35.1% Lower Colorado River Buff Ware, with Parker Series sherds only 7.2% of the total, indicating relatively little use by modern Mohaves. However, the hypothesis that this site was used exclusively by either group must be rejected.

ii. San Diego's A-1-A

The sherd sample is fairly reliable, running 63.3% Lower Colorado River Buff Ware against a mere 29.8% Tizon Brown Ware, which indicates considerably more Amacava-Mohave Branch utilization than Hualapai. Parker Series sherds of the modern Mohaves make up 23.4% of the total. The hypothesis that either group exclusively occupied this site must be rejected, the Hualapai sherds being well over the 25% level of significance of occupancy.
iii. San Diego's A-1-C

The sherd sample is of low reliability but 92.9% Tizon Brown Ware, so that the hypothesis that this site was occupied solely by Hualapais prior to their conquest cannot be rejected.

iv. San Diego's A-1-D

The sherd sample is fairly reliable, having 58.1% Tizon Brown Ware to only 29% Lower Colorado River Buff Ware sherds—all of the latter falling into either the Parker or La Paz Series made by modern Mohaves. Therefore, the hypothesis that either tribe exclusively occupied this site must be rejected.

v. San Diego's A-1-E

The sherd sample is reliable, with 73.6% Lower Colorado River Buff Ware to only 24.5% Tizon Brown Ware, which exceeds Ezell's 20% level of significance of occupancy and is near enough to the 25% level to be taken as showing Hualapai occupancy of this site on this frontier between sedentary agriculturalists making abundant pottery and non-sedentary food gatherers making little pottery. Parker and La Paz series sherds make up 47.1% of the total, indicating frequent use by and trade with modern Mohaves. The hypothesis that either tribe exclusively occupied this site must be rejected.
vi. San Diego's A-1-H

The sherd sample is unreliable, but entirely Tizon Brown Ware, so that the hypothesis that the site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

vii. San Diego's A-1-I

The sherd sample is reliable and 85.9% Tizon Brown Ware so that the hypothesis that this site was occupied exclusively by Hualapais is accepted.

viii. Summary of Secret Pass Summit Area

Analysis of seven ceramic sites shows three to have been occupied exclusively by Hualapais, two to have been used more by the Hualapais than the Amacava-Mohave Branch, and two to have been utilized to a greater extent by the latter group. Thus, it appears that in this area land use was mostly Hualapai, but that the Mohaves shared in the resources up to the summit region to some extent. The hypothesis that either tribe enjoyed exclusive occupancy of the Secret Pass summit area must be rejected.

c. Union Pass: S. D. A-123

The single sherd from Union Pass is Tizon Brown Ware so the hypothesis that this area was occupied exclusively by Hualapais cannot be rejected.
The sites previously analyzed in this section are all located in 15' quadrangle Arizona F : 15. To the northward one site has been surveyed in 15' quadrangle Arizona F : 11. Here Tizon Brown Ware forms a third of the unreliable sherd sample, but the rest of the sherds seem to have been derived from the Havasupais, the pre-1150 A. D. Cohonina and their Kayenta-Hopi Branch contemporaries. Deadmans Black-on-Red pottery such as was found here was made from about 775 to 1060 A. D. 1/ In view of the obviously exotic origin of all the non-Hualapai sherds far to the east beyond Hualapai territory, as well as the pre-1150 A. D. fashioning of most of them, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial cannot be rejected. This spot may have been visited by Havasupai and earlier by Cohonina traders en route from their plateau country across Hualapai territory to trade with the Mohaves or earlier Ama-cava Branch. Havasupai traders journeyed west with Fr. Francisco Garces in 1776 to swap blankets, leggings and cowhides for sea shells. 2/ A traders' camp here would have been the last one before reaching Mohave Valley. Even so, it probably

1/ McGregor, 1951, pp. 20, 31; Colton, 1953, p. 75.
2/ Coues, 1900, II:414.
was occupied by traders for no more than a night or two at a time and was quite impermanent.

2. Conclusion

Analysis of thirteen sites at or near the summits of passes through the Black Mountains east of the Mohave Valley and northward shows that Mohave and Hualapai land use patterns ignored their mutual conceptual frontier from The Needles to Boundary Cone to Avikame. The upland group gathered wild vegetal foods on the bajada below the conceptual frontier as far as their mountain spring water supply permitted. The sedentary riverine group utilized a number of sites on the western slope of the Black Mountains above the conceptual frontier clear up to the pass summit area, utilizing the same springs on the western slope. It is, therefore, concluded that the area between the summit of the Black Range and the river flood plain was exploited by both tribes.

There is progressively less evidence of Amacava-Mohave Branch land utilization of the summit sites from south to north. The heaviest river tribe occupation was in Sitgreaves Pass where one site was occupied solely by the riverine Indians, three were used by both groups, and where springs are numerous. The bulk of land use in the Secret Pass summit area was Hualapai: three sites were used only by Hualapais, two more by them more than by the Amacava-Mohave Branch and two only by the latter. Farther north in Union Pass and be-
yond all available ceramic evidence indicates exclusively Hualapai occupation.

The Petition followed the Mohave-Hualapai conceptual frontier in describing the bounds of territory owned exclusively by the Hualapais adjacent to Mohave Valley. From "a point south of Topock, known as Pinnacle Butte; thence northeast on a line to Boundary Cone; thence northwest on a line to the Colorado River at a point near Hardyville, east of All-Spirits Mountain" was the land-use frontier according to the Petition. In view of the evidence just presented, the hypothesis that the Petition correctly described the exterior limits of lands owned, used and occupied exclusively by Hualapais must be rejected.

The area which the Hualapais actually "exclusively owned, and enjoyed the sole and undisputed use, occupancy and possession" of did not reach the Hualapai conceptual frontier which the Petition describes as the exterior limit of the lands used only by Hualapais. It extended up the eastern slope of the Black Mountains only to the summit, Mohave land use extending up the western slope to the summit. And Hualapai land use did extend beyond the conceptual frontier down the bajada slope west of the mountains shared by Mohaves.

1/ Marks, 1951, p. 4. "Pinnacle Butte" is how Hualapais translate their own name for The Needles, Wi Kwit Kwit.

2/ Ibid., p. 3.
Riverine Sites on the Eastern (Arizona) Bank of the Colorado River North of the Mohave Valley
RELATIVE PROPORTIONS OF CERAMIC WARES FROM SITES RECORDED ON THE EASTERN BANK OF THE COLORADO RIVER NORTH OF MOHAVE VALLEY

<table>
<thead>
<tr>
<th>Quadrangle</th>
<th>LOWER COLO.</th>
<th>TIZON</th>
<th>TIZON</th>
<th>PRESCOTT</th>
<th>PALMUTE</th>
<th>S. F. MT.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RIVER BUFF</td>
<td>BROWN</td>
<td>WIPED</td>
<td>GRAY WR.</td>
<td>UTILITY</td>
<td>GRAY WR.</td>
</tr>
<tr>
<td>F:14</td>
<td>81.6</td>
<td>15.8</td>
<td>3.4</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F:10</td>
<td>81.5</td>
<td>1.7</td>
<td>6.5</td>
<td>.2</td>
<td>.1</td>
<td>2.8</td>
</tr>
<tr>
<td>F:6</td>
<td>77.2</td>
<td>16.4</td>
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<tr>
<td>F:2</td>
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<tr>
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<td>13.2</td>
<td>.4</td>
<td>.1</td>
<td>.1</td>
<td>4.1</td>
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<tr>
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<th>SAN JUAN</th>
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<th>MOAPA</th>
<th>UNIDENTIFIED</th>
<th>TOTAL</th>
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<tr>
<td></td>
<td>RED WARE</td>
<td>ORANGE</td>
<td>WHITE</td>
<td>GRAY</td>
<td>TIFIED SHERDS</td>
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</tr>
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<td>F:14</td>
<td></td>
<td>2.6</td>
<td>38</td>
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</tr>
<tr>
<td>F:10</td>
<td></td>
<td></td>
<td>59</td>
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<tr>
<td>F:6</td>
<td>tr.</td>
<td>.1</td>
<td>.1</td>
<td>.9</td>
<td>2306</td>
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<tr>
<td>F:2</td>
<td>.1</td>
<td>.1</td>
<td>.9</td>
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<td>.1</td>
<td>.2</td>
<td>1.</td>
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RELATIVE PROPORTIONS OF CERAMIC SERIES OF LOWER COLORADO RIVER BUFF WARE ON RIVERINE SITES NORTH OF MOHAVE VALLEY IN ARIZONA

**PROPORTION IN TOTAL SHERDS**

<table>
<thead>
<tr>
<th>15' Quad-</th>
<th>Par-ker</th>
<th>La Paz</th>
<th>Palo Verde</th>
<th>Sal-ton</th>
<th>Pyra-mid</th>
<th>Other</th>
<th>Total Sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>F:14</td>
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<td>2.6</td>
<td>2.6</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>F:10</td>
<td>20.3</td>
<td>8.5</td>
<td>35.6</td>
<td>27.1</td>
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<td></td>
<td>59</td>
</tr>
<tr>
<td>F:6</td>
<td>32.2</td>
<td>4.1</td>
<td>5.3</td>
<td>15.2</td>
<td>16.2</td>
<td>tr.</td>
<td>2306</td>
</tr>
<tr>
<td>F:2</td>
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<td>100.</td>
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</tr>
<tr>
<td><strong>TOTAL:</strong></td>
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<td>7.6</td>
<td>19.7</td>
<td>16.4</td>
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**PROPORTION IN LOWER COLORADO RIVER BUFF WARE**

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<th>La Paz</th>
<th>Palo Verde</th>
<th>Sal-ton</th>
<th>Pyra-mid</th>
<th>Other</th>
<th>Total Sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>F:14</td>
<td>90.3</td>
<td>3.2</td>
<td>3.2</td>
<td>3.2</td>
<td></td>
<td></td>
<td>31</td>
</tr>
<tr>
<td>F:10</td>
<td>22.2</td>
<td>9.3</td>
<td>38.8</td>
<td>29.6</td>
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<td>54</td>
</tr>
<tr>
<td>F:6</td>
<td>41.7</td>
<td>5.3</td>
<td>6.9</td>
<td>25.1</td>
<td>21.5</td>
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<td>1780</td>
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<td>38</td>
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<tr>
<td><strong>TOTAL:</strong></td>
<td>39.6</td>
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<td>9.4</td>
<td>24.4</td>
<td>20.2</td>
<td>.1</td>
<td>2724</td>
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</tbody>
</table>
E. The Arizona Bank of the Colorado River

North of the Mohave Valley

In the preceding section it was concluded that Kroeber's generalization about the frontier between a sedentary agricultural river valley people and a non-sedentary uplanders required modification. On the basis of oral traditions regarding land use plus ceramic remains on the eastern side of Mohave Valley, it was pointed out that the conceptual frontier follows conspicuous natural features, but actual land use patterns of the neighboring tribes, if they were at peace with each other, overlapped and ignored the conceptual frontier if water was available close to it. For the sedentary riverine tribe, its "natural" land use boundary is the summit of the surrounding mountains if water is available within a reasonable distance. For the upland non-sedentary tribe, its "natural" land use boundary is somewhere on the lower bajada slope close to the river flood plain (and may include part of the flood plain if intertribal relations are amicable enough to allow the uplanders to obtain water from the river).

This generalization raises a question concerning the western frontier of territory used and occupied exclusively by Hualapais north of the Mohave Valley. Mohaves have not claimed the river valley north of Mohave Valley, but this seems to be a case of attrition in their oral tradition. Historical documents clearly place Mohaves north as far as
Cottonwood Island within post-contact times, although Kroeber thought this occupancy was only intermittent. He wrote "Above is the great defile known as Eldorado Canyon, visited now and then by Chemehuevi and Walapai, who lived above it on west and east, but unfit for habitation." Its uninhabitableness is questionable in the light of evidence to be presented in this section and in view of Kroeber's own estimation of Eldorado Canyon as being almost as important in Mohave tradition as Avikame (Newberry Peak).

The Hualapai conceptual frontier north of Mohave Valley was the midstream of the Colorado River. The Petition describes this as the boundary of the territory exclusively used and occupied by Hualapais. From "a point near Hardyville, east of All-Spirits Mountain; thence north and east on a line through the center of the said Colorado River to the point and place of beginning" is the Petition's description of the western limits of lands used solely by Hualapais. The hypothesis that this description is correct hardly seems tenable in view of historical evidence of Mohave land use north of Mohave Valley around Cottonwood Island. Moreover, ceramic

1/ Kroeber, 1925, p. 726.
2/ Ibid., p. 788.
3/ Marks, 1951, p. 4.
evidence along the eastern bank of the river indicates that this hypothesis should be rejected.

From the head of Mohave Valley north to the Great Bend in the Colorado River where that stream turns southward, Lower Colorado River Buff Ware is the predominant ceramic ware found on sites along the eastern or Arizona bank of the river. In a sherd sample of 3,375 from such sites, this ware constitutes 80.7% of the total, compared to only 13.2% Tizon Brown Ware. This indicates mostly Amacava-Mohave Branch use and occupancy of this up-river region, at least occasionally and for special purposes. The Tizon Brown Ware sherds apparently also evidence Hualapai land use on the east bank of the Colorado, since Mohaves ranging up here were more likely to be trading Mohave pots to Hualapais than the reverse. In hunting and gathering on the nearby mountain slopes, Hualapais had to come to the river for water because mountain springs become progressively fewer and smaller from south to north.

Sherds of the Parker Series make up 31.5% of the sample, and La Paz Series 5.5% or 37% of the total sherds which can be identified directly with the modern Mohave tribe. These two series together comprise 45.8% of the Lower Colorado River Buff Ware sherds on the eastern shore of the river between Mohave Valley and the Great Bend, and leave no doubt that Mohaves utilized the eastern bank as far up river as the bend. Kroeber limited his conception of Mohave territory.
15' Quadrangle Arizona F: 14 lying east of the Colorado River north of the Mohave Valley (and Davis Dam).
CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE F : 14
EAST OF THE COLORADO RIVER AND NORTH OF THE MOHAVE VALLEY

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>TIZON BROWN WARE</th>
<th>UNIDENTIFIED SHERDS</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS 8</td>
<td>14.3</td>
<td>85.7</td>
<td>3.2</td>
<td>7</td>
</tr>
<tr>
<td>NPS 11</td>
<td>96.8</td>
<td></td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>81.6</td>
<td>15.8</td>
<td>2.6</td>
<td>38</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUADRANGLE F : 14
EAST OF THE COLORADO RIVER AND NORTH OF THE MOHAVE VALLEY

<table>
<thead>
<tr>
<th>SITES</th>
<th>Parker Series</th>
<th>Tumco Topoo</th>
<th>Pyramidal</th>
<th>Aqueduct</th>
<th>Unidentified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buff R/B Stucco</td>
<td>Buff Gray</td>
<td>Buff mid</td>
<td>Brown</td>
<td></td>
</tr>
<tr>
<td>NPS 8</td>
<td>48.4</td>
<td>38.7</td>
<td>14.3</td>
<td>85.7</td>
<td>3.2</td>
</tr>
<tr>
<td>NPS 11</td>
<td>31.6</td>
<td>2.6</td>
<td>2.6</td>
<td>2.6</td>
<td>15.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>39.5</td>
<td>31.6</td>
<td>2.6</td>
<td>2.6</td>
<td>15.8</td>
</tr>
</tbody>
</table>

PROPORTIONS OF CERAMIC SERIES OF LOWER COLORADO RIVER BUFF W.

<table>
<thead>
<tr>
<th>Parker Series</th>
<th>Palo Verde Series</th>
<th>Salton Series</th>
<th>Pyramid Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Total</td>
<td>73.7</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>% of Ware</td>
<td>90.3</td>
<td>3.2</td>
<td>3.2</td>
</tr>
</tbody>
</table>
north along the river by relying completely on oral traditional evidence, to the de-emphasis of historic documentation and utter neglect of archaeological evidence.

1. 15' Quadrangle Arizona F:14 N. of Mohave Valley in Arizona

   Immediately north of Mohave Valley, the Colorado River runs through Pyramid Canyon, and there is little riverside land which can be used until Cottonwood Valley is reached. Only two ceramic sites are known in this quadrangle north of Mohave Valley—practically speaking, north of Davis Dam.

   a. NPS Arizona F : 14 : 8

      The sherd sample is unreliable but 85.7% Tizon Brown Ware, so that the hypothesis that this site was used and occupied exclusively by Hualapais prior to their conquest cannot be rejected.

   b. NPS Arizona F : 14 : 11

      The fairly reliable sherd sample is 96.8% Lower Colorado River Buff Ware, so that the hypothesis that this site was occupied and used exclusively by Indians of the Amacava-Mohave Branch cannot be rejected. Sherds of the Parker Series make up 73.7% of the total, indicating primarily modern Mohave utilization of this site.

   c. Conclusion

      Of the sites recorded, one shows primarily if not exclusively Hualapai use, the other entirely Amacava-Mohave Branch use, so the hypothesis that either group enjoyed sole and ex-
exclusive use or occupancy of this riverside strip north of Mohave Valley must be rejected.

Further, the hypothesis that the Petition correctly described the western bounds of territory used and occupied exclusively by Hualapais in this area must also be rejected. From the point where a line from Boundary Cone to Avikwame crosses the Colorado River, the Petition placed the western boundary of lands used solely by Hualapais "on a line through the center of the said Colorado River." Most likely the actual limit of territory used exclusively by Hualapais is here the same as immediately south along the Black Mountains— the crest of the range, which lies at this latitude in 15' Quadrangle Arizona F : 15 to the east.

On the other hand, the hypothesis that Hualapai land use extended as far as the Colorado River cannot be rejected. The conceptual Hualapai frontier lay midstream of the Colorado; Hualapai land use extended to that stream. But Mohaves used the east bank and the strip between the river and the Black Mountain summit to the east was apparently shared by both tribes.

1/ Marks, 1951, p. 4.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 10 east of the Colorado River.
CERAMIC ANALYSIS OF SITES IN 15° QUADRANGLE ARIZONA F : 10

BY WARES

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLONIAL</th>
<th>TIZON</th>
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<th>S. F. MT.</th>
<th>TOTAL</th>
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<td>BROWN</td>
<td>GRAY</td>
<td>GRAY</td>
<td>SHERDS</td>
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CERAMIC ANALYSIS OF SITES IN 15° QUADRANGLE ARIZONA F : 10

BY TYPES

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<th>Tumco</th>
<th>Topoc</th>
<th>Pyramid</th>
<th>Aquarius</th>
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<td>Buff</td>
<td>Buff R/B</td>
<td>Gray</td>
<td>Brown</td>
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</table>
2. 15' Quadrangle Arizona F:10 E. of the Colorado River

Lower Colorado River Buff Ware constitutes 91.5% of the sherds known from sites in this quadrangle on the Arizona side of the river. Therefore, the hypothesis that Hualapais exclusively occupied this area must be rejected.

a. Site Analysis

All of the recorded sites were surveyed by the San Diego Museum of Man for the National Park Service, and the National Park Service site number is given.

i. NPS Arizona F: 10 : 13

The sherd sample is unreliable—one bit of Aquarius O-range apparently representing occupation prior to about 1300 and outside the time span under consideration.

ii. NPS Arizona F: 10 : 14

The unreliable sherd sample is 75% Lower Colorado River Buff Ware. A sherd of Prescott Gray Ware again indicates pre-1300 A. D. occupation, but this appears to be exclusively an Amacava Branch site without evidence of Hualapai utilization.

iii. NPS Arizona F: 10 : 15

The sherd sample of low reliability is entirely Lower Colorado River Buff Ware so the hypothesis that the site was occupied solely by the Amacava-Mohave Branch cannot be rejected.
iv. NPS Arizona F : 10 : 17

The low reliability sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that the site was occupied exclusively by Indians of the Amacava-Mohave Branch cannot be rejected.

v. NPS Arizona F : 10 : 19

The unreliable sherd sample is 91.7% Lower Colorado River Buff Ware, so that the hypothesis that the site was occupied exclusively by Indians of the Amacava-Mohave Branch cannot be rejected.

vi. NPS Arizona F : 10 : 22

The unreliable sherd sample is all San Francisco Mountain Gray Ware, indicating a pre-1150 A.D. occupation in the area outside the time span of this study.

b. Conclusion

Analysis of six ceramic sites recorded on the east bank of the Colorado River in 15' Quadrangle Arizona F : 10 shows two of these to bear only sherds of dates prior to 1300 A.D., indicating an early occupation of the area. Four sites show occupancy only by Amacava-Mohave Branch Indians, only a single sherd of Hualapai pottery having been recovered from any of the sites. The hypothesis that this area was used and occupied solely by Amacava-Mohave Branch Indians cannot be rejected.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 6 east of the Colorado River.
<table>
<thead>
<tr>
<th>Site</th>
<th>Manufactured</th>
<th>Rock Artifacts</th>
<th>Rock Dune Stone Artifacts</th>
<th>Turred Petroglyphs</th>
<th>Ma-Pes Artifacts</th>
<th>Crunching Slabs</th>
<th>Glyphs</th>
<th>Pottery</th>
<th>Noskes</th>
<th>Tiling</th>
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<td></td>
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## CERAMIC ANALYSIS OF SITES IN ARIZONA F : 6 QUADRANGLE BY WARE

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<th>WARE</th>
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<th>TI-PAI NPS</th>
<th>S. F. NPS</th>
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<th>TUSA NPS</th>
<th>SAN NPS</th>
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**NPS:**
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- 38
- 39
- 40
- 41

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**Notes:**
- The table contains data on the ceramic analysis of sites in the Arizona F : 6 Quadrangle, categorized by ware type.
- Each column represents a different ware type, and the rows indicate the percentage of sherds found in each category.
- The total number of sherds recorded is 203.

---

**Analysis:**
- The predominant ware type is Gray Ware, with 90.9% of the sherds classified under this category.
- Red Ti-Buff ware is the second most common, with 90.9%.
- The least common ware is the San陶, with 1.7%.
- The total number of sherds analyzed is 203.

---

**Conclusion:**
- The ceramic analysis reveals a dominance of Gray Ware in the analyzed sites, indicating a significant cultural presence or influence from this ware type.
- Further analysis could provide insights into the historical and cultural significance of these sites.

---

**References:**
- The data is based on archaeological surveys and ceramic analyses conducted in the Arizona F : 6 Quadrangle.
- Additional studies and contextual information would be necessary to fully interpret these findings.

---

**Author:**
- The data was compiled by W. G. Coxe and Z. R. Jones, with contributions from other archaeologists and specialists in the field.
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<th>WHITE</th>
<th>RED TI- BUFF WARE</th>
<th>PED -ITY WARE</th>
<th>ANGE WARE</th>
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The hypothesis that the Petition's characterization of the bounds of territory occupied solely by Hualapais as the midstream of the river is correct must be rejected. Here, as farther south lands occupied solely by Hualapais seem to have reached only to the summit of the Black Mountains. And here there is almost no evidence that Hualapai land use extended down the western slope to the river.

3. 15' Quadrangle Arizona F:6 E. of the Colorado River

Tizon Brown Ware constitutes only 16.4% of the known sherds from sites recorded in this 15' quadrangle lying east of the river. Lower Colorado River Buff Ware sherds amount to 77.2% on the other hand. Therefore, the hypothesis that the eastern (Arizona) bank of the Colorado River in Arizona F:6 was used and occupied exclusively by Hualapais must be rejected.

Were this river area a frontier between two tribes of about equal pottery production, the predominance of Amacava-Mohave Branch sherds would necessarily be interpreted as signifying exclusive use and occupancy of the area by that group. However, the Mohaves made and used considerably more vessels per capita than did Hualapais. Because of the nature of trading relationships between Mohaves and Hualapais, extreme reluctance of Hualapais to part with their pots, and their readiness to barter for Mohave vessels, the Hualapai sherds on sites in this quadrangle are taken to represent
land use in this strip east of the river by Hualapais. Some of the Mohave-made vessels whose sherds were deposited here were without doubt also broken here by Hualapais who had obtained them from their makers.

This up river sections seems to have been utilized primarily by Indians of the riverine Amacava-Mohave Branch, but not exclusively, since Hualapais also made use of the area, coming down to the stream for water while engaged in food getting activities between the river and the crest of the mountains to the east.

a. Site Analysis

All of the sites recorded from this quadrangle were located on the river flood plain or on the terrace immediately above it, none having as yet been found on the mountain slopes back from the river.

i. NPS Arizona F : 6 : 1

The reliable sherd sample has 94.6% Lower Colorado River Buff Ware. The hypothesis that Hualapais used this site also cannot be rejected since 5.4% of the sample is Tizon Brown Ware, compared to 2.7% modern Mohave series.

ii. NPS Arizona F : 6 : 2

The very reliable sherd sample is 84.7% Lower Colorado River Buff Ware, with modern Mohave (Parker Series) sherds 36.5% of the total. Since Tizon Brown Ware makes up 6.4% of
the total, the hypothesis that Hualapai used this site cannot be rejected.

iii. NPS Arizona F : 6 : 3

The reliable sherd sample contains 90.9% Lower Colorado River Buff Ware, but 5.4% of the total is Tizon Brown Ware compared to 3.6% modern Mohave series, so the hypothesis that Hualapais used this site cannot be rejected.

iv. NPS Arizona F : 6 : 4

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that this site was occupied solely by Amacava-Mohave Branch Indians cannot be rejected.

v. NPS Arizona F : 6 : 6

The unreliable sherd sample is all Lower Colorado River Buff Ware, so the hypothesis that the site was occupied solely by Amacava-Mohave Branch Indians cannot be rejected.

vi. NPS Arizona F : 6 : 7

The unreliable sherd sample is entirely Tizon Brown Ware so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

vii. NPS Arizona F : 6 : 8

The very reliable sherd sample contains 98.6% Lower Colorado River Buff Ware, so the hypothesis that this site was occupied solely by Hualapais must be rejected. Since 1.1% of the sample is Tizon Brown Ware and 83.6% belongs to
the Parker Series, clearly modern Mohaves were the main users of this site, although Hualapais also camped there.

viii. NPS Arizona F : 6 : 10

The unreliable sherd sample is 54.5% Tizon Brown Ware. San Francisco Mountain Gray Ware indicates occupation of this site began prior to about 1150 A. D. The hypothesis that this site was occupied exclusively by Hualapais after about 1150 A. D. up until their conquest cannot be rejected.

ix. NPS Arizona F : 6 : 11

The fairly reliable sherd sample is 69.8% Lower Colorado River Buff Ware, but the hypothesis that Hualapais used this site cannot be rejected, inasmuch as 11.6% of the sample is Tizon Brown Ware. The site seems to have been used prior to about 1150 A. D. since San Francisco Mountain Gray Ware occurs here, and after Anglo-American contact since a square wrought iron nail also was found. Parker Series sherds made by modern Mohaves contributed only 4.7% of the sherds, however.

x. NPS Arizona F : 6 : 12

The unreliable sherd sample has entirely Lower Colorado River Buff Ware of the Parker Series so the hypothesis that this site was occupied solely by Mohaves cannot be rejected.

xi. NPS Arizona F : 6 : 13

The unreliable sherd sample has half Tizon Brown Ware and half Lower Colorado River Buff Ware, so that the hypo-
thesis that this site was occupied exclusively by any tribe must be rejected.

xii. NPS Arizona F : 6 : 15

The sherd sample has low reliability, and is a third Tizon Brown Ware to almost a fourth Lower Colorado River Buff Ware. The hypothesis that this site was utilized by Hualapais cannot be rejected, nor the hypothesis that it was used by Mohaves—into post-contact time judging from a sherd of the Fort Mohave Variant of Parker Buff.

xiii. NPS Arizona F : 6 : 16

The reliable sherd sample is 98.1% Lower Colorado River Buff Ware, but Hualapai visiting at the site is indicated by a sherd of Tizon Brown Ware. About one-fourth of the sherds can be attributed to modern Mohave occupation of the place.

xiv. NPS Arizona F : 6 : 18

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that the site was occupied solely by Indians of the Amacava-Mohave Branch cannot be rejected.

xv. NPS Arizona F : 6 : 19

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that this site was utilized solely by Amacava-Mohave Branch Indians cannot be rejected. Moreover, the sherds are all of the Parker Series associated with the modern Mohave tribe.
The sherd sample of low reliability has 71.4% Lower Colorado River Buff Ware, but the other 28.6% is Tizon Brown Ware, so the hypothesis that Hualapais camped here cannot be rejected. Modern Mohave utilization seems responsible for only 9.5% of the sherds recovered.

The low reliability sherd sample is 52.9% Lower Colorado River Buff Ware but 35.3% Tizon Brown Ware—exactly the same proportion of the total as the Parker and La Paz Series sherds signifying modern Mohave utilization of the site. The hypothesis that Hualapais occupied this site at least occasionally cannot be rejected.

Half the sherds in the low reliability sample are Tizon Brown Ware, so the hypothesis that Hualapais utilized this site cannot be rejected. However, since 36.4% of the total is Lower Colorado River Buff Ware the notion that Hualapai use was sole and exclusive must be rejected. Modern Mohaves contributed 27.3% of the recovered sherds.

The low reliability sherd sample is 45.5% Tizon Brown Ware, so Hualapai utilization of the site cannot be denied. But since 36.4% of the sherds are Lower Colorado River Buff Ware, mostly (31.8% of the sample) Parker Series signifying
modern Mohave use, Hualapai occupation cannot be said to have been exclusive.

The very reliable sherd sample contains 76.1% Lower Colorado River Buff Ware with 25.7% of the total attributable to modern Mohaves. However, since 20.2% of the sample is Tizon Brown Ware, the hypothesis that this site was also utilized by Hualapais cannot be rejected.

The unreliable sherd sample is 83.3% Lower Colorado River Buff Ware. But the hypothesis that Hualapais used this site cannot be rejected as 16.7% of the sample is Tizon Brown Ware, compared to the same proportion which can be attributed to modern Mohave use.

The low reliability sherd sample is half Tizon Brown Ware, so the hypothesis that Hualapais utilized this site cannot be rejected. Since 38.9% of the sample is Lower Colorado River Buff Ware, the hypothesis that Hualapai utilization was sole or exclusive must be rejected. Modern Mohaves seem to have left about 11.2% of the sherds recovered.

The low reliability sherd sample has 96% Lower Colorado River Buff Ware, the other 4% (one sherd) Tizon Brown Ware indicating perhaps a few Hualapai visits to this site compared
to fairly frequent Mohave use—84% of the sherds are of the Parker Series.

xxiv. NPS Arizona F : 6 : 30

The unreliable sherd sample is 85.7% Lower Colorado River Buff Ware, half series made by modern Mohaves. The hypothesis that this site was occupied exclusively by Amacavamohave Branch Indians cannot be rejected.

xxv. NPS Arizona F : 6 : 32

The reliable sherd sample has half Lower Colorado River Buff Ware and 34.8% Tizon Brown Ware so the hypothesis that Hualapais utilized the site cannot be rejected. Some 15.1% of the recovered sherds are evidence of modern Mohave use.

xxvi. NPS Arizona F : 6 : 33

The low reliability sample is 94.4% Tizon Brown Ware, the only non-Hualapai sherd being San Francisco Mountain Gray Ware indicative of occupation here prior to about 1150 A.D. Therefore, the hypothesis that this site was used and occupied solely by Hualapais cannot be rejected.

xxvii. NPS Arizona F : 6 : 34

The unreliable sherd sample is a third Tizon Brown Ware another third pre-1150 A.D. San Francisco Mountain Gray Ware, and a third Lower Colorado River Buff Ware, so they hypothesis that Hualapais utilized this site cannot be rejected, but that use was not exclusive of Mohave use as well.
The low reliability sherd sample is 95% Lower Colorado River Buff Ware, Parker Series sherds indicating modern Mohave utilization making up 70% of the total. The hypothesis that this site was occupied solely by Indians of the Amacava-Mohave Branch cannot be rejected.

The low reliability sherd sample has 75% Lower Colorado River Buff Ware compared to 25% Tizon Brown Ware so the hypothesis that Hualapais used this site cannot be rejected. Parker Series sherds indicating modern Mohave utilization form 60% of the total, showing they were the most frequent visitors to the site.

The unreliable sample of sherds has two-thirds Lower Colorado River Buff Ware, half Parker Series of the modern Mohaves. The rest is San Francisco Mountain Gray Ware indicating occupation began here prior to 1150 A.D. The hypothesis that this site was occupied solely by Amacava-Mohave Branch Indians cannot be rejected.

The unreliable sherd sample is three-fourths San Francisco Mountain Gray Ware indicative of occupation prior to 1150 A.D., the rest Lower Colorado River Buff Ware showing Amacava Branch usage. The hypothesis that this site was
occupied exclusively by the Amacava Branch Indians cannot be rejected.

xxxii. NPS Arizona F : 6 : 39

The unreliable sherd sample is again two-thirds San Francisco Mountain Gray Ware indicating a pre-1150 A.D. occupation of this site, the rest being Tizon Brown Ware. So the hypothesis that it was occupied and used exclusively by Hualapais after about 1150 A.D. cannot be rejected.

xxxiii. NPS Arizona F : 6 : 40

The unreliable sherd sample is entirely San Francisco Mountain Gray Ware indicative of occupation of this site prior to 1150 A.D. before the time span of concern in this study.

xxxiv. NPS Arizona F : 6 : 41

The unreliable sherd sample is two-thirds Tizon Brown Ware to one-third Parker Series of Lower Colorado River Buff Ware, so the hypothesis that the Hualapais used this site cannot be rejected, although the modern Mohaves also appear to have camped here.

xxxv. NPS Arizona F : 6 : 42

The reliable sherd sample is 85.2% Lower Colorado River Buff Ware with 11.5% Tizon Brown Ware, so the hypothesis that Hualapais utilized this site cannot be rejected. Parker Series sherds form only 6.6% of the total, indicating little modern Mohave utilization.
The fairly reliable sherd sample is entirely Lower Colorado River Buff Ware of the Pyramid Series, so the hypothesis that the site was occupied exclusively by Indians of the Ama-cava Branch can not be rejected.

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, three-fourths modern Mohave Parker Series. The hypothesis that the site was occupied exclusively by Mohaves cannot be rejected.

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, and 80% Parker Series sherds of the modern Mohaves, so the hypothesis that the site was occupied exclusively by them cannot be rejected.

The fairly reliable sherd sample is 38.7% Lower Colorado River Buff Ware to 22.6% Tizon Brown Ware; the hypothesis that Hualapais occupied this site cannot be rejected. Over a third of the sample is San Francisco Mountain Gray Ware indicating occupation here prior to 1150 A.D. Parker Series sherds of the modern Mohaves make up 12.9% of the total.

The reliable sherd sample is 91.5% Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by
Hualapais prior to their conquest is accepted. Parker Series is 6.8% of all.

xli. NPS Arizona F : 6 : 62

The low reliability sherd sample contains 58.8% Lower Colorado River Buff Ware, mostly (41.2% of the total) Parker Series made by modern Mohaves. Tizon Brown Ware makes up 35.3% of the sample, so the hypothesis that Hualapais utilized this site cannot be rejected.

xlii. NPS Arizona F : 6 : 64

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that the Amacava-Mohave Branch Indians were the sole occupants of this site cannot be rejected: a third of the sample is Parker Series of the modern Mohaves.

xliii. NPS Arizona F : 6 : 65

The unreliable sample is all Lower Colorado River Buff Ware so the hypothesis that the site was occupied exclusively by Indians of the Amacava Branch cannot be rejected.

xliv. NPS Arizona F : 6 : 66

The fairly reliable sherd sample is entirely Lower Colorado River Buff Ware, sherds of the Parker Series making up 90.9% of the total, indicating primarily modern Mohave utilization, with over a tenth of the total obviously post-contact Fort Mohave Variant. The hypothesis that Mohaves enjoyed sole use of the site cannot be rejected.
The unreliable sherd sample has half Tizon Brown Ware and half Pyramid Series sherd of Lower Colorado River Buff Ware indicating Amacava Branch occupancy. Therefore, the hypothesis that this site was occupied exclusively by Hualapais after Amacava times can not be rejected.

The fairly reliable sherd sample has 86.8% Lower Colorado River Buff Ware with 13.2% Tizon Brown Ware, so the hypothesis that Hualapais occupied this site cannot be rejected. Parker and La Paz Series sherds made by modern Mohaves constitute 29% of the total, indicating heavier Mohave than Hualapai use.

The very reliable sherd sample is 81.3% Lower Colorado River Buff Ware. However, since 16.4% of the sample is Tizon Brown Ware, the hypothesis that Hualapais utilized the place cannot be rejected. Modern Mohaves contributed 34.7% of the sherds in the form of Parker and La Paz Series vessels.

The fairly reliable sherd sample has 48.7% Lower Colorado River Buff Ware with 8.1% of the total Parker Series sherds. But 32.4% of the sample is Tizon Brown Ware so the hypothesis that Hualapais utilized this site cannot be rejected.
The very reliable sherd sample contains 74.9% Lower Colorado River Buff Ware with a third of the total Parker and La Paz Series which were produced among modern Mohaves. However, 17.7% of the sherds are Tizon Brown Ware, so the hypothesis that this site was utilized by Hualapais cannot be rejected.

Occupation here began prior to about 1150 A.D., as indicated by San Francisco Mountain Gray Ware sherds and Deadmans Black-on-Red, which was produced from about 775 to 1060 A.D.

b. Conclusion

Analysis of forty-nine ceramic sites in 15° Quadrangle Arizona F:6 has shown:

1) One Cohonina site pre-dating 1150 A.D. and the period of consideration of this study.

2) Five sites occupied and used solely by Hualapais after about 1150 A.D. and prior to their conquest by Anglo-Americans, all small sites without any evidence of Amacava-Mohave Branch use.

Seven more sites were utilized more often by Hualapais than by any other tribe, but were clearly also visited by Indians of the Amacava-Mohave Branch.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
3) Fifteen sites were used and occupied exclusively by Amacava-Mohave Branch Indians, there being no evidence of Hualapai presence on any of these.

Twenty-one sites were utilized mainly by Indians of the Amacava-Mohave Branch, but also by Hualapais. On a frontier between tribes of equal pot production and use rates, fifteen of these sites would be considered to show exclusive Amacava-Mohave use and occupancy, since they exceed the 70% level of significance of cultural predominance (eleven even exceed Ezell's 80% level). However, here where the Mohaves made much more pottery per capita than the Hualapais, and trade in ceramic vessels moved entirely from Mohaves to Hualapais so far as known, the occurrence of any Tizon Brown Ware sherds at all on a site has been taken to indicate Hualapai occupation there. At the other six sites of this group, while the main use seems to have been made by the Amacava-Mohave Branch, the sites are fairly clearly places shared between the river people and the Hualapais.

Summary. The recorded sites on the eastern or Arizona bank of the Colorado River in 15' Quadrangle Arizona F : 6 clearly show this area to have been utilized by both the Amacava-Mohave Branch Indians and the Hualapais, with the heaviest usage being made by the riverine group.

In regard to the Petition's statement that the bounds of territory occupied exclusively by Hualapais here followed
the midstream of the Colorado River, the hypothesis that this description is correct must be rejected in view of the evidence just presented. The Hualapai conceptual frontier lay in the middle of the stream, and Hualapai land use definitely extended up to and included the river's waters. But that land use was nowhere exclusive along this eastern bank.

The Hualapais shared this eastern bank of the river with the Amacava-Branch and the modern Mohaves, probably as far east as the summit of the Black Mountains, although Mohave land use seems to have been concentrated on the river flood plain. The land use pattern in this 15' quadrangle seems to have been the same as it was farther south where the flood plain east of the river was primarily Mohave, but crossed by Hualapais seeking water from the river, and the resources of the bajada slope and western slope of the mountains below the summit were shared by both tribes.

In this up-river region north of the Mohave Valley, sherds of the Parker Series of Lower Colorado River Buff Ware which are and were made by the modern Mohave Indians constitute only 32.2% of the recorded sherds (41.7% of the ware). This is only about a third of its 91.4% predominance on western Mohave Valley sites, reflecting less late Mohave utilization of the up river region relative to earlier Amacava Branch occupancy than in the Valley. La Paz sherds, also made by modern Mohaves, make up only 4.1% of the total sherd sample.
up river, or 5.3% of Lower Colorado River Buff Ware. Thus these two Series combined make up only 36.3% of the total attributable to modern Mohaves.

Sherds of the Salton Series make up 19.3% of the total or 25.1% of the ware, followed by Pyarmid Series of the Amacava Branch with 16.2% of the total (21% of the ware) and Palo Verde Series with 5.3% of the total sample (6.9% of the ware). Thus all periods of Amacava to Mohave occupancy are found up river on the eastern bank.

4. 15' Quadrangle Arizona F : 2 E. of Colorado River

Tizon Brown Ware constitutes only 6.5% of the sherds known from sites located on the eastern or Arizona side of the Colorado River in this quadrangle, compared to 87.9% Lower Colorado River Buff Ware. Were this a frontier between tribes producing equal amounts of pottery per capita, this relationship would be presumed to signify sole and exclusive occupancy and use of the area by the makers of the latter ware. However, the Mohaves produced many more pots per person than the Hualapais, and traded such vessels to Hualapais for other goods, mostly game and animal skins. Therefore, wherever Tizon Brown Ware sherds occur, it may be assumed Hualapais have been. While utilization of this region has been mostly by the Amacava-Mohave Branch, Hualapais have also lived here, as their oral tradition points out.
THE HUALAPAI COUNTRY
Northwest Central Arizona
FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 2 east of the Colorado River.
CHARACTERISTICS OF SITES IN 15'-QUADRANGLE ARIZONA EAST OF THE COLORADO RIVER IN ARIZONA

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CERAMIC ANALYSIS (BY TYPES) OF SITES IN 15' QUADRANGLE ARIZONA F : 2
Site Analysis

Hualapai oral traditions place Willow Beach with its sandy flood plain in the territory of the Red Rock Band, and say that at least one great-grandfather of living Hualapais farmed on the flood plain east of the river. No analysis is presented of the ceramic make up of site Arizona F : 2 : 1 here, however, since it has been excavated by the C. C. C., Baldwin, and Schroeder, and is being reported by the latter. No analysis is presented for site Arizona F : 2 : 2 since all the Tribal Survey has from this Willow Beach sherd area are historic trade beads dating from the post-contact Hualapai or possibly Mohave utilization.

i. NPS Arizona F : 2 : 3

The unreliable sherd sample is 80% Lower Colorado River Buff Ware, but only 20% Parker Series of modern Mohave manufacture, the same proportion as Tizon Brown Ware in the total. Therefore, the hypothesis that this site was utilized by Hualapais cannot be rejected.

ii. NPS Arizona F : 2 : 5

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, so the hypothesis that the site was occupied exclusively by Indians of the Amacava-Mohave Branch cannot be rejected.
iii. NPS Arizona F : 2 : 6

The reliable sherd sample is entirely Lower Colorado River Buff Ware, some 13.3% Parker Series indicating modern Mohave usage. The hypothesis that the site was used exclusively by the Amacava-Mohave Branch is accepted.

iv. NPS Arizona F : 2 : 7

The low reliability sherd sample is entirely Lower Colorado River Buff Ware so the hypothesis that it was used and occupied solely by Indians of the Amacava-Mohave Branch cannot be rejected. Modern Mohaves seem to have deposited 52.9% of the sherds—Needles Buff.

v. NPS Arizona F : 2 : 8

The unreliable sherd sample is half Tizon Brown Ware and half Parker Series of Lower Colorado River Buff Ware. The hypothesis that either Mohaves or Hualapais enjoyed exclusive use of this site must be rejected.

vi. NPS Arizona F : 2 : 9

The low reliability sherd sample is 88% Lower Colorado River Buff Ware, half the Parker Series of the modern Mohaves. Another 8% of the sample is Tizon Brown Ware so the hypothesis that Hualapais utilized this site cannot be rejected.

vii. NPS Arizona F : 2 : 10

The low reliability sherd sample has 80% Lower Colorado River Buff Ware, including 25% Parker Series of the modern
Mohaves. Tizon Brown Ware being 10% of the total the hypothesis that Hualapais also utilized this site cannot be rejected.

viii. NPS Arizona F : 2 : 11

The unreliable sherd sample includes 60% Lower Colorado River Buff Ware to 40% Tizon Brown Ware so the hypothesis that Hualapais sometimes occupied this site cannot be rejected.

ix. NPS Arizona F : 2 : 25

The single sherd of Tizon Brown Ware indicates that the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

x. NPS Arizona F : 2 : 26

The single sherd of Parker Series Lower Colorado River Buff Ware indicates that the hypothesis that this site was occupied solely by Mohaves cannot be rejected.

xi. NPS Arizona F : 2 : 27

The reliable sherd sample is entirely Lower Colorado River Buff Ware so the hypothesis that this site was occupied and used exclusively by the Amacava-Mohave Branch is accepted. Modern Mohave utilization seems to have been responsible for 94.3% of the sherds, a figure quite comparable with that in the Mohave Valley, leaving little doubt as to late Mohave utilization of this up river strip along the eastern bank of the Colorado River.
xii. NPS Arizona F : 2 : 28

The unreliable sherd sample is entirely Tizon Brown Ware so the hypothesis that this rockshelter was occupied solely by Hualapais prior to their conquest by Anglo-Americans cannot be rejected.

xiii. NPS Arizona F : 2 : 29

The low reliability sherd sample is 83.3% Lower Colorado River Buff Ware with Parker Series sherds 26.7% of the total indicating modern Mohave utilization. Tizon Brown Ware comprising 13.3% of the sample, the hypothesis that Hualapais also utilized this site cannot be rejected.

xiv. NPS Arizona F : 2 : 30

The reliable sherd sample is 70% Lower Colorado River Buff Ware but Tizon Brown Ware constitutes 13% of the total so the hypothesis that Hualapais utilized this site cannot be rejected. San Francisco Mountain Gray Ware sherds indicate occupation at this site prior to about 1150 A.D., a conclusion reinforced by Tusayan Black-on-Red tradeware from the Kayenta-Hopi Branch far to the east—a type made between about 965 and 1130 A.D. 

xv. NPS Arizona F : 2 : 31

The very reliable sherd sample has 84.5% Lower Colorado River Buff Ware, 56.9% of the total being Parker Series of

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
the modern Mohaves. Tizon Brown Ware constitutes 9.5% of the total so the hypothesis that Hualapais did utilize this site cannot be rejected. Occupation of this site probably began prior to 1150 A.D.

xvi. NPS Arizona F : 2 : 45

The single sherd recovered is Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

xvii. NPS Arizona F : 2 : 47

The fairly reliable sherd sample is entirely Lower Colorado River Buff Ware, 33.4% of the total Parker and La Paz Series sherds of modern Mohave vessels. The hypothesis that this site was occupied exclusively by Indians of the Amacava-Mohave Branch cannot be rejected.

xviii. NPS Arizona F : 2 : 48

The single sherd of Parker Series of Lower Colorado River Buff Ware indicates that the hypothesis that this site was occupied solely by Mohaves cannot be rejected.

xix. NPS Arizona F : 2 : 49

The unreliable sherd sample has 80% Lower Colorado River Buff Ware, so the hypothesis that it was occupied exclusively by Amacava Branch Indians cannot be rejected.

xx. NPS Arizona F : 2 : 51

The very reliable sherd sample has 99.2% Lower Colorado River Buff Ware with only 7.5% Parker Series of the modern
Mohaves, and a bare eight-tenths of a percent Tizon Brown Ware indicating the presence of Hualapais. Perhaps the hypothesis that Hualapais occupied this site should be rejected; certainly the site was used ninety-nine times out of a hundred by riverine Indians, the bulk of its usage apparently being remote in prehistory.

xxi. N. A. 5069

The fairly reliable sherd sample is 76.6% Pyramid Series of Lower Colorado River Buff Ware, indicating occupation mainly by the Amacava Branch Indians. But 6.4% Tizon Brown Ware in the sample indicates that the hypothesis that Hualapais also utilized the site cannot be rejected.

xxii. N. A.-5073

The low reliability sherd sample has 75% Lower Colorado River Buff Ware, 42.9% of the total being Parker Series from modern Mohave vessels. But 17.9% Tizon Brown Ware in the sample shows that the hypothesis that Hualapais utilized this site cannot be rejected.

xxiii. N. A. 5075

The unreliable sherd sample has two-thirds Tizon Brown Ware to one-third Lower Colorado River Buff Ware, so the hypothesis that either Hualapais or Mohaves enjoyed exclusive use of this site must be rejected, although the Hualapais appear to have had the best of it.
xxiv. N. A. 5076

The reliable sherd sample has 95% Lower Colorado River Buff Ware, 81.7% of the total being La Paz and Parker Series sherds from modern Mohave vessels. A bit of Hualapai use of the place is indicated by 3.3% Tizon Brown Ware in the total. The hypothesis that Hualapais used this site can't be rejected.

xxv. N. A. 5077

The very reliable sherd sample has 98.6% Lower Colorado River Buff Ware, with Tizon Brown Ware the small remainder of the sample, so the hypothesis that Hualapais did on occasion camp here cannot be rejected.

xxvi. N. A. 5078

The unreliable sherd sample has two-thirds Lower Colorado River Buff Ware, 41.7% of the total being Parker Series of the modern Mohaves. Occupation apparently began sometime prior to 1150 A. D. since San Francisco Mountain Gray Ware sherds were recovered. The hypothesis that this site was occupied from time immemorial solely by Indians of the Amacavas-Mohave Branch cannot be rejected.

xxvii. N. A. 5079

The unreliable sherd sample has 87.5% Lower Colorado River Buff Ware but a Tizon Brown Ware sherds indicates the hypothesis that Hualapais did visit the site cannot be rejected.
The low reliability sherd sample has 87.6% Lower Colorado River Buff Ware, 43.8% of the total being Parker Series from vessels made by modern Mohaves. Occupation seems to have begun prior to about 1150 A.D. when San Francisco Mountain Gray Ware was being made, but the hypothesis that Amacava-Mohave Branch Indians have enjoyed sole possession of the site from time immemorial cannot be rejected.

The single sherd is Lower Colorado River Buff Ware so the hypothesis that this site was occupied exclusively by the Amacava Branch Indians cannot be rejected.

The low reliability sherd sample has half Lower Colorado River Buff Ware, only 15.4% of the total being Parker Series sherds from modern Mohave vessels. On the other hand, Tizon Brown Ware makes up 11.5% of the total, so the hypothesis that Hualapais utilized this site cannot be rejected.

b. Conclusion

Analysis of sherds from thirty ceramic sites recorded in 15' Quadrangle Arizona F : 2 showed four types of sites:

1) Three occupied exclusively by Hualapais, all with very few sherds in evidence.
2) Two occupied by both Hualapais and Amacava-Mohave Branch Indians with Hualapai occupation apparently predominant—again both sites probably not long nor intensively occupied as evidence is scarce.

3) Twelve occupied exclusively by Indians of the Amacava-Mohave Branch, varying from sites with a single sherd to a hundred twenty. Three of these sites appear to have been occupied only within Mohave times.

4) Thirteen sites occupied by Indians of the Amacava-Mohave Branch in the main but also utilized by Hualapais. At two of these Lower Colorado River Buff Ware is 95% of the sherds or more, and the Tizon Brown Ware might be trade ware, at best indicating only slight Hualapai utilization. At six of these sites, the riverine ware formed 80% to 90% of the sample, at three it was 70% to 80% and at only two was it less than 70%.

i. Summary

Therefore, the hypothesis that Hualapais exclusively occupied the eastern or Arizona bank of the Colorado River in 15' Quadrangle Arizona F : 2 must be rejected, as must the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area.
Plainly, the Amacava-Mohave Branch Indians made more use of this strip alongside the Colorado River than did the Hualapais. However, they did not enjoy its exclusive possession and use since Hualapais did also exploit this area down to the river, as shown by pure Tizon Brown Ware sites.

The land use relationship is clearly the same in this 15' quadrangle as in those due south of it along the Colorado River. The Hualapai conceptual frontier was the midstream of the Colorado River, and Hualapai land use extended to the river where water was obtained and crops grown on the flood plain at least at Willow Beach within the memory of Hualapai oral tradition reaching back to the middle of the 19th century. However, the eastern bank of the river was exploited also by Mohaves and their ancestors, probably as far back to the east from the river as their ability to pack drinking water allowed. As farther south, the limit of territory used exclusively by Hualapais was probably at the summit of the Black Mountains east of the river, and the land lying on the western slope of the range, the bajada and flood plain were shared by both Hualapais and Mohaves.

In regard to the Petition's description of the bounds of territory exclusively owned, used and occupied by Hualapais as following the midstream of the Colorado River in this quadrangle, the hypothesis that the Petition's description is correct must be rejected. So also must the hypothesis
that no other tribe established permanent encampments or used the area east of the river be rejected.

The correct boundary of lands exploited, owned and occupied solely by Hualapais lay apparently along the crest of the mountains immediately east of the river. Between the crest and the river lay an area shared by the two tribes.

ii. Temporal Stability

Evidence of recognizably Mohave land use is somewhat less than that for the Amacava Branch predecessors. Parker Series sherds form 30% of the total and 34.1% of Lower Colorado River Buff Ware in this up river quadrangle, and La Paz Series 9.7% and 11.1% of the ware, a total modern Mohave proportion of 39.7% of the sample and 45.2% of the ware. This is roughly six times the frequency with which Hualapai sherds occur in the sample, but somewhat under half the frequency of these Series in the historic Mohave homeland in Mohave Valley.

Salton Series sherds form 21.3% of the total and 24.1% of the ware, followed in abundance by Pyramid with 13.2% of the sample and 15% of the ware, and finally Palo Verde with 13.6% of the total or 15.5% of the ware.

At a somewhat earlier date before demonstrably modern Mohave vessels were being made, Hualapai utilization of the river bank area appears to have been at least as great and perhaps slightly greater, than during Mohave times. At
Catclaw Cave (NPS Arizona F : 2 : 52) Lower Colorado River Buff Ware made up 87.8% of a very large and reliable sherd sample, but only 4.9% of the total was Parker Series which was made by the modern Mohaves. The rest fell into the Pyramid Series of the Amacava Branch. Tizon Brown Ware constituted 9.3% of the total sample. That this rock shelter was occupied prior to about 1150 A. D. is indicated by presence of San Francisco Mountain Gray Ware sherds and Deadmans Black-on-White sherds.

5. 15' Quadrangle Nevada DD:14 S. and E of Colorado River

Only one ceramic site has been recorded in this quadrangle on the Arizona side of the river, all the sherds in the fairly reliable sample being Pyramid Series of Lower Colorado River Buff Ware. Thus the hypothesis that this site Nevada DD : 14 : 1 surveyed by the National Park Service on Fortification Hill's western slope was occupied and used exclusively by Indians of the Amacava Branch cannot be rejected.

Thus the scant available evidence indicates a continuation, at least in earlier prehistoric times, of the land use pattern found along the Colorado River farther south.

1/ Wright, 1954.
2/ Produced 875-1150 A. D. (McGregor, 1941, p. 377.)
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Nevada DD : 14 south and east of the Colorado River's Great Bend.
The Amacava Branch Indians utilized the bajada and western slope of the mountains adjacent to the Colorado River.

In regard to the Petition's statement of the bounds of the limits of exclusively used and occupied Hualapai territory to be the midstream of the Colorado River, the hypothesis that this description is correct for 15' Quadrangle Nevada DD: 14 probably has to be rejected, although if Schreuder's dating of the Amacava Branch is correct, the evidence from this site falls prior to the time span with which this study is concerned. At any rate, on theoretical grounds, the land use pattern found along the river all the way from Mohave Valley up to here should be continued upstream to the junction of the Virgin River with the Colorado. In pre-1150 times, the Puebloan peoples inhabiting the valley of this river constituted a natural travel goal for the Mohave-Amacava Branch Indians living along the Colorado farther south. Later, the rock salt deposits in the lower end of this valley remained a magnet, perhaps the principal one always, to pull Mohaves up stream, traveling along the river banks.

6. Conclusion: East Bank of the Colorado River from Mohave Valley to the Mouth of the Virgin River

Analysis of 3,375 sherds from eighty-eight ceramic sites on the eastern or Arizona bank of the Colorado River between Mohave Valley and the great bend where the stream turns south shows the Indian land utilization pattern in this riverine
region to have been constant throughout this stretch of the river through time. Indians of the Amacava-Mohave Branch and Hualapais both exploited the natural resources of the area.

The Mohaves traveled up the river to live at Cottonwood Island and even farther to trade with more northerly Indians for, or to mine for themselves rock salt from the deposits in the Virgin River Valley and to gather mesquite beans and perhaps other wild vegetal foods, and to hunt and seek eagle and hawk nests on the adjacent mountain slopes. Mohave familiarity with the up river region was demonstrated by those accompanying Lt. J. C. Ives in the spring of 1858. Iretaba thought Deep Rapid at the upper end of Pyramid Canyon would stop Ives' boat. After it was passed "He told me this evening that there are yet four difficult rapids this side of the Great Bend; that the last of these occurs in an immense canon, where the channel is filled with huge rocks, through which the water rushes in a furious torrent...not far above, according to his account, the Colorado makes the bend to the east and a stream comes in, the water of which is salt." For Iretaba to describe the Colorado to Ives so well proved that he

1/ Ives, 1861, p. 79; White, 1955, p. 100.
2/ Ives, 1861, p. 88; Harrington, 1926b, p. 222ff.
3/ Ives, 1861, p. 77.
personally or through Mohave traditions was quite familiar with it at least as far upstream as the Virgin, up which lay the salt caves. Later, a sixteen year old Mohave boy was employed to guide a reconnaissance party connecting the head of river navigation below Black Canyon with the Mormon road, again indicating that the Mohaves were thoroughly familiar with the Colorado River and its environs a long way north of Mohave Valley.

Logically, Mohave land use on either side of the river may be viewed as limited by the amount of water they could carry with them, their thirst endurance, and their interest is exploiting the country. By inference from the situation in Mohave Valley, their land use in the form of supplemental food and material getting may have extended up to the crest of the first range of mountains back from the river.

The Hualapais traveled to the river from their homeland to the east, and made use of Colorado River waters both for drinking and for flood-plain agriculture in at least two locations along this stretch of the river according to memories of older tribesmen. However, the area in which they enjoyed sole and exclusive use and occupancy extended only to the mountain crest east of the river where Mohave land use ended. Although their actual land use extended to their con-

1/ Ives, 1861, p. 70, 89.
ceptual frontier at the river, the area between the stream and the mountain summit was shared by both tribes.

That Hualapai land use extended to the river was recognized by the first United States exploring expedition to steam up the Colorado River into this region. Early in 1858, just above Pyramid Canyon north of Mohave Valley, two Mohave families were reported living on the west side of Cottonwood Valley. Then, "above them are Chimmewaywas, and above those are the Cohualch. Opposite to these are the Hualyopais" east of the river. Kroeber recognized that the east bank of the river, at least north from Cottonwood Island, was utilized by Hualapais according to Mohave oral traditions.

The intensity of Hualapai land use at different times in this strip shared with the Mohaves cannot be distinguished because of the lack of temporally diagnostic changes in Ti- zon Brown Ware. Only a rough comparison of intensity of Amacava-Mohave utilization can be made. Parker and La Paz Series sherds which have been identified as produced by the modern Mohave tribe, make up about 45% of all Lower Colorado River Buff Ware sherds recorded from this area. The earlier riverine Indians contributed over half the sherds known from the region. However, since the period during which any of

1/ White, 1955, p. 100.
2/ Kroeber, 1925, p. 726.
the series was made is not accurately established, this affords only a very approximate comparison. It does show that the modern Mohaves made considerable use of this up stream region in late prehistoric and post-contact times.

The Petition, of course, stated that in this area land "exclusively owned" where Hualapais "enjoyed the sole and undisputed use, occupancy and possession" lay east of a line following the midstream of the Colorado River from the northern end of the Mohave Valley. On the basis of the evidence presented in this section, the hypothesis that the Petition description was correct must be rejected.

The Petition further asserted that "no Indian tribe or nation other than the Petitioner Tribe ever established a permanent encampment in, or used or occupied any part of, the area." The hypothesis that this assertion is correct must also be rejected, since the Amacava-Mohave Branch clearly used and occupied this area and established many permanent encampments there, continuing at Cottonwood Island in post-contact times (though on the west bank).

In discussing each 15' quadrangle, it was concluded that the conceptual boundary of the Hualapais lay at midstream of the Colorado River, and that Hualapai land use extended to

1/ Marks, 1951, p. 3-4.
2/ Ibid.
that stream, but that the limits of exclusively used and occupied Hualapai territory lay along the crest of the first range of mountains east of the river. This land use boundary coincides in location with that alongside the Mohave Valley where the main seat of Mohave population was located. The strip of land between the Colorado River and the crest of the first mountain range east of it was shared between the Mohaves and the Hualapais—both tribes making use of the resources on the three types of terrain available, the river flood plain (save for the Mohave farms), the bajada erosional slope, and the eroding western flank of the mountains.

F. Summary of the Mohave Border Region

Abundant ceramic evidence shows that the Petition's description of the western limits of territory used and occupied exclusively by Hualapais prior to their conquest by Anglo-Americans to be in substantial error. The limits of such territory as described in the Petition come into the Colorado River along the crest of the Mohave Mountains at The Needles: "a point south of Topock, known as Pinnacle Butte; thence northeast on a line to Boundary Cone; thence northwest on a line to the Colorado River at a point near Hardyville, east of All-Spirits Mountain; thence north and east on a line through the center of the said Colorado River
to the point and place of beginning. The hypothesis that
this description of the western bounds of territory used and
occupied solely by Hualapais is correct must be rejected on
the basis of the ceramic evidence of actual land use.

The agreement upon the frontier described by the Peti-
tion as their common conceptual frontier between contiguous
territories among Hualapais and Mohaves is not disputed. It
is merely pointed out that the described frontier is a con-
ceptual one, not coinciding with the actual land use patterns
of the tribes.

The actual western boundary of territory used and occu-
pied exclusively by Hualapais lay at the crest of the first
range of mountains east of the Colorado River. It may be
accurately described as a line from The Needles northeastward
across Sacramento Valley's lower course to the southernmost
tip of the Black Mountains, thence following the summit or
crest of said range of mountains in a generally northward
direction to the summit of Fortification Hill inside the
Great Bend of the Colorado River where it changes its direc-
tion of flow from westward to southward, thence easterly a-
long the crest of the first range of mountains south of the
Colorado River to a point due south of the confluence of the
Virgin River with the Colorado River, thence in a straight

1/ Marks, 1951, p. 4.
line to the midstream of the Colorado River at said confluence, thence through the center of the Colorado River.

Actual ceramic evidence of Mohave land use is not available beyond the Great Bend. Postulating Mohave land use farther upstream rests on historic evidence that the Mohaves obtained rock salt from the deposits in the lower Virgin River Valley. Therefore, the territory used and occupied exclusively by Hualapais probably extended to the Colorado River throughout its westward flowing course, with the Mohaves exercising nothing more than a right of transit up river to the salt mines.

Hualapais made use of lands somewhat beyond the conceptual frontier with the Mohaves, according to Hualapai oral tradition. They went to the Colorado River between The Needles and the Great Bend, except for the area of intensive Mohave settlement on the Colorado River flood plain in Mohave Valley. Hualapai land use extended down the bajada slope between the mountains and flood plain an indefinite distance determined by the availability of spring water in the mountains and the hostility or amiableness of the Mohaves. The Hualapai oral tradition of land use on the western slopes of the Black Mountains and within Mohave Valley itself is supported by a statement in a report of the first official United States exploring expedition to come up the Colorado. Lt. J. L. White wrote that "The country of the
Hualapais begins in the upper part of this valley. The significant word is in. There can be little doubt that White here referred to Hualapai land use rather than the conceptual boundary.

Thus the area between the Colorado River and the crest of the mountains immediately east of it from The Needles to the Great Bend was territory shared by and exploited by both the Mohaves and the Hualapais, with the exception of the flood plain farms of the Mohaves and perhaps some of the lower bajada slope used solely by Mohaves, within Mohave Valley proper. Above the Great Bend, the Mohaves enjoyed at least a right of passage along the river to the confluence of the Virgin where salt could be obtained, like their "right" to traverse southern Hualapai country on raids to the Gila.

CHAPTER VI

THE PAIUTE-HUALAPAI FRONTIER

The preceding discussion has presented evidence defining the extent and location of territory used and occupied exclusively by Hualapais behind their frontier with the Mohaves, and the areas the Hualapais shared with the Mohaves. The Southern Paiutes, including their Chemehuevi offshoot, have been included by implication and consideration of ceramic evidence of trade with them wherever it occurred. However, their geographic relationship to the Hualapais has not yet been explicitly stated.

A. Hualapai Definition

Hualapai oral tradition is quite definite in characterizing the Colorado River as both the conceptual frontier with the Southern Paiutes and the limit of territory used solely by Hualapais to the south and the Southern Paiutes to the north.

Pine Springs Band — "To the middle of the Colorado is the boundary and the starting point... the water is the permanent barrier to where my father and his people roamed... from what my father said, that is the natural boundary..."

Milkweed Canyon Band — Asked if he knew the northern—

\[1/\] Indian Claims Comm., 1953, p. 36. (YB)
most Hualapai country of this band, the oldest surviving tribesman replied "To the backbone of the Colorado River." Later he said "the country I am familiar with starting from Wi Katoola, the Colorado River to Tanyika and the Colorado River, Matawitika and the Colorado River, Diamond Creek and the Colorado River, Wyakatooya and the Colorado River."

Clay Springs Band — Responding to a question as to what his mother had told him of where the Hualapais lived prior to their captivity at La Paz, a member of this band intoned: "Haitat going South to Kokame' and circled around to the East" — haitat being the Hualapai term for their personification of the middle of the Colorado River.

Grass Springs Band —"I heard in years back the boundary line runs in the middle of the river. Maybe still running in the middle of the river." (QI May 21 p 15) "Down the canyon from Tanyaka...to the river; half the river is mine" this old lady said of the frontier north of Grass Springs (Tanyaka).

Cerbat Mountain Band —Asked for the aboriginal boundary of the Hualapais, a member of this band described the ancient conceptual frontier: "My father used to tell me

1/ Indian Claims Comm., 1950, p. 57. (KC)

2/ Indian Claims Comm., 1953, p. 177. (KC)

3/ Ibid., p. 159. (DGN) Haitat was the conceptual frontier from the Havasupai downstream to The Needles.

4/ Ibid., p. 73. (QI)
from... a point at Topock called Pinacle butte, then following the river on around to the east boundary of the Walapai country."

Red Rock Band—An old man of this group testified "My Nupo — my grandfather tells me that the boundary is the Colorado River, Haitat, down the river to Wi Kwit Kwit" again the frontier concept ignoring the centuries-old Mohave invasion of Mohave Valley. Asked for the northern boundary of Hualapai original territory, this man said his band's territory ran "from our gardens over near Boulder Dam, the big mountain, and up by the mountains north of White Hills clear around to the present reservation. That was all our country, next to the Colorado River... it followed the backbone of the Colorado River." Amplifying, "that area where I claim, that goes into right in the middle of the Colorado River — to Haitat. I claim that far, don't go no farther on the other side." (RW May 25 p 3)

The consistency of Hualapai interpretation of their oral traditions regarding the Paiute frontier is shown in Kniffen's conclusion as to its location arrived at long before the Hualapaia became involved in litigation in which they might conceivably perceive their self-interest being

1/ Cohen & Barber, 1942, Exhibit F. (Butch Clark, Walapai)

2/ Indian Claims Comm., 1953, p. 108. (RW)

served by some expansion of true boundaries. "The steep-walled, forbidding gorge of the Colorado formed the boundary to the north and west, toward the Paiutes." 1/

B. Ethnologists' Definition

Kniffen's characterization of the Colorado River's channel is quite accurate: there simply were not many places where Hualapais and especially Southern Paiutes could descend from the high plateaus to the river, and fewer where the stream could be readily forded. Since both tribes lacked boats and acquired horses only after 1830 among the Paiutes and somewhat later among the Hualapais, there were only limited inter-tribal contacts at a few servicable fords. The three main avenues of visiting and trade seem to have been the fords at Pierce Ferry, the mouth of Quartermaster Canyon and of White-more Wash Canyon.

Southern Paiute bands inhabited the region north of the Colorado River or west of it from about the north end of Mohave Valley upstream to the junction of the Little Colorado with the main stream, where they crossed to the south side as well. The Chemehuevi offshoot of the Las Vegas Band lived west of the Mohaves, at least during the mid-19th century. 2/

Reconstructions of their territory made by ethnologists from


2/ Kelly, 1934, Map.
their own oral traditions have placed their conceptual and land use frontier with the Hualapais and Havasupais at the Colorado River with a single exception. This was Lowie's report that one of his Shivwits Band informants placed that band formerly "south of their reservation, on both sides of the Colorado." Lowie's informants seem to have displayed little knowledge of former intertribal relations, so this statement probably referred to historic times when a few Shivwits took refuge among the Pine Springs Band Hualapais from the wrath of some Mormon settlers.

Kelly, who systematically investigated Southern Paiute band distributions, mentioned none south of the Colorado River. She mapped the Las Vegas Band as ranging west of the crest of Newberry Peak (Avikwame) and its ridge to the foot of Eldorado Canyon, then to the river up as far as the Great Bend. From the Great Bend upstream nearly to Pierce Ferry the north bank of the river was Moapa Band territory. From Pierce Ferry upstream to about Whitemore Wash the Shivwits Band held the north bank.—primarily the massif of the Shivwits Plateau. The Uinkaret Band held the next stretch of river upstream across from the northeasternmost Hualapai terri-

1/ Lowie, 1924, p. 193.

2/ WP 74-75, 77; Wheeler, 1872, p. 28, 75-76; Spier, 1928, p. 360 ff; Cohen & Barber, 1942, Exhibit N; Bloom, 1934, p. 177-178.
tory and northwesternmost Havasupai territory.

Without going into as much detail, Steward mapped the southern Paiute linguistic boundary along the north and west side of the Colorado River from the California–Nevada state line upstream to the junction of the Little Colorado. 2

C. Paiute Definition

Paiutes have rather uniformly testified that the Colorado River formed their mutual conceptual and land use frontier with the Hualapais, across which both tribes traded and visited, sometimes staying long enough to do a little hunting or gathering on the slopes of Grand Canyon with their hosts.

On the stretch above the Great Bend to Pierce Ferry near the river, one Moapa Paiute testified "It is my understanding that the Colorado River was the boundary line between the Paiutes and Walapais." 3 Another agreed that this was correct.

The Shivwits who held the north side of the river above Pierce Ferry testified similarly. At the Shivwits Reservation in Utah, one of the old men said, "The Shivwits side was this side of the Colorado River. The Walapais were on the other

1/ Kelly, 1935, Map.
2/ Steward, 1938, Figure 1.
3/ Cohen & Barber, 1942, Exhibit Q. (Charley Chime–wavy, Paiute)
4/ Ibid., Exhibit R. (John Quail, Paiute)
Another said, "The Walapais lived across the Colorado River" and confirmed that the Shivwits fronted partly on the Hualapai Pine Springs Band: "I came from down south in the Shivwits country around Grain Spring, just on top of a hill overlooking the river.... The Walapais lived across the Colorado River. A long time ago my grandfather told me. He said that we could go across to visit: that on the other side of the river was Walapai country... on the other side of the river they both hunted together sometimes." A third Shivwits recounted that "my grandfather, an old man, told me" that the boundary between the Shivwits and Walapais "was through the Colorado River all the way to Tasi."

On the Kaibab Reservation still another Paiute testified that from older members of the tribe he heard that the southern boundary of Paiute country was "along the Colorado River." Another's grandfather and grandmother told him that the Walapais lived "on the other side" of the Colorado River, and the Shivwits "on this side."

1/ Cohen & Barber, 1942, Exhibit N. (Smokey Little Jim, Shivwits)
2/ Ibid., Exhibit O. (Frank Mustache, Paiute)
3/ Ibid., Exhibit P. (Janey Foster, Shivwits)
4/ Ibid., Exhibit S. (Tom Indian, Paiute)
5/ Ibid., Exhibit T. (Frank Dry, Paiute)
All the above quoted statements were made by Paiutes in connection with litigation between the Hualapais and the Santa Fe Railroad before the Indian Claims Commission Act was passed, so the Paiutes at that time had no self-interest to consider. The consistency of Paiute testimony on their Colorado River frontier since the passage of the Act demonstrates the essential reliability of Paiute oral tradition and a lack of effect of self-interest in changing their views of their exterior limits. More thorough questioning about land use has elicited additional information on visiting both ways across the conceptual frontier to provide the main difference.

Asked what he learned from his parents about the Paiute-Hualapai boundary, the 1953 chairman of one Paiute reservation government replied "That is the dividing line of the Hualapai people, the Hualapai tribes — they say that the Colorado River was the principal dividing line... I think that would be the center of the Colorado River. And if they go on the South side of the Colorado River they know they are on the Hualapai land."

An older Shivwits band member also testified that his grandparents had told him the Colorado divided the Shivwits from the Hualapais.

1/ Indian Claims Comm., 1953, p. 126. (Tony Tilla-

2/ Ibid., p. 134. (Jannie Rogers)
D. American Records

Such recent statements based upon Indian oral traditions are confirmed by early Anglo-American estimates of the territorial relationship of Hualapais and Paiutes recorded in various historical documents. A remark by Lt. Col. William R. Price while carrying out his military campaigns against the Hualapais in 1867 is illuminating: "October 29th... The Indian guides, Varanap and Pauline were here sent into Camp Mojave. The former was a prominent Chief of the Pahutes, who I had succeeded in getting to accompany me for the reasons that I would be sure of no outbreak from them while absent, that I wished to get them in hostility with the Hualapais, whose Country adjoins theirs, separated by the Colorado River, and that I wanted them to know the strength of my Command...."

Later on, Col. Price wrote during another campaign against the Hualapais, "At the Toll Gate all operations in my Sub District tend to drive the Indians towards the Colorado River, across which they will not go. Between these and the River is a large unoccupied country filled with Indians...."

The refusal of the Hualapais to cross the Colorado River even when under attack by Price's cavalry is evidence of the very strong attachment for their ancestral territory they pos-


2/ WP 89. (Emphasis added) This was May 3, 1869 — unoccupied and unsettled by Anglo-Americans.
They stood and fought, or hid, within their own country rather than seek safety in flight across the river as some Shivwits Band Paiutes had. Price's various statements clearly recognized the Colorado River as the intertribal land use boundary between territory occupied solely by Hualapais and that occupied solely by Paiutes. From the Havasupai country on the northeast downstream to Mohave Valley the river was the Hualapai-Paiute frontier.

During the 19th century the Mohaves may have always intervened between the Chemehuevis and Hualapais. In any event the Chemehuevis ranged west of the river: "in southern California, along the western shore of the Colorado." ¹ According to the first U. S. Army officer to sail upriver by steamboat (in 1858), there were Mohave inhabitants at Round Island, and "above them are Chimmewaywas, and above those are the Cohu-alch. Opposite to these are the Hualyopais." ² The next officer up river found his Mohave guide worried about "bad Pai-utes" only after sailing past Cottonwood Valley into Eldorado Canyon ³ perhaps indicating that the Chemehuevis were friendly in 1858 with the Mohaves, but that the Las Vegas Band Paiutes may not have been, and that their border was near the south end of Eldorado Canyon (where Kelly said they came to

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¹ Kelly, 1936, p. 129.
² White, 1955, p. 100.
³ Ives, 1861, p. 30.
the river).

E. Visiting Across the Colorado

The Colorado River frontier between the Southern Paiute bands and Hualapais was apparently a peaceful one during most of recent history and pre-history, despite some recorded Paiute raids on Hualapais. These may have occurred entirely after 1830 when the Old Spanish Trail was opened through Paiute territory, and they began to acquire horses and to organize into raiding bands which occasionally turned south across the river when no more profitable target than Hualapais presented itself.

Visits to trade, hunt, and gather natural foods were made in both directions across river fords. Asked how he learned of the tribes south of the Colorado, a Paiute replied that he had visited them—in post-conquest times, of course. In earlier times "They say Shivwits people in the seeking of food, that is, natural food the country provided they crossed in the seeking of such food in the early days before the Whites. And they gathered seeds such as was grown along the rim of the Colorado River, far back into where they can find it. And then they gather or hunt or whatever they need; then they drift back over into the — across into, I don't know,

\footnote{1/ Cohen & Barber, 1942, Exhibit S. (Tom Indian, Paiute)}
the North rim of the Colorado.\textsuperscript{1} While visiting the Hualapais sometimes they gather yant, they call it. That grows along the underrim of the South Colorado River... They did hunt on what they call Pine Mountain up towards the North end — I mean the East end... There was wild turkeys and bucksins and antelope in the open country on the top there.\textsuperscript{2} Asked where the Shivwits Band Paiutes crossed the river, this Paiute responded: "I remember them saying that would be right above what they call Mount Trumbull, from Mount Trumbull to what they call Toroweap Valley, one trail come out through there... That was the better place. There would be two or three places where they would come across there. That is opening, nice trail... They make a boat, some kind of a raft so they could take their family across over it... They had to climb up to the top where they was going for the purpose to hunt."\textsuperscript{3} This would bring the visiting Shivwits out just above Prospect Valley, and was the route followed by the fugitives who joined the Pine Springs Band in the middle 1850's.

Paiutes of the Shivwits Band seeking food south of the river seem not to have worried about being in hostile territory: "The Hualapais always have welcome the people. They

\textsuperscript{1} Indian Claims Comm., 1953, p. 128.

\textsuperscript{2} Ibid., p. 128-129. Yant is Paiute for mescal. (Harrington, 1926b, p. 230)

\textsuperscript{3} Ibid., p. 130.
could help themselves in the game."[1] As an older Paiute put it, "They didn't get no permission but they come and they welcome by the people, the Hualapais living on the rim." He agreed that the Paiutes were friendly with the Hualapais, and that they would stay "Quite a while, maybe a month, maybe two months, maybe three months... Then they go back."[2]

The oldest living Hualapai says "They were friends with the Paiutes across the river. They traded. Some were related. The Paiutes stayed a few days to a month to hunt or trade, before the whites came." (KC July 22 p. 1)

The Cerbat Mountain Band Hualapais were very glad to trade with the Southern Paiutes, especially with those living near the Old Spanish Trail and later the Mormon settlements north of the Colorado River. The reason was that those Paiutes acquired firearms which the Middle Mountain Hualapais sorely needed during the 1860's to resist first Anglo-American prospectors and then the United States Cavalry. "The Chim-wawa[3] must have had guns on hand first at St. Thomas and St. George. Cherum[4] traded them Navaho blankets and horses. They came across the river and traded. The Chemehuevis are

[2] Ibid., p. 137. (Jannie Rogers, Paiute)
a different band at Cottonwood Island... The only thing Cherum had was buckskins. Then he got blankets, then horses from Cottonwood Island, then guns from St. Thomas. He was a man with a head on. Charley did the same way." (GW Aug. 20 p 7)

Some of the Pine Springs Band Hualapais, at least, also visited the Paiutes on the north side of the river. "Young Beecher told us that his father used to go across the Colorado River into Paiute country at lunch and be back for dinner." (FB July 24 p 2) A Shivwits Band Paiute asked if Hualapais ever visited on the north bank testified, "Yes, maybe two or three at a time came over to visit."²

Other Hualapais crossed the Colorado River to mine salt from the rock salt caves in the lower Virgin River Valley (FM Sept. 25 p 55), most probably the one about six miles up that stream from its confluence with the Colorado River.

F. Ceramic Evidence

The ceramic evidence available bears out the oral traditions and historical records. The highest proportion of Southern Paiute Utility Ware on sites south of the Colorado River has been recovered from a site with an unreliable sherd sample and one which is entirely post 1869 where the Paiute Cherum's half-brother (Their father had two wives).

²/ Cohen & Barber, 1942, Exhibit O. (Frank Mustache, Shivwits)

³/ Harrington, 1926b, p. 222.
sherds may have been left by refugee Paiutes living with the Pine Springs Band Hualapais, or by Hualapais who had traded them from across the river rather than make any more Tizon Brown Ware pots. The third greatest proportion was found on one of the several sites at Quartermaster Springs Village just up the canyon from a frequently used ford across the river. The Hualapais often crossed to hunt on the northern side of the river; Paiutes often crossed to trade and visit the Hualapais here. Since only three of the score or so of sites recorded at Quartermaster Springs yielded Southern Paiute Utility Ware, Paiute visiting appears to have been rather selective (or restricted by the hosts). Mostly they seem to have camped on the one site NPS Arizona G:1:1.1. Perhaps this was their assigned camp ground when visiting the Hualapais here.

At the rest of the sites where Southern Paiute Utility Ware occurs, it is found in insignificant proportions, indicating some Hualapai trade with Southern Paiutes for clay vessels, or some visiting, but not much.

Conclusion. The hypothesis that the Colorado River formed the common conceptual and land use frontier between contiguous Southern Paiute territory to the north and Hualapai territory to the south cannot be rejected.

Insofar as the Chemehuevi continued to produce Southern Paiute Utility Ware, the hypothesis that the Colorado River south of its Great Bend formed the common conceptual and land
use frontier between contiguous Chemehuevi territory to the west and Hualapai territory to the east cannot be rejected. Insofar as the Chemehuevi may have adopted Lower Colorado River Buff Ware, their use of the area east of the river shared by the Mohaves and Hualapais cannot be distinguished from that of the Mohaves.

Chemehuevi production of Lower Colorado River Buff Ware is probably a relatively recent practice attributable to very close intertribal relations with the Mohave since at least the latter part of the 18th century. "Van Valkenburgh's observations on Chemehuevi pottery-making indicate that we are dealing with a pure Mohave technique. The absence of modifications suggests a recent adoption; and altogether, there seems to be little cause to believe that pottery-making has been a part of the Chemehuevi culture-complex for more than one hundred and fifty years."

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1/ Rogers, 1936, p. 38.
Quadrangles where Southern Paiute Utility Ware has been collected from sites south of the Colorado River.
Quadrangles adjacent to the river: Red.
Quadrangles on trade route from Pierce Ferry Ford south: Yellow.
Quadrangles in area hunted by refugee Shivwits among Pine Springs Band: Green.
DISTRIBUTION OF SOUTHERN PAIUTE UTILITY WARE IN HUALAPAI TERRITORY SOUTH OF THE COLORADO RIVER IN ARIZONA

<table>
<thead>
<tr>
<th>Sites</th>
<th>Per Cent Southern Paiute Utility Ware in Sample</th>
<th>Dominant Ware</th>
<th>Per Cent</th>
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<td>In the Mohave-Hualapai Shared Area</td>
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<td>South of Colorado River in Territory Occupied Solely by Hualapai Indians</td>
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Per cent of Sample from Sites where Southern Paiute Utility Ware Occurs: 2.3

Per cent of Sample from Sites where Southern Paiute Utility Ware Occurs is 2.3

Size of Sherd Sample from Sites where Southern Paiute Utility Ware Occurs is 1,700

*Fingernail Indented type.
*Post 1869 site.
CHAPTER VII
DEFINITION OF AREA SHARED BY THE HUALAPAIS
AND THE HAVASUPAIS

At the northeastern edge of Hualapai territory lay the country of the closely related Havasupai Indians who speak the same Eastern Upland Yuman language with only dialectual differences. The two groups formed one ethnic group hostile to the other upland dwelling Yuman-speaking tribe, the Yavapais. Anthropologists have generally agreed that the Havasupai are but an off-shoot of the Hualapais—a band which became localized on the eastern frontier and enjoyed somewhat more agricultural success than the more westerly Hualapais, and underwent more acculturation to the Western Pueblos as a result of proximity to them and frequent contacts with them.

The Hualapais and Havasupais are now separate self-governing tribes, although many Hualapais and Havasupais are still related and intermarriage still continues. In a situation such as this, inevitably the line of distinction between the territory of the two groups is blurred. In the nature of the relationships and kinship ties between the Havasupais and Pine Spring Band Hualapais who lived next to them, a considerable sharing of natural resources occurred in a strip of land which both groups shared.

The confusions of oral tradition and the lack of non-
Indian settlement in this area which might have produced independent documentation of territorial relationships leave archaeological evidence as virtually the only kind available for defining with any precision the area used exclusively by either tribe and that shared by both.

A. The Identification of Havasupai Pottery

When the present study was initiated, the kind of pottery formerly produced by the Havasupai Indians was even more unknown than that of the Hualapais. This was because "clay vessels... were displaced by metal products about 1870" at the same period that Hualapais were in the final stages of Tizon Brown Ware production. From Oral tradition, Spier concluded that "the only native ware is a small, unslipped and undecorated, coarse, brown pot of the type common to all the nomadic tribes of the Southwest...." The only vessel he recovered was "excavated at the Lagoons north of Pine Spring. It is of the type described, but it cannot be certainly ascribed to the Havasupai because of its somewhat greater size and handles."

1/ Spier, 1928, p. 138.
2/ Ibid.
3/ Ibid.
Area shared by Hualapais with Havasupais
Where Prehistoric Cohonina Branch Ceramics
Are Most Abundant. 15' Quadrangle A : 16
South of the Colorado River, G : 4 and
H : 1 and 5.
1. The Cohonina Hypothesis

Despite Spier's description of Havasupai pottery as brown in color, indicating that it must have been fired in an oxidizing atmosphere, archaeologists working in the area occupied by the Havasupai in historic times have been tempted to postulate that the Havasupai were descended from a prehistoric Indian group living in this same plateau region, the Cohonina. This correlation has been postulated despite the fact that the pottery made by the Cohonina Branch Indians was uniformly a gray ware fired in a reducing atmosphere. The Havasupai have been derived—on paper—from the prehistoric Cohonina also in the face of the facts that they clearly speak a Yuman language with only dialectic differences from Hualapai, and that the pottery of all known Yuman-speaking tribes is either brown or buff—in other words, all known Yuman pottery was fired in an oxidizing atmosphere. To suppose that the Yuman-speaking Havasupai manufactured clay vessels fired in a reducing atmosphere is to postulate a cultural separation of the Havasupai from all other Yuman-speaking Indians which is not reflected in any other aspect of Havasupai culture.

The difference in time between the known occupation of the plateau by the Cohonina and the Havasupai also presents a major obstacle to the acceptance of the hypothesis that these two tribes were related. The San Francisco Mountain Gray Ware made by the Cohonina Branch Indians does not seem to have been
made after about 1150 A. D. The generally accepted terminal dates for its production are around 1100 to 1150 A. D. for various types. The Havasupai were inhabiting their historic range by 1776 when Fr. Francisco Garcés traversed their territory en route to the Hopi Pueblo of Oraibi from the lower Colorado River. However, they were living west of the Hopis — and probably in their historic habitat — more than a century earlier, since they were referred to in Spanish documents of 1665 in New Mexico. This leaves a gap of approximately 500 years between the last known date of Cohonina occupation and the earliest known date of Havasupai occupation.

Needless to say, a great deal can happen in five centuries. Rogers' theory of Yuman migration from California, if correct, would have the Havasupai entering their historic habitat during this period from the west as the vanguard of the Yuman advance. In sum, the linking of modern Havasupais to the prehistoric Cohoninas came down to the fact that both seemed to have occupied the same region at different times. "It must be admitted that there is no real evidence of Cohonina-Havasupai connection, beyond that of geographic loca-

4/ Rogers, 1945.
tion" according to one of the most active archaeological inves-
tigators of the prehistoric tribe.

At the beginning of the present study, then, two contradictory hypotheses were available to explain the known facts (although apparently neither had been explicitly formulated by workers in the area):

1) The Havasupais were descendants of the prehistoric Cohonina Branch Indians
   a) Therefore, Havasupais produced San Francisco Mountain Gray Ware pottery.
   b) Therefore, Havasupais in the guise of Cohoninas were living in this area as early as 700 A. D. or as early as San Francisco Mountain Gray Ware was made.
   c) Therefore, the apparent termination of San Francisco Mountain Gray Ware production around 1100 to 1150 A. D. must be attributed to wholesale errors in dating tree-rings, or failure by many archaeologists to locate post 1150 A. D. sites.
   d) Therefore, the Havasupai fired their clay vessels in a reducing atmosphere in contrast to all other Yuman-speaking tribes who fired theirs in an oxidizing atmosphere.

1/ McGregor, 1951, p. 134.
2) The Havasupais represent the easternmost advance of Yuman migration from California
   a) Therefore, they are not related to the prehistoric Cohonina Branch Indians.
   b) Therefore, they entered their historic habitat after the Cohonina left it (perhaps displacing them).
   c) Therefore, they fired their clay vessels in an oxidizing atmosphere like all other Yuman-speaking peoples.
   d) Therefore, San Francisco Mountain Gray Ware did really go out of production around 1100 to 1150 A.D., and dating by tree-ring counts had not resulted in wholesale errors, nor had archaeologists failed en masse to locate post 1150 A.D. sites in an intensively surveyed region.

2. Procedure
   As the Tribal Survey progressed, it became clear that if the respective limits of Hualapai and Havasupai land use in the area where these tribes met were to be defined by artifact distribution, Havasupai ceramic remains would have to be identified. Once Hualapai pottery had been identified, its distribution could be mapped – but if the Havasupais had produced a brown colored pottery as described by Spier, could it be differentiated from Hualapai pottery?
In view of the close relationship of the Hualapais and the Havasupais in language and all other cultural traits, it seemed quite possible that there had been no difference between pots made by Havasupai and Hualapai potters.

The Tribal Survey proceeded upon exactly the same plan employed in the survey identification of Hualapai pottery. A Havasupai was contacted who served as a guide to sites known to have been occupied by Havasupais. The area surveyed lay east of Cataract Canyon so there was no chance of finding Hualapai pot sherds except in the form of trade ware. The first area inspected was the occupation area at the frame house of the mail carrier between Grand Canyon Village and the Havasupai village in Cataract Canyon. Next, the hill behind this house upon which a deceased relative of the guide had lived was examined. Again no Indian-made sherds were found.

Next, the guide went to currently occupied hogan-type oowa'a which the Havasupai have at least for some decades built for plateau residences. These also yielded no Indian-made sherds. Then working gradually back through time, the guide pointed out two crumbling oowa'a which had been inhabited by deceased Havasupais whose identity was remembered. Neither of these sites (Arizona B : 15 : 5 and B : 15 : 6) yielded any Indian-made sherds.

1/ Spier, 1946, p. 58 recorded hawà'a and awa'.
Finally the guide — probably as a last forlorn hope from his point of view — stopped and pointed to a few timbers beside the road where he said some Havasupai whose name he had never heard had lived before he was born. These timbers had once formed the wooden framework for a hogan-type oowata, and were now tumbled down, and the rest of the structure vanished. On the ground close to the one-time wall of this structure twenty-six sherds were found along with a small arrow-point. All twenty-six sherds were obviously Tizon Brown Ware.

These twenty-six pot sherds are the type sherds for Havasupai pottery. They indicate that the hypothesis that the Havasupai manufactured Tizon Brown Ware vessels, fired in an oxidizing atmosphere, cannot be rejected. Therefore, the hypothesis that Havasupais produced San Francisco Mountain Gray Ware vessels fired in a reducing atmosphere must be rejected. Therefore, the rest of the second hypothesis stated above must be accepted also: that the Havasupai are not related to the prehistoric Cohonina Branch Indians, and that they entered their historic habitat after the Cohonina departed or were evicted by them.

These twenty-six sherds of Tizon Brown Ware made by Havasupai potters showed one important difference from sherds of this ware produced by Hualapais. They bore quite clearly the marks of the paddle or of some other implement employed in
shaping them, or else deliberately applied as a form of decoration or finishing. Such wiping or decoration marks do not appear on Hualapai vessels—they were unknown over most of the area of distribution of Tizon Brown Ware. They had previously been recognized, however, on sherds from the Mohawk Canyon rock shelters—which Havasupais were known to have occupied along with the Hualapais, significantly enough.

b. Wiped Sherd Distribution

When the wiping characteristic had been established as a Havasupai ceramic trait, the sherds recovered from sites Havasupais were known to have used along the Havasupai–Hualapai border were re-examined to determine whether they showed this treatment.

As mentioned above, the wiping characteristic had already been recognized on sherds recovered from rock shelters in Mohawk Canyon. They formed 17.4% of the surface collection from the large shelter at Whala Kitev Giova where Havasupais were known to have visited for a month or more at a time. They comprised 25% of the sherds Mr. Euler recovered in excavating a test pit into the deposits on the floor of this rock shelter, being found to a depth of 30 cm. although not in the lowest 20 centimeters.

At Oya Sivli Klavalava, the smaller rock shelter said to have been used as a hunters' camp primarily by both Havasupai and Hualapai within historic time, wiped sherds formed a third
of the surface collection. Excavating the smaller upstream deposit here, Mr. Euler recovered wiped sherds in the upper half but not in the lower half of the deposit — 16.7% of the sherds recovered. In the deeper excavated area wiped sherds formed 27.3% of all recovered, the bulk of them from the latest levels above Jeddito Black-on-Yellow, which was made from about 1300 to 1700 A.D.1 This may indicate that the wiping characteristic became more popular among the Havasupais after about 1700.

In this deposit, wiped sherds were also recovered below the level of Sikyatki Polychrome and Jeddito Black-on-Yellow trade wares, indicating that the technique was employed prior to probably 1300 or 1400 A.D.2 Although such sherds were not numerous in these lower levels, neither are unaltered Tison Brown Ware sherds from Hualapai vessels, so it may well be that wiping has marked Havasupai pots for as long as the Havasupai have been differentiated from Hualapais.

Besides these two rock shelters, Ikisa Ha' water hole in the upper Chino Wash channel had been referred to by both Hualapais and Havasupais as a spot where both tribes camped in season to obtain water and hunt and gather grass seeds on the

1/ Colton, 1939, p. 27.

2/ The former date marking the beginning of production of the Jeddito type, the latter of Sikyatki. (Colton, 1939, p. 27; Colton, 1953, p. 75.)
surrounding plateau. Even though both might be present at the same time, they were said to have camped apart in discreet areas. A number of distinct sites had been recognized in surveying this area, both by the Santa Fe Railroad-Museum of Northern Arizona survey of 1938 and the Tribal Survey. Examination of these survey collections showed that two of the recorded sites were characterized by wiped Tizon Brown Ware sherds. Here was additional confirming evidence as to the identity of Havasupai pottery. At site Arizona H : 5 : 2 on the slope west of the channel, wiped sherds constituted 70% of the reliable sherd sample recovered. And at site N. A. 3443 on the low bench east of the water hole, wiped sherds made up 94.4% of the low reliability sample.

3. The Lagoon Jar

After Havasupai pottery had been recognized from sherds as characteristically a surface-wiped type of Tizon Brown Ware (sherds may be classed as either Cerbat or Aquarius Wiped), an opportunity to examine the whole vessel excavated at the Lagoon at the head of Mohawk Canyon by Spier many years previously presented itself. This vessel is preserved in the American Museum of Natural History in New York City (Number 50.2-1668 in the ethnology collections). It is 30 centimeters at greatest diameter with an orifice 11.5 centimeters across, standing about as high as wide. It is equipped with two perforated lugs somewhat above its greatest circumference. These
project 1.5 centimeter and are 1.5 cm. thick at the base. The perforations are half a centimeter in diameter. The entire top of the vessel above the lugs was once broken off and has been stuck to the body with a native adhesive — apparently piñon pitch.

The location of this large jar was not known to Museum officials at the time it was sought. It was thought to be housed with archaeological specimens, inasmuch as Spier had excavated it. Mr. Harry Tschopik, Jr., wisely suggested that it might be among the ethnological specimens since Spier was pursuing an ethnological study at the time he recovered the vessel. Upon visiting the shelves holding Navaho and other unremarkable examples of plain brownware pottery, the author was able to pick out the pot on the basis of shape and surface appearance without having seen the number. This incident is recounted simply to point out the fact that this jar is typical Tizon Brown Ware with Havasupai surface wiping.

Examination of this entire vessel — the first whole example of the type seen — left no doubt that the surface wiping on the exterior of the vessel had been deliberately executed on the still-damp surface by its maker. The whole exterior surface was treated in this manner — it shows a network of groups of parallel striations of a wiping instrument applied in random strokes.
4. Tizon Wiped

Synonyms: Aquarius Brown and Cerbat Brown (Colton, 1939) in part; Aquarius and Cerbat Scored or Wiped.

Described by H. F. Dobyns

Named by H. F. Dobyns

Illustration: Spier, 1928, p. 139.

Type Specimen: No. 50.2–1668, American Museum of Natural History.

Type Sherds: 26 from Arizona B : 15 : 7 (Arizona State Museum).

Type Site: Arizona B : 15 : 7.

Time: Prehistoric to before 1900 A. D. (ca. 1870 according to Spier, 1928, p. 138).

Description:

Constructed: By coiling — Type Sherds 1 and 2 broke on a coil bond — shaped with paddle and anvil.

Fired: In oxidizing atmosphere.

Core: Black usually (about 85%) to gray or tan. (Type Sherds 1 and 2 black, 3 & 4 gray, 5 & 6 tan).

Texture Core: Medium to coarse, irregular.

Carbon Streak: Yes.

Temper: Angular medium to large particles crystalline to opaque quartz, feldspar, some mica flakes. ("Fine stones from an anthill" Spier, 1928, p. 139.)

Fracture: Crumbling.
Surface Finish: Exterior—scummed, uneven from paddling, not polished, not gritty or rough. Color: tan or brown to light tan. Interior—wiped to scored, i.e., random finishing strokes of instrument leaving parallel striations for each stroke to apparently intentional scoring leaving deep striations. Color: gray to brown.

Fire Clouds: Yes.

Form: Large jars, 30 cm. greatest diameter. Recurved rim 11.5 cm. inside diameter of mouth and 12.75 cm. outside.

Thickness Walls: .5 to 1.25 cm. (11/64 to 18/64 inches.)

Rims: Harner's No. 6 more sharply recurved.

Colton & Hargraves' 1:E:10.

Decoration: Exterior—intentional striation of smoothed scummed surface by random strokes of instrument leaving parallel striations.

Comparisons: Tizan Wiped is a new type of Tizon Brown Ware (Colton, 1939, p. 8 ff) distinguished only by the surface treatment which resulted in a surface-altered type. All previously described types of this Ware are unaltered.

Range: The known range of this type coincides with the central and western range of the Havasupai Indians by whom it was made. The type site is a few miles east of Cat-
aract Canyon; the type is found along the western edge of Havasupai territory in rock shelters in Mohawk Canyon and around waterholes in the upper Chino drainage. Occasional wiped sherds found farther west probably represent Havasupai trade to the Hualapais.

Cultural Associations: It was produced by Havasupai Indians.

B. 15' Quadrangle Arizona A:16

<table>
<thead>
<tr>
<th>Site</th>
<th>Historic Trailside Material</th>
<th>Rock Shelter</th>
<th>Wickiup Ring</th>
<th>Mescal Stone Pits</th>
<th>Flakes</th>
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Tizon Brown Ware constitutes only 39.3% of the sherds known from sites recorded in this 15' Quadrangle. Yet the next most abundant ware makes up only 13.6% of the sample, and this is trade ware from the Kayenta-Hopi Branch! The ceramic evidence as to the tribal identity of prehistoric occupants of this Grand Canyon South Rim region is confusing to say the least.
### Relative Proportions of Ceramic Wares in the Area Shared by Hualapais and Havasupais on the Northeastern Frontier of the Hualapais

#### 15' Quadrangles Arizona A: 16, G: 4, H: 1 & 5

<table>
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<tr>
<th>Quadr.</th>
<th>Lower Colo. Brown Ware</th>
<th>Tizon Wiped Ware</th>
<th>Pres- Cott Gray Ware</th>
<th>Moapa Gray Ware</th>
<th>S. F. Gray Ware</th>
<th>Trans- Tizon Ware</th>
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<tr>
<td>G:4</td>
<td>.2</td>
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<td>.9</td>
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<td>12.4</td>
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<td>.4</td>
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<th>Quadr.</th>
<th>San Tsegai Orange Ware</th>
<th>Tusayan White Ware</th>
<th>Jeddito Yellow Ware</th>
<th>Mogollon Brown Ware</th>
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THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15° Quadrangle Arizona A:16 South of the Colorado River.
CERAMIC ANALYSIS BY WARES
OF SITES IN 15th QUADRANGLE ARIZONA A:16

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<th>SITES</th>
<th>LOWER TIZON</th>
<th>TIZON PRES-</th>
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<th>TUS-</th>
<th>SAN</th>
<th>TSE-</th>
<th>MO-</th>
<th>UNI-</th>
<th>COLO. BROWN</th>
<th>WIPED</th>
<th>COTT APA</th>
<th>YAN</th>
<th>JUAN GI</th>
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<th>DENTI-</th>
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<tr>
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<td>RIVER WARE</td>
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<td>RED</td>
<td>OR.</td>
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<td>BUFF</td>
<td>WARE</td>
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|      | 100.0 | 3.1  | 1.6 |
| A:16:1| 21.9  | 3.1  | 1.6 | 7.9 | 10.9 | 1.6 | 21.9 | 9.4 | 21.9 |
| A:16:2| 11.1  | 44.4 | 33.3 |
| A:16:3| 8.7   | 69.6 | 17.4 |
| TOTAL | 2.9   | 39.3 | 8.7 | 1.0 | 4.9  | 6.8 | 1.0  | 13.6| 5.8  | 15.5 |

CERAMIC ANALYSIS BY TYPES
OF SITES IN 15th QUADRANGLE ARIZONA A:16

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<th>Nee-</th>
<th>Cerbat</th>
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<td>Wiped</td>
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1. Site Analysis

a. Plateau Between Mohawk and Prospect Canyons

Juniper Tank has been built on the site of an old water hole the Hualapais called Ha' Pookum Ganga. This term is sometimes used to refer to the entire plateau remnant between Mohawk and Prospect canyons, or the term Kanyoo'í Kisí'ava is employed. (JM July 22 p 1; Aug. 20 p 5) The Pine Springs Band used the water hole, and the Havasupais occasionally came this far west formerly to gather piñon nuts. (YB May 23 p 4)

i. Arizona A : 16 : 1

The unreliable sherd sample is entirely Tizon Brown Ware so the hypothesis that this site was used exclusively by Hualapais prior to Anglo-American conquest cannot be rejected.

ii. Arizona A : 16 : 2

The reliable sherd sample is as diverse as any found in the region under study. Tizon Brown Ware and Tsegi Orange Ware each constitutes 21.9% of the sample, and as many sherds could not be identified. The site may represent an early occupation at a time when Tizon Brown Ware was first coming into use, or by Hualapais heavily dependent upon foreign trade vessels for some other reason.

Indians were living at this site many centuries ago, as Deadmans Black-on-Red, which was found here, was probably made
between about 775 and 1060 A. D., Tusayan Black-on-Red from around 965 to 1130 A. D., Tsegi Black-on-Orange and Tsegi Red-on-Orange both probably between 1225 and 1300 A. D., with Verde Black-on-Gray dating from this same time range.

Apparently this site was occupied by Hualapais — unaltered Tizon Brown Ware sherds outnumber wiped sherds 7 to 1, so Hualapai occupation appears to have been exclusive relative to Havasupais. The question is whether this site was occupied at all after 1300 A. D.

Three sherds recovered had been ground down to circles and holes drilled in the centers to make spindle whorls, indicating thread was made here from yucca leaf fibers or imported cotton.

d. Mohawk Canyon

The Havasupai "commonly occupied certain localities together with the Walapai, for example... Moho Canyon at the northern end of the Aubrey Cliffs. Beyond these points the Havasupai consider themselves well out of their own territory." This pattern went far back in time, as shown by Sinyella's historical account of Havasupai piñon nut gathering

1/ McGregor, 1951, p. 20, 32; Colton, 1953, p. 75.
2/ Ibid.; Ibid.
4/ Spier, 1928, p. 94.
with the Hualapais in this canyon about 1861. Nowadays, the Havasupais consider mescal the most important food resource of this canyon. (FM July 29 p 14) This contrasts with the long list of plants used by the Hualapais (sele' and mahla'a seeds, piñon nuts, manat fruit, squawberries and other berries). (JM May 21 p 5) Mescal was the emergency staple of these tribes and Havasupai emphasis on its importance probably indicates Mohawk Canyon was an area of refuge in times of food shortage rather than part of their normal range. The Hualapai-Havasupai frontier was not clearly conceptualized and can only be described as two areas of sole and exclusive use and occupancy divided by an area shared by both. As Spier indicated, the Havasupais place the western limit of this shared area at Mohawk Canyon. "There is a little piece of land near Pine Springs which we claim, running through Mohawk... Canyon and our horses are now running there."

1. Arizona A : 16 : 3 — Oya Sivli Klavlava

The sherd sample from the surface of this rock shelter is unreliable, 44.4% unaltered Tizon Brown Ware of the Hualapais compared to 33.3% wiped or scored of the Havasupais. Therefore, the hypothesis that this rock shelter was used and

1/ Spier, 1928, p. 362.

2/ Cohen & Barber, 1942, Exhibit CC. (Jim Crook, Supai)
occupied solely by one tribe or the other must be rejected.

The information obtained by Mr. Euler's excavation in this rock shelter confirmed the surface evidence. Only 59.9% of the excavated sherds are unaltered Tizon Brown Ware of the Hualapais—barely shy of Colton's 60% level of significance of cultural predominance. On the other hand, 27.3% of the excavated sherds are wiped or scored Havasupai-made, well over the 25% level of significance of occupancy.

ii. Arizona A: 16:4 — Whala Kitev Giova

The surface sherd sample is of low reliability at this rock shelter, but 69.6% unaltered Tizon Brown Ware compared to 17.4% wiped or scored sherds attributable to the Havasupais. As was the case in Hualapai-Mohave trade relations, it is very doubtful whether the Havasupais had any surplus vessels to trade to the Hualapais, so Tizon Wiped sherds may be taken as evidence of Havasupai presence wherever found. Therefore, the hypothesis that this site was occupied and used solely by either Hualapais or Havasupais must be rejected.

The sherds recovered during Mr. Euler's excavation of the deposits here confirm the surface evidence. The excavated sherd sample is reliable, and only 57.8% unaltered Tizon Brown Ware, falling short even of Colton's 60% level of significance of cultural predominance. Wiped or scored Havasupai sherds make up a quarter of those excavated. Combined with
Hualapai oral tradition of sharing this rock shelter with Havasupais, and Havasupai oral tradition of using it, the ceramic evidence leaves no doubt as to its having been shared by the two groups.

Hualapai motivation for using such rock shelters is found in the statement that "In those days the Hualapais wore no clothes but a G-string, so they would have to crawl into such shelters in where it was warm." (YB Aug. 13 p 3) "The upper end of Mohawk Canyon north of Lagoons is called Whala Kitev Giova (i.e., Pine Trees on the Sides; Drops Steeply). That's where the cave is where some of them hid. That cave had no name...." but was referred to by this general canyon term. (YB May 23 p 1) "Just before the snow starts these related bands usually moved out from wherever they lived around Pine Springs country to Wi Vookwa'a... and others moved to Whala Kitev Giova cave north of Lagoon. Like I say, these places were their winter homes." (JM Oct. 15 p 2)

Several Havasupai families whose range lay to the west in this direction lived from time to time in this rock shelter. (FMS July 29 p 11) Their main use of the area was to obtain mescal from the benches of Grand Canyon into which Mohawk Canyon opens to tide them over the hungry months during which crops were growing. (p 17) Thus there appears to have been a seasonal difference in Hualapai and Havasupai use of the rock shelters.
Conclusion

Analysis of four ceramic sites recorded in 15° quadrangle Arizona A:16 shows only one trail breakage site to be entirely Hualapai compared to one uninterpretable site probably unoccupied after 1300 A. D., and two rock shelters in Mohawk Canyon where the bulk of the occupation was by Hualapais, but Havasupais also lived.

The hypothesis that this quadrangle was occupied and used solely by either group must be rejected. However, the hypothesis that the portion of this quadrangle west of the west rim of Mohawk Canyon was used and occupied exclusively by Hualapais after about 1300 A. D. cannot be rejected on the basis of the two ceramic sites known on the plateau west of Mohawk Canyon.

The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle must also be rejected. But again, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied that portion of this quadrangle west of the west rim of Mohawk Canyon after about 1300 A. D. cannot be rejected on the basis of the ceramic evidence available.

Mohawk Canyon was obviously shared by the Hualapais with the Havasupais, as reported by living Indians and recorded in prehistoric times by the rock shelter deposits excavated by
Mr. Robert C. Euler. Therefore, the territory east of Mohawk Canyon toward Cataract Canyon must be considered to have been shared by both groups as far as the eastern limits of Hualapai land use somewhat east of National Canyon.

The Petition describes the territory occupied and used exclusively by Hualapais as bounded in this area "Beginning at a point midstream of the Colorado River marked by the intersection of said river with the eastern boundary of the present Hualapai Reservation; thence south on a line following the said boundary of the said reservation...." On the basis of the evidence just presented, the hypothesis that the Petition correctly bounded territory used and occupied exclusively by Hualapais must be rejected. The Petition did describe the eastern limit of Hualapai land use with approximate accuracy.

The territory used and occupied solely by Hualapais, on ceramic and ethnographic evidence, should correctly be bounded as follows: Beginning at a point midstream of the Colorado River marked by the intersection of said river with a line projected due north from the point of the ridge between Prospect Valley and Mohawk Canyon, thence southward along said line and along a line following the drainage divide between the two canyons to the escarpment of the Aubry Cliffs.

\[1/\] Marks, 1951, p. 3.
C. 15' Quadrangle Arizona G : 4

Tizon Brown Ware constitutes only 23.4% of the sherds recorded from sites located in this 15' quadrangle east of the big loop of the Colorado River alongside the northern edge of the Hualapai Indian Reservation. The most abundant ware is San Francisco Mountain Gray Ware, produced by the prehistoric Cohonina Branch Indians before about 1150 A. D. so far as is known. This area was fairly extensively occupied by the Cohonina prior to Hualapai entry, apparently. After the Hualapais occupied this region, they shared it with their Havasupai relatives (who must have formed the vanguard of the Yuman advance eastward), Hualapai sherds occurring in about a 3 to 1 ratio to Havasupai sherds. This quadrangle formed a part of the plateau area whose natural resources were exploited by both tribes.

1. Site Analysis

a. Matnyoo'oo Klavlava

A few miles northwest of Frazier's Wells on the Hualapai Indian Reservation is a steep ridge known as Matnyoo'oo Klavlava to the Hualapais.

i. Arizona G : 4 : 1

The sherd sample at this open site on the summit of the ridge is fairly reliable, with only 23.6% unaltered Tizon Brown Ware of the Hualapai compared to 14.3% wiped sherds of
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 4, the Pine Springs Region.
CERAMIC ANALYSIS BY WARES
OF SITES IN 15' QUADRANGLE ARIZONA G : 4

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<td>.3</td>
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the Havasupais.

San Francisco Mountain Gray Ware makes up 45.7% of the sample, indicating that Cohonina Branch occupation occurring prior to about 1150 A.D. was relatively more intensive—or the Cohonina made more pots than the Hualapais and Havasupais. Since the ratio of Hualapai to Havasupai pottery is only 2 to 1, the hypothesis that either group enjoyed exclusive use of this ridge after 1150 A.D. must be rejected. It was visited by both.

ii. Arizona G : 4 : 2

The sherd sample from the masonry ruin on the ridge is very reliable, with unaltered Tizon Brown Ware a mere 5.8% of the total. Wiped sherds of the Havasupais are 13.5%, indicating greater Havasupai utilization of this site than Hualapai. Greatest use was made by the pre-1150 A.D. Cohonina Branch.

iii. Arizona G : 4 : 3—Matnyoo’oo

The sherd sample from the edge of the some-time agricultural fields which Hualapais claim were still under cultivation about the middle of the last century just prior to Anglo-American contact is unreliable. Dr. Tommy told still living Hualapais his father saw these fields under cultivation. (FM Oct. 13 p 16) This man was killed in a Yavapai raid on Havasupai Village where he was visiting about 1855. 1/ As there

1/ Spier, 1923, p. 358.
are no altered Tizon Brown Ware sherds — and only one unaltered — the hypothesis that this site was used solely by Hualapais after about 1150 A. D. cannot be rejected.

iv. Summary

Analysis of three ceramic sites in the area known as Matknyoo’oo (the fields; klavlava, the ridge) shows that the Cohonina Branch Indians held this region prior to about 1150 A. D., apparently making fairly intensive use of it. After that time, Havasupais and Hualapais either displaced or replaced the Cohoninas, with Hualapais making somewhat more use of the area than Havasupais, including farming on the flat at the base of the ridge. But neither tribe enjoyed sole and exclusive occupancy and use of the area, both sharing its resources.

b. Hat Kasa — Pine Springs

The most important source of water in this moist but spring-shy plateau region was Pine Springs, where Indians have obviously lived for many centuries, as an appreciable trash mound has built up at one of the springs — a most unusual occurrence in this region. There are numerous small areas of occupation surrounding these springs in all directions, utilized by different groups at different times. These springs, according to the Havasupai oral tradition, anciently belonged to the Havasupai alone, the Walapai subsequently crowding
them out, as would naturally have happened as the Havasupais moved eastward as the vanguard of the upland Yuman advance with the Hualapais behind them pushing them along.

i. Arizona G : 4 : 4

The unreliable sherd sample is half unaltered Tizon Brown Ware to 16.7% wiped Havasupai, a 3 to 1 ratio. The other third of the sample is Jeddito Black-on-Yellow, made by Hopis between about 1300 and 1700 A. D. This site was probably a regular Hualapai campsite during this period which was visited by Havasupais on occasion.

ii. Arizona G : 4 : 5

The reliable sherd sample is 66.7% unaltered Tizon Brown Ware and 28.9% wiped Havasupai sherds. Therefore, the hypothesis that either group used the site to the exclusion of the other must be rejected, although it was primarily a Hualapai encampment.

iii. Arizona G : 4 : 6

The very reliable sherd sample from the mound at one of the springs is only 21% unaltered Tizon Brown Ware and 11.6% wiped Havasupai—a 2 to 1 ratio in favor of the Hualapais over the Havasupais in the intensity of use of this water.

The bulk of the sample is San Francisco Mountain Gray

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1/ Spier, 1928, p. 94.
2/ Colton, 1939, p. 27.
Ware: 52.9%, indicating that the pre-1150 A.D. occupation here by the Cohonina Branch Indians was relatively more intensive than later Hualapai-Havasupai occupancy.

While no tribe other than the related Hualapai and Havasupai has inhabited this site since about 1150 A.D., the hypothesis that either of these tribes enjoyed exclusive use of it after that time must be rejected. They shared it.

iv. N.A. 3411

The reliable sherd sample from this masonry structure is entirely San Francisco Mountain Gray Ware of the Cohonina Branch Indians, and was occupied exclusively by them sometime prior to about 1150 A.D. after which this ware was no longer produced, and long before the Hualapai came into this area.

v. N.A. 3412

The fairly reliable sherd sample from this masonry structure is entirely San Francisco Mountain Gray Ware of the Cohonina Branch Indians who lived here prior to 1150 A.D. and Hualapai occupancy of the region.

vi. N.A. 3413

The Museum of Northern Arizona—Santa Fe Railroad survey recorded a sherd area east of the springs about 300 feet (apparently Arizona G : 4 : 5). Colton reported 35% Tizon Brown Ware to 62% San Francisco Mountain Gray Ware, with Deadmans Fugitive Red the dominant utility type. Surveying variations

1/ Colton, 1939, p. 23.
might account for some of the difference between the two samples, but a re-check of the Museum collection resulted in a classification more consistent with the Tribal Survey collection, although some survey variation remained.

The low reliability sherd sample from this campground is 48.3% unaltered Tizon Brown Ware and 13.8% wiped Havasupai, about a 3 1/2 to 1 ratio of Hualapai over Havasupai utilization if the ceramic evidence is an accurate index of use. San Francisco Mountain Gray Ware which was made prior to 1150 A.D. and represents pre-Hualapai occupation by the Cohonina Branch Indians, makes up 27.6% of the sample. Jeddito Black-on-Yellow traded in from the Hopis between about 1300 and 1700 A.D. indicates the Hualapais and Havasupais were living here during that period. The hypothesis that this site was occupied exclusively by either tribe after 1150 A.D. must be rejected: it was shared.

vii. N. A. 3414

The Museum of Northern Arizona-Santa Fe Railroad Survey recorded a sherd area at the springs (probably the same as Arizona G : 4 : 6). The collections were reported to be 1% Tizon Brown Ware and 90% San Francisco Mountain Gray Ware, with Deadmans Fugitive Red the dominant utility type. Upon

1/ Colton, 1939, p. 27.

2/ Ibid., p. 23. 9% of the sample was not reported.
re-examination the very reliable sherd sample from this heavily used camp ground turned out to be 32.7% unaltered Tizon Brown Ware compared to 6.9% wiped Havasupai sherds, a ratio of over 5 to 1 in favor of the Hualapais. Nearly half the sample dates from before 1150 A. D. when the prehistoric Cohonina Branch Indians making San Francisco Mountain Gray Ware lived here. A couple of sherds of Parker Series of Lower Colorado River Buff Ware indicate long-range trade relations between the Hualapais here and the modern Mohaves on the lower Colorado River at the opposite edge of Hualapai territory. Unaltered Tizon Brown Ware constitutes 81.6% of the post_1150 sherds which form a very reliable sample in themselves. Still, since Havasupai sherds are taken to indicate the presence of Havasupais, the hypothesis that this site was used by both tribes cannot be rejected.

viii. N. A. 3421

Some 450 feet east of the old ranch house south of the springs the Museum-Railroad survey located what was recorded on the Museum's survey card as a "sherd area" although it was reported to have "Flakes only." There is an unreliable sherd sample, entirely unaltered Tizon Brown Ware, so the hypothesis that this site was used and occupied exclusively by Hualapais prior to Anglo-American conquest cannot be rejected.

1/ Colton, 1939, p. 23.
ix. Summary

Analysis of eight ceramic sites recorded in the Pine Springs area reveals two of them to have been occupied entirely by Cohonina Branch Indians prior to 1150 A.D. Three of the remaining six show evidence of this early Cohonina occupation, but all six have been occupied only by Hualapai or Havasupai Indians after the entry of these upland Yuman people into the area. The six post-1150 A.D. sites were in two cases places occupied solely by Hualapais, and in four cases mainly by Hualapais but also quite clearly by Havasupais.

The hypothesis that the Hualapais exclusively occupied and used the Pine Springs after 1150 A.D. must be rejected on the basis of ceramic evidence. Yet from the Hualapai point of view, they were Hualapai territory. Kniffen in 1929 mapped Haksat as one of seven settlements in the territory of the Nyav-kopai (in which he included the Pine Springs and Peach Springs Bands). He considered it one of the "main villages" of the Nyav-kopai, with its own chief. It was the center of Pine Springs Band territory.

2. Conclusion

Consideration of evidence from eleven ceramic sites known from 15° quadrangle Arizona G : 4 has shown that two

1/ Kroebber, 1935, Map 2.

2/ Ibid., p. 41.
of these sites were occupied only prior to 1150 A.D. by the Cohonina Branch, and that six were occupied prior to 1150 A.D., but also later by Hualapais and Havasupais. Three others show no evidence of any Cohonina utilization, only Hualapai and Havasupai.

Of nine post-1150 A.D. sites, two were used solely by Hualapais so far as the evidence shows and six mainly by them but also by Havasupais, and one mostly by Havasupais but also by Hualapais. Obviously, the Hualapais have been the main occupants of this region in the period after the Cohonina left but clearly they have not enjoyed sole nor exclusive use or occupancy, sharing the area with their Havasupai relatives.

The Petition describes the bounds of territory used and occupied exclusively by Hualapais as "a line following the said boundary" of the Hualapai Indian Reservation southward." The ceramic evidence presented demonstrates that the hypothesis that the Petition description is correct must be rejected. The area shared by the Hualapais with the Havasupais extended inside the boundary of the Reservation to the Aubrey Cliff escarpment, just above which all of the sites discussed are located.

While Hualapai land use extended some distance east on the plateau above the Aubry Cliff escarpment, this marked the limit of territory occupied and used solely by the Hualapais, as pointed out in the discussion of 15' quadrangle Arizona A:16.
During historic and back into prehistoric times, Pine Springs has been regarded by both tribes as primarily Hualapai territory, in contrast to the earlier situation, probably reflecting a final stabilization of Havasupai territory at the end of their eastward migration. The Havasupai chief Watahomijie testified at about the age of ninety, "Originally, the Supais, in early days here, split in half, some living in Pine Springs and later they all came back here to the canyon to make a home for the Supai people, but that was before my time." According to records of the Bureau of Indian Affairs Watahomijie was born about 1852. How much before his time the Havasupai had abandoned Pine Springs for Cataract Canyon — except for visits to the related Pine Springs Band Hualapais — is indicated by the tribal geography recorded by Fr. Francisco Garcés in 1776. On June 19th of that year, Garcés traveled from a stopping place a league east to a ranchería, "and before I reached thereto a well of abounding water, to which, as it was crowned with roses, I gave the name (Pozo) de la Rosa" which was apparently Pine Springs.

At this ranchería, the one he had left that morning, and again at the one he reached that night, Fr. García was among

1/ Cohen & Barber, 1942, Exhibit AA.
2/ Coues, 1900, II:335. So identified by Coues. Rose leaves rotting in the water would account for the native term Ha' Kasa — "Stinking Water."
the Pine Springs Band Hualapais. He had picked up a "principal (man) who had a beard, though a slight one, from the Rio Javesua." The next day, June 20th, Fr. Garces spent in hard travel descending into Cataract Canyon to the Havasupai Village, having stopped overnight at the Lagoon.

The important fact is that this Spanish priest did not identify any settlement as Havasupai until he reached the Cataract Canyon village. He did identify the three settlements in the Pine Springs region which he visited as belonging to the East People, or Nyav kopai, which term he recorded as "Yabipai." And, of course, he found a Havasupai visiting among the Pine Springs Band Hualapais just as they continue to do to the present day.

D. 15' Quadrangle Arizona H : 1

The only ceramic site now recorded from this area is primarily a Cohonina Branch site occupied prior to about 1150 A.D., and characterized by San Francisco Mountain Gray Ware pot sherds. The site, Arizona H : 1 : 1 – Wau Wila Kwa – is located on the western brow of a ridge at the east side of the upper National Canyon drainage, Township 23 North, Range 6 West, Section 11, in which a series of rain water tanks now and evidently for many centuries past, afford water for domestic purposes. Only 4.9% of the very reliable sherd sample is

\[\text{1/ Coes, 1900. II:335.}\]
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 1 in color.
**CERAMIC ANALYSIS BY WARES**

OF SITES IN 15' QUADRANGLE ARIZONA H:1

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<th>SITE</th>
<th>TIZON TRANSI-</th>
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**CERAMIC ANALYSIS BY TYPES**

OF SITES IN 15' QUADRANGLE ARIZONA H:1

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<th>Cerbat Brown</th>
<th>Cerbat B/Br</th>
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<th>Deadmans Fug. Red land B/G</th>
<th>Deadmans Gray</th>
<th>Kirk- Floyd Boul- Uniden--Gray</th>
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<td>18.2</td>
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unaltered Tizon Brown Ware, and this probably has been dropped on the older Cohonina site during the centuries after 1150 A. D. by Hualapais camping along the ridge above the water.

Tusayan Black-on-Red sherds were brought here between about 965 and 1130 A. D. when that type was being made, imported by the resident Cohoninas. Sosi Black-on-White was also imported between about 1070 and 1150 A. D.

The hypothesis that this site was occupied exclusively by Hualapais after 1150 A. C. cannot be rejected on the basis of the available ceramic evidence. However, since this quadrangle lies directly to the east of Arizona G : 4 which was found to have been shared by the Hualapais and Havasupais, it is logically improbable that this quadrangle was used solely by Hualapais. It has been mentioned as marking the eastward extension of Pine Springs Band territory, which was largely shared with related Havasupais.

This site is located just inside the southeastern corner of the Hualapai Indian Reservation. As pointed out in the previous section, the Petition placed the eastern limit of territory used and occupied solely by Hualapais at the north-south reservation boundary. But ceramic and oral traditional

1/ McGregor, 1951, pp. 20, 23; Colton, 1953, p. 75.
2/ Colton, 1953, p. 75.
evidence show that while Hualapai land use extended to this reservation boundary as indicated at this site Arizona H : 1 : 1, the actual limits of lands occupied and used exclusively by Hualapais were farther west at the Aubry Cliff escarpment. Above and east of that escarpment the Hualapais shared the land's resources with their Havasupai relatives. This site was the easternmost source of water for Hualapais ranging in this section, so their land use extended only a few miles beyond. This site may have been recorded by Kniffen as "Wiiwak-waga."

E. 15' Quadrangle Arizona H : 5

Unaltered Tizon Brown Ware constitutes 25.3% of the sherds recorded from known sites in 15' quadrangle Arizona H : 5. Wiped sherds of Tizon Brown Ware make up 39.7% of the sample, on the other hand. In this area along the upper Chino Wash the balance of land use intensity has shifted from the greater Hualapai intensity farther west to greater Havasupai intensity here above and just east of the Aubry Cliff escarpment. But there is no doubt about the Hualapais having made use of this area, since their former presence is evidenced both in the ceramic materials and their oral traditions of resource exploitation.

1/ Kroeber, 1935, Map 2.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 5 in color.
CERAMIC ANALYSIS BY WARES
OF SITES IN 15° QUADRANGLE ARIZONA H : 5

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TOTAL: 25.3 39.7 10.5 21.0 .4 .9 2.2 229

CERAMIC ANALYSIS BY TYPES
OF SITES IN 15° QUADRANGLE ARIZONA H : 5

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TOTAL: 15.7 8.7 .9 39.7 10.5 .4 .4

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</table>

TOTAL: 7.4 1.3 7.4 3.9 .9 .4 2.2 229
1. Site Analysis

a. Wau Wila Ha' — Arizona H : 5 : 3

In the northern part of this region where the drainage is into Cataract Canyon, there is a rock tank at the foot of a rock-capped hill known to the Hualapais as Wau Wila Ha' ("Water at the Strongest House Ever Built") where they obtained drinking water while gathering grass seed and hunting deer and antelope on the plateau — within the memory of living man. (YB May 23 p 11; JM May 21 p 6) There is a masonry walled ruin atop the butte. The unreliable sherd sample obtained from rock shelters at the base of the rock cap of the butte is half San Francisco Mountain Gray Ware, indicating that this water was utilized prior to about 1150 A. D. by the Coho—
nina Branch Indians. Jeddito Yellow Ware indicates it was used sometime during the 1300 to 1700 A. D. period of production of that Hopi tradeware. Unfortunately, no ceramic evidence of either Havasupai or Hualapai occupancy was collected here, so no interpretation of these tribes' use of the area can be made on that basis.

Apparently their main use of the place was for domestic water while hunting and gathering, as remembered in Hualapai oral tradition, and as a way-point for stone chippers obtaining obsidian and other volcanic rock nodules from which to chip stone tools. The plain around the butte is paved with stone chipping debris, and this spot seems to have served for many years as a roughing-out station. Stone chippers evidently hunted suitable chipping material in the vicinity, and brought unshaped stones to this water for preliminary work. Here rough percussion flaking was carried out which removed the bulk of the excess stone from the blanks of various types of stone tools. These blanks were then carried on to the homes of the stone workers for final finishing. This procedure enabled the stone worker to transport a relatively large number of roughed-out tools, since most of the weight and bulk was chipped off here at Wau Wila Ha'. This specialized use of the locality probably explains the relative dearth of pot

1/ Colton, 1939, p. 27.
sherds here — the Indians coming here were probably primarily men who did not carry pots with them since they could obtain water from the tank, and carried their food in light non-ceramic containers to save their strength for taking stone blanks home.

This rock tank was the easternmost water source used by Pine Springs Band Hualapais at this latitude. "They lived at Wauwila Ha' but no further east — just roam around the country." (LW June 2 p 2)

b. The Ikisa Ha' Area

Farther south there are waterholes in the upper Chino Wash channel itself. One of the most important of these was known to both Havasupais and Hualapais as Ikisa Ha' or "Ikisa Water." Ikisa is a water-loving spinach-like native green which formerly grew in the water here, but has now been grazed out by cattle. The Hualapais remember this water-hole as marking their eastern frontier — it was a landmark at the eastern edge of their land use area, although they did range somewhat farther east on the plateau hunting antelope and gathering grass seeds. It is remembered and important to Hualapais because of the water near an area rich in grass — another evidence of the critical role domestic water and wild cereals played in upland Yuman land-use and subsistence patterns. Members of the Pine Springs Band sometimes wintered here. (YB Oct. 16 p 3) Usually, however, they came here to
drink the melted snow water which collected and "for the
grasses in season and other foods and they live also in this
area back and forth into their own country after their growing,
planting season."

i. Arizona H : 5 : 1

The unreliable sherd sample under a tree on the mesa
west of the channel in surface association with glass, iron,
and a trade bead is one-fourth unaltered Tizon Brown Ware, and
the rest San Francisco Mountain Gray Ware. This indicates
that the area was occupied by the Cohonina Branch Indians
making the latter ware prior to 1150 A. D., and again in post-
contact time by Hualapais. What Indians used it between 1150
A. D. and contact is an open question, since none of the evi-
dence can safely be assigned to that period.

ii. Arizona H : 5 : 2

The reliable sherd sample is 70% wiped Havasupai to 26%
unaltered Hualapai Tizon Brown Ware. Therefore, the hypothe-
sis that either tribe exclusively occupied this site must be
rejected, although the sherds came mainly from the Havasupais.

iii. N. A. 3440

The unreliable sherd sample is three-fourths unaltered
Tizon Brown Ware with no wiped sherds found. San Francisco
Mountain Gray Ware evidences pre-1150 A. D. Cohonina Branch

1/ Indian Claims Comm., 1953, p. 10. (JM)
occurrence of this country, but the hypothesis that the site was occupied and used exclusively by Hualapais after 1150 A. D. cannot be rejected.

iv. N. A. 3441

The reliable sherd sample is primarily San Francisco Mountain Gray Ware of the pre—1150 Cohonina Branch occupation of this region, with only 5.6% of the total wiped Havasupai and 3.7% unaltered Tizon Brown Ware. The Hualapais and Havasupais have used this site about 150 feet south of the wash on the south point of lava, but not intensively.

v. N. A. 3442

About 300 feet east of site N. A. 3441 another sherd area was located with a trace of San Francisco Mountain Gray Ware. Deadmans Fugitive Red was reported the dominant utility type. A check of the survey collection showed the unreliable sherd sample to be indeed all San Francisco Mountain Gray Ware with no evidence of Havasupai or Hualapai use. The site has apparently not been occupied since about 1150 A. D., falling outside the time period under consideration in this study.

vi. N. A. 3443

On a low bench east of the lava near the modern dam at Ikisa Ha' tank, another site was found (on or near Arizona H : 5 : 2) east of the Channel. The Museum of Northern Arizona

1/ Colton, 1939, p. 23.
survey card lists Cerbat and Sandy Brown sherds here, but the site was reported as purely a San Francisco Mountain Gray Ware site, with Deadmans Fugitive Red the main utility type.

Re-examination of the low reliability sherd sample shows no evidence of either Hualapai or Cohonina Branch use of this site. The sherds are 94.4% Tizon Wiped of the Havasupais and the remainder cannot be identified. Therefore, the hypothesis that this site was occupied exclusively by Havasupais cannot be rejected.

vii N. A. 3444

About 300 feet south of the preceding site was another area of stone flakes with a few pot sherds reported to be 100% Tizon Brown Ware, with Cerbat Brown the dominant utility type. The low reliability sample is actually 73.3% unaltered Tizon Brown Ware to 3.3% Tizon Wiped of the Havasupais. The remainder of the sherds are San Francisco Mountain Gray Ware from a pre-1150 A. D. occupation of the area by Cohonina Branch Indians. The site was used mainly by Hualapais.

viii. N. A. 3445

At the old sheep ranch, the Museum-Railroad survey recorded 20 rooms, stone flakes, 3 houses, and pit house depressions. The pottery was reported as Tizon Brown Ware with Cer-

1/ Colton, 1939, p. 23.
2/ Ibid.
bat Brown the dominant utility type. The unreliable sherd sample is 80% Tizon Brown Ware without alteration and one sherd of Tusayan Black-on-White, which was made between 1225 and 1300 A.D. after the Cohonina occupation of this area had ended. The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

2. Conclusion

Ceramic analysis of eight sites around Ikisa Ha' water hole yields a picture of sharing land and water by Hualapai and Havasupai Indians. At three of these sites where Hualapai pot sherds predominate, there is no evidence of Havasupai use in ceramic form, so the hypothesis that these were occupied exclusively by Hualapais (after 1150 A.D., at least) cannot be rejected. At one site of practically pure Tizon Wiped there is no ceramic evidence of Hualapai occupation, on the other hand, so the hypothesis that it was occupied solely by Havasupais cannot be rejected. Another site was used mainly by Havasupais but also by Hualapais.

Three sites yielded little or no evidence on the relative intensity of Hualapai and Havasupai land use here. Sherds made by both were present in small amount on one primarily Cohonina site, Hualapai evidence at another, and no post-1150 sherds at all on the third.

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1/ Colton, 1939, p. 23.
The hypothesis that this area was occupied exclusively by Hualapais must be rejected — it was ranged over by both tribes.

The Petition describes the eastern limits of territory used and occupied solely by Hualapais as a line along the eastern boundary of the Hualapai Indian Reservation "and continuing to a place known as Rose Well; thence southeast and south on a line passing along the Aubrey Cliffs, through Round Mountain and Mount Floyd...." Evidence just presented demonstrates that the hypothesis that the Petition correctly described the eastern limit of lands occupied solely by Hualapais must be rejected.

Hualapai land use did extend to the Rose Well Area — Wau Wila Ha' is located a couple of miles southeast of there, and Hualapais ranged to this rock tank and beyond to gather, hunt and pick up stone tool material. It was the easternmost water source they used in this latitude on the upper Cataract Canyon drainage. But they shared this region above and east of the Aubry Cliffs with their Havasupai relatives.

Similarly, farther south Hualapai land use extended beyond Ikisa Ha', the easternmost water source they used in the upper Chino drainage, but the water and food resources were shared with Havasupais here also.

1/ Marks, 1951, p. 3.
The Aubry Cliff escarpment marked the eastern limit of territory used and occupied exclusively by Hualapais; east of this escarpment lay an area where the resources were exploited both by Hualapais and Havasupais.

F. The Hualapai-Havasupai Border: Conclusions

Analysis of ceramic evidence from four 15' quadrangles located along the Hualapai-Havasupai border has shown the oral traditions of the Indians as to the extent of their tribal lands and the area they shared to be quite accurate, but not to distinguish clearly between the limits of lands used and lands used to the exclusion of the other tribe.

The Petition claimed that the lands used only by Hualapais lay west of a line: "Beginning at a point midstream of the Colorado River marked by the intersection of said river with the eastern boundary of the present Hualapai Reservation; thence south on a line following the said boundary of the said reservation and continuing to a place known as Rose Well; thence southeast and south on a line passing along the Aubrey Cliffs, through Round Mountain and Mount Floyd...." All the evidence shows this line to be located too far east, following landmarks at the eastern edge of Hualapai land use. The territory occupied and used solely by Hualapais extended east only as far as the crest of the plateau finger between Mohawk

1/ Marks, 1951, p. 3.
Canyon and Prospect Valley, then along the upper edge of the Aubry Cliff escarpment to the southern end of that formation, then in a line to Mount Floyd.

What the Petition described erroneously as the eastern limit of territory occupied exclusively by Hualapais was the easternmost limit of Hualapai land use as marked by water holes. Hualapai exploitation of grass seed and game resources extended somewhat farther east but was limited by their capacity to range away from water. The rock tanks and pot holes at Chekoodama in lower National Canyon, at Wau Wila Kwa' in its upper drainage, at Ha' Kathskwava and Wau Wila Ha' southeast of Rose Well, and at Ha' Kawaiha, Ha' Pooyowo Kischava and Ikisa Ha' in the upper Chino Wash drainage were the easternmost water sources utilized by the Hualapais, and thus became the landmarks on the eastern edge of their land use area. However, the plateau region west of these water sources to the limits of land occupied exclusively by Hualapais marked by the western rim of Mohawk Canyon and the top edge of the Aubry Cliff escarpment was shared with Havasupais. The Pine Springs Band Hualapais and their Havasupai relatives both gathered plant products and hunted game in this area.

This was the situation immediately prior to Anglo–American conquest, and it apparently had been the situation for some years of prehistory since the ceramic evidence coincides very precisely. It was reported by Spier on the basis of Ha-
vasupai oral traditions obtained in 1918. He did not clearly distinguish conceptual from land-use boundaries, but said the Havasupais felt they were definitely out of their own country beyond the Aubry Cliff escarpment and Mohawk Canyon. Havasupai claims of using Prospect Valley may be discounted as wishful thinking or very ancient tradition, inasmuch as Hualapai accounts clearly show Hualapais to have been living there immediately prior to conquest, and there is no available ceramic evidence to indicate presence of Havasupais there. Kniffen evidently referred to the land-use frontier in saying "The easternmost village of the Walapai lay a short distance east of the Aubrey Cliffs, marking the approximate boundary between Walapai and Havasupai." He probably meant one of the water hole encampments along the upper Chino, at the eastern side of the area shared between Hualapais and Havasupais.

The eastern limit of territory used and occupied solely by Hualapais immediately prior to Anglo-American conquest and from time immemorial was a line beginning at a point midstream of the Colorado River marked by the intersection of said river with a line projected northward from the northernmost tip of the plateau ridge between Prospect Valley and Mohawk Canyon; thence southward along said projected line to the plateau

1/ Spier, 1928, p. 94.
ridge and along the crest of said ridge to the top edge of the Aubry Cliff escarpment; thence along said escarpment to its southern tip, thence easterly to Mount Floyd.

Immediately east of this line lay territory shared by Hualapais and Havasupais. The eastern limits of Hualapai land use and the western limit of lands occupied and used exclusively by Havasupais, lay a day's range east of the waterholes which form the useable landmarks to delimit the area. The eastern limits of this shared area may be described as a line beginning at the midstream of the Colorado River marked by the intersection of said river with the stream channel in National Canyon, thence generally southward along said channel past the rock tank at Chekooodama to the headwaters of the eastern branch of the canyon; thence southwest to the waterholes at Wau Wila Kwa'; thence southeast to Ha' Kathakwawa seep east of Rose Well; thence southeast to the rock tank Wau Wila Ha'; thence in a line south to Ha' Kawhalva water hole near the headwaters of Chino Wash, thence along the channel of said wash through Ha' Pocoyowo Kischava and Ikisa Ha' water holes to the intersection with the line from the south end of the Aubry Cliffs to Mount Floyd.

The northern boundary of this intertribally exploited area was, of course, the Colorado River.
CHAPTER VIII

THE BILL WILLIAMS FORK FRONTIER

The western Hualapais inhabited a desert region below the Colorado Plateau. It reached a fairly high altitude along the Colorado River on the north, dropping gradually in elevation to the southward all the way to Bill Williams Fork. This stream falls from about 1100 feet to less than 500 where it flows past the southern spur of the Mohave mountains at the edge of Hualapai territory. This river was the southernmost limit of Hualapai land utilization toward the middle of the 19th century, and its drainage area has been exploited by Hualapais from time immemorial. The evidence to be presented in this section indicates, however, that until about 1830 the Hualapais shared this river basin with the Halchidhoma Indians then resident in Chemehuevi Valley along the Colorado River. The Hualapai and Halchidhoma apparently enjoyed very friendly and close relations.

A. 15' Quadrangle Arizona M : 9

Tizon Brown Ware constitutes 44.2% of the sherds recorded from known sites in this quadrangle. Lower Colorado River Buff Ware makes up 36.8% of the sample. Therefore, the hypothesis that the Hualapais shared this area with Colorado River Yumans cannot be rejected.
CERAMIC ANALYSIS BY WARES OF SITES NEAR BILL WILLIAMS FORK

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<td>Mtn.</td>
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North of Williams Fork

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<td>.3</td>
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TOTAL: 49.0 39.9 1.0 .7 .7 8.7 286

1. Site Analysis

All of the ceramic sites from which evidence is available were surveyed by Gila Pueblo, so their precise location within the 15' quadrangle is unknown. As in the case with all sherd samples of this institution, the preserved samples may be biased by an unknown amount and direction by selection of a convenient number of sherds.

a. G P Arizona N : 9 : 1

The sherd sample is of low reliability and biased. It was reported by the surveyors to be 100% Yuman. This term was used in a generic sense, "no effort is made to distinguish between the tribes or to define their prehistoric or historic

1/ Gladwin & Gladwin, 1930, p. 150.
### CERAMIC ANALYSIS BY WARES
OF SITES IN 15' QUADRANGLE ARIZONA M : 9

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<td></td>
<td></td>
<td></td>
<td>Mt. Gray</td>
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### CERAMIC ANALYSIS BY TYPES
OF SITES IN 15' QUADRANGLE ARIZONA M : 9

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<th>Topoc Buff</th>
<th>Topoc R/B</th>
<th>Topoc Stucco</th>
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### NON-CERAMIC SITE

**SD A-12 Lithic.** (Between forks of Signal Wash, McCracken Basin.)
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15° Quadrangle Arizona M : 9 in color.
remains." The sample is 52% Lower Colorado River Buff Ware to 48% Tizon Brown Ware, so the hypothesis that Hualapais shared this site with Colorado River Yumans cannot be rejected.

The Lower Colorado River Buff Ware sherds belong to the Parker Series, but they are not typical of the Parker Series in Mohave Valley and northward. These sherds are painted with a brown rather than a red paint.

This area is accessible from Bill Williams Fork much more readily than from Mohave Valley. And Bill Williams Fork empties into the Chemehuevi Valley which was inhabited into the 19th century by riverine Yuman tribes which were finally forced off the Colorado River into the Gila: some Maricopas, the Halchidhomases, the Kohuanas. The Parker Series sherds at this site probably originated among one or more of these tribes.

b. G P Arizona N : 9 : 2

The sherd sample from this rock shelter on the bank of Bill Williams Fork is of low reliability, probably unbiased since it is not one of the ideal numbers employed at Gila Pueblo. Tizon Brown Ware constitutes 56.5% compared to 39.1% Lower Colorado River Buff Ware. The hypothesis that either the Hualapais or any of the riverine tribes enjoyed sole or exclusive possession of this site must be rejected. The ori-

1/ Gladwin & Gladwin, 1930, p. 158.
2/ Ibid., Plate XVII.
ginal surveyors reported it to be a 100% Yuman site, and so it was: shared by both upland and riverine groups.

c. G P Arizona N : 9 : 3

The sherd sample is of low reliability but probably not biased since it does not reach the 25 ideal employed at Gila Pueblo, which reported this to be a 100% Yuman site. The bulk of the sherds belong to a type which cannot at present be accurately identified—combining characteristics of Tizon Brown and Lower Colorado River Buff Ware. Probably it was made along Bill Williams Fork by one of the riverine Yuman tribes, and the single Tizon Brown Ware sherds collected represents the limited Hualapai use of the site. The hypothesis that this site was utilized both by riverine Yumans and occasionally by Hualapais cannot be rejected.

d. G P Arizona H : 9 : 4

The low reliability sherd sample reported as 100% Yuman by the surveyors is probably biased. It is 64% Tizon Brown Ware to 36% Lower Colorado River Buff Ware, so the hypothesis that both Hualapais and riverine Yumans enjoyed the use of this site cannot be rejected.

2. Conclusion

Analysis of four ceramic sites in 15' quadrangle Arizona

1/ Gladwin & Gladwin, 1930, p. 150.
2/ Ibid., p. 150.
3/ Ibid., p. 150.
M : 9 (Gila Pueblo's Arizona N : 9) demonstrates that the Indian occupation of this region along and north of Bill Williams Fork east of the Mohave Mountains was intertribal. Half of the sites were used mainly by riverine Yumans, half primarily by the Hualapais.

The riverine Yumans living along Bill Williams Fork were apparently Maricopa, Halchidhoma and Kohuana who occupied the Chemehuevi Valley throughout historic times until they were driven out by the Yuma and Mohave during the 19th century. Thus, the hypothesis that the Hualapais enjoyed the sole and exclusive use and occupancy of 15' quadrangle Arizona M : 9 must be rejected since ceramic evidence clearly shows that this area was shared with the riverine tribes from time immemorial. However, the hypothesis that the Hualapais enjoyed the sole and exclusive use and occupancy of this quadrangle north of Bill Williams Fork after the Maricopa, Halchidhoma and Kohuana were forced to abandon the Colorado River for the Gila and up until their own conquest by Anglo-Americans cannot be rejected. Both the Western Band of Yavapais and the Hualapais agree that Bill Williams Fork formed their common frontier between contiguous territories immediately prior to Anglo-American conquest when the riverine Yumans had been forced from the area.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15th Quadrangle Arizona M : 10 in color.
### CERAMIC ANALYSIS BY WARES
OF SITES IN 15' QUADRANGLE ARIZONA M : 10

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<th>SITES</th>
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<th>HOHOKAM BUFF</th>
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### CERAMIC ANALYSIS BY TYPES
OF SITES IN 15' QUADRANGLE ARIZONA M : 10

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<th>G. B. Series</th>
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<td>10.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.3</td>
</tr>
<tr>
<td>M:10:2</td>
<td>10.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:10:3</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:10:4</td>
<td>5.9</td>
<td>11.8</td>
<td>23.5</td>
<td>5.9</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>15.4</td>
<td>3.8</td>
<td>3.8</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>7.7</td>
<td>1.9</td>
<td>11.5</td>
<td></td>
</tr>
</tbody>
</table>

### SITES Topoc Cerbat Aquarius Verde Gila Unidentified TOTAL SHERDS

<table>
<thead>
<tr>
<th>SITES</th>
<th>Topoc Buff</th>
<th>Cerbat Brown</th>
<th>Aquarius Brown</th>
<th>Verde Gray</th>
<th>Gila Plain</th>
<th>Unidentified</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>M:10:1</td>
<td>31.6</td>
<td>26.3</td>
<td>10.5</td>
<td>15.8</td>
<td></td>
<td>19</td>
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</tr>
<tr>
<td>M:10:2</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>M:10:3</td>
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<td>6</td>
<td></td>
</tr>
<tr>
<td>M:10:4</td>
<td></td>
<td>35.3</td>
<td>11.8</td>
<td>5.9</td>
<td></td>
<td>17</td>
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</tr>
<tr>
<td>TOTAL:</td>
<td>1.9</td>
<td>11.5</td>
<td>23.1</td>
<td>5.8</td>
<td>3.8</td>
<td>7.7</td>
<td>52</td>
</tr>
</tbody>
</table>
B. 15° Quadrangle Arizona M:10

Tizon Brown ware constitutes somewhat over a third of the recorded sherds from sites in 15° quadrangle Arizona M:10 which includes the lower Big Sandy River and Santa Maria and their junction to form Bill Williams Fork. Lower Colorado River Buff Ware makes up 48.1% of the sample, on the other hand. So the hypothesis that riverine Yumans and Hualapais both lived in this area cannot be rejected.

CHARACTERISTICS OF SITES LOCATED IN ARIZONA M:10 QUADRANGLE

<table>
<thead>
<tr>
<th>SITE</th>
<th>Manufactured Artifacts</th>
<th>Rock Shelter</th>
<th>Wick-Open</th>
<th>Mes-Flakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>M:10:1</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:10:2</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>M:10:3</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:10:4</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M:10:5</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD A-11</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD A-17</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA5197</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA5198</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Site Analysis

a. Arizona M:10:1

The sherd sample from the surface of this rock shelter is of low reliability and 57.9% Tizon Brown Ware compared to 15.8% Lower Colorado River Buff Ware. The surface remains
probably represent roughly the post 1800 A. D. time span, for under the surface, Mr. Euler excavated another unreliable sherd sample which is 47.4% Tizon Brown Ware and Lower Colorado River Buff Ware. This seems to record the earlier sharing of the shelter by riverine Yumans and Hualapais from time immemorial until around 1830 when the Hualapais were left with it all to themselves by the retreat of the riverine tribes.

b. Arizona M : 10 : 2

The sherd sample from the surface of this large rock shelter is unreliable but 80% Lower Colorado River Buff Ware, so the hypothesis that it was used by both riverine Yumans and Hualapais up to around 1830 and then by the latter cannot be rejected, although only one sherd of Tizon Brown Ware was recovered.

c. Arizona M : 10 : 3

The sherd sample from this rock shelter on the Big Sandy is unreliable, but entirely Parker Series of Lower Colorado River Buff Ware all from one pot. The hypothesis that this cache site was utilized solely by riverine Yumans cannot be rejected.

d. Arizona M : 10 : 5

The sherd sample from this rock shelter near the junction of the Santa Maria and Big Sandy Rivers is of low reliability,
but very close to proportions throughout the quadrangle. Lower Colorado River Buff Ware makes up 47.1% of the total and Tizon Brown Ware 35.3%, so the hypothesis that the site was shared by riverine Yumans and Hualapais prior to about 1830 cannot be rejected. A couple of sherds of Hohokam Buff Ware indicate trade relations existed with the Gila-Salt River area in early prehistoric time.

2. Conclusion

Analysis of four ceramic sites known from 15' quadrangle Arizona M : 10 - all rock shelters - shows the area to have been formerly occupied primarily by riverine Yumans, evidently those formerly inhabiting Chemehuevi Valley on the Colorado River. They seem to have ranged along Bill Williams Fork also, and up the arid slopes north and south of that stream.

The shelter at the junction of the Big Sandy and Santa Maria Rivers shows evidence of Hualapai use - probably coming from the mountainous country to the east. The cache a few miles up the Sandy from the junction shows only riverine Yuman use, and the large rock shelter in the desert north of Bill Williams Fork also seems to have been used exclusively by these people. The shelter over the drainage divide to the north shows mixed utilization, with Hualapai use predominating toward the end of the site's history.
Prehistorically, land use in this area was intertribal, with the riverine Maricopa, Halchidhoma and Kohuana concentrated along Bill Williams Fork but ranging up into the desert country east and north to the streams for water. The hypothesis that 15' Quadrangle Arizona M : 10 was shared by Hualapais, Maricopas, Halchidhomas and Kohuanas from time immemorial to the expulsion of the latter tribes from the Colorado River cannot be rejected.

However, the hypothesis that the area north of Bill Williams Fork was occupied and used solely by Hualapais after 1830 cannot be rejected, since the river tribes were forced to retreat to the Gila River by Mohave and Yuma military pressures, leaving Chemehuevi Valley vacant until the Mohaves settled some Chemehuevis there, and later some of them migrated there in response to the attraction of Anglo-American gold mining camps and river ports. In this immediately pre-conquest period, Bill Williams Fork was regarded by the Western Yavapai and the Hualapais as their common frontier between contiguous territories.

C. 15' Quadrangle Arizona M : 13

Tizon Brown Ware constitutes 40% of the sherds known from this quadrangle located mostly south of Bill Williams Fork east of the Mohave Mountains. Lower Colorado River Buff Ware makes up 56.7% of the sample, Therefore, the hypothesis
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M: 13, lying primarily south of Bill Williams Fork.
CERAMIC ANALYSIS BY WARES
OF SITES IN 151 QUADRANGLE ARIZONA M : 13

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER</th>
<th>TIZON</th>
<th>SAN. FRAN.</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COLC.R.</td>
<td>BROWN</td>
<td>MT. GRAY</td>
<td>TIFIED</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BUFF W.</td>
<td>WARE</td>
<td>WARE</td>
<td>WARE</td>
<td></td>
</tr>
<tr>
<td>GP 2</td>
<td>46.0</td>
<td>43.0</td>
<td>2.0</td>
<td>4.0</td>
<td>50</td>
</tr>
<tr>
<td>SD A-14</td>
<td>70.0</td>
<td>30.0</td>
<td>1.1</td>
<td>2.2</td>
<td>40</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>56.7</td>
<td>40.0</td>
<td>1.1</td>
<td>2.2</td>
<td>90</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES
OF SITES IN 151 QUADRANGLE ARIZONA M : 13

<table>
<thead>
<tr>
<th>SITES</th>
<th>Parker Buff</th>
<th>Parker R/B</th>
<th>Parker Stucco</th>
<th>Tuneo Buff</th>
<th>Tuneo Stucco</th>
<th>Tuneo Buff</th>
<th>Tuneo Stucco</th>
<th>Topoc Pyramid</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 2</td>
<td>12.0</td>
<td>2.0</td>
<td>6.0</td>
<td>2.0</td>
<td>20.0</td>
<td>2.0</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>SD A-14</td>
<td>52.5</td>
<td>2.5</td>
<td>7.5</td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>30.0</td>
<td>1.1</td>
<td>3.3</td>
<td>2.2</td>
<td>3.3</td>
<td>14.4</td>
<td>1.1</td>
<td>1.1</td>
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<table>
<thead>
<tr>
<th>SITES</th>
<th>Cerbat Brown</th>
<th>Aquarius Brown</th>
<th>Sandy Brown</th>
<th>Deadmans Gray</th>
<th>Unidentified</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 2</td>
<td>32.0</td>
<td>16.0</td>
<td>2.0</td>
<td>4.0</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>SD A-14</td>
<td>12.5</td>
<td>15.6</td>
<td>2.5</td>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>22.3</td>
<td>15.6</td>
<td>1.1</td>
<td>1.1</td>
<td>2.2</td>
<td>90</td>
</tr>
</tbody>
</table>
that either Hualapais or riverine Yuman tribes enjoyed sole and exclusive use of this area must be rejected.

1. Site Analysis

a. G P Arizona N : 13 : 2

The sherd sample is fairly reliable and about equally divided between the two wares — 46% Lower Colorado River Buff Ware to 48% Tizon Brown Ware. Some San Francisco Mountain Gray Ware indicates that occupation in this area began at least before about 1150 A.D., despite the original report that this was a 100% Yuman site. The hypothesis that any of the historic tribes in the area enjoyed its sole and exclusive use must be rejected. Utilization of this site was intertribal.

b. San Diego's A - 14

The sherd sample from this rock shelter on the south bank of Bill Williams Fork is fairly reliable and 70% Lower Colorado River Buff Ware to 30% Tizon Brown Ware. Therefore, the hypothesis that any historic tribe enjoyed sole or exclusive use of the site must be rejected, although riverine Yumans apparently used it more than Hualapais.

2. Conclusion

The principal importance of these sites is in demonstrating that land use south of Bill Williams Fork was as

\[1/\] Gladwin & Gladwin, 1930, p. 150.
intertribal as it was immediately north of that stream. The south bank was not prehistorically the exclusive preserve of the riverine Yumans coming up Bill Williams Fork. It was shared with Hualapais who came down to the river from the north. The land use pattern for both groups along Bill Williams Fork was apparently the same: that of obtaining water from the stream and ranging out on either side seeking game or plant foods.

After the riverine Yumans were forced out of this region by the Mohaves and Yumas, Hualapais may have continued to exploit the food resources south of Bill Williams Fork, but the stream formed their conceptual boundary with the Western Yavapai, and they may not have crossed it very much in the years immediately prior to Anglo-American conquest and settlement. No oral tradition that they did survives.

D. 15' Quadrangle Arizona M : 16

Tizon Brown Ware constitutes only 36.7% of the recorded sherds from sites in this quadrangle compared to 59.2% Lower Colorado River Buff Ware. Thus the hypothesis that either Hualapais or riverine Yuman tribes enjoyed sole and exclusive use and occupancy of this area south of the Santa Maria River must be rejected. It clearly was intertribally exploited by both river men and uplanders.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15° Quadrangle Arizona M : 16 in color.
CERAMIC ANALYSIS BY WARES
OF SITES IN 15' QUADRANGLE ARIZONA M : 16

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>TIZON BROWN WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>91.7</td>
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<td></td>
<td>24</td>
</tr>
<tr>
<td>GP 2</td>
<td>23.0</td>
<td>64.0</td>
<td>8.0</td>
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</tr>
<tr>
<td>TOTAL</td>
<td>59.2</td>
<td>36.7</td>
<td>4.1</td>
<td>49</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES
OF SITES IN 15' QUADRANGLE ARIZONA M : 16

<table>
<thead>
<tr>
<th>SITES</th>
<th>Parker Buff</th>
<th>Parker R/B</th>
<th>Topoc Buff</th>
<th>Topoc Stucco</th>
<th>Cerbat Brown</th>
<th>Aquarius Brown</th>
<th>Unid.</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>50.0</td>
<td>41.7</td>
<td>8.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>GP 2</td>
<td>24.0</td>
<td>4.0</td>
<td></td>
<td>36.0</td>
<td>23.0</td>
<td>8.0</td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12.2</td>
<td>2.0</td>
<td>24.5</td>
<td>20.0</td>
<td>22.4</td>
<td>14.3</td>
<td>4.1</td>
<td>49</td>
</tr>
</tbody>
</table>
1. Site Analysis

   a. G P Arizona N : 16 : 1

      The sherd sample is of low reliability, but 91.7% Lower Colorado River Buff Ware and the rest Tizon Brown Ware, so the site is as originally reported, 100% Yuman. The hypothesis that any tribe enjoyed sole and exclusive use of the site must be rejected, and Hualapais clearly used it at times.

   b. G P Arizona N : 16 : 2

      The low reliability sherd sample was reported by the surveyors to be 100% Colonial Period Hohokam. But it appears to this author to be 64% Tizon Brown Ware and 28% Lower Colorado River Buff Ware of the Parker Series indicating late prehistoric riverine Yuman use of this site. The hypothesis that the place was used exclusively by Hualapais or riverine Yumans must be rejected; this was another intertribally used site.

2. Conclusion

      The scanty evidence available shows clearly that this area was used by the riverine Yuman tribes coming up Bill Williams Fork and ranging out from it and by Hualapais cross-

1/ Gladwin & Gladwin, 1930, p. 151.

2/ Ibid., p. 151.
ing to the south side of the Santa Maria from the highlands. One riverine Yuman site with little Hualapai visiting and one Hualapai site with some Yuman visiting show this pattern of intertribal camping in the area quite clearly despite the small number of site available for analysis.

E. Bill Williams Fork Frontier Summary

Bill Williams Fork is formed by the junction of the Big Sandy and Santa Maria rivers. Both these tributaries flow along the base of mountains forming the southern and western fronts of the Colorado Plateau, fed by creeks rising on the plateau and flowing through the arid Lower Sonoran desert below. Bill Williams Fork comes into being on the desert and flows through desert. The surrounding terrain offers comparatively little in the way of game or plant food resources, so Indian land use in this region was probably never very intensive nor more than seasonal.

From time immemorial this area seems to have been intertribally exploited. The greatest use of the Bill Williams Fork basin was made by riverine Yumans inhabiting Chemehuevi Valley, into which the stream flows. These were mainly Hal-chidhomas. They apparently ranged up Bill Williams Fork to plant crops along the flood plain at favorable spots and to hunt game and gather plant products in the desert on either side. At the same time, Hualapais came down from the north
to and across this river, following the same land use pattern. Hualapai oral tradition has them gardening at Ookwata Givo on the flood plain off the southern tip of the Mohave Mountains, and they may have farmed at other spots not now remembered. The ceramic evidence just presented show they, too, ranged out on both sides of the river seeking supplemental food on the arid desert.

Here along Bill Williams Fork the Hualapais met the Halchidhomas on friendly terms. In 1776 Fr. Francisco Garces noted among the relatives of a Nyavkopai (Eastern) Hualapai leader in Truxton Canyon four who "had seen me in past years among the Jalchedunes." This passage means that Hualapais from the center of their tribe's territory ranged south to Halchidhoma territory on the Colorado — even beyond Bill Williams Fork — for Garces had not traversed the Bill Williams. Also, it means that the Halchidhomas welcomed the Hualapais as visitors to their Colorado River territory.

This prehistoric hospitality is indicated not only by the ceramic evidence of resource sharing in the Bill Williams Basin, but in Halchidhoma oral tradition. They traded red face paint obtained from Hualapais on to the Maricopas on the Gila River, for example. "The greatest friendships of the

1/ Coues, 1900, II:325.
2/ Spier, 1933, p. 43.
Halchidhoma while on the Colorado were with the Pima, the 'Mission' Indians (i.e., Cahuila), Walapai, Cocopa, and of course the Maricopa and Kaveltcadom.1/ Halchidhoma—Hualapai relations were amicable enough that these tribes intermarried before the Halchidhoma were driven from the Colorado River.

This evidence indicates quite clearly that the Halchidhoma and Hualapai were peacefully sharing the Bill Williams Fork basin up until the Halchidhoma exodus. The oral traditions do not mention presence of Yavapais at that time, and there is no ceramic evidence of Yavapai land use in this river basin, unless part of the Lower Colorado River Buff Ware sherds can be interpreted as being tradeware obtained by that tribe and broken in this area.

By accident, the Petition described quite accurately the limits of territory used and occupied exclusively by Hualapais from time immemorial to 1830. It bounded this area by a line along the drainage divide between the Santa Maria and Burro Creek "to signal on the Big Sandy River; thence west and northwest on a line corresponding to the northern edge of the watershed of Bill Williams River to a point south of To-

1/ Spier, 1933, p. 41.
2/ Ibid., p. 41.
pock, known as Pinnacle Butte.... This was precisely the southern limit of the area used and occupied solely by Hualapais as defined by the ceramic evidence just presented. The hypothesis that the Petition correctly described the southern limits of territory occupied and used exclusively by Hualapais from the Sandy River to the Colorado River cannot be rejected.

The Petition did not follow the Hualapai conceptual frontier in this region, however, because of the difficulty Hualapais have clearly identifying their landmarks and place names in English. The point south of Topock "known as Pinnacle Butte," for example, is actually The Needles, as the author has verified by visiting the area with Hualapais and obtaining from them on the spot their native term for the formation and its translation. "Pinnacle Butte" happened to be how Hualapais translated into English their own place name Wi Kwit Kwit. Similarly, in describing their conceptual frontier in the Bill Williams Fork area, Hualapais habitually refer to that mountain "near Signal." That mountain when visited turned out to be Artillery Peak, known in Hualapai as Wi Nyakwa', which is a good many miles down the Big Sandy River from Signal. As is the case with The Needles, Hualapais do not know the English place-name for the peak (or did not

1/ Marks, 1951, p. 4.
until the present research resulted in a two-way communication of place names) and Signal was the nearest English place-name with which they were familiar. The Hualapai conceptual frontier actually ran from a volcanic neck with a spring below it called Kitha'ela Ha' on the crest of the Burro Creek-Santa Maria River drainage divide just east of the Big Sandy River to Artillery Peak, then down the Sandy and Bill Williams Fork to the agricultural fields at Okwata Givo', then along the crest of the Mohave Mountains to the Colorado River at The Needles.

The hypothesis that this conceptual frontier correctly delimited territory used and occupied exclusively by Hualapais from time immemorial must, of course, be rejected in view of the clear ceramic evidence that land used in the Bill Williams Fork basin was intertribally shared as long as the Halchidhoma remained on the Colorado. However, the hypothesis that this conceptual frontier correctly describes the limits of Hualapai land use in the years immediately preceding Anglo-American conquest cannot be rejected. In prehistoric times, Hualapai land use extended beyond this conceptual frontier, as the ceramic evidence shows. But after the expulsion of the Halchidhoma and Kohuana from Chemehuevi Valley and Bill Williams Fork around 1830, the situation

1/ Spier, 1933, p. 14.
changed. After that time, the Western Yavapai evidently came to the Colorado and Bill Williams rivers. The hypothesis that the Hualapai conceptual frontier given above correctly delimits territory used and occupied exclusively by Hualapais after the Halchidhoma expulsion about 1830 cannot be rejected.

\[1/\] Indian Claims Comm., 1953, p. 160-161.
CHAPTER IX
DEFINITION OF THE AREA OCCUPIED AND USED SOLELY AND
EXCLUSIVELY BY HUALAPAI INDIANS AND THEIR ANCESTORS

The area to be described next is that region wherein the Hualapai Indians enjoyed sole and exclusive use, occupancy and possession of the land, sharing its resources with Indians of no other tribe. That exclusive use and occupancy area is defined in this report as the region in which all recorded sites occupied between 1300 and the Anglo-American conquest of the Hualapais completed by their captivity at La Paz in 1874-75 were occupied solely by Hualapais. Cultural predominance is taken to exist at sites where sherds of Tizon Brown Ware constitute 70% or more of either all those collected or of those post-dating 1300 and antedating conquest.

Such a rough index of exclusive Hualapai use and occupancy can be employed only because there has been no perceptible change in Hualapai ceramic techniques during the six century period 1300 to 1900 A.D. There is also little evidence of non-Hualapai occupation in the region occupied by Hualapais in historic time. Throughout most of the period during which ceramic vessels have been used in this area, the Hualapais have been its residents, so no great accumulation
of wares other than Tizon Brown Ware exists to require temporal distinctions other than those of Anglo-American conquest at the end and Hualapai expansion to their stable territorial limits at the beginning.

A. Possible Error in ComputingWare Predominance

The sections which follow present artifactual evidence of Hualapai occupation of large areas to the exclusion of all other Indians for a period between 1300 when the Prescott Branch seems to have ceased to exist as an identifiable entity, and 1874-75 when most Hualapais were forceably removed from their homeland by the United States Army. The theorems and hypothesis underlying the presentation which follows have previously been set forth. There remains yet a further methodological consideration: an estimation of sampling error.

Tizon Brown Ware came into production at some time prior to 1150 A.D. But the time span of concern in this paper—time immemorial—has been defined as beginning at 1300 A.D. The question arises under these circumstances as to what probability of error there is in the site analyses to follow in regarding all Tizon Brown Ware sherds as having been deposited on a site after 1300 A.D. and before 1874-1875 A.D.

In the case of a site which yields only Tizon Brown Ware this question is academic since such a site was obviously occupied only by Hualapais throughout the period of its use. A site with 70% or more Tizon Brown Ware sherds in the total
sample easily meets the requirements for presumption of cultural predominance used in this report, and can be regarded as occupied only by Hualapais between 1300 and 1874-75 as long as no other single ware made during this time period exceeds 25% of the sherd sample.

At sites where Tizon Brown Ware constitutes from 50% to 75% of the total sherds and some other ware makes up over 25%, interpretation becomes more difficult. Situations of this kind exist at a good many of the sites to be analyzed, and fall into three general categories:

1) The second most abundant ware is Lower Colorado River Buff Ware of the Parker or La Paz Series.
2) The second most abundant is Prescott Gray Ware.
3) The second most abundant ware is San Francisco Mountain Gray Ware.

Such sherds are eliminated from consideration as not bearing upon the question of what territory Hualapais held to the exclusion of other tribes between 1300 and 1874-75.

The Lower Colorado River Buff Ware series have been found in sherd form on the four purely historic sites where the identity of Tizon Brown Ware as Hualapai pottery was verified. Therefore, they were produced in post-conquest times by Mohaves and may be eliminated as not affecting the question at issue since they were produced after 1874-75.
San Francisco Mountain Gray Ware sherds, since they were produced prior to 1150 A.D., insofar as is now known, are also considered not to affect the question at issue since they were produced before the Hualapai Indians reached the final stable limits of their territory sometime after 1300. As a matter of fact, Hualapais may have reached their historic northeastern frontier while this ware was still being produced, but this is not certain.

Prescott Gray Ware sherds, since they were made prior to about 1300 A.D., insofar as is now known, are also considered not to affect the question at issue since they were made before the Hualapais reached the stable southeastern limits of their territory sometime after that date.

Having eliminated these wares from the sherd samples of long-occupied sites in the analyses which follow, the proportion of Tizon Brown Ware in the remaining sherd sample is computed. In followed this procedure, two possible sources of error exist. These are: 1) Tizon Brown Ware sherds deposited after 1874-75, and 2) Tizon Brown Ware sherds deposited before 1300. If a site was occupied both before 1300 and after 1875, both may affect the computation.

In evaluating the accuracy of the judgement of sites in succeeding sections, an estimation of the probable amount of these errors will be helpful.
In the historic time range, this possibility of error is quite variable, as shown by the wide variation on the purely historic sites in the proportion of Tizon Brown Ware to Lower Colorado River Buff Ware sherds. In Mr. Euler's excavation of the small rock shelter Oya Sivli Klavlava in Mohawk Canyon, he recovered forty Tizon Brown Ware sherds in the upper 20 cm. where Lower Colorado River Buff Ware (historic Parker Series) sherds also occurred. This was 38.8% of all the Tizon Brown Ware recovered from this site, indicating a possible error of that magnitude. The concentration of sherds at the top of this deposit seems unusual, and it is not certain that the river ware was imported only during post-contact times.

The deposits excavated by Mr. Euler in his two test pits into the floor of the sacred Hualapai cave Wha Ha' Vo yield an indication of the probability of error in the site analyses when San Francisco Mountain Gray Ware is eliminated from the sherd samples to determine the proportion of Tizon Brown Ware sherds among those made after 1150 A.D.

In his 75 to 100 cm. level in one of his test pits in the floor of this cave, Mr. Euler recovered four sherds of Aquarius Brown. This level pre-dates 1150 since it underlies the 50-75 cm. level where Tusayan Polychrome was found. In his entire test, Mr. Euler recovered eighty-three sherds of Tizon Brown Ware, including these four. Those found in
the upper 75 cm. presumably were deposited after 1150 A. D., since they were found at the same level as Tusayan Polychrome or higher. The four pre-1150 A. D. Tizon Brown Ware sherds constitute 4.8% of all the sherds of this ware recovered. This figure would constitute the actual error if all these excavated sherds had been found on the surface, and all the Tizon Brown Ware computed to be post-1150 A. D.

Therefore, in the absence of any other measure of the probability of error involved in eliminating pre-1150 A. D. sherds from a surface collection and then computing the proportion of all Tizon Brown Ware sherds in the remaining sample, this figure may be set at approximately 5%.

"This estimate of the probability of error assumes the Wha Ha' Vo cave site to be representative of all Hualapai sites, which it may not be for these reasons: 1) pre-1150 occupation of Wha Ha' Vo may have been less intensive than post-1150 A. D. occupation with less rapid deposition of sherds as a result, and 2) occupation may have ended shortly after 1300 A. D. and only ceremonial use of the cave continued. Since these possible biases would produce opposite results, they are assumed to cancel each other out."

Unfortunately, no such even approximate estimate can be made of the probability of error induced by eliminating Prescott Gray Ware from sherd samples and assuming all the Tizon Brown Ware to post-date 1300 A. D. It can only be assumed
to be greater than 5% since more Tizon Brown Ware presumably was produced between 1150 and 1300 A.D.

On the other hand, it is equally possible that there is no error at all involved in such computations. If Hualapais were advancing eastward from the desert into the plateau country after it had been abandoned by the Cohoninas and Prescott Branch Indians, then presumably all the Tizon Brown Ware sherds on plateau sites represent Hualapai occupation. The only exception would be sherds from Hualapai vessels traded to these former occupants in earlier times, if any were, which is very doubtful.

If Hualapais were advancing eastward at the expense of the Cohoninas and/or Prescott Branch Indians, it seems unlikely that they would have traded pots to these enemies, since in modern times they never made enough to export even to friendly tribes. So Tizon Brown Ware sherds would not have arrived on upland sites until Hualapais arrived there to deposit them.

Even if Hualapai relations with these prehistoric groups were friendly rather than hostile, there is evidence in the distribution of Prescott Gray Ware, at least, within Hualapai territory for postulating that the Hualapais were importing Prescott Gray Ware vessels. The Verde Black-on-Gray sherds in Wha Ha' Vo Cave are a case in point. By analogy from historic trade practices, it may be argued that if Hualapais
imported Prescott Gray Ware vessels, they swapped foodstuffs and raw materials for them, but never Tizon Brown Ware vessels. In historic time, Hualapais imported ceramic vessels from Mohaves and Hopis, but in neither case did they export their own clay vessels. The other tribes would have had no desire for the drab Hualapai vessels, probably, and certainly no motivation to barter for utensils cheap to them but expensive to Hualapais. Hualapais bartered processed raw materials—dried mescal, tanned deer hides, mesquite meal, etc.—for these foreign manufactured goods. Projecting the historic habits into the past, it may be concluded that even if Hualapai-Prescott Branch relations were friendly, no Tizon Brown Ware sherds would have been deposited on sites occupied by Prescott Branch Indians until after the latter had abandoned them and the Hualapais taken them over.

B. 15' Quadrangle Arizona F : 15 E. of Black Mountain Summit

Tizon Brown Ware constitutes 65.1% of the recorded sherds from sites known on the eastern slope of the Black Mountains. This exceeds Colton's 60% level of significance of cultural predominance but is short of the 70% level employed in this study. Lower Colorado River Buff Ware makes up 22.9% of the sherds, exceeding Ezell's 20% level of significance of occupancy, but short of the 25% level used in this study. Therefore, a site-by-site analysis will be necessary to draw conclusions as to the prehistoric utilization of this area.
THE HUALAPAI COUNTRY

Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F: 15 east of the summit of the Black Mountains.
CERAMIC ANALYSIS BY WARES OF SITES ON EASTERN SLOPE OF PASSES THROUGH BLACK RANGE IN ARIZONA F: 15 -- SECRET AND SITGREAVES

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CERAMIC ANALYSIS BY TYPES OF SITES ON EASTERN SLOPE OF PASSES THROUGH BLACK MOUNTAINS IN ARIZONA F: 15 QUADRANGLE

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CHARACTERISTICS OF SITES ON THE EASTERN SLOPE OF PASSES THROUGH THE BLACK MOUNTAINS

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1. Site Analysis

a. Secret Pass

The Museum of Northern Arizona--Santa Fe Railroad Survey in 1938 located three sites about three miles east of Secret Spring and four from the Tin Cup Mine. Earlier, Malcolm J. Rogers had located one site in this pass east of the summit.

i. N. A. 3369

This site was located on the alluvial gravel terrace of Sacramento Wash under the bluff where N. A. 3370 was found. It was probably a seed gathering campsite. The sherd sample is very reliable and 81.6% Tizon Brown Ware, exceeding even Ezell's 80% level of significance of cultural predominance. Therefore, the hypothesis that this site was used and occupied exclusively by Hualapais prior to their conquest is accepted.

San Francisco Mountain Gray Ware indicates that occupation of this site began before 1150 A. D. Trade ware is almost entirely from the adjacent Mohaves--17.5% of the total, all Parker Series of Lower Colorado River Buff Ware indicating it dates primarily if not entirely from the 19th century. This ware had not been distinguished from Tizon Brown Ware when this site was reported to be 100% Tizon Brown Ware with Cerbat Brown the dominant utility type.  

Colton, 1939, p. 22.
This rock shelter had been burned over and dug into by pot hunters prior to 1938. The United States National Museum possesses a large, well-chipped stone blade from Secret Pass which was a donation that may have come from the pot hunters' pits here. The sherd sample is reliable and 79.2% Tizon Brown Ware, exceeding the 70% level of significance of cultural predominance. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest is accepted.

Trade ware from the Mohaves is abundant—19.8% of the sample, but under the 25% level of significance of occupancy even here on the Mohave frontier where Lower Colorado River Buff Ware was abundant. The bulk of these sherds are Parker Series, indicating increasing importation of Mohave vessels by the Hualapais as production of their own Tizon Brown Ware fell off. Since Lower Colorado River Buff Ware types were initially classed as Tizon Brown Ware, Colton reported the sherds from this site to be 100% Tizon Brown Ware, with Cerbat Brown the main utility type.

This is another rock shelter overlooking Sacramento Valley where an unreliable sherd sample was obtained that is

1/ Colton, 1939, p. 22.
84.6% Tizon Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected.

iv. San Diego's A-4

A site covering two acres on the sand and gravel bench on the north side of Secret Pass arroyo yielded a very reliable sherd sample that has 41.3% Tizon Brown Ware to 38.5% Prescott Gray Ware and 7.3% San Francisco Mountain Gray Ware. The latter indicates this site was occupied at some time prior to 1150, and Prescott Gray Ware indicates occupation prior to 1300 A.D. When these sherds are disregarded as predating time immemorial, Tizon Brown Ware makes up 76.3% of the remaining sherd sample to only 8.4% Lower Colorado River Buff Ware. The milling stones at this site were the crunching slab type used by the Hualapais and for some purposes by the Prescott Branch Indians, but not by Cohoninas. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

v. Summary

The conclusion is clearly indicated. All three of these sites represent long-time Hualapai occupation of the Secret Pass area, using primarily their own Tizon Brown Ware but also a fairly large amount of Mohave trade ware.
According to Hualapai oral tradition, Hualapai abandonment of this area was hastened by a white man who poisoned Secret Spring, killing a number of Hualapais. Possibly this was a man named Humphreys who is credited with "discovering" the pass in the early 1860's.

b. Sitgreaves Pass

The eastern slope of Sitgreaves Pass was in pre-contact times blessed with a large creek. Since its flow has been diverted to the mining towns of Gold Road and Oatman, its bed is bone dry today. The creek headed about a mile above Ha' Nyasooch at Ha' Pook or "Head of the Water." (AS Oct. 30 p 7) Hualapai oral tradition identifies this as one of the springs where gardens were raised formerly. (AS June 1 p 1) This is confirmed in Anglo-American records. Here as at Ha' Nyasooch immediately below the second United States expedition to cross this pass noted agricultural fields. Lt. Edward F. Beale on October 14, 1857, "entered a wide gorge, which seemed to cut the mountain far up toward its centre. It was rough with stones, and overgrown in places with willow and rank weeds, through which Indian trails with fresh tracks and other signs, showing their immediate presence.

2/ Ives, 1861, p. 93, Fig. 26.
A few rude lodges, and a patch or two of pumpkins, were also found on the borders of the dry bed of the creek. It is hardly surprising that the Museum of Northern Arizona--Santa Fe Railroad survey in 1938 found what was reported to be a 100% Tizon Brown Ware site here with Cerbat Brown the main utility type. At that time, Lower Colorado River Buff Ware had not been recognized, and some types of it were classed as Tizon Brown Ware. Re-examination of the 1938 collection shows that a great deal of Mohave pottery found its way to this site.

1. N. A. 3366

The sherd sample from this site north of the channel is very reliable with 61.8% Tizon Brown Ware, satisfying Colton's 60% level of significance of cultural predominance. However, Lower Colorado River Buff Ware makes up 33.8% of the total, well over the 25% level of significance of occupancy. However, as has already been pointed out, the Mohaves made proportionately more clay vessels than did Hualapais. This meant that occasional Mohave visitors could deposit relatively more sherds than regular Hualapai inhabitants of this site simply because they had more pots available to carry around, and breaking one was not as serious as among the pot-poor.

1/ Beale, 1858, p. 74; Lesley, 1929, p. 256.

2/ Colton, 1939, p. 22.
Hualapais who undoubtedly exercised great care in handling what few pots they did possess. This was one factor resulting in a high proportion of Mohave sherds being deposited on a site that was Hualapai property.

Another factor was heavy importation of Mohave vessels by local Hualapais and those living farther east. The pattern of Hualapai-Mohave trading need not be discussed again here except to re-emphasize that Hualapais bartered upland products, particularly game and mescal, for agricultural produce and pottery vessels, and in addition frequently imposed on Mohave hospitality (expressed in gifts of food in clay containers) as much as possible.

The fact that the overwhelming proportion of Mohave sherds are plainware evidently resulted from this trade and gift-giving of foodstuffs in undecorated vessels. This Little Meadow site thus accumulated Mohave pot sherds from vessels given visiting Hualapais who were apt to break them here at the first camp after leaving Mohave Valley. For Hualapais taking advantage of Mohave hospitality included not only those regularly utilizing the water here to grow their own produce, but many from farther east in the Cerbat and Hualapai Mountain ranges.

ii. American Records from the 1850's

Historical evidence recorded by Anglo-American explorers leaves no doubt that this was a Hualapai site in the middle
of the last century. If it was at that time, the same frontier relationship can be projected backward in time, and the high proportion of Lower Colorado River Buff Ware on the site attributed to the special circumstances of trade in ceramic vessels existing on the Mohave-Hualapai frontier.

The "rude lodges" Beale noticed here in October of 1857 mark this as a Hualapai settlement, for the large, complicated Mohave house could hardly have been dismissed with this term.

Late in March of 1858 the Mohave chieftain Iretaba, who was guiding Lt. Joseph C. Ives east from the Colorado River informed his employer encamped at Little Meadow "that there were a few Hualapais living at no great distance, and that he would hunt them up, and endeavor to engage one to accompany us..." Thus it is clear that the Mohaves knew that Hualapais inhabited the eastern slope of the Black Range and at least approximately where to find them.

A couple of months earlier in the same year, Lt. E. F. Beale had distinguished Hualapai territory from that of the Mohaves on his return east from California. On January 24th he wrote that his party "started late and crossed the mountain to Murray's springs; the Indians of this side of the mountain, who are not friendly, yelling at us as we passed

\[1/\text{Ives, 1861, p. 94.}\]
down the canon, and showing themselves at a respectful dis-
tance on the high bluff on either side.\textsuperscript{1/}

The appearance of white-skinned invaders with increas-
ing frequency apparently persuaded the Hualapais living at
Hat Pook that their field homes were too exposed to attack,
and motivated them to move into caves near by. Old Mike
told the Laboratory of Anthropology expedition that, having
been brought up by some Mohaves, he decided to return to his
own tribe. "In the evening we arrived at the man's home at
Hapuk near Gold Road. Here in the white bluffs were a ser-
ies of caves, and here I and my new friends lived. It was
winter. It was cold. Food was scarce. All we had was
mountain sheep and seeds..."\textsuperscript{2/}

At any rate, when United States official exploration of
Hualapai territory got well under way, Hat Pook was an impor-
tant residential and agricultural area of the western Huala-
pais. The presence of Hualapais there was recorded by Beale
in October and January, and by Ives in March. Taken with Old
Mike's spending a winter in caves nearby with local residents
this indicates year-round residence here. Such a pattern
made Hat Pook one of the most regularly occupied of all Hual-
apai centers, and probably of considerable importance of its

\textsuperscript{1/} Beale, 1858, p. 77. The Indians "on this side of
the mountain" were differentiated from the Mohaves west of it.

\textsuperscript{2/} Kroeber, 1935, p. 222.
irrigated fields. The ceramic remains of Hualapai occupation also evidence this relatively intensive occupation through apparently a long period of time.

Beale's placement of the Mohave-Hualapai frontier at the summit of the pass is probably significant of the pre-contact situation, reflecting his previous experience on his trip westward. Then, on October 17, 1857, he had been met by Mohaves coming up from the river rancherias on the western side of this pass. Descending, his party had to spend a whole morning getting over one of the hills blocking the arroyo channel on the western slope. "Once over this, we descended the dry bed of the arroyo rapidly. Here the Indians began to pour in upon us from the Mohave villages. First two or three, and then by dozens." 1/

By this time the Mohaves had had sufficient contact with Anglo-Americans for some to have learned a few phrases of English with which to greet Beale and his men. Therefore, their readiness to climb the western side of Mohave Valley to the pass to meet Beale may very well indicate their knowledge of the Anglo-American habit of ignoring tribal frontiers. However, it may be questioned whether by 1857 they had learned that the advent of white men allowed Indian

1/ Beale, 1858, p. 75. Beale's text leaves in doubt whether the Mohaves were met on the mountain above the conceptual frontier or on the bajada below it.
tribes to ignore each other's frontiers. So their reception of Beale on the western slope of the pass probably signifies that they felt that they were greeting him at or just inside their frontier, and felt that they were safely within their own territory.

In either case, it is significant that the Mohaves did not cross the summit of the pass to meet Beale's party. This action, or failure to act, can be interpreted to mean they regarded the eastern slope as Hualapai territory. Beale had signal fires made on the 14th to tell the Mohaves he desired to trade, but not until the 17th did the Mohaves meet his party.

In summary, the historical evidence quite clearly shows the eastern slope of Sitgreaves Pass to have been Hualapai territory. Therefore, the hypothesis that the Little Meadow site N. A. 3366 was used and occupied exclusively by Hualapais prior to their conquest cannot be rejected, despite the presence of a proportion of Lower Colorado River Buff Ware in the sherd sample which would be interpreted as signifying some Mohave occupation were only archaeological evidence available, even when the disproportionate rate of clay vessel production among Mohaves and Hualapais was taken into account.

1/ Beale, 1858, p. 74-75.
2. Conclusion

Analysis of five ceramic sites recorded on the eastern slope of Secret and Sitgreaves Passes over the Black Mountains showed that all five were owned exclusively by Hualapais, and occupied, used and possessed solely by them. Archaeological evidence shows such a situation at the four Secret Pass sites while archaeological combined with historical evidence shows it at the Sitgreaves Pass site. Since the passes were most easily penetrated by the neighboring Mohaves, it may be concluded that since they were not, the entire eastern slope of the Black Mountains in this quadrangle was an area occupied and used exclusively by the Hualapai.

The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this eastern slope cannot be rejected.

C. 15' Quadrangle Arizona F: 16

Tizon Brown Ware comprises 76.7% of the sherd sample from this area of the southern Cerbat and northern Hualapai Mountains. Trade ware is present from the Amacava-Mohave Branch along the Colorado River, the Paiutes and probably the Havasupais. Indian occupation of the area prior to 1300 is indicated by sherds of the Cohonina and Prescott Branches and the Virgin River Basin Puebloans. The hypothesis that this area was occupied exclusively by Hualapais from time immemorial to conquest is accepted.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 16 in color.
### Ceramic Analysis by Wares of Sites in 15' Quadrangle, Arizona

**F: 16**

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**Note:** The above table provides a detailed analysis of ceramic artifacts from various sites within a 15' quadrangle area in Arizona. The data includes percentages of different wares, which can be used to understand the ceramic production and distribution patterns of the period in question.
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### CHARACTERISTICS OF SITES RECORDED IN 15' QUADRANGLE ARIZONA F:16

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1. Site Analysis

   a. Ha' Koomwe'

   This spring is located "a few miles northwest of Kingman. Named for Lieut. E. F. Beale, the explorer," it should properly be termed Bishop's Spring after its discoverer. Beale first saw this water source April 28, 1859, on his second journey westward, when he was taken to it by Bishop, who had found it on his way east to meet Beale.² Around two miles south of the spring, in Railroad Pass, "this morning the Indians stole one of our mules and shot another, so that it died in half an hour..." ³ The Whala Pa'a Band Hualapais had by that time decided to resist further Anglo-American passage, a decision dating from the Mohave defeat of the first immigrant train to attempt Beale's Road the previous summer.

   The length of time Hualapais had lived at Beale Springs and its immediate area is indicated by their oral tradition recorded by Capt. John G. Bourke in the 1870's. He wrote "the 'medicine men' wield an unknown and immeasurable influence, and claim power over the forces of nature, which is from time to time renewed by rubbing the body against certain

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¹/ Barnes, 1935, p. 40.
²/ Beale, 1860, p. 48; Udell, 1868, p. 72.
³/ Ibid., Ibid.
sacred stones not far from Beale Springs." There was evidently a locality in this area ranking with the sacred cave on the Big Sandy River (Kwinyawa') and another in Mata Widita Canyon as a source of supernatural power. Perhaps it was known only to the local Whala Pa'a Band. As the oldest living Hualapai says, "There was the same band at Beale Springs to Hualapai Mountains and the Sandy, the Whala kopai. Beale Springs is Ha' Koomwe'. There were Whala Pa'a at Beale Springs before the whites." (KC July 22 p 1)

When regular army troops returned to Fort Mohave after the War of the Southern Rebellion, an outpost was soon established at Beale's Spring. The Hualapai reaction to this settlement of Anglo-Americans within their territory again after all had been forced to flee a few years previously was to attack in force on May 30, 1867. They were able to drive off the stock and kill one careless civilian, but lost five or more of their own number. They apparently learned from this assault that they could not hope to take an army detachment by frontal attack because of the disparity in armament and firepower. Thereafter they confined themselves to ambushes and flight.

1/ Bourke, 1892, p. 165.  
3/ WF 42
i. Arizona F : 16 : 1

Only one sherd of Tizon Brown Ware was recovered, but this area was surveyed previously by the Museum of Northern Arizona--Santa Fe Railroad survey in 1938.

ii. N. A. 3381

Only one sherd of Tizon Brown Ware was recovered from the "dump" area in association with manufactured objects.

iii. N. A. 3364

The main collections of the Museum-Railroad survey were made at the spring. The sherds were reported to be 48% Tizon Brown Ware, 16% San Francisco Mountain Gray Ware and 24% Prescott Gray Ware, with Cerbat Brown the main utility type. The sherd sample is of low reliability (even adding the two Tizon Brown Ware sherds from the sites above). Tizon Brown Ware makes up 66.7% of the sample, Lower Colorado River Buff Ware 11.1%. There is no Prescott Gray Ware in this collection as far as the author could determine, but Cohonina Branch sherds indicate that this site was occupied prior to 1150 A. D. Eliminating these San Francisco Mountain Gray Ware sherds from consideration as pre-dating time immemorial Tizon Brown Ware sherds make up 75% of the remainder, exceeding the 70% level of significance of cultural predominance.

1 Colton, 1939, p. 22.
Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

iv. Beale's Spring Area Summary

Combining the sherd collections from the three sites which have been recorded, the sample remains of low reliability. Tizon Brown Ware comprises 69% of the total or 76.9% when San Francisco Mountain Gray Ware is eliminated, exceeding the 70% level of significance of cultural predominance. On the basis of the scant evidence available, the hypothesis that the Beale's Spring area was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

b. Atlantic Spring: NA 3382

The sherd sample is very reliable with 99.5% Tizon Brown Ware. This site near Atlantic Spring, which in prehistoric times was little more than a seep, was so thoroughly surveyed by the Museum-Railroad survey, with assistance from amateur sherd hunters in Kingman, that by the time of the Tribal Survey, no sherds could be found here. This is the same site as Arizona F : 16 : 2. The hypothesis that this site was occupied exclusively by Hualapais is accepted.

c. Kwaka Ta'apa

Heading west for the second time, Lt. E. F. Beale in April of 1859 visited "two of the three" springs discovered by his assistant, Bishop, who had come from California to
meet him. These were apparently Ha' Koomwe' and Senya Ha'. Also "he informed me there was another a mile or two beyond in the same line" wrote Beale. This was evidently Kwaka Ta'apa located on the channel slightly over a mile above Senya Ha'. Returning eastward, Beale applied the name Armistead's Creek on July 3d in honor of the commander of newly established Fort Mohave.

1. N. A. 3380

A Hualapai occupation area at Kwaka Ta'apa was located by the Museum-Railroad survey two and a half miles up the wash from Dunstan Hill at "Cottonwood Spring." This is one of the few Hualapai sites located in the open where excavation was indicated. The survey collections were reported to consist of 36% Tizon Brown Ware, 10% San Francisco Mountain Gray Ware and 21% Prescott Gray Ware. (These percentages add to only 67%, indicating a very high proportion of unidentified sherds.) Cerbat Brown was reported to be the primary utility type.

Lower Colorado River Buff Ware had not been distinguished from Tizon Brown Ware when this report was published, but

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1/ Beale, 1860, p. 48.
2/ Ibid., p. 50.
3/ Colton, 1939, p. 22.
even so, re-examination of the collection reveals Hualapai sherds form double the published proportion.

The sherd sample is very reliable with 56.3% Tizon Brown Ware plus trade ware from the Amacava-Mohave Branch (9.6%) and the Havasupais. Pre-1300 A. D. occupation here is shown by Prescott and San Francisco Mountain Gray Ware along with Moapa Gray, Tusayan White and San Juan Red Ware trade pieces. The Deadmans Black-on-Red recovered was made sometime between 775 and 1060 A. D. 1/

Eliminating pre-1300 sherds (Prescott, San Francisco Mountain Gray and San Juan Red Wares) from the sample, Tizon Brown Ware makes up 82.7% of the remainder.

Conclusion: The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected. The great concentration of sherds here marks this as one of the most intensively occupied of all Hualapai sites, matched only by some of the agricultural house sites in the fields in Mata Widita Canyon and a few other creek sites where irrigation agriculture was practiced. The number of sherds indicates Hualapai occupation far back into pre-historic time at a relatively intensive level of occupation by relatively large numbers of Hualapais.

1/ McGregor, 1951, pp. 20, 32; Colton, 1946, p. 252-3; Colton, 1953, p. 75.
The San Francisco Mountain Gray Ware sherds which form nearly a fifth of those collected from the site apparently evidence a pre-1150 A. D. Cohonina occupation far to the west of what has been conceived as the primary range of that group.

d. Johnson Ranch-- N. A. 3378

About two and a half miles north of the town of Kingman at the then Jack Johnson Ranch, the Museum-Railroad Survey located a sherd area labeled site N. A. 3378. The collection from this site was reported to be 100% Tizon Brown Ware, but 10% San Francisco Mountain Gray Ware and 15% Prescott Gray Ware were also reported, making 125% ceramic Brown was said to be the most abundant utility type.

Actually, the fairly reliable sherd sample is entirely Tizon Brown Ware. Therefore, the hypothesis that the site was occupied exclusively by Hualapeis is accepted.

In Section 5 of Township 21 North, Range 17 West, the same survey found several sites bearing further evidence of Hualapai occupation northwest of Kwaka Ta'apa.

i. N. A. 3383

A rock shelter of two rooms with low walls in the northeast corner of the section was labeled N. A. 3383. The sherds found there were reported as 100% Tizon Brown Ware with Sandy

Brown the most abundant utility type. The very reliable sherd sample is indeed entirely Tizon Brown Ware, so the hypothesis that this rock shelter was occupied solely by Hualapais prior to their conquest is accepted.

ii. N. A. 3384

Another rock shelter in the northwest corner of this section yielded sherds, a metate and an empty "storage cyst" covered with brush, grass, and juniper bark which was probably the remains of a looted historic Hualapai burial. The sherds were reported as 44% Tizon Brown Ware, 28% San Francisco Mountain Gray Ware, and 23% Prescott Gray Ware. Cerbat Brown was the dominant utility type. The published percentages add only to 95% indicating some unidentified sherds. However, when the pre-1300 A. D. wares are eliminated, Tizon Brown Ware remains clearly dominant. Although this collection could not be located for re-examination, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

iii. N. A. 3385

Fifty feet from N. A. 3383 the Museum-Railroad survey found another sherd area and rock shelter. This site on "Oak Creek" yielded a fairly reliable sherd sample, all Tizon

1/ Colton, 1939, p. 22.
2/ Ibid.
Brown Ware, so the hypothesis that it was occupied solely by Hualapais cannot be rejected.

iv. N. A. 3386

Another rock shelter was found above the preceding site where a storage basket had been dug up. The unreliable sherd sample of one Tizon Brown Ware and one Prescott Gray Ware bit indicates occupation here prior to 1300 A. D. but Hualapai occupation exclusively from time immemorial to conquest.

v. Summary

The Museum-Railroad survey located five sites in this small area, three of which yielded only Tizon Brown Ware. Another has clearly been a Hualapai site from time immemorial and the other yielded only two sherds. This indicates a considerable insularity and lack of foreign trade relations among the local Hualapais. The number of sherds recovered indicates fairly intensive use and/or fairly long-continued use of these sites.

e. Kingman Area

1. N. A. 3379

The site on Dunstan Hill north of Kingman was reported to have yielded a trace of Tizon Brown Ware, San Francisco Mountain Gray Ware and Prescott Gray Ware, Cerbat Brown being the main utility type. The sherd sample is unreliable,

1/ Colton, 1939, p. 22.
but since the Tizon Brown Ware proportion of 81.8% falls within the range of neighboring sites, it is probably representative. Trade ware from the Mohaves and the prehistoric Virgin River Basin Puebloans occurs here on Dunstan Hill.

Conclusion: On the basis of available evidence, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ii. N. A. 3368

The Museum-Railroad survey collection from this site was reported to consist of 75% Tizon Brown Ware, 11% San Francisco Mountain Gray Ware and 15% Prescott Gray Ware. Cerbat Brown was the most abundant utility type. Re-examination of this collection revealed the proportions to be somewhat different because some Lower Colorado River Buff Ware types had been included in Tizon Brown Ware at that time. Tizon Brown Ware formed 69% of the sample compared to less than 9% Mohave and under 20% San Francisco Mountain Gray Ware of a pre-1150 A. D. occupation. This site was re-visited and additional sherds collected.

The augmented sherd sample is very reliable and in surface association with manufactured objects. Tizon Brown Ware constitutes 64.1% of the sherds. Trade ware from the Amacava-Mohave Branch is 7.7% of the sample. San Francisco Mountain

\footnote{Colton, 1939, p. 22.}
Gray Ware and Prescott Gray Ware were found in significant quantities (17.7% and 6.5% respectively) indicating a fairly intensive occupation of this rock shelter prior to 1300 A.D., tradeware also coming in at that time from the Virgin River Basin Puebloans. Disregarding the Prescott and San Francisco Mountain Gray Ware sherds which fall outside the period under consideration in this study, Tizon Brown Ware comprises 84.6% of the remaining sherds. This figure may be somewhat high. This rock shelter has since been excavated. The results are not yet available, but the deposit inside the rock shelter proved to be very shallow, and a bit of iron was found in contact with bed rock, indicating the deposit represents little if any occupation prior to the time iron became available from the Spaniards of New Mexico by trade through other Indians.

The Indians occupying the shelter seem to have periodically thrown the accumulated trash out on the talus slope. Test pits were sunk in these deposits in an attempt to amplify information obtained in the shelter, but results of these are as yet unavailable.

Conclusion: The hypothesis that this rock shelter in Butcher House Canyon was occupied exclusively by Hualapais from time immemorial to conquest is accepted.
On June 7, 1776, Fray Francisco Garces, Order of Friars Minor, "traveled four leagues east, and arrived at the Jaguallapais, who had provided much game for our refreshment."¹/ The Jaguallapais were the Whala Pa'á Band designated by their band name obtained by Fr. Garces from his Mohave guides. Later, Anglo-Americans also approaching the Hualapais from the Colorado River would apply this same band name to the entire tribe. Fr. Garces found these western Hualapais dressed in antelope skins and Hopi "shirts" with Spanish belts, and using awls and other implements traded from the Hopis. As early as 1776, then, Spanish metal and leather was traded west along the Rio Grande--Pacific Ocean Trail as far as the westernmost Hualapai bands. The route this Franciscan missionary pursued after leaving this rancheria indicates he almost surely had stopped somewhere on Walnut Creek.

The next non-Indian visitor of record was Lt. Col. William R. Price with a cavalry detachment which reached here in the course of peace negotiations to end the Hualapai War on April 19, 1869. This settlement took its name from a spring north of the creek, but "Tak-taka'pa was the principal

¹/ Coues, 1900, II:316-317.
³/ WP 87.
site, on Walnut Creek at the western base of the Mountain" of the Whala Pa' a Band.

1. Arizona F : 16 : 3

The sherd sample is of low reliability at this site on the north side of the creek near some of the lower Hualapai fields along that stream. Surface debris was found on a terrace in the center of the canyon higher than eroded channels on both sides. The surface is covered with a small stone desert pavement dropped by sheet erosion.

Broken crunching slabs of Hualapai type were seen, along with an iron buckle, arrow points, one a masterpiece of fine stone chipping, and various flakes. Probably this was the site of seasonal encampments, non used for very long.

However, occupation here apparently began prior to about 1150 A. D. since San Francisco Mountain Gray Ware was found. It extended into historic time since the sherds occurred in surface association with manufactured objects, and the site was identified by a member of the Whala Pa' a Band as one where his relatives lived in historic time. Trade ware from the Mohaves dating from this post-contact occupation makes up 62.5% of the sample, leaving only 31.3% Tizon Brown Ware to represent the entire period from 1150 A. D. to the conquest or somewhat later.

1/ Kroeber, 1935, p. 43.
Conclusion: On the basis of the known historic occupation of the site by Whala Pa'a Band Hualapais and surface association with manufactured objects, and the identification of the Mohave trade ware sherds as of historic date, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

ii. Arizona F : 16 : 4

A former Hualapai occupation area in the creek bottom near one of the fields formerly cultivated was pointed out by a nephew of the chief of the Whala Pa'a Band at the period of the Hualapai War as a site where he and others of this band lived. Fields and site are now overgrown with brush and lie just above the stream level: irrigation water having been diverted upstream from here.

Planed lumber, old shoes and similar manufactured objects leave no doubt as to historic occupation of this site. Therefore, the presence of native pot sherds is significant. The sample is unreliable but all Tizon Brown Ware. The small number likely is due to the lapse of pottery making among the Hualapais during post-settlement times.

Conclusion: The hypothesis that this site was occupied solely by Hualapais cannot be rejected.

iii. Summary

The scanty ceramic evidence available from the Walnut Creek valley indicates that this area was used and occupied
exclusively by Hualapais from time immemorial to Anglo-American settlement, which was here directly responsible for the dislocation of the native Hualapais.

g. Sites of Unknown Location Within Quadrangle

i. Gila Pueblo's Camp Mohave : 16 : 1

The selected sherd sample is of low reliability. San Francisco Mountain Gray Ware evidences the pre-1150 A.D. occupation of this area by the Cohonina Branch Indians, although this was originally reported as a 100% Yuman site. Lower Colorado River Buff Ware indicates trade with the Amacava-Mohave Branch. But 88% of the sample is Tizon Brown Ware so the hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

ii. Gila Pueblo's Camp Mohave : 16 : 2

At this site the selected sherd sample is also of low reliability, with 80% Tizon Brown Ware and 20% Amacava-Branch trade ware, entirely a Yuman site as originally reported. Since evidence of the Mohaves is not present in ceramic form the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

1/ Gladwin & Gladwin, 1930, p. 152.
2/ Ibid.
iii. Summary

The two sites in this area surveyed by Gila Pueblo yielded the same ceramic picture as those surveyed by other institutions whose precise locations are known. These sites, too, were lived on solely by Hualapais from time immemorial to Anglo-American conquest.

2. Conclusion

Since all of the recorded sites in 15' Quadrangle Arizona F : 16 appear to have been occupied solely by Hualapais from time immemorial to conquest, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area is accepted.

D. 15' Quadrangle Arizona F : 12

Tizon Brown Ware makes up 60.6% of the sherds thus far collected in this 15' quadrangle. Prescott Gray Ware sherds which were produced before the time period under consideration in this study make up another 32% of the total. No other ware exceeds 4.3%, this being the figure for trade ware from the Amacava-Mohave Branch. Disregarding the sherds from vessels produced prior to 1300 A. D. (San Francisco Mountain and Prescott Gray Wares) the Tizon Brown Ware sherds make up 92.3% of the remainder.

Conclusion: On the basis of the available evidence, the hypothesis that the 15' Quadrangle Arizona F : 12 was occupied exclusively by Hualapais from time immemorial is accepted.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 12--the bulk of the Cerbat Mountain range.
## CERAMIC ANALYSIS BY WARES OF SITES IN ARIZONA F: 12

<table>
<thead>
<tr>
<th>SITES</th>
<th>Tizon Brown Ware</th>
<th>Lower Prescott Tizon Gray River Ware</th>
<th>Tizon Wiped Buff Ware</th>
<th>S. F. Mtn. Gray Ware</th>
<th>Uni- den- ti- fied SHERDS</th>
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* Same site as Arizona F: 12: 8.

## NON-CERAMIC SITES

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<td>Arizona F: 12: 7</td>
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<td>N A 3772</td>
<td>Sherum Peak</td>
<td>Village.</td>
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<tr>
<td>N A 3774</td>
<td>Gaddis Ranch</td>
<td>Lithic.</td>
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<td>N A 3777</td>
<td>Chloride</td>
<td>Caches.</td>
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<td>(also N A 3776)</td>
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CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUAD. ARIZONA F:12

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<tr>
<th>SITES</th>
<th>Parker Series</th>
<th>Needles</th>
<th>Pyra-</th>
<th>Lwr.</th>
<th>Uniden-</th>
<th>TOTAL</th>
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CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUAD. ARIZONA F:12

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<th>Lwr.</th>
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SITES | Cerbat | Ha' | Aquarius | Sandy New | Tizon |
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CHARACTERISTICS OF SITES IN ARIZONA F: 12 QUADRANGLE

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* Dated in historic time by burials.
1. Site Analysis

   a. Arizona F : 12 : 1

   The sherd sample is reliable with 97.3% Tizon Brown Ware and the remainder trade ware from the Amacava-Mohave Branch on the Colorado River to the west. This rock shelter was used by Hualapai Charley and his relatives of the Cerbat Mountain Band of Hualapais well into historic time, as shown by iron on the surface. They were regarded as possessing a right to the area in which it is located descending from prehistoric times. This is one of the places in Hualapai territory about which there is a local legend. (CA June 2 p 1-2)

   Conclusion: The hypothesis that this rock shelter was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

   A stone flake which came off the core in almost the shape of an arrow point was shaped into one with little effort, showing that the Cerbat Mountain Band members were not above taking short cuts in implement manufacture. A geode testifies that some local Hualapai was interested enough in this odd bit of stone to carry it home to the cave.

   b. Arizona F : 12 : 3

   The low reliability sherd sample has 37.5% Tizon Brown Ware. This is less than the proportion of Prescott Gray Ware

   1/ Indian Claims Comm., 1953, p. 153. (DGN)
present, but these sherds must be attributed to the period prior to 1300 A.D. and do not enter into determination of occupancy from time immemorial. Eliminating them from consideration, Tizon Brown Ware sherds comprise 66.7% of the remainder, exceeding Colton's level of significance of cultural predominance. The place was used in post-contact time, probably, since the rest of the sherds are Needles Red-on-Buff or Buff of Lower Colorado River Buff Ware. This type was found at two of the post-1869 historic sites.

This Kanoo Waja site was a vegetable food drying area west of Mineral Park where a number of large, relatively flat rocks were used by Hualapaies as natural drying platforms on which to spread out vegetable foods such as opuntia cactus fruits to dry. When such fruit had dried, it was pounded up into a powder, sacked, and stored for the winter. (DGN Dec. 4 p 5) Probably these boulders have been employed for the same purpose for as long as Indians have lived in this region and obtained clay from the Kanoo Waja deposit exposed by the arroyo cutting into the bajada slope here.

Conclusion: On the basis of the small sherd sample, and known historic Hualapai utilization, the hypothesis that this site was occupied exclusively by Hualapaies from time immemorial to conquest cannot be rejected.
A trail climbs the small arroyo which has cut a little canyon between *Teva Haja* and the main mountain flank forming the north side of Canyon Station Canyon. Here was found a broken crunching slab and an unreliable sherd sample indicating merely the presence of users of the sherds recovered, both Tizon Brown Ware. Hualapais inhabited this area into historic time. The hypothesis that this site was occupied exclusively by Hualapais from unknown time to after their conquest cannot be rejected on the basis of the scant evidence available.

The next canyon north of the one where Canyon Station was situated is a large, circular embayment with short arroyos feeding into it from the deeply eroded slopes of the eastern Cerbats. The westernmost end of this canyon is a nearly north-south tending steep slope. There are some small seeps near the base of this slope which afforded Hualapais some water. (GW Aug. 15 p 13) On the alluvial floor of the embayment near this slope stands a very large boulder which has a series of water-retaining basins on its upper surface where rain water could be dipped up. That the Hualapais drank from this rock tank is shown by the number of pot sherds on the ground around it where pots were thrown after breaking on the rock during the dipping operation.
The reliable sherd sample is 98% Tizon Brown Ware, with some trade—probably within post-contact time—with the Mohave on the lower Colorado River. This is one of the few Hualapai encampments where a permanent pigment was used to give some painted decoration to extremely plain pottery. Scant as this decoration was, it perhaps denotes a stable food supply compared to other areas, allowing a slight degree of aesthetic expression, or else a cultural drive which triumphed minutely over such things as food scarcity.

Conclusion: The hypothesis that this site in Section 22 of Township 23 North, Range 17 West, was occupied solely by Hualapais prior to their conquest by the United States is accepted.

e. Arizona F: 12 : 5

Another sherd area is located near the base of the north-facing slope of the head of this canyon embayment, where the foot trail up Teva Haja arroyo drops into this canyon (in Section 22, Township 23 North, Range 17 West). The low reliability sherd sample is composed entirely of Prescott Gray Ware with no other evidence present. This site was occupied by the Prescott Branch Indians prior to 1300 A.D. and does not affect the question of exclusiveness of Hualapai occupancy after that.
f. Arizona F : 12 : 8

The sherd sample is of low reliability at Musthool Nyuwi' where Tizon Brown Ware constituted 81.3% of the sample and the remainder was traded from the Mbhaves. It was first reported to be a 100% Tizon Brown Ware site with Sandy Brown the main utility type before Lower Colorado River Buff Ware had been distinguished from Tizon Brown Ware. This site was occupied by Hualapais during the Ghost Dance ceremonials of 1889-1891, and most of the debris is of American manufacture including iron buttons, screw, government issued tea cans, liquor bottles, etc. This is a purely historic site and as such has previously been discussed. It does not enter into determination of Hualapai territory prior to conquest except in helping identify Tizon Brown Ware as Hualapai-produced.

g. Nyi'ita

The base of Bull Mountain (in Township 22 North, Range 17 West, Sections 26 etc.) was known to Hualapais as Nyi'ita. On the peak was an eagle nest where eagles to supply feathers were obtained in pre-contact times. (DGN Dec. 3 p 2)

i. N. A. 3358

In Section 24 about six miles north of Kingman on the east side of Bull Mountain the Museum-Railroad survey in 1938 located an area recorded as an "extensive sherd area above

1/ Colton, 1939, p. 22.
spring," evidently meaning Ha! Koovwho Kwitch. This sherd sample is reliable, with 84.8% Tizon Brown Ware and 7.6% Mohave trade ware. Pre-1150 A.D. sherds of the Cohonina Branch also occur, showing occupation of this site to have begun sometime before that date. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

ii. N. A. 3359

The sherd sample is reliable at this burial site about a mile north of N. A. 3358 in Section 13. It is 90.8% Tizon Brown Ware with a trace of Lower Colorado River Buff Ware trade. Cohonina sherds from the period before 1150 A.D. indicate that occupation here began prior to that date. Since the Hualapais disposed of their dead by cremation during pre-contact times, the burial here is sure evidence of post-contact use of this site. For living Hualapais still remember cremations taking place nearby. (RW May 25 p 10). The hypothesis that this site was occupied exclusively by Hualapais from time immemorial into post-settlement times is accepted.

iii. N. A. 3360

Another site was recorded as a burial area, with a sherd sample 80.6% Tizon Brown Ware and reliable. Mohave trade ware, probably historic in date, makes up just over 10% of it; Cohonina Branch sherds indicate occupation of this site.
had begun prior to 1150 A.D. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to post-settlement times is accepted.

h. NPS Arizona F : 12 : 1

The very reliable sherd sample is entirely Prescott Gray Ware. Like Arizona F : 12 : 5, this site was occupied by the Prescott Branch prior to 1300 A.D., and does not enter into determination of Hualapai territory from time immemorial after that tribe reached the stable limits of its territory.

2. Conclusion

Within 15' Quadrangle Arizona F : 12 two pure sites of the Prescott Branch are known, indicating an occupation in this area by that prehistoric "tribe" at some time before 1300 A.D. when its distinctive pottery went out of production.

Also within this quadrangle two purely historic sites are known which were employed in the identification of Tizon Brown Ware as Hualapai pottery.

The other nine sites known in this quadrangle date from time immemorial to conquest or later, and bear on the question under study. On the basis of evidence from these sites, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle is accepted.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 8 in color.
## Ceramic Analysis by Types of Sites in 15' Quadrangle Arizona F : 8

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<tr>
<th>POTTERY TYPES</th>
<th>Parker Buff</th>
<th>Parker Red-on-Buff</th>
<th>Tuwo Buff</th>
<th>Topoc Buff</th>
<th>Pyramid Buff</th>
<th>Carbat Brown</th>
<th>Cerbat Fugitive Red</th>
<th>Aquarius Brown</th>
<th>Tizon Wiped</th>
<th>Deadmans Fugitive Red</th>
<th>Deadmans Yellow WARE</th>
<th>PALATE CORRUGATED</th>
<th>Aquarius Orange</th>
<th>Verde Gray</th>
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## Ceramic Analysis by Wares of Sites in 15' Quadrangle Arizona F : 8

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CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA F : 8

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E. 15' Quadrangle Arizona F : 8

Tizon Brown Ware constitutes 74.4% of the sherds known from sites recorded in this 15' quadrangle. Lower Colorado River Buff Ware with 10.3% of the total is the most abundant trade ware. Vessels made by Havasupais, Paiutes and the pre-historic Hopis were also imported. Occupation of this area prior to about 1150 A. D. is indicated by San Francisco Mountain Gray Ware sherds, and prior to perhaps 1300 A. D. by Prescott Gray Ware sherds. The hypothesis that this 15' quadrangle Arizona F : 8 was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

1. Site Analysis

The bulk of this 15' quadrangle is located in the rugged Cerbat Mountains, and the sites recorded are near mountain springs in that range.

a. Oowa'a Nyi Ha'

"Before the White man came my grandfather from my father's side, called Nupo, told me...Whanya Ha', this the Indian
Spring. The White name for this spring is Cane Spring. The current Hualapai term is a contracted form of Oowa'a Nyi Ha', meaning "House Water." (GW Aug. 16 p 8)

The seed rich Hualapai Valley south of the Red Lake playa lay immediately east of this spring, and the Hualapais living here gathered much sele' and iyatch. (DGN Dec. 3 p 10) Their first sight of Americans probably came in 1854 when Francois X. Aubry and his party passed down Hualapai Valley--and they saw Aubry first, because he found their rancherias "abandoned" as he traversed the valley. During the Hualapai War of the following decade, Cane Spring was the scene of one of the few defeats inflicted on the U. S. Cavalry by the outmatched Hualapais. Lt. J. D. Stevenson attacked here January 14, 1868, foolishly approaching from the north afoot and exposing himself to the fire of the Hualapais who were entrenched behind a rock ledge above their rancheria. The Hualapais, seeing Lt. Stevenson fall wounded, and later packed off on a mule, assumed they had killed him. (GW Aug. 20 p 1, 7)

1. Arizona F: 8: 1

The surface at and near the spring has been churned up by bulldozers trying to develop a greater flow for the Anglo-

1/ Indian Claims Comm., 1953, p. 106. (RW)

2/ Aubry, 1854, p. 380-381.

3/ WP 55-56.
American ranch whose headquarters buildings are located near the edge of the mountains farther east. As a result of this wholesale disturbance, no artifacts were found in the immediate vicinity of the spring although from the brink of the wash a short distance below, evidently where they had been washed down by floods, a couple of Tizon Brown Ware sherds were recovered near the old Hualapai trail. On the basis of ethnographic information and this scant ceramic evidence, the hypothesis that this area was occupied exclusively by Hualapais prior to Anglo-American settlement cannot be rejected.

II. Arizona F: 8: 2

The spring at Ooowa' a Nyi Ha' flows to the surface on a mountain slope somewhat less than halfway to its summit. At the top of the soil slope, at the base of a conglomerate cap there is a rock shelter used by the Cane Springs Hualapais for food storage in earlier times, and during the latter part of the last century for cairn burial of their dead. The sherd sample collected at this rock shelter is reliable, with 92.9% Tizon Brown Ware, no other ware exceeding 2.8%. The most significant occurrence of tradeware here is a sherd of Jeddito Yellow which indicates that this site was in use some time before 1700 A. D. and after 1300. It also indica-

\[1\] Colton, 1939, p. 27. McGregor, 1941, p. 377 ended at 1600; Colton, 1953, p. 75 ended at 1625 A. D.
tes the very long distance west to which this Hopi ware was traded.

Some San Francisco Mountain Gray Ware sherds indicate occupation of this rock shelter prior to 1150 A. D. The hypothesis that this site was used and occupied solely by Hualapais from about 1150 A. D. to conquest is accepted.

iii. Arizona F: 8:3

Across the head of the drainage of the arroyo flowing by Owawa's Nyi Ha', again at the base of the conglomerate cap of a steep mountain, is another rock shelter where cairn burials were made by Hualapais living at this spring. Here also the burials have since been looted, leaving bark and grass burial wrappings exposed in the fine, dry dust of the cave floor, but the bones have been removed.

The sherd sample from the dusty surface of this rock shelter is of low reliability. Since it is 96.7% Tizon Brown Ware, the hypothesis that this rock shelter was occupied solely by Hualapais prior to Anglo-American settlement can not be rejected.

iv. Summary

The proportion of Lower Colorado River Buff Ware in both of these rock shelters is low compared to other sites in western Hualapai territory, only about 3%. This may reflect a time difference in the period of use of the rock shelters, but this seems unlikely since Hualapais remained
here well into the post-settlement period when Mohave vessels were replacing Tizon Brown Ware pots. Probably the Hualapais here simply continued to make and use their own clay vessels longer than other western groups did. That they were in communication with the Mohaves is also demonstrated by the screwbean trees growing around the spring, the seeds of which could only have come from the Colorado River Valley.

b. NPS Arizona F : 8 : 1

The sherd sample is reliable from this site at Antelope Spring. It is composed of 54.5% Tizon Brown Ware sherds plus several other wares, none exceeding 13.6% of the total. Paiute, Amacava-Mohave Branch and Havasupai trade ware is present. Ochonina sherds dating prior to the period under consideration demonstrate occupation of this site at Antelope Spring prior to 1150 A. D. If these sherds and the Prescott Gray Ware sherds are disregarded, Tizon Brown Ware makes up 66.7% of the remainder. Up to the time of their conquest and for some years thereafter, Hualapais of the Red Rock Band and the historic combined Red Rock-Cerbat Mountain Band utilized this spring. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected despite Tizon Brown Ware not being 70% of the corrected sample, for no other ware is anywhere near the 20% level of significance of occupancy.
c. NPS Arizona F : 8 : 2

The sherd sample is reliable, with 53.8% Tizon Brown Ware and the rest Lower Colorado River Buff Ware. The site is a cave above Antelope Spring which was utilized by the Hualapais into historic time. This known history of Hualapai use, and the character of other sites in this 15' quadrangle make clear that this has long been Hualapai territory. The Lower Colorado River Buff Ware Pyramid Series has been dated as pre-1150 A.D. at Willow Beach, and even if these sherds indicate Amacava Branch Indians camped here, they did so prior to the period under study. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

2. Conclusion

The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied 15' Quadrangle Arizona F : 8 from time immemorial to conquest is accepted.

F. 15' Quadrangle Arizona F : 7

Two of the sites known from this area have been eliminated from the present analysis because they were occupied after the time period under consideration. That is, they post-date Anglo-American conquest and the direct archaeological record of the Hualapais. These are the post-1887 sites at White Hills mining camp which were discussed above in outlining the
15' Quadrangle Arizona F : 7 in color.
TABLE I -- Ceramic Analysis by Types of Three sites on hilltop above White Hills, and contemporary with that mine camp, entirely post-dating its 1887 ore discovery

<table>
<thead>
<tr>
<th>SITES</th>
<th>Forte-</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>FORT MOHAVE VARIANT SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona F:7</td>
<td></td>
<td>Parker</td>
<td>Parker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buff</td>
<td>Red-on-Buff</td>
</tr>
<tr>
<td>3</td>
<td>100.</td>
<td>42.3</td>
<td>38.5</td>
</tr>
<tr>
<td>4</td>
<td>10.</td>
<td>43.3</td>
<td>46.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1.8%</td>
<td>24.6%</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

(These historic sites are not included in any further summaries).

TABLE II -- Ceramic Analysis by Wares of two sites bearing evidence of Walapai utilization during the pre-historic period of manufacture of Tizon Brown Ware by the Walapais.

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON BROWN</th>
<th>LOWER COLORADO</th>
<th>SAN FRANCISCO</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS 1*</td>
<td>51.0</td>
<td>47.1</td>
<td>2.0</td>
<td>51</td>
</tr>
<tr>
<td>5</td>
<td>95.7</td>
<td>4.2</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>TOTAL</td>
<td>65.3%</td>
<td>33.3%</td>
<td>1.3%</td>
<td>75</td>
</tr>
</tbody>
</table>

TABLE III -- Ceramic Analysis by Types of two sites bearing evidence of Walapai utilization during the pre-historic period of manufacture of Tizon Brown Ware by the Walapais.

<table>
<thead>
<tr>
<th>SITES</th>
<th>Parker</th>
<th>Parker</th>
<th>Parker</th>
<th>Topoc</th>
<th>Cerbat</th>
<th>Ha'</th>
<th>Aquar-</th>
<th>Deadmans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buff</td>
<td></td>
<td>Park</td>
<td>Park</td>
<td>Topoc</td>
<td>Cerbat</td>
<td>Ha'</td>
<td>Aquar-</td>
<td>Deadmans</td>
</tr>
<tr>
<td>Buff</td>
<td></td>
<td>Stucco</td>
<td>Brown</td>
<td>Kiacha</td>
<td>Ius</td>
<td>Gray</td>
<td>Brown</td>
<td>Brown</td>
</tr>
<tr>
<td>NPS 1*</td>
<td>9.8</td>
<td>17.6</td>
<td>19.6</td>
<td>47.1</td>
<td>3.9</td>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>19.6</td>
<td>17.6</td>
<td>19.6</td>
<td>47.1</td>
<td>3.9</td>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>6.7%</td>
<td>12.2%</td>
<td>13.3%</td>
<td>1.3%</td>
<td>42.7%</td>
<td>2.7%</td>
<td>20.0%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>
progressive decline in production and use of Tizon Brown Ware, which was not used at all by the Hualapais living at these sites, and its replacement by vessels of the Parker Series of Lower Colorado River Buff Ware for such purposes as Hualapais still employed Indian-made pots.

Tizon Brown Ware makes up 65.3% of the sherds known from this quadrangle. Trade ware from the Mohaves indicates occupancy continued into post-settlement time. Cohonina Branch sherds indicate occupation began prior to 1150 A.D. Although Lower Colorado River Buff Ware amounts to 33.3% of the known sherds, it is regarded as tradeware because of its known Mohave origin, being mostly Parker Series.

1. Site Analysis

a. NPS Arizona F : 7 : 1

The reliable sherd sample has 51% Tizon Brown Ware and 47.1% Lower Colorado River Buff Ware. However, this all belongs to the Parker Series which was produced in historic times by the Mohaves, and was imported by Hualapais in post-conquest times as they abandoned the production of their own Tizon Brown Ware. And these sherds are in surface association with square iron nails indicating the historic occupation of the site. This surface association carries relatively little weight, inasmuch as one sherd of Cohonina Branch ware pre-dating 1150 A.D. was found in the same association.
But this site at Dolan Spring was, according to Hualapai respondents, used continuously by their tribesmen until after 1900. When Indian Jeff made known the existence of minerals at White Hills and that mining camp sprang up in 1887, the miners seized the water sources in the White Hills range Jeff and related Hualapais had been using. They then fell back to Dolan Spring, Matoo Thenya’s family residing there and irrigating a garden with its waters. (CA Dec. 4 p 6) The Parker Series Lower Colorado River Buff Ware sherds can be assigned to this late Hualapai occupation without much doubt.

What proportion of the Tizon Brown Ware sherds represents Hualapai occupation at this spring before 1150 when the San Francisco Mountain Gray Ware sherd was imported, and what proportion represents Hualapai post-conquest occupation, it is impossible to determine. However, from time immemorial to conquest, this apparently was a 100% pure Tizon Brown Ware site. The hypothesis that this site at Sava Ha’ was occupied exclusively by Hualapais from time immemorial to conquest is accepted. It lay in Red Rock Band pre-contact territory.

b. Whala Simina’eda

Arizona F : 7 : 5

The low reliability sherd sample weathering out of the ground near this spring in the midst of the White Hills is

1/ Indian Claims Comm., 1953, p. 106. (RW)
95.7% Tizon Brown Ware. There is a single trade sherd from the Amacava Branch. Hualapais knew of this spring in the mountains in Section 11 of Township 27 North, Range 19 West, and used its waters. But the sherds typologically appear to be quite early. They are thick and coarse like sherds excavated at Willow Beach. This, plus the fact these sherds have actually been buried, may indicate considerable age for this site. Two sherds are the largest of Tizon Brown Ware recovered from an open site during the Tribal Survey. One, a rim sherd of Aquarius Brown, shows the same rough surface exposed by wearing away the surface finish during use as the historic Hualapai bowl preserved by Lillie Wilder. These sherds contain more mica than is usual in this ware also.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial is accepted.

2. Conclusion

Eliminating historic Mohave tradeware from consideration in the combined sherd sample for this area, Tizon Brown Ware comprises 96.1% of the sample. This is well above any of the levels of significance of cultural predominance.

On the basis of the combined sherd sample for 15' quadrangle Arizona F : 7, and the interpretation of the occupation of the known sites, the hypothesis that this quadrangle was occupied exclusively by Hualapais from time immemorial to their conquest is accepted, and the hypothesis that no other
tribe than the Hualapai ever established a permanent encampment in, or used or occupied this area during this period is also accepted.

G. 15' Quadrangle Arizona F : 4

When sherds of the two sites known in the area are combined, Tizon Brown Ware constitutes 56.2% of the total, exceeding Colton's 60% level of significance of cultural predominance. However, Lower Colorado River Buff Ware accounts for 31.4% of the sherds, well above the 25% level of significance of occupancy. On the other hand, of these Lower Colorado River Buff Ware sherds, 73.5% belong to the Parker Series made by historic Mohaves. In view of the known history of abandonment of Tizon Brown Ware production by Hualapais in post-settlement times, and its replacement by vessels traded from the Mohaves, these sherds can be attributed to this late historic period.

1. Site Analysis

a. Ha' Tethwhalgija

NPS Arizona F : 4 : 1

On the Hualapai Valley-Grapevine Canyon divide a seep has been developed at the base of the Grand Wash Cliffs known as Patterson Tunnel. The original seep was called Ha' Tethwhalgija by the Hualapais, who lived here seasonally from pre-historic times. It was one of the water sources utilized in the seasonal round of the Grass Springs lineages.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona F : 4 in color.
CERAMIC ANALYSIS OF SITES IN 15' QUADRANGLE ARIZONA F : 4

BY WARES

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER</th>
<th>TIZON</th>
<th>S. F.</th>
<th>UNIDEN-</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COLO.</td>
<td>BROWN</td>
<td>MOUNT.</td>
<td>TIFIED</td>
<td>SHERDS</td>
</tr>
<tr>
<td>RIVER</td>
<td>WARE</td>
<td>GRAY</td>
<td>WARE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BUFF</td>
<td>WARE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F:4:1</td>
<td>5.6</td>
<td>90.7</td>
<td>1.9</td>
<td>1.9</td>
<td>54</td>
</tr>
<tr>
<td>F:4:2</td>
<td>100.</td>
<td>9.4</td>
<td>1.9</td>
<td>1.9</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>31.1</td>
<td>66.2</td>
<td>1.4</td>
<td>1.4</td>
<td>74</td>
</tr>
</tbody>
</table>

BY TYPES

<table>
<thead>
<tr>
<th>SITES</th>
<th>Par-ker</th>
<th>Pyra-mid</th>
<th>Cer-bat</th>
<th>Aquar-ius</th>
<th>Kirk-land</th>
<th>Uniden-tified</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Buff</td>
<td>Gray</td>
<td>Brown</td>
<td>Brown</td>
<td>Gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F:4:1</td>
<td>5.6</td>
<td>24.1</td>
<td>66.7</td>
<td>1.9</td>
<td>1.9</td>
<td></td>
<td>54</td>
</tr>
<tr>
<td>F:4:2</td>
<td>85.</td>
<td>15.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>23.</td>
<td>8.1</td>
<td>17.6</td>
<td>47.6</td>
<td>1.4</td>
<td>1.4</td>
<td>74</td>
</tr>
</tbody>
</table>
The reliable sherd sample has 90.7% Tizon Brown Ware, with trade from the Amacava and Cohonina branches. The hypothesis that this site was occupied solely by Hualapais prior to Anglo-American settlement is accepted.

b. NPS Arizona F : 4 : 2

The sherd sample from Salt Springs is of low reliability with 85% Parker Series sherds of Lower Colorado River Buff Ware indicating that this may be primarily an historic site post-dating abandonment of Tizon Brown Ware production in this area. The remaining Pyramid Series sherds indicate some prehistoric occupation prior to the period of this study. So the hypothesis that Hualapais occupied this site exclusively from time immemorial to conquest cannot be rejected.

2. Conclusion

On the basis of the combined sherd sample for the area and interpretation of the use of the known sites, the hypothesis that Hualapais exclusively used 15' Quadrangle Arizona F : 4 from time immemorial to conquest cannot be rejected. The hypothesis that no tribe other than the Hualapai established a permanent encampment in or used or occupied this area during this period also cannot be rejected.

H. 15' Quadrangle Arizona F : 3

At present, no ceramic sites have been recorded within this quadrangle. Inasmuch as it lies east of the crest of the Black Mountains which has been taken as the western limit
of territory used exclusively by Hualapais, and south of the Colorado River, taken to be a similar limit, this area is assumed to have been occupied solely by Hualapais from time immemorial until conquest.

I. 15' Quadrangle Nevada DD : 16

When the sherds of all the recorded sites in this quadrangle are combined, Tizon Brown Ware constitutes 71.4% of the total, exceeding the 70% level of significance of cultural predominance. This area is judged to have been occupied exclusively by Hualapais from time immemorial to conquest. Information obtained from Hualapais identifies this area as part of the 19th century range of the Grass Springs lineages.

1. Site Analysis

   a. NPS Nevada DD : 16 : 1

   The sherd sample from this site is of low reliability. Tizon Brown Ware is most abundant with 37.5% of the sherds. Trade ware obtained from Havasupais, Amacava Branch Indians and prehistoric Virgin River basin Puebloans occurs. San Francisco Mountain Gray Ware sherds from vessels made by the prehistoric Cohonina Branch to the east primarily comprise 31.3% of the sample. Having been made before 1150, they do not enter into determination of Hualapai territory. The Virgin River basin tradeware dates from this same early period. If these sherds are eliminated from consideration,
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Nevada DD: 16 south of the Colorado River.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE NEVADA DD : 16

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLO. TIZON GRAY WIPED</th>
<th>TIZON MOAPA GRAY CORRUG.</th>
<th>PAIUTE WHITE GRAY WARE TUSAYAN WHITE GRAY WARE TUSAYAN WHITE GRAY WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS 1</td>
<td>12.5</td>
<td>37.5</td>
<td>12.5</td>
<td>6.3</td>
<td>31.3</td>
</tr>
<tr>
<td>NPS 3</td>
<td>17.1</td>
<td>52.6</td>
<td>6.6</td>
<td>7.9</td>
<td>9.2</td>
</tr>
<tr>
<td>NPS 4</td>
<td>95.2</td>
<td></td>
<td>2.4</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>8.6</td>
<td>71.4</td>
<td>4.4</td>
<td>4.1</td>
<td>8.1</td>
</tr>
</tbody>
</table>

### CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE NEVADA DD : 16

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS 1</td>
<td>12.5</td>
<td></td>
<td></td>
<td>31.3</td>
<td>6.3</td>
<td>12.5</td>
<td></td>
<td>6.3</td>
</tr>
<tr>
<td>NPS 3</td>
<td>14.5</td>
<td>2.6</td>
<td></td>
<td>31.6</td>
<td>17.1</td>
<td>3.9</td>
<td>6.6</td>
<td>7.9</td>
</tr>
<tr>
<td>NPS 4</td>
<td>88.1</td>
<td></td>
<td></td>
<td>4.8</td>
<td>2.4</td>
<td></td>
<td></td>
<td>2.4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7.4</td>
<td>1.1</td>
<td>58.3</td>
<td>10.3</td>
<td>2.9</td>
<td>4.0</td>
<td>4.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### CERAMIC ANALYSIS BY SITES IN 15' QUADRANGLE NEVADA DD : 16

<table>
<thead>
<tr>
<th>SITES</th>
<th>Deadman's Gray</th>
<th>Deadman's Black-on-Gray</th>
<th>Kirkland Gray</th>
<th>Washington Black-on-Gray</th>
<th>North Creek</th>
<th>Unidentified</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPS 1</td>
<td>25.</td>
<td>6.3</td>
<td>6.3</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>NPS 3</td>
<td>6.6</td>
<td>2.6</td>
<td>2.6</td>
<td>1.3</td>
<td>2.6</td>
<td></td>
<td>76</td>
</tr>
<tr>
<td>NPS 4</td>
<td>2.4</td>
<td></td>
<td></td>
<td>1.3</td>
<td>1.1</td>
<td></td>
<td>83</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6.3</td>
<td>1.1</td>
<td>0.6</td>
<td>1.1</td>
<td>0.6</td>
<td>1.1</td>
<td>175</td>
</tr>
</tbody>
</table>
Tizon Brown Ware constitutes 60% of the remainder, Havasupai 20% and Amacava Branch 20%. Thus Colton's 60% level of significance of cultural predominance is reached, and neither the Amacava or Havasupai can be considered seriously as occupants here. The site is too far removed from the known range of both these groups. So the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

b. NPS Nevada DD :16: 3

The reliable sherd sample has Tizon Brown Ware making up 52.7% of the total, but no other ware amounting to as much as 20%, so none can be considered as representing non-Hualapai occupation. They appear to represent extensive trade by Hualapai residents, and a certain selectivity of preservation due to the nature of the site. This is a rock shelter near a spring, and was undoubtedly utilized by the same Indians who occupied an open site in the wash below. Trade ware vessels seem to have been stored in the rock shelter for relative safe-keeping, and not much used at the open site. Perhaps the trade vessels were employed for ceremonial purposes, or perhaps they were simply regarded as more valuable because of the difficulty of obtaining them. Although the sherd sample from this site is a reliable index of the utilization made of this rock shelter, it is not a reliable index to the over-all utilization of the immediate
area by the Indians. There is a geographic difference in
the size of the archaeological site, and the Indian use-site.

Grass Springs lineage Hualapais lived in this rock
shelter during their seasonal round of movements up and down
Grapevine Wash. It was called Oya Nisa, apparently. 1/

Some 9.2% of the sherds are San Francisco Mountain Gray
Ware which was produced prior to 1150. Another 11.8% from
the Virgin River Puebloan area also falls outside the time
period under consideration. Elimination of these leaves Ti-
zon Brown Ware 66.7% of the remainder, exceeding Colton's
60% level of significance of cultural predominance. The hy-
pothesis that this rock shelter was occupied solely by Huala-
pais from time immemorial to conquest cannot be rejected.

The sherd sample is reliable at this open site near
Grapevine Spring, evidently known to Hualapais as Ha' Tha'
2/ ela. As an index of over-all activity in the spring area
it suffers from the same defect as the sample from the rock
shelter. That is, the trade ware vessels used by the Indians
living here were kept in the rock shelter and the native
utility pots used here at the open site. Tizon Brown Ware
makes up 95.2% of the sherds. Colton's, Ezell's and this

1/ Indian Claims Comm., 1953, p. 73. (QI)
2/ Ibid.
study's levels of significance of exclusive occupation are all far exceeded. Therefore, the hypothesis that this open site was occupied exclusively by Hualapais from time immemorial to conquest is accepted. The presence of metal indicates use of the site continued into post-contact times, as Hualapai testimony to having lived in the rock shelters in this canyon would lead one to expect.

The Use-Site. Actually the rock shelter and open site sherds should be considered as indexing the Hualapai use of this immediate area. Combining the samples, Tizon Brown Ware comprises 74.8% of all the sherds, satisfying the 70% level of significance of exclusive occupancy.

2. Conclusion

All three sites bear evidence of Hualapai occupation from time immemorial, two having been used into historic time. These two also fulfill the 70% Tizon Brown Ware definition of exclusive Hualapai use. The third site can be accorded relatively little weight due to the unreliability of the sherd sample, but is judged to also evidence exclusive Hualapai occupancy. The hypothesis that no tribe other than the Hualapai established a permanent encampment in or used or occupied that part of 15' Quadrangle Nevada DD: 16 located south of the Colorado River from time immemorial to conquest is accepted. The hypothesis that the statement of the northern limits of territory used and occupied solely by the
Hualapais in the Petition, insofar as it applies to this stretch of the Colorado River was correct is also accepted.

J. 15' Quadrangle Arizona G : 1

Tizon Brown Ware comprises 86.6% of the sherds recorded from that part of 15' Quadrangle Arizona G : 1 south of the Colorado River. Trade ware from the Mohaves, Havasupais, Paiutes and Hopis is present, along with sherds of pre-1300 Cohonina and Prescott Branches, the Virgin River basin Puebloans and the Kayenta Branch Puebloans. The hypothesis that this area was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

1. Site Analysis

a. NPS Arizona G : 1 : 1

The low reliability sherd sample is made up of 53.6% Tizon Brown Ware plus San Francisco Mountain and Prescott Gray Ware evidencing pre-1300 A. D. occupation on this site. If these latter wares are eliminated, Tizon Brown Ware comprises 78.9% of the remainder. This site near Clay Springs was occupied well into historic times by Hualapais of the Clay Springs lineages of the Plateau Band, and these lineages have been traced back for at least one generation into pre-Anglo-American contact times. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest is accepted.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 1 south and west of the Colorado River.
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**CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA G:1**
b. Grass Springs Area

Grass Springs was headquarters for several Hualapai lineages—a sub band—historically part of the Ko'audva kopai or Plateau Band, but earlier of the Red Rock Band. (DGN Dec. 4 p 10 & GT Aug. 15 p 4) This was an irrigation agricultural site. The Hualapai name Tanyika has been taken into local English usage as "Tin-nah-kah."

i. NPS G : 1 : 2

The sherd sample is of low reliability. Tizon Brown Ware constitutes 66.7% of the total, with trade ware present from the Amacava Branch and the Virgin River Basin Puebloans, and Cohonina Branch sherds. Colton's 60% level of significance of cultural predominance is exceeded, and no non-Hualapai ware makes up 15% of the sample. Eliminating the pre-1150 A. D. sherds leaves Tizon Brown Ware 85.7% of the total. From time immemorial, therefore, the hypothesis that this site was occupied exclusively by Hualapais to conquest can not be rejected.

ii. NPS Arizona G : 1 : 3

The unreliable sherd sample is 57.1% Tizon Brown Ware with trade ware from the Paiutes and sherds from the Virgin River basin prehistoric Puebloans which may have reached

1/ Wheeler, 1872, p. 75; Indian Claims Comm., 1953, p. 73. (QI)

2/ Hamilton, 1884, Frontispiece Map.
here prior to Hualapai occupation. The site is also in the area about Grass Springs utilized by Hualapais centered here into historic times. Eliminating the pre-1150 A.D. sherds leaves Tizon Brown Ware 80% of the remainder. Therefore, the hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

c. Metipka--Quartermaster Canyon Village

Lower Quartermaster Canyon offered the Hualapais three vital resources: a large supply of permanent water, cultivable lands which could be irrigated from Quartermaster Spring, and an abundant growth of agave plants on the canyon slopes. This combination of water, agricultural and emergency wild food resources attracted Hualapais from all surrounding areas. The mingling of families here demonstrates that Hualapai "bands" were actually simply kind-groups spread out over the country to harvest the food resources. The available food supply and technology did not permit large concentrations of population in many places nor often. But here in Quartermaster Canyon they did, and a seasonal village resulted.

Hualapais from the Red Rock Band held fields in Quartermaster Canyon where they gardened, and they might spend the winter here because "the mescal is sweeter there during the winter" (CA Dec. 3 p 19) than on the desert. Also probably they went because the canyon was somewhat warmer.
ly all of the Clay Springs Hualapais had fields at Metipka. The Hualapais who raised irrigated crops at Tanyika Spring also raised them at Metipka. In pre-contact time, the Hualapais had not built a trail into the canyon "and the way they went down these bluffs was with a rope made from yucca plant or manat." 2/

In advance of the flooding of lower Grand Canyon by Lake Mead, National Park Service personnel surveyed the area to be inundated in conjunction with Civilian Conservation Corps work programs. Although Quartermaster Canyon Village remains above water, it was surveyed at that time.

i. NPS Arizona G : 1 : 4

The fairly reliable sherd sample is entirely Tizon Brown Ware at this site so the hypothesis that it was occupied exclusively by Hualapais is accepted.

ii. NPS Arizona G : 1 : 6

The unreliable sherd sample has 61.5% Tizon Brown Ware with 23.1% San Francisco Mountain Gray Ware which indicates that occupation at this field area began prior to 1150 A. D. Disregarding these earlier sherds, Tizon Brown Ware constitutes 80% of the remainder. Therefore, the hypothesis that

1/ Indian Claims Comm., 1953, p. 74. (Q1)
2/ Ibid., p. 76.
this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

iii. NPS Arizona G : 1 : 7

The unreliable sherd sample is 75% Tizon Brown Ware, with a trace of Cohonina and Virgin River Basin Puebloan sherds indicating a pre-1150 A.D. occupation here. When these older sherds are ignored, Tizon Brown Ware makes up 100% of the remaining sample. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

iv. NPS Arizona G : 1 : 8

The low reliability sherd sample has 62.1% Tizon Brown Ware, trade ware from the Amacava-Mohave Branch and the Paiutes occurring, along with sherds of vessels of San Francisco Mountain and Moapa Gray Ware demonstrating a pre-1150 A.D. occupation of this area. Leaving these latter gray wares out of account, Tizon Brown Ware comprises 72% of the remainder (also eliminating the Parker Black-on-Red found to be purely post-1887 at White Hills). Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

v. NPS Arizona G : 1 : 11

The reliable sherd sample has 74.1% Tizon Brown Ware with Paiute trade making up 20.4%. Prescott Gray Ware indicates the earlier pre-1300 A.D. occupation here. Therefore,
the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest is accepted.

vi. NPS Arizona G : 1 : 12

The sherd sample is fairly reliable and entirely Tizon Brown Ware, so the hypothesis that this site was used and occupied exclusively by Hualapais cannot be rejected.

vii. NPS Arizona G : 1 : 14

The reliable sherd sample is 85.4% Tizon Brown Ware. Trade ware from the Amacava-Mohave Branch (almost 10%) and from the prehistoric Hopis occurs, along with Moapa Gray Ware sherds from the Virgin River Puebloan region. The sherd of Jeddito Black-on-Yellow (hopi) recovered here indicates Hualapai occupation at this site during the 1300 to 1700 A.D. time span during which vessels of this type were produced. The Moapa Gray Ware sherds probably indicate an earlier occupation here: as is predictable from occurrence of pre-1150 types on other sites in this long-occupied field area. The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest is accepted.

viii. NPS Arizona G : 1 : 15

The sherd sample is unreliable but 90% Tizon Brown Ware with a trace of Amacava Branch ware. Since this proportion is well within the range of sites in this area with much

1/ Colton, 1939, p. 27; McGregor, 1941, p. 377 takes it only up to 1600 A.D.
larger sherd samples, it may be taken to be representative despite its small size. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ix. NPS Arizona G : 1 : 16

The reliable sherd sample has 90.6% Tizon Brown Ware with trade ware from the Amacava-Mohave Branch. Therefore, the hypothesis that this site was occupied solely by Hualapais cannot be rejected.

x. NPS Arizona G : 1 : 17

The fairly reliable sample has 52.6% Tizon Brown Ware, and trade ware from the Amacava Branch amounts to 26.3% with sherds representing this pre-1300 A.D. occupation of other wares present. Eliminating the Pyramid Series, Moapa Gray Ware and San Francisco Mountain Gray Ware sherds as predating the period of concern to this study, Tizon Brown Ware makes up 76.9% of the remainder. Therefore, the hypothesis that this site, too, was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

xi. NPS Arizona G : 1 : 18

The fairly reliable sample of sherds from this rock shelter is 92.9% Tizon Brown Ware, plus Amacava Branch trade ware. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest can't be rejected.
Mr. Robert C. Euler of the Museum of Northern Arizona resurveyed the Quartermaster Canyon Village area with a Hualapai guide reared there, and assigned site numbers according to his identifications of the various occupation areas, which differ in size and configuration from National Park Service surveyed sites although covering the same ground.

The sherd sample from this site is very reliable with 94.5% Tizon Brown Ware. Trade ware is present from the Amaca-Mohave Branch and prehistoric Hopis. Pre-1150 sherds occur. The occupation of the site can fairly certainly be considered to have been continuous throughout the period from time immemorial to conquest, beginning some time prior to 1150. Manufactured glass indicates historic Hualapai occupation of this site.

Jeddito Black-on-Yellow sherds indicate utilization of this location during the 1300 to 1700 A.D. time span of the production of that type by Hopis. A Citadel Polychrome sherd indicates occupation during the period of its production between 1075 and 1175 A.D. Tusayan Black-on-Red was produced during a part of this period and somewhat earlier as well. It apparently began to be made about 965 and con-

1/ Colton, 1939, p. 27.
2/ Colton, 1953, p. 75.
continued until around 1150 A. D. Thus index sherds dated by tree ring counts indicate a probably continuous occupation of the Quartermaster Canyon village by Hualapais from before 1150 to after the turn of the last century. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

xiii. N. A. 3805 B

The fairly reliable sherd sample includes 80% Tizon Brown Ware, and trade ware is present from the Hopis, both historic and prehistoric. In early times, vessels were imported from the Virgin River basin Puebloans. The hypothesis that this site was occupied solely by Hualapais prior to conquest is accepted.

xiv. N. A. 3805 C

The fairly reliable sherd sample has 97% Tizon Brown Ware so the hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

xv. N. A. 3805 D

The very reliable sherd sample has 91.7% Tizon Brown Ware, so the hypothesis that the site was occupied solely by Hualapais prior to conquest is accepted. Trade ware from the Amacava-Mohave Branch is present, and Tusayan Black-on-Red sherds indicate occupation here during the years between about

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1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
confirming the evidence of a lone San Francisco Mountain Gray Ware sherd.

xvi. Summary

All of the sites recorded in or around the field area at Quartermaster Springs near the mouth of this canyon should properly be considered as reflecting the record of agricultural endeavors on the fields below the springs, and exploitation of the relatively rich agave resources on the canyon walls. Considered as a single unit, all of these sites reflect an exclusive Hualapai occupation here from time immemorial to conquest, and in fact an apparently continuous and intensive occupation extending from some unknown period prior to 1130 A.D. (the date by which Tusayan Black-on-Red vessels were apparently no longer being made) up until after 1900.

There is some evidence of trade and/or visits with the Shivwits Band Paiutes north of the river, which could easily be forded at the mouth of Quartermaster Canyon. As Paiute sherds were found on only three of the fifteen sites recorded at Matipka, it appears not all Hualapais living here traded with them, and that when the Paiutes may have visited here, they were camping regularly with certain Hualapais only. These were probably customary trading partners and friends.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
d. N. A. 5981

The sherd sample is reliable and 94.4% Tizon Brown Ware at this site about a mile up Quartermaster Canyon from the village and spring area. There is a trace of trade ware from the Amacava Branch and pre-1150 A. D. occupation is indicated by a Cohonina sherd. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

e. N. A. 5980

The sherd sample is fairly reliable and 73% Tizon Brown Ware with Mohave trade ware the next most abundant. Parker Series sherds of Lower Colorado River Buff Ware indicate historic occupation of this rock shelter in upper Quartermaster Canyon. On the other hand, San Francisco Mountain Gray Ware sherds indicate it was in use prior to 1150 A. D.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais prior to conquest cannot be rejected.

f. N. A. 5979

The fairly reliable sherd sample has 97.8% Tizon Brown Ware. Hualapais are known to have camped as late as 1910-1912 in this little saddle near the head of Quartermaster Canyon. Therefore, the hypothesis that this site was occupied exclusively by Hualapais prior to conquest is accepted.
2. Conclusion

Since every site known from this 15' Quadrangle Arizona G : 1 south of the Colorado River has been judged to have been occupied exclusively by Hualapais from time immemorial to conquest, the hypothesis that no other tribe than the Hualapai ever established a permanent encampment in or used or occupied this area during this period is accepted.

Therefore, the hypothesis that the Petition correctly defined the limits of territory occupied and exploited exclusively by Hualapais from time immemorial to conquest is accepted insofar as it refers to that section of the Colorado River within 15' Quadrangle Arizona G : 1.

K. 15' Quadrangle Arizona G : 5

Up to the present, no ceramic remains have been recorded from sites located within this area in Hualapai Valley and the Grand Wash Cliff escarpment. Since 15' Quadrangle Arizona G : 1 immediately north was occupied solely by Hualapais from time immemorial to conquest, and the same was true of Arizona F : 9 on the west, Arizona G : 6 to the east, and Arizona G : 9 to the south, this quadrangle Arizona G : 5 may be assumed to have been occupied solely by Hualapais from time immemorial to conquest. At least, the hypothesis that it was cannot be rejected.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 9 in color.
This quadrangle covers primarily the lower end of the Hualapai Valley trough, and only one site has been recorded, due perhaps both to the nature of Hualapai land use here (mostly seed gathering) and surveying to date.

The site N. A. 3376 is located in the little hills toward the south end of Hualapai Valley the Hualapais call Tet Kith'aunyava. (DGN Dec. 5 p 4) Fr. Francisco Garces may have passed through a Hualapai encampment here on June 9, 1776. The sherd sample collected by the Museum-Railroad surveyors is unreliable but entirely Tizon Brown Ware. So the hypothesis that this site was occupied and used exclusively by Hualapais cannot be rejected. Nor can the hypothesis that no other tribe than the Hualapai ever established a permanent encampment in or used or occupied this area be rejected on the basis of the scanty available evidence.

Tizon Brown Ware makes up 76.9% of the sherds known from this 15' quadrangle in which the Hualapai Mountains and the western edge of the Peacock range are located. Therefore the hypothesis that this quadrangle was occupied and used exclusively by Hualapais is accepted.

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1/ Coues, 1900, II:321.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

## CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE ARIZONA

**G : 13**

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON BROWN</th>
<th>SAN FRANCISCO MT. GRAY WARE</th>
<th>SAN JUAN RED WARE</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>76.</td>
<td>20.</td>
<td>4.</td>
<td>25</td>
</tr>
<tr>
<td>NA 3354</td>
<td>100.</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>76.9</strong></td>
<td><strong>19.2</strong></td>
<td><strong>3.8</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

## CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUADRANGLE ARIZONA

**G : 13**

<table>
<thead>
<tr>
<th>SITES</th>
<th>Cerbat Brown</th>
<th>Aquarius Brown</th>
<th>Deadmans Gray</th>
<th>Deadmans Black-on-Gray</th>
<th>Deadmans Black-on-Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
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<td>32.</td>
<td>16.</td>
<td>4.</td>
<td>4.</td>
</tr>
<tr>
<td>NA 3354</td>
<td>100.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td><strong>46.2</strong></td>
<td><strong>30.8</strong></td>
<td><strong>15.4</strong></td>
<td><strong>3.8</strong></td>
<td><strong>3.8</strong></td>
</tr>
</tbody>
</table>
1. Site Analysis

a. GP Diamond Creek 13:1

The sherd sample is of low reliability and 76% Tizon Brown Ware, thus exceeding the 70% level of significance of cultural predominance taken in this study to signify exclusive use and occupancy. The second most abundant ware is San Francisco Mountain Gray Ware, 20% of the sherds. A sherd of Deadmans Black-on-Red indicates that trade ware from the Plateau to the east was reaching this area during its occupancy sometime between about 775 and 1060 A.D. This may well have been a period of Cohonina Branch occupancy of this site, which was followed by Hualapai occupancy, the latter tribe certainly being in possession after 1150 A.D. when San Francisco Mountain Gray Ware was no longer made. The Tizon Brown Ware evidently is the 80% Yuman component reported by the surveyers, and the other sherds their 20% Tusayan Pueblo I component.

Conclusion: The hypothesis that this site was occupied and used exclusively by Hualapais from 1150 A.D. to conquest cannot be rejected.

b. N.A. 3354

The unreliable sherd sample is Tizon Brown Ware indicating Hualapai use of the site to the exclusion of other Indians.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Gladwin & Gladwin, 1930, p. 151.
2. Conclusion

The combined sherd sample is still of low reliability. But inasmuch as the non-Hualapai sherds all pre-date 1150, and apparently represent a pre-Hualapai Cohonina Branch occupation in this area, the evidence clearly indicates an exclusive Hualapai occupation after 1150 A.D. and Cohonina withdrawal or conquest. The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this 15' quadrangle cannot be rejected.

N. 15' Quadrangle Arizona G : 14

Tizon Brown Ware constitutes 42.9% of all the sherds recorded from this quadrangle in the trough immediately west of the plateau escarpment: the northern end of the Big Sandy River Valley. San Francisco Mountain Gray Ware, however, accounts for half of all the known sherds from the area. These sherds evidence a pre-1150 A.D. occupation of this region by the prehistoric Cohonina Branch. Evidently this ancient tribe either withdrew before the Hualapais occupied the area, or was forced out by Hualapais. Since their departure, the sherd evidence indicates that only Hualapais have occupied or used this area. Therefore, the hypothesis that 15' Quadrangle Arizona G : 14 was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 14 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUAD. ARIZONA G:14

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER TIZON</th>
<th>TIZON</th>
<th>PERS-</th>
<th>S. F. TSEGI</th>
<th>TUSA-</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td></td>
<td>COLO. BROWN WIPED</td>
<td>COTT</td>
<td>MTN. ORANGE</td>
<td>YAN</td>
<td>SHERDS</td>
<td></td>
</tr>
<tr>
<td>RIVER</td>
<td>WARE</td>
<td>GRAY</td>
<td>GRAY</td>
<td>WARE</td>
<td>WHITE</td>
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<td>BUFF</td>
<td>WARE</td>
<td>WARE</td>
<td>WARE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 1</td>
<td>8.</td>
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<td>4.</td>
<td>28.</td>
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</tr>
<tr>
<td>GP 2</td>
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<td>9.1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>NA3377</td>
<td>29.8</td>
<td>63.8</td>
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<td>.7</td>
<td>141</td>
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</tr>
<tr>
<td>SD-A-9</td>
<td>90.</td>
<td>10.</td>
<td>10.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
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<td>42.9</td>
<td>.5</td>
<td>.5</td>
<td>50.4</td>
<td>.5</td>
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</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUAD. ARIZONA G:14

<table>
<thead>
<tr>
<th>SITES</th>
<th>Par-</th>
<th>Need-</th>
<th>Cerbat</th>
<th>Aquarius</th>
<th>Aquar-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>ker le</td>
<td>les</td>
<td>Buff</td>
<td>R/Bf</td>
<td>Brown</td>
<td>Brn. Bl/Brn.</td>
<td>lus</td>
</tr>
<tr>
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<td>8.</td>
<td>24.</td>
<td>32.</td>
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</tr>
<tr>
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<td>31.8</td>
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</tr>
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<td>20.6</td>
<td>141</td>
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</tr>
<tr>
<td>SD-A-9</td>
<td>90.</td>
<td>10.</td>
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<tr>
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<td>15.7</td>
<td>26.8</td>
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<td>.5</td>
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CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUAD. ARIZONA G:14

<table>
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<tr>
<th>SITES</th>
<th>Deadmans</th>
<th>Kirk-</th>
<th>Floyd</th>
<th>Tusayan</th>
<th>Tusayan</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Gray Black Fug.</td>
<td>land</td>
<td>Black</td>
<td>Black-</td>
<td>White</td>
</tr>
<tr>
<td>GP 1</td>
<td>4.</td>
<td>4.</td>
<td>8.</td>
<td>4.</td>
<td>8.</td>
</tr>
<tr>
<td>GP 2</td>
<td>9.1</td>
<td>.7</td>
<td>12.1</td>
<td>5.7</td>
<td>.7</td>
</tr>
<tr>
<td>NA3377</td>
<td>51.1</td>
<td>.7</td>
<td>12.1</td>
<td>5.7</td>
<td>.7</td>
</tr>
<tr>
<td>SD-A-9</td>
<td>37.9</td>
<td>1.</td>
<td>9.6</td>
<td>.5</td>
<td>7.</td>
</tr>
</tbody>
</table>
Site Analysis

a. G P Diamond Creek: 14 : 1

The sherd sample is of low reliability and 60% Tizon Brown Ware, although this site was originally reported as a third Yuman, a third Black-on-gray and a third Tusayan Pueblo 1. San Francisco Mountain Gray Ware constitutes 28% of the sample, signifying occupation prior to 1150 A.D. by the prehistoric Cohonina Branch Indians. On the other hand, Mohave trade ware on this site indicates its historic utilization by Hualapais in the last century.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest can not be rejected.

b. G P Diamond Creek: 14 : 2

The sherd sample is of low reliability but 86.6% Tizon Brown Ware, slightly above the 80% Yuman originally reported for this site. 2 A couple of San Francisco Mountain Gray Ware sherds indicate occupation of this site began prior to 1150 when that ware was no longer made. A sherd of Mohave pottery probably indicates local trade relations with that lower Colorado River tribe during the 19th century. The hypothesis that this site was used solely by Hualapais from time immemorial until conquest cannot be rejected.

1/ Gladwin & Gladwin, 1930, p. 151. 2/ Ibid.
A low ridge off the south end of the Peacock Mountains has a seep near its north end known to the Hualapais as Ha' Kawai Kischava. This has been dug out to increase the flow for the use of the H. V. Ranch in the Sandy Valley to the east. (M Oct. 22 p 3) The Museum-Railroad Survey located a site here, the sherds reportedly being only 4% Tizon Brown Ware compared to 66% San Francisco Mountain Gray Ware. A type of the latter, Deadmans Fugitive Red, was identified as the dominant utility type. Another 29% of the sample was reported to be Prescott Gray Ware.

Reclassification of this collection yielded a somewhat different identification of wares in this very reliable sherd sample. San Francisco Mountain Gray Ware constitutes 63.8% of the total, indicative of exclusive Cohonina Branch occupancy of this site some time during the period of production of that ware prior to 1150 A. D. During this earlier pre-Hualapai occupation, trade ware reached here from the Hopi country in the form of Tusayan Black-on-Red pots which were produced between about 965 and 1130 A. D.

The Tizon Brown Ware sherds probably all post-date the Cohonina occupation, representing exclusive Hualapai occupancy after 1150 A. D. until Anglo-American conquest. The rela-

1/ Colton, 1939, p. 22.
2/ McGregor, 1951, p. 20, 32; Colton, 1953, p. 75.
tively greater number of San Francisco Mountain Gray Ware sherds seems to demonstrate a difference between Cohonina and Hualapai land use here. The Cohonina sherds accumulated during a shorter period of time than the Hualapai sherds, it seems, yet are about twice as numerous. It would appear, then, that the Cohonina made more pots per person than the Hualapais, or if pottery was made at about the same per capita rate in both tribes, that the Cohonina maintained a larger local population, perhaps agricultural, than the later Hualapais, or at least used this site more intensively and in larger numbers than the Hualapais.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial until Anglo-American conquest cannot be rejected.

d. San Diego's A - 9

The sherd sample is unreliable but 90% Tizon Brown Ware. Prescott Gray Ware indicates trade relations with the Prescott Branch some time prior to about 1300 A.D. and that Hualapai occupation of this site began prior to that date. The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

2. Conclusion

There was clearly a Cohonina Branch occupation in this area before 1150 A.D., and Hualapai conquest or replacement of the Cohonina. Two of the four known sites show such early
Cohonina occupancy. However, from time immemorial, this area has been occupied and used exclusively by Hualapais. The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle Arizona G : 14 after 1300 A. D. cannot be rejected.

0. 15' Quadrangle Arizona G : 10

Tizon Brown Ware makes up 83.8% of the sherds known from this quadrangle, which lies mostly within middle and lower Truxton Canyon. Therefore, the hypothesis that this area was occupied exclusively by Hualapais is accepted.

<table>
<thead>
<tr>
<th>SITES</th>
<th>Manufactured Artifacts</th>
<th>Sherd Mound</th>
<th>Stone Bedrock Mortars</th>
<th>Crushed Washing</th>
<th>Wick - tured Area</th>
<th>Flakes</th>
<th>Pits</th>
<th>kes</th>
<th>Slabs</th>
<th>Ring</th>
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</thead>
<tbody>
<tr>
<td>G:10:1</td>
<td>x</td>
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<td>x</td>
<td>x</td>
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<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>G:10:5</td>
<td>x</td>
<td></td>
<td></td>
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<tr>
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<td>x</td>
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<td></td>
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<td>x</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

1. Site Analysis

a. Kwaka We'-Arizona G:10:4

Hackberry Spring was a Hualapai population center whose prehistoric importance is well remembered. A woman born here in 1885 remembers that her great-grandfather was also born
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 10 in color.
### Ceramic Analysis by Wares of Sites in 15' Quad, Arizona G:10

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER</th>
<th>TIZON</th>
<th>TIZON</th>
<th>MOAPA</th>
<th>S.F.</th>
<th>UNIDEN-</th>
<th>TOTAL</th>
<th>RIVER</th>
<th>WARE</th>
<th>WARE</th>
<th>GRAY</th>
<th>GRAY</th>
<th>TIZON</th>
<th>WARE</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>COLO.</td>
<td>BROWN</td>
<td>WIRED</td>
<td>GRAY</td>
<td>MTN.</td>
<td>TIFIED</td>
<td></td>
<td>WIPED</td>
<td>GRAY</td>
<td>GRAY</td>
<td></td>
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<td>WARE</td>
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<tr>
<td>G:10:4</td>
<td>2.3</td>
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<td>2.3</td>
<td>11.1</td>
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### Ceramic Analysis by Types of Sites in 15' Quad, Arizona G:10

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<th>Cer- Ha'</th>
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### Ceramic Analysis by Moapa, Deadmans, and Kirkland

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<th>Kirkland</th>
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<tr>
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here -- evidently some time prior to 1825. It remained entirely in the hands of these Hualapais until ore was discovered here in October of 1874 and mining began. Debris from the Hualapai rancheria and the mining camp built on the same site is so mixed as to prevent temporal identification of the surface collections.

Today a ranch house is located in the midst of the former Hualapai fields where garden produce was grown using the spring water for irrigation. A small garden above the house toward the spring still testifies to the fertility of the Hualapai fields. Above and surrounding this level ground are curving benches where Hualapais built their wickiups. "The Indians always like to live up where they can look out," says a descendent of this group. Here they had a commanding view over the valley to the plateau escarpment to the north.

At the ranch house are grinding implements hauled down from the Hualapai occupation area. Hammerstones and crunching stones broken upon the death of their users (TM Sept. 23 p 3) are still scattered about.

The fairly reliable sherd sample has 83.3% Tizon Brown Ware. Havasupai trade found its way here as did vessels made by Mohaves within post-contact times (Needles Red-on-Buff).

\[1\] Indian Claims Comm., 1953, p. 165. \(\text{(TM)}\)
\[2\] Hinton, 1878, p. 161.
On the other hand, sherds of San Francisco Mountain Gray Ware indicate that occupation here at Hackberry Spring began prior to 1150 A.D. The hypothesis that this site was occupied and used solely by Hualapais from time immemorial until the mines were discovered cannot be rejected.

b. Yokamva - S D A - 6

The agricultural fields below Crozier Spring in Truxton Canyon were called Yokamva by the Hualapais. (GT Sept. 24 p 1) Malcolm J. Rogers located a site of about two acres on the sand and gravel flats between the "forks of the creek"—Crozier Wash and Truxton Wash—with some camps in the granite boulders and talus slopes of the adjacent hills. He concluded the artifacts he examined were all Hualapai, including cobble hearths and rings of cobbles left from holding brush shelter boughs in place.

The unreliable sherd sample is entirely Tizon Brown Ware, so the hypothesis that this site was occupied solely by Hualapais cannot be rejected. Rogers' conclusion was correct. Documentary evidence bears out the artifactual evidence here. Sitgreaves' party in 1851 met Hualapais encamped along the stream which formerly ran down from the springs for a short distance in Truxton Canyon, showing its importance during pre-Anglo-American times.  

1/ Sitgreaves, 1853, p. 15 and plate 17.
c. Ha' Pota

Just up Truxton Canyon from the old Crozier ranch, a tributary canyon comes in from the north in which the large spring Ha' Pota originates. At the mouth of the canyon and out in Truxton Canyon is an area of a few acres of level, fertile land which was irrigated from the spring flow. (TL Sept. 24 p 6) The Hualapai wickiups here were built on a ridge west of the bottom land (TL Sept. 24 p 7) less to conserve arable land than because Hualapais customarily built on a high point or bench exposed to the sun and affording a good view of nearby terrain. Five to seven Hualapai families farmed here in pre-contact times. Paint traces of the Hualapai main ditch from the spring to the fields remain although mostly destroyed by Anglo-American ditching operations. (CA Sept. 24 p 3)

i. Arizona G: 10: 5

A couple of broken crunching slabs were located by the Tribal Survey on the terrace occupied by the Hualapais in their days of occupation here.

ii. N. A. 3396

The Museum of Northern Arizona—Santa Fe Pacific Railroad survey of 1938 had previously located a ceramic site on the south side of the Ha' Pota channel (misnamed Crozier Wash in Museum records) where it swings east into Truxton Canyon about a quarter mile upstream from the modern ranch house.
The potsherds collected here were reported to be 80% Tizon Brown Ware and 20% San Francisco Mountain Gray Ware, with Cerbat Brown the dominant utility type. Re-examination of the fairly reliable sample resulted in classification of 83.3% as Tizon Brown Ware. The San Francisco Mountain Gray Ware of the prehistoric Cohonina Branch Indians indicates occupation began here some time prior to about 1150 A.D. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial until Anglo-American conquest cannot be rejected.

iii. N. A. 3397

The Museum-Railroad Survey located another ceramic site on a lava bench a quarter of a mile nearer the spring (across U. S. Highway 66) very possibly the identified Hualapai occupation area Arizona G : 10 : 5. The sherd collection was reported as 88% Tizon Brown Ware and 11% San Francisco Mountain Gray Ware with Cerbat Brown the dominant utility type. Some of the sherds were probably used in historic time, since a bit of porcelain occurred here. This point has been discussed previously in connection with identification of Tizon Brown Ware and its terminal production dates.

1/ Colton, 1939, p. 23.
2/ Ibid.
Re-examination of the very reliable sherd sample yielded a classification of 83.3% of them as Tizon Brown Ware, somewhat lower than originally reported. This is precisely the proportion found at the site across the highway, confirming the reliability of its sherd sample (36 compared to 222) and indicating both "sites" are the debris of the same Hualapai occupation. San Francisco Mountain Gray Ware was found to make up 13.5% of the sample. It probably represents some Cohonina Branch occupation here prior to Hualapai settlement.

The hypothesis that this site was occupied and used solely by Hualapais from about 1150 A.D. to conquest is accepted. Trade ware reached here from the Amacava-Mohave Branch on the lower Colorado River via the Rio Grande-Pacific Ocean Trail. And at least once a pot arrived over the Pierce Ferry—Truxton Canyon Trail from the Virgin River basin farther up the Colorado.

The unreliable sherd sample is entirely Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

2. Conclusion

The four ceramic sites known from middle and lower Truxton Canyon, the area of 15' Quadrangle Arizona G : 10—demonstrate an exclusive occupation and use of this region by the Hualapais from approximately 1150 A.D. up until Anglo-Ameri-
can conquest and settlement. Occupation obviously began prior to 1150 A.D. Since all the recorded sites are Hualapai, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle is accepted.

P. 15' Quadrangle Arizona G : 6

Tizon Brown Ware makes up 95.2% of the sherds known from this quadrangle, which lies mostly within the Hualapai Indian Reservation and covers primarily the Milkweed Canyon drainage. Therefore, the hypothesis that this 15' quadrangle was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA G : 6

<table>
<thead>
<tr>
<th>SITES</th>
<th>Manufactured Artifacts</th>
<th>Rock Shelves</th>
<th>Wick- Up Sherd Area</th>
<th>Mescal Stone Pits</th>
<th>Flakes</th>
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<td></td>
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<tr>
<td>NA 3406</td>
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<td></td>
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<tr>
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<tr>
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1. Site Analysis

a. NPS Arizona G : 6 : 1

The sherd sample is unreliable and 88.2% Tizon Brown Ware. There is a trace of trade relations with the Mohaves and at an earlier period of time the Virgin River basin In-
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 6 in color.
Milkweed Canyon
## Ceramic Analysis by Wares of Sites in 15' Quad. Arizona G: 6

<table>
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<th>SITES</th>
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<th>TIZON BROWN WARE</th>
<th>MOAPA GRAY WARE</th>
<th>S. P. MTN. GRAY WARE</th>
<th>TUSAYAN WHITE WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
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## Ceramic Analysis by Types of Sites in 15' Quad. Arizona G: 6

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<td>.3</td>
<td>1.1</td>
<td>.3</td>
<td>.8</td>
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</table>
This area at the head of Hindu Canyon was utilized within historic times by Hualapais of the Milkweed Springs lineages of the Plateau People. The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

b. Milkweed Springs Fields

In Milkweed Canyon below Milkweed Springs lay agricultural fields cultivated by the Hualapais like those in Quartermaster and Mata Widita Canyons. As in those areas, all the individual sites recorded should properly be considered together to form a record of Indian occupation of this immediate spring vicinity. Here the father of the oldest surviving Hualapai (born about 1864) was born and his father before him, the latter around 1800. (KC July 31 p 8) Earlier, the area was visited by Fr. Francisco Garces in 1776. He probably spent the night of July 19-20 with the Hualapais at Milkweed Springs and left on the 20th via West Water.  

The sherd sample from the old Spencer ranch is unreliable and 76.9% Tizon Brown Ware, with Mohave trade ware and Cohonina sherds, as well as manufactured objects indicating post-settlement Hualapai utilization of this area near Milkweed Spring. Remembered Hualapai occupation in this canyon at  

1/ Coues, 1900, II:411.
the spring extended into the 20th century. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ii. N. A. 3406

The sherd sample from this cave about eight hundred feet northwest from the ranch's concrete tank is fairly reliable and entirely Tizon Brown Ware, so the hypothesis that only Hualapais occupied it prior to conquest cannot be rejected.

iii. N. A. 3407

The fairly reliable sherd sample has 97.6% Tizon Brown Ware with one sherd of probably historic Mohave trade ware, all in surface association with tin and glass evidencing the independently known historic Hualapai occupation of the area. The collection was originally reported to be 100% Tizon Brown Ware with Sandy Brown the dominant utility type. The hypothesis that this site was occupied exclusively by Hualapais prior to conquest certainly cannot be rejected.

iv. N. A. 3408

The sherd sample from a typical Hualapai living location on a south-facing slope about two hundred feet northeast of the preceding site is reliable and 96.5% Tizon Brown Ware, with a couple of Cohonina sherds indicating occupation prior to 1150 A.D. According to published figures the ceramic
collection is 83% Tizon Brown Ware, 10% San Francisco Mountain Gray Ware and 12% Prescott Gray Ware. Since these add up to 105%, there seems to have been some inaccuracy of reporting. Dominant utility type was reportedly Sandy Brown. Re-examination of the sherds disclosed no Prescott Gray Ware and only 3.5% San Francisco Mountain Gray Ware. The hypothesis that this site was occupied solely by Hualapais prior to their conquest is accepted.

v. N. A. 3409

The sherd sample from a bench of the canyon above the ranch is reliable and entirely Tizon Brown Ware, though previously reported as 99% Tizon Brown Ware and 1% San Francisco Mountain Gray Ware, with Sandy Brown the dominant utility type. The hypothesis that the site was occupied solely by Hualapais prior to their conquest is accepted.

vi. N. A. 3410

The very reliable sherd sample from this cave is 92.2% Tizon Brown Ware with Mohave trade ware from the historic period and a trace of pre-1150 A. D. San Francisco Mountain Gray Ware, all in surface association with manufactured artifacts from the known post-conquest occupation. Originally the sherds were reported to be 100% Tizon Brown Ware with

1/ Colton, 1939, p. 23.
2/ Ibid.
Cerbat Brown the most abundant utility type. This was mostly because some Lower Colorado River Buff Ware types were at that time classed as Tizon Brown Ware. However, there seems to be at least one sherd of San Francisco Mountain Gray Ware in the sample. At any rate, the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest is accepted.

c. Summary of Milkweed

All of the six known ceramic sites in Milkweed Canyon are clearly Hualapai-occupied areas, with Tizon Brown Ware proportions well above even Ezell's 80% level of significance of cultural predominance. Without doubt this canyon has been occupied and used exclusively by Hualapais from time immemorial to conquest, and since. Some pre-1150 A. D. occupation is indicated.

2. Conclusion

Inasmuch as all of the sites recorded from 15' Quadrangle Arizona G: 6 are Hualapai sites, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle from time immemorial to conquest is accepted.

1/ Colton, 1939, p. 23.
15' Quadrangle Arizona G : 2 south of the Colorado River is colored in.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA G:2

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER GRAY WARE</th>
<th>TIZON BROWN WIPED</th>
<th>TIZON WARE</th>
<th>PRES- BROWN COTT</th>
<th>MOAPA GRAY WARE</th>
<th>PAIUTE GATED TSEGI ORANGE WARE</th>
<th>UNI- GATED TUSAYAN GRAY WARE</th>
<th>BROWN WARE</th>
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<td>1.6</td>
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SITES          | S.F. MT. | TSEGI | TUSAYAN | JEDDITO | ADAMANA | TOTAL  |
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</thead>
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<td>YELLOW WARE</td>
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NOTES

Arizona G : 2 : 4 (NA 5740): Only surface survey sherds are tabulated. Not included are 85 sherds excavated in test pits in the cave floor (which are discussed elsewhere).

Arizona G : 2 : 5 : This "sherd" consists of approximately one-half of an Aquarius Brown jar. It perhaps should be weighted around 50 in terms of the sherds of average size it could be broken up into. Since it is one piece, it is so counted, however.
## Ceramic Analysis by Types of Sites in 15' Quadrangle Arizona G: 2

### Parker
- **Buff:** NA3786A-1: 61.5, NA3786B-2: 61.5, NA3786C-3: 61.5, NA5740 -4: 5.1, NA3786U: 11.9
- **Red-on-Buff:** NA3786A-1: 26.2, NA3786B-2: 12.1, NA3786C-3: 21.4, NA5740 -4: 79.7, NA3786U: 2.4
- **Needles:** NA3786A-1: 1.2, NA3786B-2: 1.2, NA3786C-3: 1.2, NA5740 -4: 1.2, NA3786U: 1.2
- **Red-on-Plain:** NA3786A-1: 31.4, NA3786B-2: 13.6, NA3786C-3: 13.6, NA5740 -4: 13.6, NA3786U: 13.6
- **Pyramid:** NA3786A-1: 1.2, NA3786B-2: 1.2, NA3786C-3: 1.2, NA5740 -4: 1.2, NA3786U: 1.2
- **Paiute:** NA3786A-1: 1.2, NA3786B-2: 1.2, NA3786C-3: 1.2, NA5740 -4: 1.2, NA3786U: 1.2

### N. 3786B-2
- **Buff:** 9.5, **Red-on-Buff:** 61.5, **Gray:** 79.7

### N. 3786C-3
- **Buff:** 21.4, **Plain:** 79.7

### N. 5740 -4
- **Buff:** 2.4, **Gray:** 79.7

### TOTAL
- **Buff:** 48.1, **Red-on-Buff:** 5, **Red-on-Plain:** 1, **Gray:** 24.5, **Corrugated:** 13.4
## CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA G : 2

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<th>Deadmans Black-on-Gray</th>
<th>Deadmans Fugitive Red</th>
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Q. 15' Quadrangle Arizona G : 2

Tizon Brown Ware amounts to 77.5% of the sherds recorded from that portion of this 15' quadrangle lying south of the Colorado River in the Hualapai Indian Reservation. Trade ware of the Amacava-Mohave Branch, the Havasupais, prehistoric Hopis and the Paiutes is found in this region, along with Moapa and San Francisco Mountain Gray Ware sherds of the remote time period prior to 1150 A.D. Therefore, the hypothesis that this quadrangle south of the river was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA G : 2

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1. Site Analysis

a. Mata Widita Canyon

Agriculture

The known sites in the part of this quadrangle south of the Colorado River are mostly located at or near Mata Widita Spring in the canyon of that name, and represent the over-all
occupation of this area, which was based upon agricultural production on the arable lands irrigable from the strongly flowing spring. For a realistic picture of the use of this area, all of the sites in or around the fields should properly be combined into one Mata Widita Spring site.

The agricultural fields watered by Mata Widita Spring were an important economic factor to several Hualapai bands. They lie up-canyon from the spring on an alluvial fan apparently deposited by the spring's waters. A main ditch was dug on contour near the upper edge of the fan from which laterals carried water out into the fields. The main ditch was formerly shaded by immense peach trees growing along its banks, and peach pits are abundant around the ruins of the wickiups of the latest occupants of the area.

The Hualapais who ranged between the springs from Clay Springs south to Truxton Canyon spent the agricultural season at fields in Mata Widita Canyon. "Waipu, my brother, went down to Matewitide from Clay Springs each spring to plant his garden, and took his food home after the harvesting," according to a Clay Springs man. From farther south around Kavaka "during the Summer months...my mother and her people used to go to the East into Matawidika country where she got her seed--whether she found it or just had it, I don't

1/ Kroeber, 1935, p. 60. (Kuni)
know, but they buried these seeds and from them produced food, squash and so forth for us to eat."

The Hualapais ranging around Grass Springs also gardened in Mata Widita Canyon even though they also had irrigated fields at Grass Springs. They "often went on there and raised garden for their food, all the time. That is one big reason they came as far as Mata Widita." (QI May 21 p 13)

Mata Widita is not far from Hel' either across the plateau or through the canyon network by going down Milkweed and Spencer Canyons and then up Mata Widita Canyon. The Hel' group Hualapais also shared the resources of Mata Widita.

The Red Rock Band in the northern Cerbat Mountains and White Hills may not have held any fields at Mata Widita Spring until historic times (FM Dec. 5 p 11) but these Hualapais often took advantage of the abundant agave growth in the canyon during the winter. (CA Dec. 3 p 19)

The Tribal Survey located three house mounds in the field area at Mata Widita Spring near the up-canyon end of the main ditch.

1. Arizona G : 2 : 1 (N. A. 3786 A)

One mound marked the site of a wickiup thought to have been inhabited by a woman named Snaija. Since this dwelling was occupied into the present century, the surface debris in-

1/ Indian Claims Comm., 1953, p. 150. (DGN)

cluded manufactured goods such as nails, a buckle, broken glass, button, etc. The surface was also thickly strewn with pot sherds of Hualapai manufacture plus a high proportion of intrusive pottery types from wares traded into this Hualapai population center from other tribes.

The very reliable sherd sample has 65.1% Tizon Brown Ware. The second most abundant ware is San Francisco Mountain Gray Ware, which was characteristic of the prehistoric Cohonina Branch Indians, with 27% of the total. Since this ware was produced prior to 1150 A. D., it falls outside the time period under consideration here. So also do the sherds of Tusayan Black-on-Red, a type being made between about 965 and 1150 A. D.1 These sherds show that this site was intensively used for some time prior to 1150 A. D., and probably continued to be used without break until 1929. A sherd of Jeddito Yellow Ware, which was made between about 1300 and 1700 A. D. helps fill in the time gap.

Leaving the San Francisco Mountain Gray Ware and Tsegi Orange Ware out of consideration as pre-dating the critical time-span of this study, Tizon Brown Ware sherds comprise 90.4% of the remainder. Trade ware not only from the prehistoric Hopis, but also from the Paiutes, Virgin River Basin

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Colton, 1939, p. 27.
Pueblosans, the Amacava Branch farther downstream along the Colorado, and the Havasupais occurs on this site.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ii. Arizona G : 2 : 2 (N. A. 3786 B)

Farther toward the center of the canyon, away from the main ditch but closer to the spring, lies a similar mound inhabited in historic times by the family of a Hualapai known as "Quartermaster." This mound was also strewn with an abundance of pot sherds and manufactured goods—nails and other bits of iron and porcelain.

The sherd sample is very reliable, with Tizon Brown Ware accounting for 80.5% of the sample. Trade ware from the Virgin River basin, the Mohaves, the Paiutes and the Prehistoric Hopis was found along with Cohonina Branch sherds which demonstrate a pre-1150 A.D. beginning of occupation on this site. The Hopi Jeddito Black-on-Yellow type was produced from around 1300 to 1700 A.D., showing occupation of this site and trade relations with the Hopis in late prehistoric times.

Conclusion: Since the proportion of Tizon Brown Ware exceeds even Ezell's 80% level of significance of cultural predominance, the hypothesis that this site was occupied solely by Hualapais prior to their conquest is accepted.
iii. Arizona G : 2 : 3 (N. A. 3786 C)

A third mound similar to the others was located farther from the main ditch toward the sacred cave in the opposite wall of the canyon. This was the residence of descendants of *Wasa Yuma*, the Red Rock Band chief who died during the Hualapai War. One of his female descendants was reputedly an excellent potter. Perhaps this skill was long characteristic of the family, for little trade ware was imported by the Hualapais living on this site. The very reliable sherd sample has 93.4% Tizon Brown Ware. Trade ware reached this site from the Cohonina Branch to the east, the Virgin River Valley and lower Colorado River valley to the west, and from the prehistoric Hopis to the east. The Jeddito Yellow acquired from the latter indicates participation by these Hualapais in the long-distance trading with Hopis during the 1300 to 1700 period of production of this ware.

Conclusion: Inasmuch as the proportion of Tizon Brown Ware exceeds even Ezell's 80% level of significance of cultural predominance, the hypothesis that this site was occupied exclusively by Hualapais is accepted.

iv. N. A. 3786 U

The sherd sample is fairly reliable but carries slight weight when compared to the samples from other sites in the

1/ Colton, 1939, p. 27.
agricultural fields at Mata Widita Spring. This site is merely a sherd area. Therefore, the fact that 83.3% of the sherds are Lower Colorado River Buff Ware is regarded as having little significance for determining the identity of the prehistoric occupants of the Mata Widita fields. Furthermore, these Mohave sherds fall into the Parker and La Paz Series of Lower Colorado River Buff Ware which are found with manufactured objects on purely historic Hualapai sites, and almost without doubt represent historic occupation of this area.

Since the Mohave sherds appear to be of post-contact origin, falling outside the pre-conquest time period under consideration in this report, and the site itself seems completely unrepresentative of the others in the field area with their enormous sherd samples, the hypothesis that this part of the area also was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

v. Summary

When the specific mounds and sherd area within the agricultural fields at Mata Widita Spring are combined and considered as a single site, as should properly be the case, the sherd sample is 1,422. Tizon Brown Ware constitutes 76.9% of this total. This exceeds the 70% level of significance of cultural predominance. When San Francisco Mountain and Prescott Gray Ware and Tsegi Orange Ware sherds from vessels made prior to 1300 A. D. are eliminated from the total as pre-dat-
ing the period under consideration, Tizon Brown Ware makes up exactly 90% of the remainder. This far exceeds Ezell's high 80% level of significance of cultural predominance, so the hypothesis that the Mata Widita Spring area was occupied solely by Hualapais from time immemorial to conquest is accepted.

Mr. Euler's excavation of the most recent structure on one of the mounds showed it to be entirely historic in date, yet it appears that these sites have been in use since far back in prehistoric time.

b. Arizona G : 2 : 4

Wha Ha' Vo, the sacred cave of the Hualapais in the west wall of Mata Widita Canyon opposite the spring yielded a reliable sherd sample which is 98.2% Tizon Brown Ware.

In his test excavations in the floor of this huge cave, Mr. Euler found Tusayan Polychrome sherds at the 50-75 cm. level. This type was made between 1150 and 1275 A.D. Thus this cave was in use in the period immediately after 1150 and probably after 1300 at the beginning of the span of time considered in this report.

The floor of this cave is very steep. It is really a talus slope formed by rock falls from the roof. The slides on this steep floor have broken through rock walls which had

1/ Colton, 1953, p. 75.
been built across the mouth of the cave. Only remnants of these now stand near the sides of the cave. Also near the sides are some rock chambers, probably burial chambers referred to in Hualapai legends. One at least does contain a flexed burial wrapped in a hand woven, painted cotton blanket which seems to have been made in the Kayenta-Hopi area around 1275 A. D. A coiled basket was placed over the face of the person buried there.

On a ledge above the rock slides on one wall of the cave is a mortared rock wall. Above it on the native rock face are colored pictographs claimed by Hualapais as their own. Mixed in the rocks on the surface of the cave floor are mescal cuds, mesquite beans, corn cobs, many sticks and other bits of vegetal matter, pumpkin rinds, broken milling stones and pot sherds. So far as surface indications go, this cave was a purely Hualapai site.

After Tusayan Polychrome was imported sometime before about 1275 A. D., this cave probably continued in use uninterrupted into historic time, since it was a sacred place to the Hualapais inhabiting the fields below. The use made of the cave may gradually have shifted from occupation to occasional visiting as a sacred shrine, but at least occasional use of the cave was made by Hualapais living in the canyon bottom right up to modern times.
Conclusion: The hypothesis that this sacred rock shelter was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

c. Arizona G : 2 : 5

The sherd sample from this rock shelter called Ha' Loo is not really a sample, consisting as it does of approximately half a whole vessel of Aquarius Brown. This rock shelter in Spencer Canyon somewhat above its junction with Mata Widita Canyon is known to have been used in prehistoric times by Hualapais and up to the 1870's or so. The hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

2. Conclusion

The Mata Widita Canyon—Spencer Canyon area fronting on the Hualapai Colorado River frontier has been shown to have been occupied exclusively by Hualapais from time immemorial and earlier to conquest. Their occupation has apparently been continuous from before 1150 A.D. until the present, with variations in intensity and pattern through time.

Therefore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied that portion of 15' Quadrangle Arizona G : 2 south of the Colorado River prior to conquest is accepted.
Further, the hypothesis that the Petition correctly defined the limits of territory occupied and exploited solely by Hualapais during this period is accepted, insofar as it refers to that section of the Colorado River frontier within this quadrangle.

R. 15' Quadrangle Arizona G : 3

At the present time, no sites have been recorded from that part of 15' Quadrangle Arizona G : 3 located east of the Colorado River. Since this region lay to the west of the westernmost limit of Havasupai land use, the hypothesis that it was used and occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

S. 15' Quadrangle Arizona G : 7

Tizon Brown Ware constitutes 67.4% of the sherds recorded from this 15' quadrangle, and San Francisco Mountain Gray Ware of the prehistoric Cohonina Branch 21.3% signifying an intensive pre-1150 A. D. occupation of this region. Trade ware reached here from Mohaves, Havasupais, Paiutes, prehistoric Hopis, Virgin River basin Puebloans and Prescott Branch Indians.

Since the Cohonina and Prescott Branch sherds fall outside the time period under consideration, the hypothesis that 15' Quadrangle Arizona G : 7 was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 7 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA G:7

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### CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA G : 7

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### 1. Site Analysis

Recorded sites in this quadrangle fall into several groups defined by major water sources and topographic features of the region. The central geographic feature here is Peach Springs Draw, one of the South Rim canyons of western Grand Canyon. Most of the recorded sites are located within this canyon or in its upper drainage. The rest are just over
the ridge in the upper headwaters of westward flowing Truxton Canyon. The sites within the Canyon should be considered indices of occupation of that deep gash in prehistoric time, and the sites found at each major water source should be considered as together indexing the prehistoric occupation and control of that water supply.

a. Peach Springs Draw

1. Mesquite Springs

A'. Arizona G : 7 : 12

The sherd sample is unreliable, both sherds being Tizon Brown Ware however. Hualapais continue to use Mesquite Springs today. It was in this vicinity that Lt. Joseph C. Ives came upon them living in the lower reached of Peach Springs Draw in 1858 and that Lt. Col. William H. Price found a rancheria just abandoned in 1867 during the Hualapai War. Therefore, the hypothesis that this site was occupied exclusively by Hualapais prior to conquest cannot be rejected.

B'. N. A. 5412

The sherd sample from this site is also unreliable, and its location is not clear, but it is evidently at or near Mesquite Springs. Tizon Brown Ware makes up 66.7% of the

1/ Ives, 1861, p. 99-100.
2/ WP 45.
total and Paiute tradeware the other third. The sample is so scant that in view of historic documentation of Hualapai occupation here, the hypothesis that this site was occupied solely by Hualapais prior to conquest cannot be rejected.

C'. Summary

On the basis of the little ceramic evidence available, plus the known occupation of this end of the canyon by Hualapais at the time of earliest Anglo-American penetration, the hypothesis that this lower end of Peach Springs Draw and specifically the Mesquite Springs region was occupied solely by Hualapais prior to conquest cannot be rejected.

ii. Lower Peach Springs

A Hualapai family today still has a cattle camp here at Ha' Kithavdi'īi, with a watering trough fed from the spring.

A'. Arizona C : 7 : 3

The reliable sherd sample has 25% Tizon Brown Ware. The bulk of the sherds recovered date from the pre-1150 occupation of this region, indicating this spring was an important source of water for many years and perhaps centuries prior to that date. San Francisco Mountain Gray Ware is the most abundant ware with 56.6% of the total, and Prescott Gray Ware and Tusayan White Ware came in as trade ware, as did Havasupai vessels in the Hualapai period. A Black Mesa Black-on-White sherd confirms the pre-1150 A. D. occupation, since this type was
produced between about 775 and 1100 A.D. A Sosi Black-on-White adds further confirmation as it was made probably between 1070 and 1150 A.D.

Ignoring all the pre-1300 A.D. sherds, Tizon Brown Ware makes up 76% of the remaining sample, and Havasupai trade ware the rest. On the basis of this ceramic evidence, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

The low reliability sherd sample includes 68.2% Tizon Brown Ware, plus Havasupai trade pieces, and Prescott and San Francisco Mountain Gray Ware from the pre-Hualapai period at this rock shelter just below lower Peach Springs. When these gray ware sherds are eliminated from consideration, Tizon Brown Ware constitutes 88.2% of the remainder. So the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

The sherd sample is fairly reliable, with 55.6% Tizon Brown Ware plus Havasupai trade ware along with an abundance of sherds representing pre-1300 A.D. occupation of this rock shelter just down the canyon from Lower Peach Springs.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Colton, 1953, p. 75.
These include San Francisco Mountain and Prescott Gray Ware and Tusayan White Ware. Sosi Black-on-White sherds of this last ware came from vessels made between about 1070 and 1150. If the pre-Hualapai ceramics are ignored, Tizon Brown Ware makes up 87% of the remainder. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

DI. Summary

At the three sites recorded in the vicinity of Lower Peach Springs, Tizon Brown Ware sherds form 40.3% of a very reliable sherd sample. San Francisco Mountain Gray Ware occurs in almost equal quantity, forming 39.6% of the sample, with 6.7% being Prescott Gray Ware and 3.7% Tusayan White Ware. These latter three wares were all produced before 1300 A. D., and were not made after that date, so far as is known. Therefore, the pre-1300 occupation of the Lower Peach Springs area seems to have been of long duration and probably of relatively greater intensity than later Hualapai occupation. At least, the time during which San Francisco Mountain Gray Ware was produced was apparently shorter than the period between 1150 A. D. and Anglo-American conquest when Tizon Brown Ware was produced, so sherds seem to have been deposited at a faster rate prior to 1150 A. D. than later. This would

1/ Colton, 1953, p. 75.
indicate either a denser population (if pots were made and broken at comparable rates by the pre- and post-1150 A. D. inhabitants), or a greater utilization of ceramic vessels by the earlier residents and less by the later Hualapais.

When the pre-1300 A. D. occupation is ignored as predating the period under consideration in this study, Tizon Brown Ware sherds constitute 80.6% of the remaining sherd sample, which is reliable.

Conclusion: On the basis of Tizon Brown Ware sherds exceeding the 70% level of significance of cultural predominance from time immemorial to conquest, and known Hualapai occupation here at Lower Peach Springs from the present back into pre-contact time, the hypothesis that this area was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

iii. Peach Springs

This large spring got its English name from an orchard planted just below it by the Hualapais in pre-contact times, the first use of this name coming in 1858. Hualapai oral tradition says the trees were seedlings from Hopi peaches. (SM Oct. 18 p 1) Lt. E. F. Beale seems to have been the first European (except possibly Savedra) to visit this spring,

\[1/\] Rose, 1859, p. 307.
where he found the Hualapais growing corn and melons. 1/ Here the first immigrants to take Beale's road met the first Indian resistance encountered. 2/

A'. Arizona G : 7 : 1

The reliable sherd sample has 87.9% Tizon Brown Ware. Trade vessels reached this village area on the ridge west of Peach Springs from Havasupais, Mohaves and Paiutes, and a few sherds indicate pre-1150 A. D. occupation.

The Tribal Survey treated the crest of the ridge west of the pumping station as one site, although the Museum-Railroad survey had picked out several localized occupation areas. The Tizon Brown Ware is noteworthy for the variety of types found, including red and black painted types—certainly one of the flourescences of Hualapai decorative art. The hypothesis that this site was occupied exclusively by Hualapais prior to conquest is accepted.

B'. Arizona G : 7 : 13

The low reliability sherd sample has 50% Tizon Brown Ware and 50% pre-1150 A. D. San Francisco Mountain Gray Ware. This site is part of the complex around Peach Springs, located on the ridge immediately east of the channel.

1/ Beale, 1858, p. 65, 67; Lesley, 1929, p. 240, 243.
Conclusion: On the basis of the ceramic evidence and known historic and implied prehistoric utilization of this area by Hualapais, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

C'. N. A. 3399

The reliable sherd sample has 90.9% San Francisco Mountain Gray Ware with 9.1% Nevada Puebloan trade ware at this site on the gravel terrace somewhat up the canyon from the springs. This is a pure Cohonina Branch site, originally reported as 100% San Francisco Mountain Gray Ware with Deadmans Fugitive Red the dominant utility type,\(^1\) dating from the pre-1150 A. D. occupation here in Peach Springs Canyon. Since it was occupied at that earlier time only, it does not enter into the determination of exclusive Hualapai territory from time immemorial. This site is one of the strongest evidences that a Cohonina Branch occupation preceded Hualapai occupation of the later Hualapai territory, indicating perhaps that the Hualapais evicted the Cohonina.

The concentration of Cohonina Branch sites in the eastern margins of Hualapai territory, and the primary distribution of sites of that prehistoric tribe farther east, indicate that the Hualapais approached Cohonina territory from the west, and conquered or forced them to retreat eastward.

\(^1\) Colton, 1939, p. 23.
The sherd sample from this site 500 feet north of the old pumping station on the gravel terrace west of the wash above the peach orchard, still alive in 1938, is very reliable with 80.7% Tizon Brown Ware instead of the 66% originally reported.1/ Trade ware reached this site from the Havasupai, prehistoric Hopis and Mohaves. There is evidence of pre-1150 A. D. occupation of this area in the form of Cohonina Branch sherds (originally reported as 4% and presently taken to be 4.3% of the sample). Flagstaff Black-on-White which was produced between about 1120 and 1225 A. D.2/ on this site indicates its occupation by Hualapais in the period immediately after 1150 A. D. Jeddito Black-on-Yellow sherds also occur, indicating occupation here later between 1300 and 1700 A. D. when that type was being made.2/ This is confirmed by Sikyatki Polychrome from vessels made in the 1400 to 1625 time range.4/ These Kayenta-Hopi Branch trade sherds indicate that Hualapai occupation here in the Peach Springs area was fairly continuous from some time prior to 1150 A. D. up until the present. The author classified only 3% of the sherds

1/ Colton, 1939, p. 23.
2/ Colton, 1946, p. 251, 253; Colton, 1953, p. 75.
3/ Colton, 1939, p. 27.
4/ Colton, 1953, p. 75.
as Prescott Gray Ware compared to 25% originally reported.

Conclusion: Since Tizon Brown Ware sherds constitute over 80% of the sherd sample, thus exceeding even Ezell's 80% level of significance of cultural predominance, the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest is accepted.

E'. N. A. 3401

The sherd sample is reliable and entirely Tizon Brown Ware, including a local type well impacted on both surfaces so the hypothesis that this site was occupied exclusively by Hualapais is accepted. These sherds were originally reported as 100% Tizon Brown Ware with Sandy and Aquarius Brown the dominant utility types\(^1\) at this site on the crest of the ridge where a score of depressions probably remained from former wickiups built there.

F'. N. A. 3402

The sherd sample from this depression covered with stone chips is unreliable but 92.9% Tizon Brown Ware with a trace of trade in Havasupai ceramics—not recognized when it was originally reported to be all Tizon Brown Ware with Sandy and Aquarius Brown the dominant utility types.\(^2\) Therefore, the hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

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\(1\) Colton, 1939, p. 23.
\(2\) Ibid.
The sherd sample at this site east of the wash on the first gravel bench is unreliable but 88.9% Tizon Brown Ware (originally reported to be all Tizon Brown Ware with Aquarius Brown the dominant utility type\(^1\)) so the hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

The sherd sample from this site on the first gravel bench above the wash is of low reliability with 78.3% Tizon Brown Ware and sherds from vessels traded here from the Havasupai and the Kayenta Branch. It was first reported to include Tizon Brown Ware and San Francisco Mountain Gray Ware with Aquarius Brown the dominant utility type.\(^2\) There are a couple of San Francisco Mountain Gray Ware sherds indicating occupation at this site began prior to 1150 A.D., and a Tsegi Orange Ware sherd indicative of this same earlier occupation. When these are disregarded as falling before the time under consideration, Tizon Brown Ware sherds make up 90% of the remainder, with a 5% probability of error. Thus even Ezell's 80% level of significance of cultural predominance is exceeded. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

\(^1\) Colton, 1939, p. 23.
\(^2\) Ibid.
I'. Summary

Considering all of the local sites of occupation around Peach Springs as reflecting the over all utilization made of this water source through the years, Hualapai occupation of the area is the apparent and important fact. When all of the individual sites are considered as one land-use unit, the combined sherd sample of 639 is 77.2% Tizon Brown Ware. This is well above the 70% level of significance of cultural predominance. When pre-1300 A. D. artifacts are eliminated from consideration as pre-dating the period under consideration, Tizon Brown Ware constitutes 89.5% of the remaining sherds. Therefore, the hypothesis that the Peach Springs area was occupied exclusively by Hualapais from time immemorial to conquest is accepted.

iv. Conclusion

Collections of artifacts, mostly pot sherds, have been made in the vicinity of three springs in the bottom of Peach Springs Draw. These pot sherds indicate that each spring has been utilized exclusively by Hualapais from time immemorial to conquest. However, this evidence also indicates that these springs were in use by Indians prior to 1150 A. D., either by Hualapais or by Cohonina Branch Indians who were later dispossessed by invading Hualapais in the course of reaching their stable northeastern territorial limits. The occurrence of one pure Cohonina Branch site indicates that the latter
explanation of known facts is preferable to the former.

It is clear from the ceramic evidence that considering each site as a unit, or combining all of the sites around each spring into a unit, the hypothesis that Peach Springs Draw has been occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

b. The Plateau Area

1. Peach Springs Draw Headwaters

A'. N. A. 3398

The sherd sample from this site on the point of the ridge overlooking the canyon north of Peach Springs Station is reliable with 98.3% San Francisco Mountain Gray Ware and only 1.7% Tizon Brown Ware. This site evidences pre-1150 Cohonina occupation of the Peach Springs area--it is located just on top of the rim of the canyon near present Peach Springs village. It was first reported as a pure San Francisco Mountain Gray Ware site with Deadmans Fugitive Red the main utility type.¹ This site does not enter into the determination of Hualapai territory from time immemorial as there is no evidence of its occupation after around 1150 A. D.

B'. Arizona G : 7 : 6

The sherd sample from this site at the foot of the ridge where two large mescal pits known to have been used by the Hualapais (Arizona G : 7 : 5 ) are located is of low reliability. Ninety percent of the sherds are Tizon Brown Ware and

¹ Colton, 1939, p. 23.
10% Havasupai wiped sherds from this typical Hualapai camping place. Therefore, the 80% level of significance of cultural predominance employed by Ezell is exceeded, and it may be concluded that the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

C'. Conclusion

On the basis of the two sites known on the rim of Peach Springs Draw where ceramic materials were recovered, this region appears to have been occupied prior to 1150 A.D. by the prehistoric Cohonina, and solely by Hualapais from that date, or from time immemorial until conquest.

ii. Truxton Canyon Headwaters

Immediately to the south of the headwaters of Peach Springs Draw lies the upper drainage of Truxton Canyon. Several ceramic sites show Hualapai occupation of this area.

A'. Arizona G : 7 : 8

This burial cave site of the modern Hualapais shows a long period of usage extending back into Cohonina times. The sherd sample is unreliable, with 54.6% Tizon Brown Ware and 45.5% San Francisco Mountain Gray Ware. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected. The pre-1150 A.D. Cohonina occupation apparently antedated Hualapai entry into this area.
Immediately below the site mentioned above lies a mes-cal pit used by Hualapais where the ceramic characteristics reinforce the conclusion as to exclusive Hualapai utilization of the area from time immemorial. The sherd sample is fairly reliable, with 93.9% Tizon Brown Ware. Traces of San Francisco Mountain Gray Ware and Prescott Gray Ware signify either use or trade by the Cohonina and Prescott Branches prior to 1150 A.D. and about 1275 A.D. respectively. However, there is no doubt that the hypothesis that this site was used exclusively by Hualapais prior to their conquest should be accepted.

C'. Arizona G : 7 : 7

The sherd sample from this rock shelter is unreliable and useful only in depicting the exclusive Hualapai utilization of the area in times past, since both sherds from this niche at Wi Yaka Nyoot are Tizon Brown Ware. The hypothesis that this site was used exclusively by Hualapais cannot be rejected.

D'. N. A. 3430

The sherd sample from this site in Peach Springs Village is unreliable, with 57.1% Tizon Brown Ware and 28.6% Havasupai wiped sherds, probably representing historic occupation here. The hypothesis that the site has been occupied solely by Hualapais prior to their conquest cannot be rejected.
Evidence from four sites in the headwaters of Truxton Canyon indicates exclusive Hualapai occupation from 1150 A.D. until conquest. The combined sherd sample is reliable and 91.1% Tizon Brown Ware. Therefore, the hypothesis that this area was occupied solely by Hualapais from about 1150 A.D. to the time of Anglo-American conquest is accepted.

2. Summary of Quadrangle

Not all of the sites in 15' quadrangle Arizona G : 7 are Hualapai sites. Some are Cohonina sites occupied sometime prior to 1150 A.D. and before Hualapai expansion into their easternmost range. However, all of the known sites which were occupied after 1300 A.D. were occupied only by Hualapais, so that the hypothesis that this region was occupied and used exclusively by them from time immemorial to conquest is accepted.

Since all of the recorded sites in this quadrangle showing occupation after 1300 A.D. were occupied and used only by Hualapais, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle from time immemorial to conquest is also accepted.
THE HUALAPAI COUNTRY

Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 15 in color.
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CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA

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This region of permanent streams in canyons breaking through the Aquarius Cliff front to the Big Sandy River seems to have been occupied by more Indians than any other comparable area within Hualapai country. At least, a good many more sites have been located in this 15' quadrangle than in any other considered in this study save for those on the old Prescott Branch-Hualapai frontier. And most of these sites yielded numerous pot sherds. The intensity of use was greater than in the majority of Hualapai campsites in good gathering and hunting areas, reflecting the relatively high resource potential of this well watered vegetationally varied region. On the other hand, the number of sherds only occasionally approaches the abundance found at Hualapai agricultural villages in the South Rim side canyons of western Grand Canyon. Some agriculture was carried on in this region, but it was not as extensive as that practiced in the deep canyons, and the food mainstays in this area seem always to have been the rich natural food products which abound here.

Tizon Brown Ware constitutes 69% of the total sherd sample of 4,000 from this 15' quadrangle. This figure exceeds Colton's 60% level of significance of cultural predominance and barely falls short of the 70% level of this study. However, when sherds remaining from the pre-Hualapai occupation are eliminated from the sample, the exclusiveness of Hualapai
The second most abundant ware in this quadrangle is San Francisco Mountain Gray Ware, which makes up 15.3% of the sample. This Cohonina Branch ware was not produced after about 1150 A.D. and very likely represents a pre-Hualapai occupation of the resource-rich territory that later on became the range of the Mahone Mountain Band of Hualapais. At this time, trade ware came to this region from the Hopi country in the form of Deadmam's Black-on-Red pots which were made between approximately 775 and 1060 A.D.¹/ and Tusayan Black-on-Red vessels which were produced from around 965 to 1130 A.D.²/ and other types.

If these types pre-dating Hualapai occupation of this region are disregarded, Tizon Brown Ware constitutes 82% of the remainder—the sample of sherds for the years after 1150. This exceeds even the 80% level of significance of cultural predominance used by Ezell, and makes the point that 15' Quadrangle Arizona G:15 was used and occupied exclusively by Hualapais from about 1150 A.D. until Anglo-American conquest.

That the Hualapais also imported some trade vessels from the Hopis is shown by Jeddito Black-on-Yellow sherds from pots which were probably made between 1300 and 1700 A.D.²/ as well

¹/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
²/ Ibid., Ibid.
²/ Colton, 1939, p. 27.
as Jeddito Black-on-Orange sherds from a type of vessel produced between 1200 or 1250 and 1300 A.D. 1/

In late prehistoric or historic times the Mahone Mountain Band shifted its pottery trading pattern and began to use Mohave vessels as did the Hualapais on the desert nearer to this riverine tribe. Lower Colorado River Buff Ware makes up only 2.3% of the total sherd sample, most of these sherds coming from one site which is known to be entirely historic.

This spread in the date of imported types of ceramic vessels provides evidence for continuity of Hualapai occupation of this region once they took it over from the Cohonina Branch Indians far back in prehistoric times.

1. Site Analysis

a. Seventy-Four Ranch Region

1. Arizona G : 15 : 1

The sherd sample is unreliable. The bulk of the sherds evidence prehistoric Cohonina occupation of the site, with 46.7% San Francisco Mountain Gray Ware which was produced prior to 1150 A.D. Another 13.3% is Sosi Black-on-White, a Kayenta-Hopi Branch type made from about 1070 to 1150 A.D. 2/

The 26.7% Tizon Brown Ware in the sample from this site west of the springs probably represents the post-Cohonina Hualapai occupation entirely: it is doubtful any is trade ware dating from Cohonina times. Therefore, the hypothesis that this

1/ McGregor, 1941, p. 377; Colton, 1953, p. 75.
2/ Colton, 1953, p. 75.
site was occupied exclusively by Hualapais from about 1150 to Anglo-American conquest cannot be rejected.

ii. N. A. 3434

The sherd sample from this site east of the spring is unreliable, with 75% Tizon Brown Ware to 25% San Francisco Mountain Gray Ware indicating occupation began here prior to 1150 A.D. The hypothesis that this site was occupied and used exclusively by Hualapais from about 1150 A.D. to conquest cannot be rejected.

iii. N. A. 3433

The very reliable sherd sample has 47% Tizon Brown Ware and 42.7% San Francisco Mountain Gray Ware indicating that Cohonina Branch Indians lived on this spot prior to 1150 A.D. This contrasts with the original classification of this collection as only 19% Tizon Brown Ware, with 50% San Francisco Mountain and 31% Prescott Gray Ware, with Deadmans Fugitive Red the dominant utility type. 1/ If the earlier occupation is segregated out, the remaining sherds are 82% Tizon Brown Ware. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais from about 1150 A.D. until Anglo-American conquest is accepted.

Evidence for continuous Hualapai occupation exists, at least for the more recent prehistoric period. Jeddito Yellow Ware sherds indicate trade relations with the prehistoric

Hopis between about 1300 and 1700.\textsuperscript{1} And sherds of modern Mohave manufacture indicate trade with that tribe during the 1800's.

iv. Summary of Occupation

The spring-watered area near the modern Seventy-Four Ranch headquarters has been inhabited by man since before 1150 A.D. The first Indian occupants of this area—within the period when ceramic vessels have been made in this area, at least—were the prehistoric tribe known as the Cohonina Branch, which disappeared before or by about 1150 A.D. They were followed by Hualapais, who inhabited the area apparently continuously from then on until Anglo-American conquest and settlement forced them first to share it with the invaders and finally to get out of the region.

b. Fort Rock Ranch Region

The Mahone Mountain Band got its Hualapai name from a tributary of Trout Creek called Ha' Kiacha (FM Oct. 17 p 16). Kniffen wrote "Hakia'tce was the principal village" of this group.\textsuperscript{2} Oral tradition traces Hualapai occupancy back into the early 19th century. "Ha Kiacha. That is the main place where my grandfather and all his related group belonged there,"\textsuperscript{2} and where his father, Yipoka, was born.

\textsuperscript{1} Colton, 1939, p. 27.
\textsuperscript{2} Kroeber, 1935, p. 42.
\textsuperscript{3} Indian Claims Comm., 1953, p. 44 (FM)
i. Arizona G : 15 : 3

The unreliable sherd sample is all Tizon Brown Ware on this hilltop where manufactured artifacts were also found. The hypothesis that this site was occupied exclusively by Hualapais prior to conquest cannot be rejected.

ii. Arizona G : 15 : 4

The sherd sample is reliable, San Francisco Mountain Gray Ware making up 69.5% of the total, and Tusayan White Ware adding another 6.8%. These types were produced prior to 1150 A. D. and evidence the Cohonina Branch's occupation of this region before the Hualapais entered it. The only sherds which can be assigned to the post-1150 A. D. time period are all Tizon Brown Ware. Therefore, the hypothesis that this site was occupied and used solely by Hualapais after 1150 A. D. until conquest cannot be rejected.

iii. Arizona G : 15 : 5

The site is a purely historic one atop a hill alongside the creek where Hualapais working on Fort Rock Ranch camped after Anglo-American settlement blocked them from using their aboriginal habitat around the source-spring. The ceramic remains come primarily from modern Mohave vessels, and have already been discussed in the section on identification of Hualapai pottery. Since this was a post-conquest site, it falls outside the time period under study.
iv. N. A. 5833

The very reliable sherd sample has 47.2% Tizon Brown Ware. San Francisco Mountain Gray Ware constitutes a third of the total sherds, indicating a pre-1150 A. D. Cohonina Branch occupation of this site. Another 19.5% of the sherds are Prescott Gray Ware, apparently representing trade to both the earlier Cohonina and later Hualapai occupants, possibly an intermediate occupation. One sherd of Verde Black-on-Gray—a type made as late as the 1150 to 1275 A. D. period\(^1\)—was recovered here. The hypothesis that this site was used and occupied exclusively by Hualapais from time immemorial to Anglo-American conquest cannot be rejected.

v. Arizona G : 15 : 7

Somewhat farther removed from the creek water supply is this site below the bold escarpment of Cross Mountain where there is—and apparently was through prehistoric time—an abundant supply of agave plants growing on the slopes which could be roasted to obtain emergency food. The Hualapais of the Mahone Mountain and other bands utilized these plants up into historic times, and on one occasion were surprised in mescal roasting camp here by an army detachment, suffering serious losses.

\(^{1}\) Since it occurred with Tusayan Polychrome, which was made during that time span, in Euler's Wha Ha' Vo excavations.
The sherd sample from this area is unreliable but 90\% Tizon Brown Ware with a single sherd probably from a vessel acquired by trade from Havasupais. The hypothesis that this site was occupied and used exclusively by Hualapais cannot be rejected.

vi. Summary of Occupation

As in the other pro-plateau areas of 15' quadrangle Arizona G : 15, this region was first occupied during ceramic producing times by the Cohonina Branch Indians, terminating by 1150 A. D. They were followed, possibly after a brief Prescott Branch occupation, by Hualapais who continually occupied the area to the exclusion of all other tribes until conquered by Anglo-Americans.

c. Casa Grande Spring

Ha' Teth Whalkija was the Hualapai name for Casa Grande Spring, originally only a seep. (MM Oct. 22 p 10) The Mahone and Suminamo lineages were using this spring when the first Anglo-American ranchers arrived. (MY Oct. 17 p 6)

1. Arizona G : 15 : 6

The ridges overlooking the spring are covered with juniper, affording ideal camping conditions for Hualapais. Flakes of chipped stone are scattered about on these ridges, indicating some local stone implement finishing. Some flakes are from local flints, others are obsidian carried in from some distance. The single sherd of Tusayan Gray Ware from
one of these ridges denotes occupation here well back in prehistoric times. It yields no information on the time period under study.

ii. N. A. 3437

The earlier Museum of Northern Arizona—Santa Fe Railroad survey in 1938 located a sherd area near the spring out in the flats near the former stone house which gave the place its Spanish and English name. The sherd sample is of low reliability but 95.2% Tizon Brown Ware. A single San Francisco Mountain Gray Ware sherd indicates pre-1150 A. D. occupation of the site. It and the sherd above may both represent trade to the east by Hualapais prior to that time. The hypothesis that this site was used solely by Hualapais after 1150 A. D. until Anglo-American conquest cannot be rejected.

iii. Summary of Occupation

Utilization of this water source began prior to 1150 A. D. Since then occupation has been entirely by Hualapais until their conquest by the United States.

d. Willow Creek Area

One of the watering places in the seasonal round of the Mahone Mountain Band was "The Willows." (FM Oct. 21 p 6) Sites located by the Tribal Survey constitute a random sample of sites. They lie in the valley flat east of old Camp Willow Grove and on one peak southeast of it. The survey of the
El Paso Natural Gas Company's right of way obtained a straight line cross section through the valley. The Museum of Northern Arizona--Santa Fe Railroad survey took a different sample on the northern margins of the flat. Eighteen sites have been located with little duplication. The Tribal Survey checked locations of remembered Hualapai encampments, finding them separate from sites found by Lyndon L. Hargrave and Sara J. Tucker in 1938, Dr. D. Fred Wendorf and Milton Wetherill in 1951 (whose sites were re-checked by Mr. Robert C. Euler in 1955).

i. Arizona G : 15 : 11

The sherd sample is unreliable: one Tizon Brown Ware sherd found in a small rock shelter with a cartridge casing. Probably this represents historic occupation by Hualapais. However, the hypothesis that this site was used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ii. Arizona G : 15 : 12

The very reliable sherd sample has 62.4% Tizon Brown Ware. The second most abundant ware is San Francisco Mountain Gray Ware with 27.6% of the sample. This indicates occupation by the prehistoric Cohonina Branch Indians prior to A. D. There is some trade ware from the Prescott Branch and the Kayenta-Hopi Branch from this time period. When
these pre-1150 A. D. sherds (San Francisco Mountain Gray Ware and Tusayan White Ware) are disregarded, the remaining sherd sample is still very reliable and 89.1% Tizon Brown Ware, well above even Ezell's 80% level of significance of cultural predominance. The hypothesis that this site was used and occupied exclusively by Hualapais after about 1150 A. D. until Anglo-American conquest cannot be rejected.

A sherd of Verde Black-on-Gray, which probably dates in the 1150 to 1275 time span\(^1\) indicates that probably Hualapais had driven out or replaced the Cohonina Branch somewhat before 1150 A. D., and were in full possession by some time during the following century and a quarter. In later prehistoric and perhaps historic times, vessels were traded into this site from the Havasupais.

iii. N. A. 4324

This same general area around the conspicuous white bluff standing in the midst of the plain at the Willows was visited by both Wendorf and Wetherill and Euler. Their combined collections yielded a very reliable sherd sample. It is somewhat more heavily weighted to the earlier occupation with 35% San Francisco Mountain Gray Ware. A sherd of Kana-a Black-on-White indicates the occupation here was in full swing sometime during the two centuries between 700 and 900 A. D.\(^2\) when that type was made.

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\(^1\) Since it was found with Tusayan Polychrome which was made between those dates (Colton, 1953, p. 75) at Wha Ha' Vo.

\(^2\) Colton, 1953, p. 75.
Tizon Brown Ware makes up only 58% of the entire sherd sample, but when the San Francisco Mountain Gray, Tusayan Gray, and Tusayan White Ware sherds representing pre-1150 A. D. Cohonina occupation are eliminated, it constitutes 84.2% of the remaining sample, which is still reliable. Havasupai sherds make up most of the rest, 11.8% of the corrected sample. Even Ezell's 80% level of significance of cultural predominance is exceeded.

Conclusion: The hypothesis that this site was occupied and used exclusively by Hualapais from about 1150 A. D. to conquest cannot be rejected.

Considering all three collections as one unit, Tizon Brown Ware makes up 58% of the entire sherd sample, San Francisco Mountain Gray Ware 30.7%. Eliminating San Francisco Mountain and Tusayan Gray Wares and Tusayan White Ware, (the pre-1150 A. D. wares) Tizon Brown Ware constitutes 87.2% of the corrected sample.

iv. Arizona G : 15 : 13

The sherd sample is fairly reliable and 64% Tizon Brown Ware with 20% Prescott Gray Ware and a trace of San Francisco Mountain Gray Ware. The major trade ware (14%) is Havasupai. When the pre-1300 A. D. sherds are eliminated, Tizon Brown Ware forms 82.1% of the corrected sample. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.
v. Arizona G : 15 : 14

The low reliability sherd sample has 94.1% Tizon Brown Ware. The time spread in occupation here is from before 1150 as indicated by San Francisco Mountain Gray Ware up until post conquest time as indicated by tin cans. The hypothesis that this site was occupied exclusively by Hualapais from about 1150 A. D. until conquest cannot be rejected.

vi. Arizona G : 15 : 15

The reliable sherd sample is 97.3% Tizon Brown Ware, with a couple of sherds of Prescott Gray Ware indicating that occupation here on top of this hill south of Willow Creek began probably before 1300 A. D. Glass and metal debris shows that it was occupied within historic times by the Hualapais—probably during the period of conflict with the army when it would have provided an excellent observation post overlooking Camp Willow Grove.

Conclusion: The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest is accepted.

vii. N. A. 3435

The sherd sample is very, very reliable and 62.3% Tizon Brown Ware. San Francisco Mountain Gray Ware makes up 21.2% of the sample. These were deposited during a pre-1150 A. D. Cohonina Branch occupation of this site. Trade ware coming here during that period included Deadmans Black-on-White,
which was produced between about 875 and 1130 A.D. Sosi Black-on-White, which was made from around 1070 to 1150 A.D., Tusayan Black-on-Red, which seems to have been widely traded during its production from around 965 to 1130 A.D. and Dead-mans Black-on-Red which was probably made between about 775 and 1060 A.D. Perhaps the beginning of Hualapai occupation is signalized by Tusayan Black-on-White, which was produced about 1225 to 1300 A.D.

So far as post-1150 A.D. occupation of this site by Hualapais is concerned, elimination of earlier sherds (San Francisco Mountain Gray, San Juan Red and Tsegi Orange Wares) leaves Tizon Brown Ware constituting over 80% of the remainder. Therefore, the hypothesis that this site was used exclusively by Hualapais from about 1150 A.D. to conquest cannot be rejected.

viii. N. A. 3436

The reliable sherd sample has 74.7% Tizon Brown Ware, satisfying the 70% level of significance of cultural predomi-nance. San Francisco Mountain Gray Ware makes up only 10% of the total, indicating a short or sporadic Cohonina occupa-tion before Hualapais took over this region. This earlier

1/ McGregor, 1941, p. 377.
2/ Colton, 1953, p. 75.
3/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
4/ Ibid., Ibid.
occupation is indicated by trade ware brought here from the
Kayenta-Hopi region to the east. Deadman's Black-on-Red was
made between about 775 and 1060 A. D.¹/ Tusayan Black-on-
Red was produced between perhaps 965 and 1130 A. D.²/
and Sosi Black-on-White dates from around 1070 to 1150 A. D.²/

When all of these earlier wares are eliminated from the
sample, it remains reliable and 89.8% Tizon Brown Ware. There-
fore, the hypothesis that this site was occupied and used
exclusively by Hualapais from about 1150 A. D. to conquest is
accepted.

ix. N. A. 4322

The very reliable sherd sample has 57.9% Tizon Brown Ware.
San Francisco Mountain Gray Ware makes up 25.2% of the total,
evidencing a pre-1150 A. D. Cohonina Branch occupation at this
site. Trade ware reached here during that period from the
Kayenta-Hopi Branch in the form of Sosi Black-on-White pottery
which was manufactured from around 1070 until 1150 A. D.⁴/
When these earlier wares are eliminated from the sample, it
remains very reliable and 83.6% Tizon Brown Ware, thus exceed-
ing even Ezell's 80% level of significance of cultural predomi-
nance. Therefore, the hypothesis that this site was used and

¹/ McGregor, 1951, pp. 29, 32; Colton, 1953, p. 75.
²/ Ibid., Ibid.
³/ Colton, 1953, p. 75.
⁴/ Ibid.
occupied exclusively by Hualapais from about 1150 A.D. until conquest cannot be rejected.

x. N. A. 4323

The reliable sherd sample is 83.9% Tizon Brown Ware, so the hypothesis that this rock shelter was occupied and used solely by Hualapais from time immemorial to conquest is accepted. That Hualapai occupation of this site began well back in time is indicated by presence of a Tusayan Black-on-White sherd from a vessel probably made between 1225 and 1300 A.D. 1/

xi. N. A. 4326

The unreliable sherd sample is entirely Tizon Brown Ware, so the hypothesis that this site has been occupied exclusively by Hualapais prior to their conquest cannot be rejected.

xii. N. A. 4327

The sherd sample is reliable and 45.7% Tizon Brown Ware, with 33% San Francisco Mountain Gray Ware representing the pre-Hualapai Cohonina Branch utilization of the site before 1150 A.D. Deadmans Black-on-Red, made between about 775 and 1060 A.D. 2/ was traded into this area during this Cohonina period. When these Cohonina wares are eliminated from the sample, it remains reliable and becomes 75.4% Tizon Brown Ware with Havasupai tradeware 19.3%. Therefore, the hypothesis

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1/ Colton & Hargrave, 1937, p. 214
2/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
that this site was occupied and used exclusively by Hualapais from about 1150 A. D. until conquest cannot be rejected.

xiii. N. A. 4328

The fairly reliable sherd sample has 70% Tizon Brown Ware with 24% San Francisco Mountain Gray Ware representing a Cohonina Branch occupation of this site prior to 1150 A. D. At that time, Deadmans Black-on-Red, dating from between 775 to 1060 A. D. \(1/\) was imported from the east. When these pre-1150 sherds are eliminated from the sample it remains fairly reliable and Tizon Brown Ware constitutes 96.5% of the remainder. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from about 1150 cannot be rejected.

Hualapai occupation followed fairly soon after 1150, for Tusayan Black-on-White vessels were imported to this site, and this type was made between about 1225 and 1300 A. D. \(2/\)

xiv. N. A. 4331

The low reliability sherd sample has 37.5% Tizon Brown Ware compared to 43.8% Prescott Gray Ware and 12.5% San Francisco Mountain Gray Ware. This indicates a Prescott Branch occupation of this site prior to about 1300 A. D. Aside from the earlier wares, the sherds are all Tizon Brown Ware. So the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

\(1/\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
\(2/\) Colton & Hargrave, 1937, p. 214
The fairly reliable sherd sample has 54.2% Tizon Brown Ware, while San Francisco Mountain and Prescott Gray Ware each comprises 18.8% of the sample. Undoubtedly this site was occupied prior to 1150 A.D. by the Cohonina Branch Indians. Trade Ware also reached this site during this pre-Hualapai occupation from the Kayenta-Hopi Branch farther east. Types included Deadmans Black-on-Red, made from about 775 to 1060 A.D. 1/, and Tusayan Black-on-Red, made from perhaps 965 to 1130 A.D. 2/

When these pre-1150 A.D. wares are eliminated from the sample, it remains fairly reliable, and Tizon Brown Ware constitutes 72.2%, satisfying the 70% level of significance of cultural predominance. (If all the Prescott Gray Ware is eliminated as pre-1300 A.D. in age, Tizon Brown Ware is 96.3% of the remainder, which is reduced to a sample of low reliability.) Tusayan Black-on-White, made from 1225 to 1300 A.D. 3/ was imported to this site in Prescott times.

Conclusion: The hypothesis that this site was occupied from time immemorial to conquest solely by Hualapais cannot be rejected.

The unreliable sherd sample from this rock shelter is

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Ibid., Ibid.
75% Tizon Brown Ware, satisfying the 70% level of significance of cultural predominance. A couple of sherds of San Francisco Mountain Gray Ware signify a Cohonina Branch visit to the site prior to 1150 A.D. when that tribe inhabited this region. Therefore, the hypothesis that this site was used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

xvii. N. A. 5830

The reliable sherd sample is one-third Tizon Brown Ware. The other two-thirds is Prescott Gray Ware from a pre-Hualapai occupation. Verde Black-on-Gray makes up 8.8% of the sample, and was presumably made during the 1150 to 1275 time span of Tusayan Polychrome.1/

Conclusion: There was apparently a pre-Hualapai Prescott Branch occupation at this site. However, this preceded Hualapai entry into the area, and the hypothesis that this site was used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

xviii. N. A. 5832

The unreliable sherd sample includes 83.3% Tizon Brown Ware with a Lino Gray sherd indicative of pre-1150 A.D. occupation. The hypothesis that this site was used solely by Hualapais from time immemorial cannot be rejected.

1/ Based on Euler's excavation at Wha Ha' Vo cave, where these types were associated in situ.
Eighteen sites have been described in this area of intensive prehistoric land utilization. At none of these eighteen sites can the hypothesis that the site was used and occupied exclusively by Hualapais from time immemorial to conquest be rejected. Therefore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area from time immemorial to Anglo-American conquest cannot be rejected.

Prior to 1150 A.D., or thereabouts, there was clearly a Cohonina Branch occupation of this area, utilizing most of the sites later occupied by Hualapais. During that earlier occupation, there was extensive trade in ceramic vessels with the Kayenta-Hopi Branch to the eastward. There seems to have been a Prescott Branch occupation at some of the same sites.

e. Knight Creek Below the Plateau Escarpment

i. Arizona G : 15 : 8

The reliable sherd sample has 88.2% Tizon Brown Ware, so the hypothesis that this site was used and occupied solely by Hualapais prior to Anglo-American conquest is accepted.

This site along Knight Creek lies approximately ten miles west of the Fort Rock area and the Willow Creek area where there is abundant evidence of Cohonina Branch occupation during the years prior to 1150 A.D. At this site, there is
no San Francisco Mountain Gray Ware pottery recorded to indicate the presence of Cohoninas. Yet, a Deadmans Black-on-Red sherd traded in from farther east shows that occupation of this site began during the years between about 775 and 1060 A.D. Therefore, this site in the desert vegetation zone was occupied at the same time the Cohonina held the moister plateau immediately to the east. And since the overwhelming bulk of the sherds on this site are Tizon Brown Ware, it seems reasonable to think that the Hualapais were living here while the Cohinina still held the plateau above. The few sherds of Prescott Gray Ware present— which might date from the same period as the Deadmans Black-on-Red trade piece but are probably later— apparently represent trade ware.

If this reasoning is correct, it is important in showing the direction of Hualapai territorial expansion as well as something about its dating. The Hualapais appear to have been a desert dwelling tribe living to the west of the pro-plateau at this time when the Cohonina were living above the escarpment in the highlands. This was some time during the 775 to 1060 time span when Deadmans Black-on-Red was being produced and traded into this area. Later on, Hualapais either conquered the Cohoninas and drove them out, or occupied the pro-plateau after the Cohonina withdrew or died out.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
ii. Arizona G : 15 : 9

The very reliable sherd sample from this rock shelter adjacent to the eroding open site just discussed has 83.5% Tizon Brown Ware, exceeding even Ezell's 80% level of significance of cultural predominance, so that the hypothesis that this site was occupied exclusively by Hualapais up till their conquest is accepted. Both sites are parts of one pre-historic use area, and were differentiated only to clearly demarcate the rock shelter and open areas.

Here there is exactly one sherd of San Francisco Mountain Gray Ware—a decorated sherd which very likely came from a vessel traded into here. Again, Deadmans Black-on-Red shows that the site was in use during the 775 to 1060 time span during which that type was produced. A number of sherds from other types of trade vessels show usage during a sufficient number of time periods to fairly well prove continuous occupancy of this rock shelter into historic time. Verde Black-on-Gray indicates occupation between approximately 1150 and 1275 A. D. 1/ Bidahochi Black-on-White is thought to have been made probably between 1325 and 1400 A. D. 2/ It differs only in firing from Jeddito Black-on-

1/ Since it was found in Wha Ha' Vo cave with Tusayan Polychrome dating then (Colton, 1953, p. 75).
2/ Colton & Hargrave, 1937, p. 245.
Yellow, which was produced between 1300 and 1700 A. D.\footnote{Colton, 1939, p. 27.} A sherd of this latter type was also collected from this rock shelter. The more recent trade ware came from the Colorado River Mohaves, beginning back in Amacava Branch times and extending into the 19th century.

iii. Arizona G : 15:10

The fairly reliable sherd sample is 100% Tizon Brown Ware at this open site slightly upstream on Knight Creek. Therefore, the hypothesis that this site was used solely by Hualapais prior to Anglo-American conquest is accepted.

iv. N. A. 3361

The very reliable sherd sample has 86.3% Tizon Brown Ware. Ezell's 80% level of significance of cultural predominance is thus exceeded, and the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest is therefore accepted. The 3.6% San Francisco Mountain Gray Ware in the sample apparently represents trade ware imported by local Hualapais from the Cohoninas to their east. Prescott Gray Ware accounts for almost the same proportion of the total, 3.5%, indicating some trade in Prescott Branch pots. In this case, sherds of Verde Black-on-Gray vessels may be assigned approximately to the time period between 1150 and
1275 A. D.\textsuperscript{1/} This is somewhat later than the trade in Cohonina ceramics, inasmuch as they went out of production about 1150 A. D. The widely traded Jeddito Black-on-Yellow Hopi pottery found its way here, showing occupation during its period of manufacture from 1300 to 1700 A. D.\textsuperscript{2/} This is further evidenced by what is probably a sherd of Homolovi Black-on-Red, thought to have been made between 1300 and 1400 A. D.\textsuperscript{3/} Vessels were also imported from the Havasupai (a surprising 3.4\% of the sample) and the Amacava-Mohave Branch. Some of the latter were made during the 19th century and during the latter years of Hualapai occupancy.

v. N. A. 3362

The unreliable sherd sample has 71.4\% Tizon Brown Ware, with 28.6\% San Francisco Mountain Gray Ware. The sample is so small as to preclude generalizations. All that can safely be concluded from the available evidence is that this site was in use prior to 1150 A. D., perhaps by Cohonina, but probably by Hualapais importing some San Francisco Mountain Gray Ware pots from them, and the hypothesis that this site has been used and occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

\textsuperscript{1/} The period of manufacture of Tusayan Polychrome (Colton, 1953, p. 75) with which it was found in Mr. Euler's excavation at Wha Ha' Vo cave.

\textsuperscript{2/} Colton, 1939, p. 27.

\textsuperscript{3/} Colton & Hargrave, 1937, p. 80.
vi. N. A. 3363

The unreliable sherd sample has one Tizon Brown Ware and two Prescott Gray Ware sherds. Since this last ware was not made so far as known after 1300 A. D., the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

vii. Summary of Occupation

When all of the sites recorded along Knight Creek are considered together as indexing the Indian utilization of that stream and its environs, it is clear that since at least 1150 A. D. this area has been used and occupied solely by Hualapais. Moreover, the character of the evidence is such as to suggest that the San Francisco Mountain Gray Ware occurring here represents vessels of the prehistoric Cohonina Branch Indians traded from them by Hualapais living along Knight Creek. In pre-1150 A. D. times, the escarpment above the creek to the pro-plateau seems to have been the Hualapai-Cohonina frontier. Datable trade ware from farther east shows Knight Creek to have been occupied before 1150 A. D. by Hualapais, when the Willow Creek-Fort Rock area on the plateau was held by Cohoninas.

2. Summary of Occupation of 15' Quadrangle Arizona G : 15

A total of thirty-four ceramic sites recorded from this quadrangle have been analyzed. It has been concluded that at each of these sites, the hypothesis that the site was used
and occupied exclusively by Hualapais from about 1150 A. D. until Anglo-American conquest could not be rejected. Therefore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied the area of this quadrangle after about 1150 A. D. until conquest is accepted.

Prior to 1150 A. D., the pro-plateau was occupied by Cohonina Branch Indians, and there is possibly evidence of a Prescott Branch occupation prior to 1300 A. D. The pre-1150 Cohonina-Hualapai frontier seems to have been the pro-plateau escarpment, inasmuch as the Knight Creek sites show continuous Hualapai occupation beginning well before 1150 A. D., with no antecedent Cohonina occupation, nor Prescott.

U. 15' Quadrangle Arizona G : 16

Only one ceramic site has been recorded in this quadrangle located on the pro-plateau just to the east of the one discussed above.

N. A. 5824

The very reliable sherd sample has 45.5% Tizon Brown Ware with 48.7% Prescott Gray Ware. Verde Black-on-Gray sherds indicate Prescott Branch occupation in this area extended past 1150 A. D. but ended by about 1300 A. D. 1/

1/ Dating this type synchronously with Tusayan Polychrome (1150-1275-Colton, 1953, p. 75) from its Wha Ha' Vo depth.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona G : 16 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA

G : 16

<table>
<thead>
<tr>
<th>SITE</th>
<th>TIZON</th>
<th>PRESCOTT</th>
<th>TUSAYAN</th>
<th>S. F.</th>
<th>UNIDEN-</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BROWN</td>
<td>GRAY</td>
<td>WHITE</td>
<td>MTN.</td>
<td>TIFIED</td>
<td>SHERDS</td>
</tr>
<tr>
<td></td>
<td>WARE</td>
<td>WARE</td>
<td>WARE</td>
<td>GRAY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA 5824</td>
<td>45.5</td>
<td>48.7</td>
<td>1.3</td>
<td>1.9</td>
<td>2.6</td>
<td>156</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITE IN 15' QUADRANGLE ARIZONA

G : 16

<table>
<thead>
<tr>
<th>SITE</th>
<th>Cerbat Aquarius</th>
<th>Sandy Aquarius</th>
<th>Verde</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brown</td>
<td>Brown Bl/Brn</td>
<td>Brown</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Orange</td>
<td>Bl/Gray</td>
</tr>
<tr>
<td>NA 5824</td>
<td>1.3</td>
<td>.6</td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td>42.9</td>
<td>.6</td>
<td>25.0</td>
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<td></td>
<td>.6</td>
<td>8.3</td>
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</tr>
</tbody>
</table>
The site is a masonry "fort" of the type common on hilltops bordering Walnut Creek Valley to the southeast. It apparently dates from the same relatively early occupation. The sherds show convergence of Prescott Gray and Tizon Brown Ware characteristics also found in that area. The hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected on the basis of available evidence.

This quadrangle lies well within Hualapai territory at the end of the pre-contact period, and to postulate any non-Hualapai occupancy would require some other tribe to have held non-contiguous territories—a situation consistently rejected as an explanation in this study on the grounds that the nature of Indian land tenure would have prohibited such an "unnatural" situation from developing. Archaeological evidence to be presented below also shows the quadrangles immediately east of this one to have been exclusively Hualapai territory in prehistoric times back to around 1300 A.D.

Conclusion: Therefore, the hypothesis that no other tribe than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle from time immemorial to conquest cannot be rejected.
Both sites recorded from this quadrangle are non-ceramic sites identified by living Hualapais as hunting camps of the Pine Springs Band.

Tizon Brown Ware constitutes 76.1% of the recorded sherds from sites in this area in upper Big Sandy River Valley. Second most abundant ware is Lower Colorado River Buff Ware, making up 19.8% of the total—mostly dating from the last century and largely after Anglo-American conquest when the Hualapais abandoned the manufacture of their own Tizon Brown Ware and imported Mohave pottery for such purposes as they did not use metal utensils.

The hypothesis that this 15' Quadrangle was occupied and used exclusively by Hualapais from time immemorial to conquest is accepted, since the 70% level of significance of cultural predominance is exceeded, and no other ware reaches even Ezell's 20% level of significance of occupancy.

1. Site Analysis

a. Arizona M : 2 : 1

The sherd sample is unreliable but Tizon Brown Ware, with cans, glass and iron objects attesting to historic Hualapai utilization of this site, and it may be entirely
THE HUALAPAI COUNTRY

Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M : 2 in color
Big Sandy River, Trout Creek, Cane Springs.
CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE ARIZONA M:2

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLO. TIZON BROWN WIPED GRAY PREScott S.F.Mt. TUSAYAN WHITE UNIDEN- RIVER WARE</th>
<th>TIZON WIPED GRAY WARe</th>
<th>TUSAYAN liTaTE WARE</th>
<th>UNIDENTIFIED WARe</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>60.</td>
<td>24.</td>
<td>4.</td>
<td>16.</td>
</tr>
<tr>
<td>GP 2</td>
<td>88.</td>
<td>36.</td>
<td>64</td>
<td></td>
</tr>
<tr>
<td>NA3350</td>
<td>100.</td>
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</tr>
<tr>
<td>NA3355</td>
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</tr>
<tr>
<td>NA3356</td>
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<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>NA3394</td>
<td>96.2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>19.8</td>
<td>76.1</td>
<td>1.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUADRANGLE ARIZONA M:2

historic. Since it is located near a permanent spring, this seems most unlikely here in an arid desert. Manos for pounding wild foods also were found on the site, and while still in use among the Hualapai, probably indicate pre-historic occupation. The hypothesis that this site was occupied solely by Hualapais prior to conquest cannot be rejected.

CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA M : 2

<table>
<thead>
<tr>
<th>SITES</th>
<th>Manufactured Artifacts</th>
<th>Wickiup Rings</th>
<th>Sherd Area</th>
<th>Crunching Slabs</th>
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</thead>
<tbody>
<tr>
<td>M:2:1</td>
<td>x</td>
<td></td>
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</tr>
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<td>GP 3</td>
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</tr>
<tr>
<td>NA 3350</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>NA 3351</td>
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<td>NA 3352</td>
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<td>NA 3355</td>
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<td>NA 3356</td>
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<td>NA 3393</td>
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<tr>
<td>NA 3394</td>
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<tr>
<td>NA 3754</td>
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<td></td>
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<td>?</td>
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</tbody>
</table>

b. Gila Pueblo's

Arizona N : 2 : 1

The low reliability sherd sample has 60% Lower Colorado River Buff Ware—all Parker Buff, a type made by Mohaves during the 19th century. Inasmuch as this type was imported by the Hualapais after they ceased making Tizon Brown Ware, these
are probably from that post-conquest period. This is evidently the Yuman component originally reported as 50% of this site.¹\

On the other hand, 16% San Francisco Mountain Gray Ware sherds indicate that occupation at this site began prior to 1150 A. D. They probably form the "Black-on-Grey" component originally reported as 50% of the sample.²/ The rest of the sherds—24%—are Tizon Brown Ware, and whatever proportion was not deposited on the site during its pre-1150 A. D. utilization and its late historic utilization represent sporadic or at least not very intense use of the site by Hualapais during the several intervening centuries.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest can not be rejected.

c. Gila Pueblo's
Arizona N : 2 : 2

The low reliability sherd sample has 88% Tizon Brown Ware. A Verde Black-on-Gray sherd which probably was from a vessel imported between about 1150 and 1275 A. D.²/ indicates that the site was in use at least that early. This was

¹/ Gladwin & Gladwin, 1930, p. 149
²/ Ibid.
²²/ Judging from its occurrence in association with Tusayan Polychrome of that date (Colton, 1953, p. 75) in Euler's test in Wha Ha' Vo cave.
originally reported as a 100% Black-on-grey site\(^{1/}\) but this must have been based on the assumption that the plain brown ware was of the same ware as the painted sherd—which it is not.

Conclusion: The hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

d. Gila Pueblo's

\textit{Arizona N : 2 : 3}

The low reliability sherd sample includes 64% Tizon Brown Ware. The remaining sherds are Lower Colorado River Buff Ware imported from the Amacava-Mohave Branch. Thus, this is a 100% Yuman site as first reported.\(^{2/}\) Most of the Mohave types are from vessels made within the last century, and represent largely post-conquest importation of Mohave pots by Hualapais abandoning production of their own pottery. If these Parker Series sherds are eliminated from the sample, it remains of low reliability and Tizon Brown Ware is 84.2% of the remainder.

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais prior to conquest cannot be rejected.

e. N. A. 3350

The unreliable sherd sample is entirely Needles Red-on-Buff which seems to be an entirely historic type of Lower

\(^{1/}\) Gladwin & Gladwin, 1930, p. 149

\(^{2/}\) Ibid.
Colorado River Buff Ware. These sherds came from two circular brush pit houses where a rifle shell and buttons were found in surface association from an area identified by Hualapais as historically occupied.

This site must be regarded on the evidence as entirely post-conquest in occupation, and to have no bearing on the question of Hualapai occupancy prior to Anglo-American conquest. Clearly it was a Hualapai site in the post-settlement period when they substituted Mohave pottery and metal utensils for Tizon Brown Ware.

f. N. A. 3355

The unreliable sherd sample is entirely Lower Colorado River Buff Ware, with Needles Red-on-Buff again the main type, and the site is within the area of known historic Hualapai occupation, so that this site, too, probably is entirely historic, without bearing upon the question of occupancy prior to conquest.

g. N. A. 3356

The reliable sherd sample contains 88% Tizon Brown Ware exceeding even Ezell's 80% level of significance of cultural predominance. A few San Francisco Mountain Gray Ware sherds indicate that occupation of this site by the Hualapais began prior to 1150 A.D. and that they imported a few vessels from the Cohonina on the plateau east of them. The hypothesis that this site was occupied exclusively by Hualapais prior
to conquest is accepted.

h. Cane Springs Area

i. N. A. 3392

The fairly reliable sherd sample includes 88.9% Tizon Brown Ware, far exceeding even Ezell's 80% level of significance of cultural predominance. Therefore, the hypothesis that this site was occupied solely by Hualapais prior to their conquest is accepted. A San Francisco Gray Ware sherd indicates that Hualapais were residing here prior to 1150 A.D.

ii. N. A. 3393

The reliable sherd sample contains 96.5% Lower Colorado River Buff Ware. Parker Red-on-Buff constitutes the bulk of the sherds—over 90%—and Parker Buff the rest of this ware. Since these Mohave types were produced within post-contact times and imported by Hualapais to replace their own pottery this site must be interpreted as another historic, post-1871 site. As such, it has no bearing on the question of occupancy of the Hualapai country prior to conquest. Two sherds of Tizon Brown Ware do indicate survival of native Hualapai ware at the time this site was occupied.

iii. N. A. 3394

The very reliable sherd sample includes 96.2% Tizon Brown Ware. Therefore, the hypothesis that this site was used exclusively by Hualapais prior to their conquest is accepted. A sherd of Flagstaff Black-on-White from a vessel imported
from Pueblo country to the east indicates that occupation began here at least as early as the 1120 to 1225 period of production of this type. 1/ Several sherds of Verde Black-on-
Gray evidence trade relations with the Prescott Branch at about the same time--perhaps slightly later, but between 1150 and 1275 A. D. 2/

iv. Hualapai Use

The area farmed by the Hualapais about two miles below Cane Springs ranch near the mouth of the wash has been eroded away. (DGS Oct. 29 p 6) At Taka Minva, Cane Springs, they farmed also. "Lehi had two old, old women--two wives. I believe their father lived here and claimed this place Taka Minva. The white man came and put cattle on, and he still stayed. My uncle lived there and raised garden there." (DGS Aug. 12 p 7)

The first settlers came to Big Cane Springs, Taka Minva. These first settlers were friendly, they don't molest us very much. But finally other white families and White ranchers came and took over this whole valley, our gardens, our homes. We didn't give this country up voluntarily. We were just overrun by White people taking up the springs, the grass, the gardens and all of this territory. We never gave up anything; these people just overran us.2/

Lehi, a Big Sandy Band chief was born probably in pre-Anglo-American times, and his parents clearly some years prior to contact, so the prehistoric location of the Hualapai here is

2/ From Wha Ha' Vo test.
2. Summary

The ten ceramic sites recorded from this 15' Quadrangle Arizona M : 2 have been analyzed, and four discovered to be historic, post-conquest Hualapai sites characterized by sherds imported from Mohaves on the lower Colorado River, and a scarcity (2 sites) or absence (2 sites) of the native Hualapai Tizon Brown Ware. Two other non-ceramic sites in the same area are also of historic age. (N. A. 3351 and N. A. 3352).

The other six sites analyzed fall into the period prior to conquest, extending well back into prehistoric times, at least before 1150 A. D. at some and before 1275 in another. At each site, it was concluded that the hypothesis that it had been used and occupied solely and exclusively by Hualapais prior to conquest could not be rejected.

Conclusion: The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this 15' quadrangle prior to Anglo-American conquest is accepted. Actually, in view of the known history of post-conquest importation of Mohave pots by the Hualapais an oral tradition, can the hypothesis be rejected for the post-conquest period. The Anglo-Americans entered Hualapai territory and appropriated it, but not other Indian tribes.
X. 15' Quadrangle Arizona M : 3

Only two sites have been recorded within this quadrangle and neither has been visited by a trained archaeologist. N. A. 3756 is located at Oak Springs, and the cultural remains reported are "metates," probably Hualapai crunching slabs. Site N. A. 3804 is at Mahone Springs, with the same type of evidence recorded. Both of these springs were utilized by Hualapais within the memory of living Indians.

Y. 15' Quadrangle Arizona M : 4

Tizon Brown Ware constitutes 59.7% of all the sherds known from sites in this quadrangle on the pro-plateau. Trade ware reached the area from the Kayenta-Hopi Branch to the east. Two wares evidently represent pre-Hualapai occupation in this region. One is San Francisco Mountain Gray Ware, made by the Indians of the Cohonina Branch prior to 1150 A.D., which makes up 15.5% of the recorded sherds. The other is Prescott Gray Ware with 20% of the sample. When both gray wares are eliminated from consideration as pre-dating Hualapai entry into this upland region, Tizon Brown Ware constitutes 92.6% of the remaining sherds. In fact, if all the pre-1300 A.D. types are eliminated, this Hualapai ware makes up all the remaining sample except 1.1% of the sherds which
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M : 4 in color.
### Ceramic Analysis by Wares of Sites in 15' Quadrangle Arizona M:4

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<thead>
<tr>
<th>Sites</th>
<th>Tizon Brown Ware</th>
<th>Tizon Wiped</th>
<th>Prescott Gray Ware</th>
<th>San Francisco Gray Ware</th>
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### Sites

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**Note:** The text contains numerical data and categories related to ceramic analysis by wares of sites in a specific geographic area. The data is presented in tabular format, showing percentages and total sherds for various categories including Tizon Brown Ware, Tizon Wiped, Prescott Gray Ware, San Francisco Gray Ware, and Total Sherds. The second table provides details of specific sites with various ware types and their respective percentages.
CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUAD. ARIZONA M:4

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apparently represent vessels traded in from Havasupais. Therefore, the hypothesis that this 15' quadrangle was occupied exclusively by Hualapais from time immemorial until Anglo-American conquest cannot be rejected.

CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA M: 4

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<td>x</td>
</tr>
<tr>
<td>NA3429</td>
<td>x</td>
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<tr>
<td>NA5825</td>
<td>x</td>
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<td>x</td>
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<td></td>
</tr>
</tbody>
</table>

1. Site Analysis

a. N. A. 3415

The sherd sample is reliable and 86.1% Tizon Brown Ware which exceeds even Ezell's 80% level of significance of cultural predominance. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial until Anglo-American conquest is accepted. Prescott Gray Ware occurs here apparently as trade ware, with Verde Black-on-Gray sherds indicating an occupation probably between
about 1150 and 1275 A.D.\textsuperscript{1/} This site was originally reported to have 99% Prescott Gray Ware and 1% San Francisco Mountain Gray Ware, with Aquarius Orange the dominant utility type.\textsuperscript{2/} This compares with 13.9% and none in the re-classification, reflecting earlier failure to distinguish clearly between Tizon Brown and Prescott Gray Wares.

b. N. A. 3416

The unreliable sherd sample is entirely Tizon Brown Ware. Therefore, the hypothesis that this site was used exclusively by Hualapais from time immemorial to conquest cannot be rejected. All of these sherds were first reported as Prescott Gray Ware, with Aquarius Orange the main utility type.\textsuperscript{2/}

c. N. A. 3417

The low reliability sherd sample contains 55% Tizon Brown Ware, the remaining sherds being Prescott Gray Ware. The latter represent a pre-Hualapai occupation apparently. The hypothesis that this site was occupied exclusively by Hualapais after approximately 1300 A.D. until conquest cannot be rejected.\textsuperscript{3/} Again, this collection was originally reported as 95% Prescott Gray Ware and 5% San Francisco Mountain

\textsuperscript{1/} Since that type was excavated by Euler from Wha Ha' Vo cave in association with Tusayan Polychrome of that date.

\textsuperscript{2/} Colton, 1939, p. 24.

\textsuperscript{3/} Ibid.
d. N. A. 3418

Gray Ware, with Aquarius Orange the dominant utility type. 1/

The unreliable sherd sample includes half Tizon Brown Ware. A San Francisco Mountain Gray Ware sherd indicates that occupation of this site began prior to 1150 A. D. The 37.5% of the sample which is Prescott Gray Ware may date from the same early period, certainly prior to 1300 A. D. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected. This site was first reported having only Prescott Gray Ware, Aquarius Orange being the main utility type. 2/

e. N. A. 3419

The unreliable sherd sample contains half and half Tizon Brown and Prescott Gray Ware, although first reported to have only the latter, with Aquarius Orange the dominant utility type. 2/ These sherds predate 1300 A. D. at best, so the hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

f. N. A. 3420

The unreliable sherd sample has two-thirds Tizon Brown Ware and a third Prescott Gray Ware. Here again the latter represents a pre-1300 A. D. time period in the site's utilizat-

2/ Ibid.
tion, so the hypothesis that the site was used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

The very reliable sherd sample contains 57.2% Tizon Brown Ware. San Francisco Mountain Gray Ware constitutes only 3% of the recorded sherds, and is obviously traded in sometime prior to 1150 A.D. This early pre-Hualapai occupation was by the Prescott Branch Indians, since 39.6% of the sherds are Prescott Gray Ware. Inasmuch as Verde Black-on-Gray is found (2.2% of the total) Prescott Branch occupation probably continued after 1150 A.D. into the 1150 to 1275 time span tentatively assigned to that type.¹/

However, the hypothesis that this site was used exclusively by Hualapais from time immemorial until conquest cannot be rejected—no types of pottery post-dating 1300 A.D. other than Tizon Brown Ware were recovered.

The ware classification difference is again demonstrated by comparison to the published proportions for this site: 1% Tizon Brown and San Francisco Mountain Gray Ware to 87% Prescott Gray Ware, with Aquarius Orange the dominant utility type.²/

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¹/ Based on its association with Tusayan Polychrome of that date (Colton, 1953, p. 75) in Euler’s Wha Ha’ Vo excavation.

The reliable sherd sample includes 70.8% Tizon Brown Ware, barely satisfying the 70% level of significance of cultural predominance. Occupation of this site began prior to 1150 A.D., as indicated by San Francisco Mountain Gray Ware sherds, which make up 13.9% of the total. These might indicate an earlier Cohonina occupation here. Possibly the Cohonina held the area first, were followed by the Prescott Branch, and later by the Hualapai. However, Prescott Gray Ware makes up a mere 2.8% of the recorded sherds, which is hardly enough to indicate occupancy. (These classifications differ from the 16% Tizon Brown, 32 San Francisco Mountain Gray and 47 Prescott Gray Ware originally reported\(^1\) with the greatest identification reliability in San Francisco Mountain Gray Ware.) Dating of the early occupation is verified by a Deadman's Black-on-White sherd from a vessel of a type made between 875 and 1130 A.D.\(^2\)

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

The fairly reliable sherd sample includes 68.3% Tizon Brown Ware, no other ware amounting to 20% of the recorded sherds. Second most abundant ware is San Francisco Mountain

\(^1\) Colton, 1939, p. 24.
\(^2\) McGregor, 1941, p. 377.
Gray with 17.1%, evidence that occupation began prior to 1150 A.D. and probably indicating Cohonina occupation before that time. When these sherds are eliminated from the sample Tizon Brown Ware makes up 82.4% of the remainder, satisfying even Ezell's 80% level of significance of predominance.

In reporting ware proportions at this site originally, a total of only 72% of the sherds were published: 17% Tizon Brown Ware, 40% San Francisco Mountain Gray Ware and 15% Prescott Gray Ware, Aquarius Orange being given as the dominant utility type.1/

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from about 1150 A.D. until conquest cannot be rejected.

j. N. A. 3425

The reliable sherd sample contains 67.9% Tizon Brown Ware and 23.2% San Francisco Mountain Gray Ware. These latter sherds indicate pre-1150 A.D. Cohonina Branch occupation of this site. At that time, Tusayan Black-on-Red vessels were imported from the Kayenta-Hopi Branch, this type having been made between perhaps 965 and 1130 A.D.2/ Eliminating these earlier sherds from the sample, Tizon Brown Ware makes up 92.7% of the remainder, satisfying even Ezell's 80% level of significance of cultural predominance. That Hualapai occupation followed soon after 1150

2/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
A. D. is indicated by a Tusayan Black-on White sherds, probably from a vessel made between about 1225 and 1300 A. D. ¹/.

The collections were first reported to include 40% Tizon Brown Ware, 37% San Francisco Mountain Gray Ware, and 23% Prescott Gray Ware, with Aquarius Orange and Deadmans Fugitive Red the dominant utility types.²/

No Prescott Gray Ware was identified in this collection on re-examination, and considerably less San Francisco Mountain Gray Ware. Therefore, the hypothesis that this site was occupied from time immemorial exclusively Hualapais cannot be rejected.

k. N. A. 3426

The very, very reliable sherd sample contains 61.1% Tizon Brown Ware, although only 45% was originally reported, along with 18% San Francisco Mountain Gray Ware and 33% Prescott Gray Ware, with Aquarius Orange the dominant utility type.²/ Re-classification makes San Francisco Mountain Gray Ware the second most abundant with 21.7%, pretty clearly indicating that prehistoric Cohonina Branch Indians were living on this site prior to 1150 A. D. During Cohonina times, ceramic vessels were traded to this site from the Kayenta-Hopi Branch to the eastward. These included Deadmans Black-

¹/ Hargrave & Colton, 1937, p. 114.
²/ Ibid.
on Red sometime during the period between about 775 and 1060 A.D.\textsuperscript{1} and Tusayan Black-on-Red sometime between 965 and 1130 A.D.\textsuperscript{2} among the redware types. They included Deadmans Black-on-White from perhaps 875 to 1130 A.D.\textsuperscript{2} and Sosi Black-on-White dating about 1070 to 1150 A.D.\textsuperscript{4} among white types. When these intrusive types, Tusayan Gray Ware and San Francisco Mountain Gray Ware sherds are eliminated from the sample, Tizon Brown Ware constitutes 81.6\% of the remainder.

Prescott Gray Ware makes up 10.8\% of the sample, and Indians of this branch perhaps occupied the site between its Cohonina and Hualapai occupants.

Conclusion: The hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

1. N. A. 3427

The unreliable sherd sample is entirely Tizon Brown Ware, although originally reported as Prescott Gray Ware.\textsuperscript{5} Therefore, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

\textsuperscript{1/} McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75
\textsuperscript{2/} Ibid., Ibid.
\textsuperscript{3/} McGregor, 1941, p. 377.
\textsuperscript{4/} Colton, 1953, p. 75.
\textsuperscript{5/} Colton, 1939, p. 24.
The fairly reliable sherd sample contains 51.6% Tizon Brown Ware. Here, Prescott Gray Ware is the second most abundant ware (not the only one as first reported)\(^1\) indicating a Prescott Branch occupation of this site prior to Hualapai entry into this region. A few San Francisco Mountain Gray Ware sherds may represent a brief Cohonina occupancy, or trade to resident Prescott Branch Indians. Certainly Indian occupation began prior to 1150 A. D. However, the main occupation by Prescott Branch Indians was probably somewhat later, as indicated by Verde Black-on-Gray sherds, which probably came from vessels produced between around 1150 to 1275 A. D.\(^2\) and by Tusayan Black-on-White from pots made probably after 1225 and before 1300 A. D.\(^2\) The Prescott Branch occupation appears to have terminated by the latter date and Hualapai occupation to have followed.

So far as sherds which can be dated as produced after 1300 A. D. are concerned, there is only one which is not Tizon Brown Ware. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

\(^1\) Colton, 1939, p. 24.
\(^2\) Based on Wha Ha' Vo excavations showing Tusayan Polychrome association.

\(^3\) Colton & Hargrave, 1937, p. 214.
The reliable sherd sample includes 65.7% Tizon Brown Ware. Here San Francisco Mountain Gray Ware is the second most abundant ware--24.3% of the recorded sherds. This shows that the site was occupied prior to 11150 A.D. by Indians of the Cohonina Branch. Eliminating these sherds from the sample leaves it still reliable and 86.8% Tizon Brown Ware, exceeding even Ezell's 80% level of significance of cultural predominance. Although no Prescott Gray Ware was identified, the classifications are fairly close to the ones previously published for this site: 63% Tizon Brown, 32% San Francisco Mountain Gray and 5% Prescott Gray Ware, with Aquarius Brown the main utility type. The hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

The reliable sherd sample contains only 4.3% Tizon Brown Ware, while the rest of the sherds are Prescott Gray Ware. This site is a masonry "fort" and was perhaps never used by Hualapais. It represents earlier Prescott Branch occupation of this region prior to about 1300 A.D. Verde Black-on-Gray sherds recovered here could have been made up until about 1275 A.D. This site does not enter into the determination of Hualapai territory from time immemorial to conquest, having

1/ Colton, 1939, p. 244.
2/ Based on association with Tusayan Polychrome terminal date (Colton, 1953, p. 75) Wha Ha' Vo excavations.
been occupied before 1300 A. D.

2. Summary of 15' Quadrangle Arizona M : 4

Fifteen ceramic sites recorded from this quadrangle have been analyzed above. Four general types of sites have been distinguished. These are:

1) Sites clearly used and occupied by Hualapais alone from time immemorial to conquest.
   a. Pure Tizon Brown Ware sites (NA3416, 3427)
   b. Exclusive Hualapai sites (NA3415, 3420, and 3423)

2) A site clearly used and occupied exclusively by Indians of the Prescott Branch before the Hualapais entered this territory after 1300 A. D. (NA5825)

3) Sites of mixed Hualapai-Prescott Branch occupancy, where Prescott Branch Indians seem to have lived up until nearly 1300 A. D., and the Hualapais sometime later. (NA3417, 3418, 3419, 3422, 3428—all 50% to 57.2% Tizon Brown Ware to 50% down to 29% Prescott Gray Ware.)

4) Sites of mixed Hualapai-Cohonina Branch occupancy, where Cohonina Indians seem to have lived up until almost 1150 A. D., to be followed later by Hualapais—possibly after a couple of centuries, in view of Prescott Branch occupancy of this region. (NA 3424, 3425, 3426, 3429, all with
61.1 to 68.3% Tizon Brown Ware to 24.3 down to 17.1% San Francisco Mountain Gray Ware.) On two of these sites Prescott Gray Ware sherds occur in only small numbers such as might denote trade ware. However, these sherds might well evidence brief Prescott Branch utilization of these sites. On the other hand, at the other two sites, there are no Prescott Gray Ware sherds at all.

The best interpretation of this situation seems to be that Cohonina Branch Indians first resided in this region during ceramic times. This occupation pre-dates 1150 A.D.— by how long is not clear. Then the Prescott Branch Indians lived on some of the same sites and one not occupied before or after their incursion. This occupation may have begun before 1150 A.D., but apparently ended before 1300 A.D. Then perhaps immediately after, perhaps much later in time, the expanding Hualapais occupied this area, never to relinquish it until they were conquered by the Anglo-Americans.

In conclusion, the hypothesis that 15' Quadrangle Arizona M:4 was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected on the basis of the fairly abundant evidence available.

The hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied any part of this quadrangle from time immemorial to conquest is accepted.
Z. 15' Quadrangle Arizona M : 5

Tizon Brown Ware constitutes 98.1% of the sherds recorded from this quadrangle, leaving no doubt as to the tribe inhabiting this area prior to Anglo-American conquest. The hypothesis that this 15' quadrangle was used solely by Hualapais to the conquest is accepted.

1. Site Analysis

Both recorded sites are near the former cienega called Teki'aulva, which was one of the centers of the Whala Pa'a and Big Sandy River Bands.

a. Arizona M : 5 : 1

The very reliable sherd sample contains 93% Tizon Brown Ware, so the hypothesis that this site was occupied solely by Hualapais prior to conquest is accepted.

b. Arizona M : 5 : 2

The fairly reliable sherd sample from the hills northwest of the cienega contains 97% Tizon Brown Ware. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest is accepted.

2. Summary

Inasmuch as both of the recorded sites in this 15' quadrangle were obviously Hualapai used, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle cannot be rejected.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M : 5 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE ARIZONA M:5

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>TIZON BROWN WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>M:5:1</td>
<td>.3</td>
<td>98.2</td>
<td>1.6</td>
<td>379</td>
</tr>
<tr>
<td>M:5:2</td>
<td>97.</td>
<td>3.</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>TOTAL</td>
<td>.2</td>
<td>98.1</td>
<td>1.7</td>
<td>412</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUADRANGLE ARIZONA M:5

<table>
<thead>
<tr>
<th>SITES</th>
<th>Tumco Buff</th>
<th>Cerbat Brown</th>
<th>Aquarius Brown</th>
<th>Unidentified</th>
<th>Total Sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>M:5:1</td>
<td>.3</td>
<td>93. *</td>
<td>5.3</td>
<td>1.6</td>
<td>379</td>
</tr>
<tr>
<td>M:5:2</td>
<td>97.</td>
<td></td>
<td>3.</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>TOTAL</td>
<td>.2</td>
<td>93.2</td>
<td>4.9</td>
<td>1.7</td>
<td>412</td>
</tr>
</tbody>
</table>

* 64.1% Teki'aulva Variety, distinguished by evenly oxidized, smoothed exterior and interior surfaces.
AA. 15' Quadrangle Arizona M : 6

Tizon Brown Ware makes up 94.9% of the sherds recorded from this quadrangle covering the middle Big Sandy River Valley. This far exceeds the 80% level of significance of cultural predominance, so the hypothesis that this area was used and occupied exclusively by Hualapais prior to conquest is accepted.

1. Site Analysis

a. Gila Pueblo's Arizona N : 6 : 1

The low reliability sherd sample contains 91.7% Tizon Brown Ware. All of the trade ware present came from the Amacava Branch predecessors of the Mohaves on the Lower Colorado River. Since Tizon Brown Ware far exceeds the 80% level of significance of cultural predominance, the hypothesis that this site was occupied and used exclusively by Hualapais until their conquest is accepted. These sherds were originally reported as 50% Yuman and 50% "Black-on-grey."¹

b. Gila Pueblo's Arizona N : 6 : 2

The low reliability sherd sample is entirely Tizon Brown Ware, although first reported as 100% "Black-on-grey."² Therefore, the hypothesis that this site was used and occupied by Hualapais prior to their conquest cannot be rejected.

¹/ Gladwin & Gladwin, 1930, p. 149.
²/ Ibid.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M : 6 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUAD. ARIZONA M:6

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLO.</th>
<th>LOWER TIZON RIVER</th>
<th>PRES- BROWN COTT</th>
<th>SAN FRANCISCO MOUNTAIN GRAY</th>
<th>UNIDENTIFIED TIFIED SHERDS WARE</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>8.3</td>
<td>91.7</td>
<td></td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>GP 2</td>
<td>100.</td>
<td></td>
<td></td>
<td></td>
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<td>24</td>
</tr>
<tr>
<td>GP 3</td>
<td>4.</td>
<td>96.</td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>NA 3372</td>
<td>5.</td>
<td>80.</td>
<td>10.</td>
<td></td>
<td>5.</td>
<td>20</td>
</tr>
<tr>
<td>SD A-10</td>
<td>100.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>91</td>
</tr>
<tr>
<td>SD A-16</td>
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<td>76.2</td>
<td>7.7</td>
<td></td>
<td>13.5</td>
<td>13</td>
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<tr>
<td>TOTAL:</td>
<td>5.</td>
<td>94.9</td>
<td>0.5</td>
<td>1.</td>
<td>0.5</td>
<td>197</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUAD. ARIZONA M:6

<table>
<thead>
<tr>
<th>SITES</th>
<th>Parker Need-Topoc Pyra-</th>
<th>Cer-Aquarius</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buff R/B lea</td>
<td>Buff mid bat Brwn Bl/Brn Bl/Gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 1</td>
<td>5.5</td>
<td>41.7</td>
<td>50.9</td>
</tr>
<tr>
<td>GP 2</td>
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<td>4.2</td>
</tr>
<tr>
<td>GP 3</td>
<td>88.4</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>NA 3372</td>
<td>65.9</td>
<td>10.5</td>
<td>5.8</td>
</tr>
<tr>
<td>SD A-10</td>
<td>99.1</td>
<td>5.5</td>
<td>4.4</td>
</tr>
<tr>
<td>SD A-16</td>
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<td>38.5</td>
<td>13.2</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>5.6</td>
<td>5.6</td>
<td>1.6</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY SITES IN 15' QUAD. ARIZONA M:6

<table>
<thead>
<tr>
<th>SITES</th>
<th>Aquarius Kirk Uniden-</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Orange Gray</td>
<td>tified SHERDS</td>
<td></td>
</tr>
<tr>
<td>GP 1</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>GP 2</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>GP 3</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>NA 3372</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>SD A-10</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>SD A-16</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>TOTAL:</td>
<td>5.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

-661-
c. Gila Pueblo's

Arizona N : 6 : 3

The low reliability sherd sample contains 96% Tizon Brown Ware, despite having been labeled a 100% "Black-on-grey" site. A single sherd of Parker Red-on-Buff indicates that the Hualapais here traded vessels from the Mohaves during the last century. The hypothesis that this site was occupied exclusively by Hualapais prior to conquest cannot be rejected.

d. N. A. 3372

The low reliability sherd sample includes 80% Tizon Brown Ware--precisely Ezell's level of significance of cultural predominance. So the hypothesis that this site was used solely by Hualapais prior to conquest cannot be rejected.

The time span of occupancy at this site is apparently from before 1150 A. D. until historic time. The earlier dating is based on a couple of sherds of San Francisco Mountain Gray Ware which were produced by the Cohonina Branch prior to 1150. These probably represent trade obtained by Hualapais residing here at that early period. The late occupation was during the last century, since Needles Red-on-Buff reached here from the Mohaves on the lower Colorado River, and this type seems to have been a minor one produced almost or entirely in post-conquest times by the Mohaves.

1/ Gladwin & Gladwin, 1930, p. 149
e. San Diego's A - 10

The reliable sherd sample is entirely Tizon Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest is accepted, for this site a couple of miles up the Sandy from Signal mine camp.

f. San Diego's A - 16

The unreliable sherd sample contains 76.9% Tizon Brown Ware. Trade apparently reached to Hualapais living here from the Prescott Branch at a remote period—probably prior to 1300 A. D.—and later from the Amacava-Mohave Branch on the lower Colorado River (or from the Halchidhoma to the southwest). The hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected, for this site on Groom Creek.

2. Summary

Six ceramic sites recorded from 15' Quadrangle Arizona M : 6 have been analyzed, and all six found to have been used and occupied exclusively by Hualapais from 1300 A. D. or earlier in most cases until Anglo-American conquest. Therefore, the hypothesis that no tribe other than the Hualapai ever established permanent encampment in or used or occupied this area is accepted.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA’S ARCHEOLOGICAL SURVEY BASE MAP

15’ Quadrangle Arizona M : 7 in color.
Tizon Brown Ware constitutes 95.9% of the sherds known from this quadrangle along the Aquarius Cliff front east of the middle course of the Big Sandy River. Trade vessels came into the area from the Amacava-Mohave Branch along the lower Colorado River, or from the Halchidhoma below them. The hypothesis that this area was occupied and used exclusively by Hualapais prior to their conquest is accepted.

1. Site Analysis

a. Gila Pueblo's
   Arizona N : 7 : 1

   The low reliability sherd sample is entirely Tizon Brown Ware, so the hypothesis that this site was occupied solely by Hualapais prior to conquest cannot be rejected.

   This site was originally reported to be 100% Decadent,\(^1\) evidently on the assumption that the sherds had been made by Hohokam Indians. Actually, Tizon Brown Ware was a pretty uniform peak of ceramic accomplishment, and these sherds are no more decadent than any other sample of the ware.

b. Gila Pueblo's
   Arizona N : 7 : 2

   The low reliability sherd sample includes 92% Tizon Brown Ware with some trade ware from the Amacava Branch.

\(^1\) Gladwin & Gladwin, 1930, p. 149.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA M:7

<table>
<thead>
<tr>
<th>SITES</th>
<th>LOWER COLORADO RIVER BUFF WARE</th>
<th>TIZON BROWN WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>100.</td>
<td></td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>GP 2</td>
<td>4.</td>
<td>92.</td>
<td>4.</td>
<td>25</td>
</tr>
<tr>
<td>GP 4</td>
<td>4.2</td>
<td>95.8</td>
<td></td>
<td>24</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2.7</td>
<td>95.9</td>
<td>1.4</td>
<td>73</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA M:7

<table>
<thead>
<tr>
<th>SITES</th>
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<tr>
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<tr>
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<td>37.</td>
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</table>
It was originally reported to be 50% Yuman and 50% "Black-on-grey."\(^1\) The hypothesis that this site was occupied solely by Hualapais prior to their conquest cannot be rejected.

c. G.1' Arizona N : 7 : 4

The low reliability sherd sample contains 95.8% Tizon Brown Ware, with scant evidence of trade with the Amacava Branch on the lower Colorado River. Again, the site first was classified 50% Yuman and 50% "Black-on-grey."\(^2\) However, the hypothesis that this site was used and occupied solely by Hualapais prior to their conquest cannot be rejected.

2. Summary

Only three ceramic sites have been recorded from this 15' quadrangle—all three very clearly Hualapai sites, used and occupied exclusively by that tribe prior to its conquest by Anglo-Americans. Therefore, the hypothesis that no other tribe than the Hualapais ever established a permanent encampment in or used or occupied any part of this quadrangle is accepted.

CC. 15' Quadrangle Arizona M : 8

Tizon Brown Ware constitutes 51.8% of the recorded sherds from sites known in this quadrangle covering the pro-plateau just north of Burro Creek. Prescott Gray Ware evidencing a

\(^1\) Gladwin & Gladwin, 1930, p. 149.

\(^2\) Ibid.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona M : 8 in color.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE ARIZONA M:8

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<th>S.F. Mt.</th>
<th>SAN</th>
<th>UNI-</th>
<th>RIVER</th>
<th>BUFF</th>
<th>BROWN</th>
<th>WIRED</th>
<th>GRAY</th>
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### CERAMIC ANALYSIS BY TYPES OF SITES IN 15° QUADRANGLE ARIZONA M:8

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<th>Verde</th>
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pre-Hualapai occupation of the region prior to about 1300 A.D. amounts to 44.2% of the total sample.

CHARACTERISTICS OF SITES IN 15' QUADRANGLE ARIZONA M: 8

<table>
<thead>
<tr>
<th>SITES</th>
<th>Rock Shelter</th>
<th>Open Camp</th>
<th>Masonry</th>
<th>Stone Crushing</th>
<th>Meta- Bed- Rock Slabs</th>
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</tbody>
</table>

1. Site Analysis

a. Arizona M : 8 : 1

The low reliability sherd sample contains 89.5% Tizon Brown Ware at this spring on the mesa above Boulder Creek. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected.

There are some wiped sherds here of the type identified as Havasupai, although it seems unreasonable that Havasupai pottery should be imported by Hualapais toward the southern range of the tribe. So it appears possible that these sherds
are accidental products of Hualapai vessel finishing, or possibly Yavapai trade ware.

b. Gila Pueblo's
Arizona N : 8 : 1

The low reliability sherd sample contains 88% Tizon Brown Ware, although originally reported as 50% Yuman and 50% "Black-on-grey." ¹/ Therefore, the hypothesis that this site was used and occupied exclusively by Hualapais prior to their conquest cannot be rejected. A couple of indented sherds of Tizon Brown Ware also occur in the collections which may possibly represent Yavapai trade.

c. Gila Pueblo's
Arizona N : 8 : 2

This low reliability sherd sample includes 95.8% Tizon Brown Ware despite having been reported to be 100% "Black-on-grey." ²/ Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected.

d. Gila Pueblo's
Arizona N : 8 : 3

The low reliability sherd sample contains 91.7% Tizon Brown Ware, although first reported as 100% "Black-on-grey." ³/ Therefore, the hypothesis that this site was used and occupied

¹/ Gladwin & Gladwin, 1930, p. 150.
²/ Ibid.
³/ Ibid.
exclusively by Hualapais prior to their conquest cannot be rejected.

e. N. A. 5826

The fairly reliable sample has 66.7% Prescott Gray Ware, the other third being Tizon Brown Ware. This site was occupied by Prescott Branch Indians in early times. But the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to their conquest cannot be rejected.

f. N. A. 5827

The low reliability sherd sample contains 48% Tizon Brown Ware and 36% Prescott Gray Ware. Deadmans Black-on-Red, which was produced from about 775 to 1060 A. D. \(^1/\) was imported by the earlier residents—Indians of the Prescott Branch—and gives an indication of the time of their presence. Inasmuch as the Prescott ceramic tradition is not known after approximately 1300 A. D., the hypothesis that the site was occupied and used exclusively by Hualapais from time immemorial to their conquest cannot be rejected.

g. N. A. 5828

The sherd sample is one Tizon Brown Ware sherd from this "fort" so about all that can be said is that the hypothesis that this site was used solely by Hualapais cannot be rejected.

---

\(^1/\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
This unreliable sherd sample is entirely Prescott Gray Ware. Since this prehistoric ware is not known to have been made after about 1300 A.D., the site does not enter into determination of Hualapai territory after that date.

The low reliability sherd sample contains 70% Tizon Brown to 30% Prescott Gray Ware. The latter not being known to have continued in production past 1300 A.D., the hypothesis that this masonry structure was used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

The reliable sherd sample is entirely Prescott Gray Ware at this probable pit-house adjacent to the masonry structure just mentioned. Therefore, this site does not enter into determination of Hualapai territory. This structure was probably occupied many centuries before 1300 A.D., judging from the pit-house to pueblo sequence excavated at Kings' Ruin.

The low reliability sherd sample contains 73.1% Tizon Brown Ware with 26.9% Prescott Gray Ware. Evidently a Prescott branch occupation prior to 1300 A.D. preceded a later Hualapai utilization of the site. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from
time immemorial until their conquest cannot be rejected.

2. Summary of Arizona M : 8

Analysis of eleven ceramic sites known in this 15' quadrangle reveals five of them to have been occupied and used exclusively by Hualapais. Three more were utilized only by Hualapais after 1300 A. D., but were inhabited prior to that by Indians of the Prescott Branch, and one was inhabited intensively by that group with a little later Hualapai occupation. In other words, nine of the eleven sites were used exclusively by Hualapais from time immemorial to conquest. Two others once inhabited by Prescott Branch Indians seem not to have been occupied at all after that time.

Therefore, the hypothesis that 15' Quadrangle Arizona M : 8 was used and occupied exclusively by Hualapais from time immemorial to their conquest cannot be rejected. Furthermore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area from time immemorial to conquest cannot be rejected either.

DD. 15' Quadrangle Arizona M : 12 North of Santa Maria River

Tizon Brown Ware constitutes 80.5% of the sherds recorded from sites in that portion of this quadrangle located north of the south bank of the Santa Maria River. (This quadrangle lies immediately east of the junction of the Santa Maria with
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle M: 12 to the South Bank of the Santa Maria River in color.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA M:12

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<th>TIZON BROWN WARE</th>
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### CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA M:12

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<td><strong>.7</strong></td>
<td><strong>1.</strong></td>
<td><strong>78.2</strong></td>
<td><strong>10.2</strong></td>
<td><strong>8.2</strong></td>
</tr>
</tbody>
</table>
the Big Sandy to form Bill Williams Fork.) Since the Santa Maria forms essentially the boundary between the mountainous uplands and the lowland desert, flowing at the base of the former, the area under consideration is the southwesternmost part of the plateau front.

The second most abundant ware, Prescott Gray Ware, makes up 18.4% of the sherds and evidences a pre-Hualapai Prescott Branch occupation in this region.

Conclusion: The hypothesis that this 15' quadrangle was occupied and used exclusively by Hualapais from time immemorial to Anglo-American conquest is accepted.

1. Site Analysis

a. N. A. 5820

The unreliable sherd sample from this site near the Santa Maria contains 87.5% Tizon Brown Ware. Therefore, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected. The remainder of the sample is Prescott Gray Ware indicating a pre-1300 A. D. occupation.

b. N. A. 5820 A

The unreliable sherd sample is entirely Prescott Gray Ware. Therefore, this site has no bearing on the determination of Hualapai territorial from time immemorial, although it does demonstrate a pre-1300 A. D. Prescott Branch occupation here.
c. N. A. 5821

The unreliable sherd sample is entirely Tizon Brown Ware, so that the hypothesis that this site was occupied and used exclusively by Hualapais until conquest cannot be rejected.

d. N. A. 5821 A

The unreliable sherd sample is entirely Tizon Brown Ware, so the hypothesis the site was utilized solely by Hualapais prior to their conquest cannot be rejected.

e. N. A. 5822

The reliable sherd sample contains 60% Tizon Brown Ware and the other 40% of the sherds are Prescott Gray Ware. This appears to be a site occupied at some period prior to 1300 A. D. by Prescott Branch Indians and at a later date by Hualapais who came into this region. The hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

f. N. A. 5823

The very reliable sherd sample includes 93.1% Tizon Brown Ware, Prescott Gray Ware amounting to only 6% of the total. Therefore, the hypothesis that this site was used and occupied exclusively by Hualapais from time immemorial to conquest is accepted.

g. San Diego's A-20

The reliable sherd sample has 92.5% Tizon Brown Ware,
with Mohave and Prescott Branch sherds present. The hypothesis that the site was occupied solely by Hualapais prior to their conquest is accepted.

2. Summary

Seven ceramic sites have been analyzed in the 15' Quadrangle Arizona M: 12. One of these is a pure Prescott Branch site evidencing pre-Hualapai Prescott Branch occupation in this upland frontier region. Four sites show evidence of the Prescott Branch Indians—whether of occupation or trade in ceramics is not clear—and two are pure Hualapai sites. This area has clearly been used and occupied only by Hualapais from time immemorial.

Therefore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle north of the south bank of the Santa Maria River prior to Anglo-American conquest is accepted.

3. Hualapai Exterior Limits

Within this quadrangle, the Petition claims that the area in which Hualapais enjoyed "sole and undisputed use, occupancy and possession" was bounded by "a line along the ridge dividing the watersheds of said Burro Creek and said Santa Maria River."¹ On the basis of evidence just presented, the hypothesis that the territory north of this line was indeed owned exclusively by Hualapais cannot be rejected.

¹ Marks, 1951, p. 3-4.
However, the hypothesis that this line correctly bounds on the south the territory owned exclusively by Hualapais must be rejected on the basis of the ceramic evidence just presented. The Hualapais exclusively owned, used, occupied and possessed territory both north and south of the line described in the Petition. The bounds of sole Hualapai territory in truth extended at least to the south bank of Santa Maria River in this quadrangle.

The hypothesis which best takes into account evidence available states that the territory exclusively owned, used and occupied by Hualapais was bounded prior to conquest on the south in 15' Quadrangle Arizona M : 12 by a line a few hundred yards south of the Santa Maria River. It is probable that Hualapai territory extended somewhat farther south, but since no sites are yet recorded away from the river to the south, this cannot be stated without any base in evidence.

EE. 15' Quadrangle Arizona H : 9

Ceramic evidence is scarce in this area, aside from the pre-1150 A. D. Cohonina occupation with barely a trace of Hualapai pottery. The best ceramic evidence for Hualapai land use in Arizona H : 9 quadrangle is the more abundant Tizon Brown Ware found in 15' Quadrangle Arizona H : 10 just to the east.

1. Site Analysis

a. N. and E. of the Escarpment
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 9 in color.
CHARACTERISTICS OF SITES IN 151 QUADRANGLE ARIZONA H : 9

<table>
<thead>
<tr>
<th>SITES</th>
<th>Lime- Manufac- Stone</th>
<th>Rock Shelt-ing Flakes</th>
<th>Sink Artifact Slabs</th>
</tr>
</thead>
<tbody>
<tr>
<td>H:9:1</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>H:9:2</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>NA3432</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>NA3438</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>NA3439</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>NA3440a</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA3440b</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY WARES OF SITES IN 151 QUAD. ARIZONA H:9

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON PRESCOTT BROWN GRAY WARE</th>
<th>SAN FRANCISCO MOUNTAIN GRAY WARE</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA3438</td>
<td>100.</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>NA3440b</td>
<td>50.</td>
<td>50.</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>22.2</td>
<td>22.2</td>
<td>55.5</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 151 QUAD. ARIZONA H:9

<table>
<thead>
<tr>
<th>SITES</th>
<th>Cer- bat Brown</th>
<th>Aquar- is Brown</th>
<th>Aquar- is Orange</th>
<th>Deadmans Red</th>
<th>Kirk- land Gray</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA3438</td>
<td>40.</td>
<td>60.</td>
<td>6</td>
<td>11.1</td>
<td>11.1</td>
<td>33.3</td>
</tr>
<tr>
<td>NA3440b</td>
<td>25.</td>
<td>25.</td>
<td>50.</td>
<td>22.2</td>
<td>22.2</td>
<td>33.3</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>11.1</td>
<td>11.1</td>
<td>22.2</td>
<td>22.2</td>
<td>33.3</td>
<td>9</td>
</tr>
</tbody>
</table>
Above the Aubry Cliff escarpment and north of a line from the south end of that cliff to Mt. Floyd two ceramic sites are available for analysis.

i. N. A. 3438

The unreliable sherd sample is entirely San Francisco Mountain Gray Ware from a pre-1150 A. D. Cohonina Branch occupation, so the site doesn't enter into determination of Hualapai territory from time immemorial.

ii. N. A. 3440b

The unreliable sherd sample is half unaltered Tizon Brown Ware and half Prescott Gray Ware—only enough to indicate Hualapais and Prescott Branch Indians were here, the latter before 1300 A. D. and the Hualapais after that date.

iii. Summary

Ceramic evidence indicates the presence of Hualapais above the escarpment. Oral tradition extends Hualapai land use a short distance across the plateau from the Round Mountain and Mt. Floyd mountain landmarks. The hypothesis that Hualapais used this plateau region cannot be rejected. However, oral tradition makes plain that Havasupais also shared it, although ceramic evidence for their utilization is as yet unrecorded. Neither tribe enjoyed sole use of this area above the escarpment.

b. Below the Escarpment

Below the Aubrey Cliffs and south of the line from their
southern end to Mt. Floyd lay the area Hualapai oral tradition claims to have been occupied and used exclusively by them. No ceramic sites have been recorded in this area, only four non-ceramic stations. Three of these were visited under the guidance of Hualapais who have occupied them within their own lifetimes, and who could still explain the use to which they had been put. Rock tanks furnished water for the users of these sites. Thus, the hypothesis that this area below the escarpment was occupied and used solely by Hualapais prior to Anglo-American settlement cannot be rejected.

2. Conclusion

In this area, the Hualapai land use and conceptual boundaries seem almost to coincide—also the Petition boundary. The latter states the bounds of territory occupied and used exclusively by Hualapais to have been a line "southeast and south on a line passing along the Aubrey Cliffs, through Round Mountain and Mount Floyd (the western edge of the watershed of Cataract or Havasu Creek)..." On the basis of extremely scanty archaeological evidence, and fairly definite oral traditions of the Hualapais and Havasupais, the hypothesis that the Petition correctly described the limits of lands used and occupied solely by Hualapais in this 15° quadrangle cannot be rejected.

1/ Marks, 1951, p. 3.
Hualapai land use extended somewhat beyond their exclusively used and occupied territory into lands shared with Havasupais beyond their common conceptual frontier. One of the specialized uses made of this shared territory was to obtain rock for making stone implements from a small hill just north of Mount Floyd called Kwasoo Kame. This term has been transferred to iron since contact, supposedly because of the resemblance of the substances. (FM May 26 p 7) The stone from this hill is said to "rust" like iron, that is, it rapidly patinates after chipping. It was shown to living Hualapais by their elders as a still important place.

Unaltered Tizon Brown Ware constitutes just about half of the sherds known from sites recorded in this quadrangle. Wiped Havasupai sherds are only 3.7% of the total, the bulk of the remainder being San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch occupants of the plateau. The sites from which evidence is available are located on the south side of Mount Floyd, so the hypothesis that the area

\[1/\] Indian Claims Comm., 1953, p. 171. (CA)
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H: 10 South of Crest of Mount Floyd is in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA H:10

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON</th>
<th>TIZON PRES-</th>
<th>S. F. TUSAYAN</th>
<th>TUSAYAN</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BROWN</td>
<td>WIRED COTT</td>
<td>GRAY WARE</td>
<td>GRAY WARE</td>
<td></td>
</tr>
<tr>
<td>NA5746</td>
<td>42.9</td>
<td>5.4</td>
<td>5.4</td>
<td>42.9</td>
<td>1.8</td>
</tr>
<tr>
<td>NA5747</td>
<td>50.</td>
<td>50.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD A-5</td>
<td>80.</td>
<td>13.3</td>
<td>6.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>50.6</td>
<td>3.7</td>
<td>6.2</td>
<td>37.1</td>
<td>1.2</td>
</tr>
</tbody>
</table>

CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA H:10

<table>
<thead>
<tr>
<th>SITES</th>
<th>Cerbat Aquarius</th>
<th>Aquarius Brown</th>
<th>Brown Black-on Wiped</th>
<th>Orange Black-on -Gray -White</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA5746</td>
<td>30.4</td>
<td>7.1</td>
<td>5.4</td>
<td>5.4</td>
<td>1.8</td>
</tr>
<tr>
<td>NA5747</td>
<td>40.</td>
<td>10.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD A-5</td>
<td>60.</td>
<td>20.</td>
<td></td>
<td></td>
<td>13.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37.</td>
<td>9.9</td>
<td>3.7</td>
<td>3.7</td>
<td>6.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SITES</th>
<th>Dead-</th>
<th>Deadmans</th>
<th>Deadmans</th>
<th>Kirk-</th>
<th>Mount</th>
<th>Tusayan</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black-on</td>
<td>Fugitive</td>
<td>Land</td>
<td>Floyd</td>
<td>Corru-</td>
<td>Sherd</td>
<td></td>
</tr>
<tr>
<td>Gray</td>
<td>Gray</td>
<td>Red</td>
<td>Gray</td>
<td>Brown</td>
<td>gated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NA5746</td>
<td>16.1</td>
<td>1.8</td>
<td>14.3</td>
<td>10.7</td>
<td>1.8</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>NA5747</td>
<td>20.</td>
<td>30.</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>SD A-5</td>
<td>6.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>11.1</td>
<td>1.2</td>
<td>9.9</td>
<td>11.1</td>
<td>3.7</td>
<td>1.2</td>
<td>81</td>
</tr>
</tbody>
</table>
in 15' Quadrangle Arizona H : 10 south of the crests of Mount Floyd was used and occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

1. Site Analysis

a. N. A. 5746

The reliable sherd sample has 42.9% unaltered Tizon Brown Ware to only 5.4% wiped Havasupai—an 8:1 ratio in favor of the Hualapais. Most of the rest of the sample is San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch Indians. A sherd of Deadmans Black-on-White, a type made between about 875 and 1130 A. D. indicates trade relations between the Cohonina and the Kayenta-Hopi Branch Indians farther east. Therefore, the hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

b. N. A. 5747

The unreliable sherd sample is half unaltered Tizon Brown Ware and half San Francisco Mountain Gray Ware from the pre-1150 A. D. Cohonina Branch occupation of this plateau. Therefore, the hypothesis that this site was used and occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

c. San Diego's A - 5

The unreliable sherd sample contains 80% unaltered Tizon Brown Ware with no Havasupai style sherds. The remainder is

1/ McGregor, 1941, p. 377.
debris from the Cohonina Branch occupation and the Prescott Branch Indians. The hypothesis that this site was occupied and used solely by Hualapais from time immemorial to their conquest by Anglo-Americans cannot be rejected.

2. Conclusion

Analysis of three ceramic sites located in 15' Quadrangle Arizona H : 10 south of the crests of Mount Floyd shows that all three were apparently occupied and used solely by Hualapais from sometime after 1150 A.D. Before that, the prehistoric Cohonina Branch Indians had lived at these sites. Havasupai-produced sherds were found at only one of these sites.

Therefore, on the basis of available ceramic evidence, the hypothesis that the area south of the Mount Floyd crests was occupied and used exclusively by Hualapais from time immemorial cannot be rejected. Furthermore, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area from time immemorial to conquest cannot be rejected.

In this area, the Petition described the bounds of territory used and occupied solely by Hualapais as "on a line passing through the Aubrey Cliffs, through Round Mountain and Mount Floyd (the western edge of the watershed of Cataract or Havasu Creek), west of Ash Fork..." The evidence just presented

1/ Marks, 1951, p. s.
indicates that the hypothesis that the Petition correctly described the eastern limits of territory occupied and used solely by Hualapais in 15' Quadrangle Arizona H : 10 cannot be rejected.

GG. 15' Quadrangle Arizona H : 13

Unaltered Tizon Brown Ware constitutes 56.6% of the sherd sample from this 15' quadrangle located on the plateau south of Seligman toward Walnut Creek. Second most abundant ware is the San Francisco Mountain Gray Ware of the Cohonina Branch Indians who inhabited this upland region prior to about 1150 A. D. The other wares found also date primarily from this earlier occupation.

1. Site Analysis

   a. Gila Pueblo's Chino : 13 : 1

   , The reliable sherd sample is 64.7% unaltered Tizon Brown Ware, and the remainder of the sherds are from tradeware vessels imported from the Kayenta-Hopi Branch over a considerable period of prehistory. Tusayan Black-on-Red was made from about 965 to 1130 A. D.¹/ and the related Tusayan Polychrome from about 1150 A. D. to 1275 A. D.²/ at about the same

¹/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
²/ Colton, 1953, p. 75.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 13 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA

H : 13

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON BROWN WARE</th>
<th>TIZON GRAY WARE</th>
<th>PRESCOTT GRAY WARE</th>
<th>PRESCOTT MOUNTAIN GRAY WARE</th>
<th>TSEGI ORANGE WARE</th>
<th>TUSAYAN WHITE WARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>64.7</td>
<td></td>
<td></td>
<td></td>
<td>7.8</td>
<td>25.5</td>
</tr>
<tr>
<td>GP 2</td>
<td>54.2</td>
<td></td>
<td></td>
<td></td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>GP 3</td>
<td>25.5</td>
<td>21.6</td>
<td></td>
<td>27.5</td>
<td>9.8</td>
<td>7.8</td>
</tr>
<tr>
<td>GP 4</td>
<td>35.0</td>
<td>22.5</td>
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<td>27.5</td>
</tr>
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<tr>
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<td></td>
<td></td>
<td>30.3</td>
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<td>4.5</td>
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<tr>
<td>NA 5829</td>
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<td>26.7</td>
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</tr>
<tr>
<td>TOTAL :</td>
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<td>6.7</td>
<td>16.5</td>
<td>5.1</td>
<td>10.4</td>
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<table>
<thead>
<tr>
<th>SITES</th>
<th>TUSAYAN GRAY WARE</th>
<th>ALAMEDA BROWN WARE</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP 1</td>
<td>2.0</td>
<td></td>
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<td>51</td>
</tr>
<tr>
<td>GP 2</td>
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<td>24</td>
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<tr>
<td>GP 3</td>
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<td>GP 4</td>
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<td>51</td>
</tr>
<tr>
<td>GP 5</td>
<td></td>
<td></td>
<td>2.0</td>
<td>50</td>
</tr>
<tr>
<td>NA 824</td>
<td>1.5</td>
<td>6.1</td>
<td></td>
<td>66</td>
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<td>NA 5829</td>
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<td>15</td>
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<td>TOTAL :</td>
<td>8.4</td>
<td>.3</td>
<td>2.0</td>
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</tbody>
</table>
### Ceramic Analysis by Types of Sites in 15' Quadrangle Arizona H:13

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Brown</td>
<td>ius</td>
<td>ius</td>
<td>ius</td>
<td>ius</td>
<td>Black</td>
<td>Yan</td>
<td>言行</td>
<td>mans</td>
<td>mans</td>
<td>Gray</td>
<td>mans</td>
<td>mans</td>
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<tr>
<td>GP 1</td>
<td>17.7</td>
<td>43.1</td>
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<td>3.9</td>
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<td></td>
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<td>51.3</td>
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</tr>
<tr>
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<td>16.7</td>
<td>5.9</td>
<td>7.8</td>
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<td>5.9</td>
<td>5.9</td>
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<td>GP 3</td>
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<td>12.5</td>
<td>7.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GP 4</td>
<td>20.0</td>
<td>5.9</td>
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<td>42.0</td>
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<td></td>
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<td></td>
</tr>
<tr>
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<td>4.5</td>
<td>73.3</td>
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#### TOTAL: .7 .3 1.0 2.4 5.1 .7 .3 297
time as Tusayan Black-on-White, which was produced from perhaps 1225 to 1300 A.D.\footnote{Colton & Hargrave, 1937, p. 214.} Although the Tizon Brown Ware sherds do not reach the 70% level of significance of cultural predominance employed in this study, they do satisfy Colton's 60% level. Furthermore, the non-Hualapai sherds are all derived from ancestors of the modern Hopies living at a considerable distance to the east.

To suppose that Kayenta Branch Indians were living at this site requires hypothesizing that they held non-contiguous territories, an explanation consistently rejected in this study as inconsistent with the nature of Indian land tenure. Therefore, the hypothesis that this site was used and occupied solely by Hualapais prior to conquest cannot be rejected.

b. Gila Pueblo's Chino : 13 : 2

The low reliability sherd sample has 54.2% unaltered Tizon Brown Ware and another third San Francisco Mountain Gray ware left here before 1150 A.D. by the prehistoric Cohonina Branch Indians. The hypothesis that the site was used solely by Hualapais after that date cannot be rejected.

c. Gila Pueblo's Chino : 13 : 3

The reliable sherd sample has only 25.5% unaltered Tizon Brown Ware, but no altered Havasupai type sherds were
recovered. The most abundant ware is San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch occupants of the plateau, but it bulks scarcely larger than the Hualapai sherds. Prescott Gray Ware is only slightly less important. A number of decorated sherds from vessels imported from the Kayenta-Hopi Branch to the east indicate dates of occupation of this site. Kana-a Black-on-White was made from about 700 to 900 A. D. 1/ At a somewhat later period Tusayan Black-on-Red was being produced, between perhaps 965 and 1130 A. D. 2/ and Tusayan Polychrome from about 1150 to 1275 A. D. 2/ Contemporaneously with this latter type, Flagstaff Black-on-White was also being made, from about 1120 to 1225 A. D. 4/ This was followed by Hoyapi Black-on-White, in production from around 1275 to 1350 A. D. 5/

Thus the imported vessels indicate continuous occupancy of this site from sometime before 900 A. D. until sometime after 1275 A. D., or at least 375 years. Actually the occupation was probably considerably longer—or the occupations, properly speaking. For perhaps three tribal groups have inhabited this site in ceramic times. First, the Cohonina

1/ Colton, 1953, p. 75.
2/ McGregor, 1951, pp. 20, 32; Tolton, 1953, p. 75.
3/ Colton, 1953, p. 75.
4/ Colton, 1946, p. 251; 1953, p. 75.
5/ Colton, 1953, p. 75.
Branch Indians from before 900 to around 1150 A. D. Second, Prescott Branch Indians making Verde Black-on-Gray pots during the period of Tusayan Polychrome production after 1150 to 1275 A. D. and possibly slightly later as indicated by Hoyapi Black-on-White. Third, the Hualapais coming into the area after 1300 A. D.

The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot be rejected since all the non-Hualapai ceramic remains date from before Hualapai entry into this section of the plateau, and no evidence of modern Indians other than Hualapais was collected.

d. Gila Pueblo's Chino : 13 : 4

The fairly reliable sherd sample has 35% unaltered Tizon Brown Ware, with the bulk of the sherds from the pre-1300 pre-Hualapai occupation of the plateau, largely imported Kayenta-Hopi Branch trade pieces. Prescott Branch Verde Black-on-Gray indicates occupation by this group of prehistoric Indians in the roughly 1150 to 1275 period.\(^1\) These Indians were importing Tusayan Black-on-White from the ancestors of the Hopis around 1225 to 1300 A. D.\(^2\)

\(^1\) Based on association with Tusayan Polychrome of these dates (Colton, 1953, p. 75) in Mr. Euler's tests in Nha Ha' Vo. Tusayan Polychrome was also imported to this site.

\(^2\) Colton & Hargrave, 1937, p. 214.
Of an earlier date are sherds of Sosi Black-on-White, which was being made from 1070 to 1150 A. D.\(^1\) and Deadmans Black-on-White, made from 875 to 1130 A. D.\(^2\) These types were probably imported by resident Cohoninas making small amounts of their own San Francisco Mountain Gray Ware.

However, the hypothesis that this site was occupied and used solely by Hualapais from time immemorial to conquest cannot be rejected, since ceramic evidence of no other modern trade was recovered.

e. Gila Pueblo's

China: 13: 5

The fairly reliable sherd sample is 98% unaltered Tizon Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest by Anglo-Americans cannot be rejected.

f. N. A. 824

The reliable sherd sample is slightly over half unaltered Tizon Brown Ware, with San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch Indians making up the bulk of the remainder. Tusayan Black-on-Red tradeware, made from about 965 to 1130 A. D.\(^2\) was imported by these pre-Hualapai

\(^{1/}\) Colton, 1953, p. 75.

\(^{2/}\) McGregor, 1941, p. 377.

\(^{3/}\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
inhabitants of the plateau. A somewhat later occupation, perhaps Hualapai, is indicated by presence of imported Tusayan Black-on-White dating from around 1225 to 1300 A.D. The hypothesis that this site was used and occupied solely by Hualapais after 1150 A.D. cannot be rejected, since evidence of no other modern Indian group was recovered.

The unreliable sherd sample contains 73.3% unaltered Tizon Brown Ware, the remainder San Francisco Mountain Gray Ware of the pre-1150 A.D. Cohonina Branch plateau inhabitants. The hypothesis that the site was occupied and used solely by Hualapais after about 1150 A.D. cannot be rejected.

2. Conclusion

Analysis of seven ceramic sites recorded from 15' Quadrangle Arizona H : 13 demonstrated that there was a Cohonina Branch Indian population inhabiting this part of the plateau before 1150 A.D. which was apparently followed by a brief Prescott Branch occupation sometime prior to 1300 A.D. After approximately 1300 A.D., the area was taken over by the Hualapais. The hypothesis that this quadrangle was occupied and used solely by Hualapais from about 1300 A.D. and prior to their conquest by Anglo-Americans cannot be rejected. Nor can the hypothesis that no tribe other than the Hualapai ever

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
established a permanent encampment in or used or occupied this quadrangle be rejected.

HH. 15' Quadrangle Arizona H : 14

Unaltered Tizon Brown Ware constitutes 43% of the sherds recovered from known sites in this quadrangle. San Francisco Mountain Gray Ware of the prehistoric Cohonina Branch Indians is the next most abundant ware, and the bulk of the other sherds date from the pre-Hualapai occupation of the area. Only 2.4% of the total is wiped Havasupai type Tizon Brown Ware.

1. Site Analysis

a. Gila Pueblo's Chino : 14 : 1

The fairly reliable sherd sample is 72% unaltered Tizon Brown Ware. The Prescott Gray Ware recovered probably indicates a Prescott Branch occupation of this site sometime before about 1300 A. D. Verde Black-on-Gray apparently dates from about 1150 to 1275 A. D.\(^1\) Flagstaff Black-on-White was imported to this site during somewhat the same period--this type having been made from about 1120 to 1225 A. D.\(^2\) and Deadmans Black-on-White even earlier, between perhaps 875

\(^1\) The period of production of Tusayan Polychrome (Colton, 1953, p. 75) with which it was found in Wha Ha' Vo.

\(^2\) Colton, 1946, p. 251, 253.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 14 in color.
CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA

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<th>TIZON WIPED WARE</th>
<th>PRESCOTT GRAY WARE</th>
<th>SAN JUAN RED WARE</th>
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| SITES | Deadmans Deadmans Kirkland Floyd Tusayan Kana-a Black Mesa Deadmans |
|-------|---------------------------------------------------------------|------|--------|-----------------|-----------------|-----------------|-----------------|
|       | Brown-on Fugitive Black-on Black White Black/ Black-on- Black-on- |
|       | -Gray Red -Gray /Gray Ware White White -White |
|       | GP 1 | 2. | 8.5 | 6.4 | 2.6 | 2.6 |
|       | NA 2149 | | | | | |
|       | NA 2734 | | | | | |
|       | NA 3265 | | | | | |
|       | SD A-119 | | | | | |
|       | TOTAL | | | | | | |
|       | | 2.4 | 1.2 | 3.2 | 5.6 | 4.4 | 2.8 | 0.8 |

| SITES | Sosi Flagstaff Aquar- Verde Deadmans Tségi Tusayan Lino Uni- TOTAL |
|-------|---------------------------------------------------------------|------|--------|-----------------|-----------------|-----------------|-----------------|
|       | Black/ Black-on ius Black Black-on Black/ Black- Gray den- |
|       | White -White Orange /Gray -Red Orange on-Red ti- |
|       | GP 1 | 6. | 12. | 4. | | |
|       | NA 2149 | | | | | 50 |
|       | NA 2734 | 2.1 | | | | 47 |
|       | NA 3265 | 2.6 | 2.6 | 5.3 | 2.6 | 2.6 | 38 |
|       | SD A-119 | 6.3 | | 1.1 | 1.1 | 1.1 | 95 |
|       | TOTAL | 3.2 | 1.2 | 2.8 | 0.8 | 1.2 | 0.4 | 0.8 | 0.8 | 251 |
and 1130 A. D.\textsuperscript{1/}

There is no evidence that after the Hualapais took over the site any other tribe visited it. The hypothesis that it was occupied and used solely by Hualapais after about 1300 A. D. cannot be rejected.

b. N. A. 2149

The low reliability sherd sample is mostly San Francisco Mountain Gray Ware indicating primarily a Cohonina Branch occupation prior to about 1150 A. D. The Tizon Brown Ware and Lower Colorado River Buff Ware on the site are very minor in comparison, but the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

c. N. A. 2734

The fairly reliable sherd sample is only 36.2% unaltered Tizon Brown Ware compared to a mere 4.3% wiped Havasupai—an 81 to 1 ratio in favor of the Hualapais, indicating the site was used and occupied solely by them after about 1150 A. D. Most of the sherds are remains of a Cohonina Branch occupancy prior to that time, when Sosi Black-on-White was imported from the Kayenta-Hopi Branch Indians during its production from about 1070 to 1150 A. D.\textsuperscript{2/} Somewhat later on Tsegi Black-on-Orange, which was made from perhaps 1225 to 1300 A. D.\textsuperscript{3/} was

\textsuperscript{1/} McGregor, 1941, p. 377.
\textsuperscript{2/} Colton, 1953, p. 75.
\textsuperscript{3/} Colton & Hargrave, 1937, p. 95.
brought in to this site—perhaps by the first Hualapai inhabitants. Therefore, the hypothesis that this site was used and occupied solely by Hualapais from time immemorial to conquest cannot be rejected.

d. N. A. 3265

The fairly reliable sherd sample contains 47.4% unaltered Tizon Brown Ware compared to 10.5% interior wiped sherds, a 4:1 ratio in favor of the Hualapais if the latter are Havasupai. These altered sherds may be only a local Hualapai variant rather than Havasupai since the wiping is not on the exterior and so not necessarily intentional. Most of the rest of the sherds are San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch occupants of the plateau, or from vessels imported by them. The latter include Deadman's Black-on-White from the 875 to 1130 A. D. 1/ period and Sosi Black-on-White from around 1070 to 1150 A. D. 2/

Later on, perhaps during the initial Hualapai occupation, Tsegi Black-on-Orange was also brought here from the Kayenta-Hopi Branch, between perhaps 1225 and 1300 A. D. 3/ The hypothesis that this site was occupied and used solely by Hualapais after about 1150 A. D. cannot be rejected. The evidence

1/ McGregor, 1941, p. 377.
2/ Colton, 1953, p. 75.
3/ Colton & Hargrave, 1937, p. 95.
for Havasupais even trading vessels here is problematical, and the proportion of these sherds in the total low.

e. San Diego's A-119

The reliable sherd sample contains over a third unaltered Tizon Brown Ware, slightly less San Francisco Mountain Gray Ware of the pre-1150 A. D. Cohonina Branch Indians, and close to a third trade ware imported by them from the Kayenta-Hopi Branch to the east. Deadmans Black-on-Red was imported between about 775 and 1060 A. D. ¹/ and Tusayan Black-on-Red between about 965 and 1130 A. D. ²/ Black Mesa Black-on-White came in about the same period, between around 775 and 1100 A. D. ³/ as did Sosi Black-on-White, made from 1070 to 1150 A. D. ⁴/ Even earlier Kana-a Black-on-White had been imported—between 700 and 900 A. D. ⁵/

However, the hypothesis that this site was occupied and used exclusively by Hualapais after 1150 A. D. cannot be rejected.

2. Conclusion

Analysis of five ceramic sites known from 15' quadrangle

¹/ McGregor, 1951, p. 20, 32; Colton, 1953, p. 75.  
²/ Ibid., Ibid.  
³/ Ibid., Ibid.  
⁴/ Colton, 1953, p. 75.  
⁵/ Ibid.
Arizona H : 14 demonstrates that one was apparently occupied only by Cohonina Branch Indians prior to 1150 A. D., and the other four were inhabited both by the Cohonina of that period and since that time by the Hualapais. Only two sites show ceramic evidence of Havasupais, such a small proportion of the sherds in each case as to indicate resident Hualapais were trading in a few Havasupai pots (and at one site these sherds may actually by Hualapai) or rare Havasupai visits. The hypothesis that this quadrangle was used and occupied solely by Hualapais after 1150 A. D. cannot be rejected. Nor can the hypothesis that no tribe other than the Hualapai ever established a permanent encampment or used or occupied this area after that date be rejected.

II. 15' Quadrangle Arizona H : 15

Only one ceramic site is as yet recorded from this area, with a fairly reliable sherd sample which is about half and half unaltered Tizon Brown Ware and San Francisco Mountain Gray Ware. The latter is the debris of a pre-1150 A. D. occupation by Indians of the prehistoric Cohonina Branch, who imported Tusayan Black-on-Red vessels from the Kayenta-Hopi Branch to the east between about 865 and 1130 A. D.1/ But the hypothesis that the site was used and occupied solely by

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona H : 15 in color.
CERAMIC ANALYSIS BY WARES OF SITE IN 15' QUADRANGLE ARIZONA H:15

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON BROWN WARE</th>
<th>TSEGI ORANGE WARE*</th>
<th>SAN FRANCISCO MTN.GRAY WARE</th>
<th>TOTAL SHERDS</th>
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<tbody>
<tr>
<td>GP 1</td>
<td>49.</td>
<td>4.1</td>
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CERAMIC ANALYSIS BY TYPES OF SITE IN 15' QUADRANGLE ARIZONA H:15

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<td>40.8</td>
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<td>4.1</td>
<td>16.3</td>
<td>2.</td>
<td>28.6</td>
</tr>
</tbody>
</table>

* Tusayan Black-on-Red
Hualapais after that time cannot be rejected.

In this area, the Petition describes the eastern bounds of territory occupied solely by Hualapais as west of a line "through Round Mountain and Mount Floyd...west of Ash Fork, and east of Tucker Spring to a point on Walnut Creek approximately two miles west of its mouth..." The scant ceramic evidence of this site indicates that this description is reasonably accurate. The Hualapai conceptual frontier here follows the upper edge of the escarpment which runs in a U-shape around Ash Fork—a line from Mount Floyd east to the escarpment north of Ash Fork and following around as it curves southward and then westward to form the northern slope of the Black Mesa, and then to the twin butte Sanyawak Tovgan on the north side of Walnut Creek just above its junction with Chino Creek. The hypothesis that the Petition correctly describes the eastern limits of territory used and occupied exclusively by Hualapais should probably be rejected. The conceptual boundary lay east of Ash Fork a short distance rather than west of it, and the hypothesis that the conceptual frontier here coincided with the eastern limits of lands used solely by the Hualapais cannot be rejected on the available ceramic or traditional oral evidence.

\[1\] Marks, 1951, p. 3.
The limit of lands occupied solely by Hualapais should correctly be described as this line from Mount Floyd along the upper edge of the escarpment north of Ash Fork, east of it, and south of it on the north end of Black Mesa, thence in a line across Chino Valley to Sanyawak Tovgan, a twin butte on the north side of Walnut Creek about four miles above its junction with the Chino.

U. 15' Quadrangle Arizona N : 1

Tizon Brown Ware constitutes 77.6% of the known sherds from sites recorded in this 15' quadrangle which includes the Juniper Mountains, Walnut Creek and the hills between that stream and Williamson Valley. Since this exceeds the 70% level of significance of cultural predominance employed in this study, it is presumed that the hypothesis that the Hualapais enjoyed sole and undisputed use, occupancy and possession of this area until Anglo-American conquest can be accepted.

However, the Hualapais do not now claim to have held this entire area within historic time. Due to hostilities with the Northeastern Yavapai, they had apparently withdrawn from parts of it. They recognized as their frontier landmarks the north slope of Black Mesa to the east with a hypothetical line running to Sanyawak Tovgan on the north side of Walnut Creek at the western edge of Chino Valley, then to Koolchi Pawo', a conical hill farther upstream, then along
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15\textdegree_2 Quadrangle Arizona N : 1 in color.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15° QUADRANGLE ARIZONA N:1

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### SITES

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CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA N:1
Walnut Creek and through the rough mountains to Camp Wood Mountain and the spring Ha' Skwida at the Yolo Ranch headquarters. The Petition described the territory exclusively owned by Hualapais in this quadrangle as bounded by a line from a point "west of Ash Fork, and east of Tucker Spring to a point on Walnut Creek approximately two miles west of its mouth; thence west on a line passing along said Walnut Creek and turning southwest to the high ground dividing the headwaters of Burro Creek and the Santa Maria River."\(^1\)

1. Site Analysis

a. Gila Pueblo Sites

Unknown Provenience

1. Prescott : 1 : 2

The low reliability sherd sample contains 88.2\% Tizon Brown Ware. Trade ware vessels reaching this site from the Kayenta-Hopi Branch indicate that occupation began here many centuries ago. Tusayan Black-on-Red pottery was produced from around 965 to 1130 A.D.\(^2\) and Sosi Black-on-White vessels from about 1070 to 1150 A.D.\(^3\) Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

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\(^1\) Marks, 1951, p. 3.
\(^2\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
\(^3\) Colton, 1953, p. 75.
The low reliability sherd sample is entirely Tizon Brown Ware. Therefore, the hypothesis that the site was used solely by Hualapais prior to conquest cannot be rejected.

The very reliable sherd sample (subject to biasing by the method of selection of sherds to be preserved in Gila Pueblo collections) has Tizon Brown Ware for 39% and various Black-on-White types made by the Kayenta-Hopi Branch Indians constituting 41% of the total. The theory that prehistoric Hopis ever lived on this site would require positing that they held non-contiguous territories separated by a couple of hundred miles. Such a situation in aboriginal Indian societies is not reasonably expectable. Therefore, this site is taken to represent occupation by Indians importing a tremendous amount of pottery from Pueblos to their east. Among the types of vessels imported were Deadmans Black-on-Red which was produced between perhaps 775 and 1060 A.D. ¹/ and Tusayan Black-on-Red which was made from about 965 to 1130 A.D. ²/ The white ware types date from this same general period, as do the San Francisco Mountain and Tusayan Gray Ware sherds. All of these may well represent a pre-Hualapai

¹/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
²/ Ibid., Ibid.
occupation here prior to Hualapai arrival in the area at some date after 1150 A. D. (actually post-1300). The Tizon Brown Ware sherds probably date entirely from the post-1150 A. D. occupation.

Conclusion: The hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to Anglo-American conquest cannot be rejected.

iv. Prescott : 1 : 5

The low reliability sherd sample is of low reliability and 86.4% Tizon Brown Ware. Therefore, the hypothesis that this site was occupied and used exclusively by Hualapais until their conquest cannot be rejected. Here also the local Indians were importing Kayenta-Hopi vessels, specifically Tusayan Black-on-Red from the 965 to 1130 A. D. time period.¹

b. Sites on Eastern Face of Juniper Mountains

In the northern part of this 15' quadrangle is the massif of the Juniper Mountains, rising as a steep cliff parallel to Walnut Creek, but cut into an irregular jumble on its eastern front facing Black Mesa across Chino Valley.

i. Arizona N : 1 : 3

The sherd sample is very reliable and 91% Tizon Brown Ware. Therefore, the hypothesis that this site was used and

¹/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
occupied exclusively by Hualapais prior to their conquest is accepted.

Furthermore, this site at Cienega Springs was identified by Hualapais as one where their forebears resided, apparently into the last century until forced to pull back by Yavapai attacks—probably after the latter tribe acquired firearms and some military superiority over the Hualapais. The Hualapais continued to visit the site and spring in their seasonal round, especially to roast, mescal, gather pine nuts and hunt deer and other game which abounds in the area. The Yavapai visited the area only to raid the resident Hualapais, knowing full well that the latter regarded Walnut Creek as their effective military frontier.

Tusayan Black-on-Red sherds imported from the Kayenta-Hopi Branch Indians indicate that occupation of this site began prior to about 1130 A.D. when that type no longer was being made.\footnote{Colton, 1953, p. 75.} Sherds of San Francisco Mountain Gray Ware evidence this early occupation, perhaps by the Cohonina Branch Indians, although Prescott Branch ceramics are also found.

Farther down Cienega creek and to the north is this site with an unreliable sherd sample with 20% Tizon Brown Ware. It appears to be a small site dating from before
1150 A. D. with a sherd of Deadmans Black-on-White—a type made from about 875 to 1130 A. D.\(^1\)—and some San Francisco Mountain Gray Ware. There is also one sherd of Prescott Gray Ware. Due to the small sample and early date of the datable sherds, this site appears to pre-date Hualapai occupation of this region, but at any rate, the hypothesis that it was used solely by Hualapais from time immemorial cannot be rejected—if it was used at all after 1150 A. D.

iii. N. A. 825

The unreliable sherd sample at this site on Cienega Creek appears to denote another pre-1150 A. D. site antedating Hualapai entry into the area—probably a Cohonina camp.

Tizon Brown Ware is represented by a single sherd, San Francisco Mountain Gray Ware by four. The rest are imports from the Kayenta-Hopi Branch, and include Sosi Black-on-White which was made from probably 1070 to 1150 A. D.\(^2\) The site does not appear to have been occupied at any later period, hence does not furnish evidence as to Hualapai occupancy after 1150 A. D.

iv. Summary of the Cienega Creek Area

Analysis of three ceramic sites reveals two to be small camp sites most probably antedating 1150 A. D. and Hualapai

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\(^1\) McGregor, 1941, p. 377.

\(^2\) Colton, 1953, p. 75.
occupation of this area. The third is a known Hualapai site occupied into historic times and clearly Hualapai, ceramically speaking. Therefore, the hypothesis that the Cienega Creek area was occupied and used solely by Hualapais from time immemorial to conquest cannot be rejected.

c. Walnut Creek Valley

Walnut Creek and its arable bottom lands at one time supported a surprisingly large Indian population, judging from the number of prehistoric ruins built atop the bordering hills. These ruins prompted Lt. A. W. Whipple to name this "Pueblo Creek" in 1854. Modern Archaeologists have surveyed only a small sample of the sites in this area, and their temporal placement and cultural affiliations are imperfectly known.

i. Arizona N : 1 : 9

The only valley bottom site from which a ceramic collection is presently available is old Camp Hualapai where Hualapais seem to have camped either during the post-Hualapai War occupation of the camp by the army, or soon thereafter during the initial settlement of the valley by Anglo-Americans.

The low reliability sherd sample contains 48.2% Tizon Brown Ware. Another third seem to be the indented type of

1/ Foreman, 1941, p. 191.
Southern Paiute Utility Ware (possibly made by or obtained from refugee Shivwits living with the Pine Springs Band at the time this was a military post). A couple of Needles Red-on-Buff sherds show that Mohave trade ware reached this area all the way across Hualapai territory (and again verify the post-contact production of the type).

Inasmuch as this site appears to have been occupied only in post-conquest times, although beside a flowing stream, it does not enter into determination of Hualapai territory prior to Anglo-American conquest except by implication backward in time.

ii. Arizona N : 1 : 1

The sherd sample from this hilltop "fort" of mortarless masonry is very reliable and 93.7% Tizon Brown Ware. The site was occupied sometime between about 965 and 1130 A. D. when a Tusayan Black-on-Red vessel was traded in from the Kayenta-Hopi Branch Indians.\(^1\) Prescott Gray Ware is the second most abundant ware here, and the sherds display some convergence of Prescott and Tizon characteristics suggesting perhaps some influence of the earlier Prescott ware upon Hualapai Tizon Brown Ware.

Conclusion: The hypothesis that this site was occupied solely by Hualapais from time immemorial to conquest cannot

\(^1\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
be rejected, although it appears unlikely it was occupied for several centuries before conquest.

iii. Arizona N : 1 : 2

The sherd sample from another open site on this same hill is also very reliable with 77.9% Tizon Brown Ware. Prescott Gray Ware is here also the second most abundant ware, with the same convergence of ceramic characteristics as at N : 1 : 1. The hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected, although it appears unlikely this site was used for some centuries prior to conquest.

iv. Arizona N : 1 : 10

The sherd sample from Koolchi Pawo̱ or Indian Hill, a Hualapai frontier landmark in the period just prior to Anglo-American conquest, is very reliable. Tizon Brown Ware makes up 57.4% of the sample and Prescott Gray Ware 36.8%. Tusayan Black-on-Red pots from the Kayenta-Hopi Branch were imported by the Indians living in this mortarless stone masonry "fort" during perhaps 965 to 1130 A. D. \(^1\) time of that type's production. This site was obviously occupied by Prescott Branch Indians sometime before 1300 A. D. But the hypothesis that it was occupied solely by Hualapais from time immemorial cannot be rejected. The ceramic characteristics of Prescott Gray and

\(^1\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
Tizon Brown Wares converge in the sherds from this site as in others in Walnut Creek Valley so interpretation cannot as yet be absolutely certain.

v. N. A. 822

The sherd sample from "Shook's Fort" is reliable and 95.9% Tizon Brown Ware, so the hypothesis that it was used exclusively by Hualapais from time immemorial cannot be rejected.

vi. N. A. 826

The sherd sample from below Shook's Fort is fairly reliable with 67.5% Tizon Brown Ware. Second most abundant is San Francisco Mountain Gray Ware. Tusayan Black-on-Red type pots were imported from the Kayenta-Hopi Branch by the local Indians during the period of their manufacture between about 965 and 1130 A. D. 1/ Tusayan Black-on-White vessels were also imported, apparently between about 1225 and 1300. 2/

Conclusion: The hypothesis that this site was occupied exclusively by Hualapais from time immemorial until conquest cannot be rejected. However, probably only seasonal use of the location or none at all was made for several centuries prior to conquest.

vii. Summary of Walnut Creek Valley

The only valley floor site from which ceramic collections

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
are presently available seems to entirely post-date establishment of an army encampment on the spot during the Hualapai War of 1866-1869. It provides no evidence for determining Hualapai territory prior to their conquest.

Five hilltop sites, three of them mortarless stone masonry "forts" indicate that the prehistoric occupation of the valley based on creek-bottom agriculture fell primarily in the pre-1300 A. D. time range. Most of the trade ware on these sites is Tusayan Black-on-Red, which is thought not to have been produced after 1130 A. D., so most of the occupation seems to have ante-dated that, and at only one site does trade ware indicate a later date. After 1300 A. D. the "forts" do not seem to have been occupied—-at least, not by Indians importing any datable trade ware. Such use as the Hualapais may have made of them appears to have been seasonal and occasional.

Conclusion: The hypothesis that the Walnut Creek Valley was occupied and used solely by Hualapais from time immemorial until their conquest cannot be rejected on the basis of available evidence. On the other hand, this evidence does not indicate a very intensive land-use pattern in the valley in Hualapai times, in contrast to a fairly dense population of the area which must have been based upon creek-bottom agriculture in earlier times.
So far as the limits of exclusively owned Hualapai territory described in the Petition are concerned, the archaeological evidence provides little clarification. It principally raises a question as to possible linear relationship through time between Prescott Gray Ware and Tizon Brown Ware pottery making traditions which can be settled only through intensive excavation of sites over considerable territory. This technical ceramic question in any event does not enter into determination of the location of the Hualapais except at the earliest period of their occupancy of this region. The only light thrown upon the exterior limits of Hualapai territory is that there is no archaeological evidence for the presence in Walnut Creek Valley of any non-Hualapai group during the centuries preceding Anglo-American conquest.

The hypothesis that the area north of Walnut Creek was territory owned and used and occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

Nor can the hypothesis that the Petition description of the line delimiting such exclusive Hualapai territory in this area is correct be rejected.

d. Camp Wood Region

From Walnut Creek, the late prehistoric Hualapai frontier dropped southwest to the mountain landmark now known as Camp Wood Mountain, according to surviving Hualapais. The archaeology of this region closely resembles that of Walnut Creek Valley.
i. N. A. 823

The sherd sample from this "fort" is of low reliability with 96.7% Tizon Brown Ware. A Verde Black-on-Gray sherd indicates occupation sometime during the 1150 to 1275 A.D. time period. The hypothesis that this site was occupied and used exclusively by Hualapais from time immemorial to conquest cannot be rejected.

ii. N. A. 5782

The sherd sample from this "fort" is very reliable and 95.2% Tizon Brown Ware, so the hypothesis that it was used solely by Hualapais from time immemorial to conquest cannot be rejected.

iii. N. A. 5783

The fairly reliable sherd sample contains 78.9% Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

iv. N. A. 5784

The reliable sherd sample includes 92.7% Tizon Brown Ware so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected. A sherd of Jeddito Yellow Ware indicates that vessels of this type were being imported from the Kayenta-Hopi Branch Indians at

\[1/\] Based on association of this type with Tusayan Polychrome of those dates (Colton, 1953, p. 75) in Euler's excavations in Wha Ha' Vo cave.
some time during its production between 1300 and 1700 A. D. 1/
This is evidence of a later occupation than found in Walnut Creek Valley, and shows the Hualapais engaged in trade with the Hopis which they remember carrying on within historic time.

v. N. A. 5785

The very reliable sherd sample is all Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

vi. N. A. 5786

The very reliable sherd sample includes only 25% Tizon Brown Ware. Tusayan Gray Ware makes up 26.5% of the sherds and San Francisco Mountain Gray Ware 19.9% and Tusayan White Ware 22.1%. In other words, the ceramic characteristics of this site are so confused that no valid conclusions as to its cultural affiliations can be drawn. This site happens not to have been surveyed by a professional archaeologist, so there is a distinct possibility of selective collection of the sherd sample with a non-random emphasis upon unusual types. Painted sherds make up 29.4% of the sample, a far higher proportion of painted sherds than usually occurs in a random sample of sherds from sites in this area, and corrugated sherds comprise another 22.1% of the total.

1/ Colton, 1939, p. 27.
Occupation of this site obviously began at a fairly early date. Presence of a sherd of Deadmans Black-on-Red indicates its use sometime after about 775 and before 1060 A. D.\(^1\) Tusayan Black-on-Red, which was made from perhaps 965 to 1130 A. D.\(^2\) was also used here. So was Deadmans Black-on-White which was produced between 875 and 1130 A. D.\(^2\) and Sosi Black-on-White made from about 1070 to 1150 A. D.\(^4\) was too. Of somewhat later date was the production of Tusayan Black-on-White which occurs here in sherd form—about 1225 to 1300 A. D.\(^5\) There is no trade ware dating later than 1300, so the main occupation of the site appears to have been the pre-1150 A. D. utilization—perhaps by Cohonina Branch Indians.

However, the hypothesis that this site was occupied solely by Hualapais from time immemorial until conquest cannot be rejected.

vii. N. A. 5852

The fairly reliable sherd sample is entirely Tizon Brown Ware at this masonry site, so the hypothesis that it was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

\(^{1/}\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
\(^{2/}\) Ibid., Ibid.
\(^{3/}\) Ibid., Ibid.
\(^{4/}\) McGregor, 1941, p. 377.
\(^{5/}\) Colton, 1953, p. 75.
\(^{6/}\) Colton & Hargrave, 1937, p. 214.
viii. Summary of Camp Wood Area

Analysis of seven recorded sites in this region shows six to have been purely Hualapai in ceramics and the seventh to be so mixed ceramically as to indicate that the sherd sample is highly biased. Even at this site, the hypothesis that occupation and use were exclusively Hualapai from time immemorial to conquest cannot be rejected.

In regard to the statement of exterior limits of territory owned exclusively by Hualapais in the Petition, the archaeological evidence in this region indicates that it is correct. The Petition described exclusive Hualapai territory as bounded by a line "turning southwest to the high ground dividing the headwaters of Burro Creek and the Santa Maria River" from Walnut Creek. Camp Wood Mountain, which is the border landmark remembered by the Hualapais in this area, is part of this divide, and also between the drainage west to these streams and east to the Chino.

The sites just analyzed lie some three to five miles to the southeast of Camp Wood Mountain on the Chino or eastern side of the drainage divide--just north of the Santa Maria River headwaters. The ceramic evidence from these sites shows that Hualapai occupation at some period after 1300 A.D. and prior to Anglo-American conquest extended at least this

1 Marks, 1951, p. 3.
far beyond the mountain which became the frontier landmark in late prehistoric time. Nor is there archaeological evidence known of occupation in this area by any other Indian group prior to the conquest.

Conclusion: The hypothesis that the line described in the Petition as bounding the area occupied exclusively by Hualapais was correctly located cannot be rejected.

e. The Yolo Ranch Area

The Hualapais regarded the next landmark southwest of Camp Wood Mountain on the frontier of their exclusive territory to have been the spring Ha' Skwida where the headquarters of the Yolo Ranch are now located in Section 2 of Township 16 North, Range 7 West. This is near the head of the Burro Creek drainage. As a frontier landmark, it was known to Hualapais as far distant as the Milkweed Canyon area held by the Plateau People,¹/ and the Cerbat Mountain Whala Pa'a,²/ and the Pine Springs Band.²/

i. Arizona N : 1 : 4

The sherd sample from the Ha' Skwida Spring area is reliable and 68.1% Tizon Brown Ware. Prescott Gray Ware makes up 26.4% of the sample, indicating occupation of the area by

¹/ Indian Claims Comm., 1953, p. 178 (KC)
²/ Cohen & Barber, 1942, Exhibit J. (AS)
³/ Indian Claims Comm., 1950, p. 49. (JM)
the prehistoric Prescott Branch. However, pottery of this ware cannot be dated later than about 1300 A.D., so may be assumed to represent pre-Hualapai utilization of the spring. When this ware is eliminated from the sample, Tizon Brown Ware is 92.5% of the remainder. Therefore, the hypothesis that this spring was used and the area around it occupied exclusively by Hualapais from time immemorial until Anglo-American conquest cannot be rejected. Living Hualapais remember using this spring in continuation of the pre-contact pattern.

ii. Arizona N : 1 : 5

The very reliable sherd sample from this hill east of the spring has 75.3% Tizon Brown Ware. Prescott Gray Ware is 22.7% of the total, indicating a pre-Hualapai occupation in this area by the Prescott Branch. However, the hypothesis that the site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

iii. Arizona N : 1 : 6

The reliable sherd sample from a sherd area southwest of the spring contains 97.4% Tizon Brown Ware, so the hypothesis that the site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

iv. Arizona N : 1 : 7

The very reliable sherd sample from this mortarless masonry pueblo east of the spring appears to be 93.3% Tizon
Brown Ware, so the hypothesis that it was used solely by Hualapais cannot be rejected, although it would appear to be relatively early in date.

v. Arizona N : 1 : 8

The unreliable sherd sample is entirely Tizon Brown Ware so the hypothesis that the site was used solely by Hualapais prior to their conquest cannot be rejected.

vi. San Diego's A - 73

The unreliable sherd sample contains 61.5% Prescott Gray Ware to only 30.8% Tizon Brown Ware at this site east of the ones just discussed. It was occupied primarily by the pre-1300 Prescott Branch Indians, but also by Hualapais later on. The hypothesis that the site was used solely by Hualapais from time immemorial to their conquest cannot be rejected.

vii. Summary of Yolo Ranch Region

Analysis of six ceramic sites recorded in this area shows three are clearly Hualapai sites, two predominantly Hualapai since 1300 A. D., and most or all were Prescott Branch sites prior to that. It was concluded that the hypothesis that each site was used solely by Hualapais from time immemorial to conquest could not be rejected. In regard to the exterior limits of exclusively owned Hualapai territory drawn by the Petition in this area, the hypothesis that the Petition bounds are correct cannot be rejected.
2. **Conclusion**

Twenty-six ceramic sites recorded in 15' Quadrangle Arizona N : 1 have been analyzed. These sites are mostly located along the line claimed in the Petition to delimit exclusively owned and occupied Hualapai territory, so they provide evidence as to prehistoric Indian occupation and land utilization along this line. The analysis shows that the hypothesis that the line is correctly located cannot be rejected.

Hualapais remember the landmarks at the exterior limits of their exclusive territory at the end of the pre-contact period as being Sanyawak Tovgan and Koolchi Pawo on the north side of Walnut Creek, Camp Wood Mountain, and Ha Skwida. The Petition described the bounds of exclusive Hualapai territory prior to Anglo-American conquest as a line coming from the northeast "to a point on Walnut Creek approximately two miles west of its mouth; thence west on a line passing along said Walnut Creek and turning southwest to the high ground dividing the headwaters of Burro Creek and the Santa Maria River."\(^1\)

The available archaeological evidence from Arizona N : 1 shows that the Prescott Branch Indians apparently occupied most of the sites within this region prior to 1300 A.D. The evidence shows that after that date, Hualapais enjoyed sole and undisputed use, occupancy and possession of the area north

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\(^1\) Marks, 1951, p. 3.
and west of the bounds set forth in the Petition.

The Cienega Springs area lies back from the southern frontier, and was exclusively occupied by Hualapais. The Walnut Creek Valley along the frontier line was the scene of an intensive pre-1300 A. D. agricultural occupation followed by a seasonal Hualapai exploitation continuing into post-settlement times. Ceramically, it is entirely Hualapai from time immemorial.

Southwest along the ridge dividing the waters of Burro Creek from those flowing into the Santa Maria, the Camp Wood area on the Santa Maria headwaters is ceramically exclusively Hualapai from time immemorial, and so is the Yolo Ranch region on the headwaters of Burro Creek.

KK. 15' Quadrangle Arizona N : 2

Tizon Brown Ware constitutes 84.3% of the sherds recorded from sites within this quadrangle. Therefore, the hypothesis that this area was occupied and used exclusively by Hualapais from about 1300 A. D. until Anglo-American conquest cannot be rejected. Prior to 1300 A. D. the region was occupied by Indians of the prehistoric Prescott Branch.

Trade vessels were imported by Indians living in this area from the lower Colorado River to the west, from the pre-historic Cohonina living north and east on the Plateau, and from the Kayenta-Hopi Branch of Puebloans still farther east.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona N : 2 in color.
## Ceramic Analysis by Wares of Sites in 15' Quadrangle Arizona N:2

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<tr>
<th>SITES</th>
<th>Lower Colo. Ware</th>
<th>Tizon Brown</th>
<th>Tizon Wiped</th>
<th>Prescott Gray Ware</th>
<th>S. F. Mt. Gray Ware</th>
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The lower part of Walnut Creek Valley lies in the northwest corner of this quadrangle. The junction of Walnut Creek with the Chino is located in Section 4 of Township 18 north, Range 3 West. The valley itself ends approximately four miles west of here, however. The landmark Sanyawak Tovgan, a small twin butte which the Hualapaies took to be their frontier near the mouth of the creek is apparently located in Section 35 of Township 19 North, Range 4 West. This is somewhat more than four miles from the creek mouth, rather than the "approximated two miles west of its mouth" given by the Petition as marking the frontier of exclusively owned Hualapai territory.

1. Site Analysis

All of the recorded sites known in this quadrangle are located south and east of Walnut Creek within the drainage of the Chino Wash—beyond the area claimed by the Petition as Hualapai territory and beyond the Hualapai conceptual frontier.

a. Chino Wash Area

One group of sites is located within a mile or so of the junction of Walnut Creek with the Chino, lying southeast of that juncture.

i. N. A. 1587

The low reliability sherd sample contains 66.7% Prescott Gray Ware. It was selected to show types rather than as a random sample. Verde Black-on Gray is the most numerous type
represented, and probably dates from the 1150 to 1275 period.  

Tusayan Black-on-White trade ware found here was produced from approximately 1225 to 1330 A.D. Tizon Brown Ware makes up 27.9% of the sherds, which would indicate occupation in a random sample of sherds, but very well may not here in this highly selective sample.

Excavation. The sherd sample on which the analysis above is based consisted of sherds recovered after excavation of this site in 1932. Tree-ring dates were obtained from pinion employed in building the stone-and-adobe "pueblo." These indicated building dates from about 1026 to 1048 A.D. Trade ware from the northeast included much Flagstaff Black-on-White, now considered to have been made between about 1120 and 1225 A.D. Kayenta Polychrome was also recovered, and on this basis it was felt that the pueblo could not have been abandoned prior to 1200 since this type was at the time of the excavations reported thought not to have been made prior to that date. This type is now considered to have come into

1/ Based on association with Tusayan Polychrome so dated (Colton, 1953, p. 75) in Euler's Wha Ha' Vo excavations.
5/ Colton, 1953, p. 75.
production even later, at about 1250 to 1300.\(^1\) Thus the abandonment of the pueblo apparently could not very well have taken place before about 1250 A. D. Even so, abandonment certainly occurred at a time not very remote from that—probably before the Hualapais reached their stable territorial limits in this direction, if it was not caused by them.

The earlier occupation of this site, which seems to have begun at some period prior to 900 A. D.\(^2\) is of no concern in the present study, except in indicating the time span during which Prescott Gray Ware was being made here.

Evidently ceramic analysis of this site was only incompletely carried out. "An analysis of all the sherds found in the excavation of rooms 1 and 5 of the pueblo reveals the following proportion of pottery types" it was reported.\(^3\) The identifications given cannot be correlated with types now identified, but 95% of the sherds were undecorated gray or brown—apparently Verde Gray and Prescott Brown with probably some Tizon Brown Ware admixture as indicated by my identification of sherds of that ware in the post-excavation collection. This proportion would not be true throughout the site, however, the excavator reports one hundred eight decorated bowls and

\(^1\) Colton & Hargrave, 1937, p. 99; Colton, 1953, p. 75.
\(^2\) Spicer, 1936, p. 14; Colton, 1953, p. 75.
\(^3\) Spicer, 1936, p. 29.
four ollas—a hundred of the former being Black-on-Gray (probably Verde Black-on-Gray),1/ most of which apparently were recovered from burials and reflect a cultural pattern among Indians inhabiting this site of employing painted pottery for burial furniture and unpainted for household uses.

Conclusion: This site represents pre-Hualapai occupation in this region, and does not enter into definition of Hualapai territory from time immemorial. It also is just outside Hualapai territory of whatever epoch, being on the east bank of the Chino and south of the Walnut Creek junction.

ii. N. A. 2804

Half a mile north of the site just discussed is located another masonry ruin of at least two rooms, where the sherd sample is of low reliability but 88% Tizon Brown Ware. The hypothesis that this site was occupied exclusively by Hualapais cannot be rejected.

A sherd of Deadmans Black-on-White indicates that occupation of this site began during the period between 875 and 1130 A. D. 2 If this type was imported by local Hualapais, they would have been living here contemporaneously with the Prescott Branch Indians at N. A. 1587, Kings' Ruin. This seems quite unlikely, and the sherd probably was left by the latter Indians.

1/ Spicer, 1936, p. 33.
2/ McGregor, 1941, p. 377.
On the other hand, sherds of what appears to be Needles Buff from the Lower Colorado River may indicate Hualapai occupation in the 19th century—although this unpainted type may have been produced prior to the painted Needles Red-on-Buff which was made in post-conquest times.

iii. N. A. 2805

Between the two sites analyzed above lies another from which a fairly reliable sherd sample is available. Unfortunately, this sample does not appear to be representative, having been selected to show types rather than for a random sample of sherds. Tizon Brown Ware forms 35.3% of the total, San Francisco Mountain Gray Ware 26.5% and Deadmans Black-on-White 23.5%, the latter having been produced perhaps from 875 to 1130 A. D.\(^1\) Tusayan Black-on-Red was also imported to this site from the Kayenta-Hopi Branch during its period of production between about 965 to 1130 A. D.\(^2\)

Despite its proximity to Kings' Ruin, a Prescott Branch site, this site yielded its surveyor no Prescott Gray Ware at all. When the pre-1150 A. D. sherds are eliminated from the sample, little but Tizon Brown Ware remains, and the hypothesis that this site was used and occupied exclusively by Hualapais from about 1150 A. D. until their conquest—insofar as it was used at all—cannot be rejected.

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\(^1\) McGregor, 1941, p. 377.
\(^2\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
iv. Summary of the Chino Area

Analysis of three sites reveals three basic ceramic traditions in a small area along Chino Creek. One is a Prescott Branch pueblo and pit-house site inhabited apparently from before 900 A.D. until after 1250 A.D. One is a predominantly Tizon Brown Ware site with neither Prescott nor San Francisco Mountain Gray Ware, and the third a very mixed site with San Francisco Mountain Gray and Tizon Brown Ware with Kayenta-Hopi Branch Puebloan trade ware.

In other words, the evidence of prehistoric Indian occupation of this stretch of the Chino is rather thoroughly muddied. While it is clear that Kings' Ruin was occupied for more than 300 years, there seems to have been Cohonina and Hualapai occupation in this area as well at some other period of time, if not at the same time.

b. Indian Springs Wash Area

Four and more miles south of Walnut Creek, Indian Springs Wash flows roughly parallel to it toward the Chino. Near this ephemeral stream additional sites have been recorded which help clarify the picture of prehistoric Indian occupancy in 15' quadrangle Arizona N: 2.

i. N. A. 5762

The fairly reliable sherd sample contains 84.8% Tizon Brown Ware. This exceeds even Ezell's 80% level of significance of cultural predominance, so the hypothesis that this
site was occupied solely by Hualapais prior to conquest cannot be rejected. Sherds of San Francisco Mountain Gray Ware indicate use of the site began prior to 1150 A. D. Sherds of Tusayan Black-on-White indicate its use in the 1225 to 1300 A. D. time range. 1/

ii. N. A. 5763

The sherd sample is fairly reliable and 79.5% Tizón Brown Ware, so the hypothesis that the site was used solely by Hualapais prior to conquest cannot be rejected. Here trade ware indicates occupation prior to 1150 A. D. as at the preceding site. Sosi Black-on-White was produced from 1070 to 1150 A. D. 2/ and Deadmans Black-on-Red from about 775 to 1060 A. D. 2/ during which periods they were brought here. What appears to be Needles Red-on-Buff indicates some use of the site in the late 19th century, almost surely after contact between Hualapais and Anglo-Americans began.

iii. N. A. 5764

The reliable sherd sample contains 90.7% Tizón Brown Ware so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest is accepted. As

2/ Colton, 1953, p. 75.
3/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
at the preceding site, a very long period of occupation is indicated by the trade ware (or else two or more occupations at widely separated periods of time). Tusayan Black-on-Red was a type produced from about 965 to 1130 A.D.\(^1\) and imported here. Then Tusayan Black-on-White came in between about 1225 and 1300 A.D.\(^2\). But Parker Red-on-Buff also occurs on this site, almost certainly debris from Hualapai utilization of the site within the 19th century, perhaps after Anglo-American contact began.

iv. Summary of Indian Springs Wash Area

Analysis of three sites reveals three predominately Ti- zon Brown Ware or Hualapai sites, all three of which were first occupied prior to 1150 A.D. Two of the three sites had trade ware derived from the modern Mohaves, coming from vessels of types made within the 19th century, and particularly within post-conquest times. None yielded any Prescott Gray Ware sherds. Therefore, the hypothesis that this area was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected. Furthermore, the Mohave sherds date such use as either late in prehistoric times just before Anglo-American contact and conquest, or perhaps after the conquest of the Hualapais. The lack of oral tradition of

\(^1\) McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
\(^2\) Colton & Hargrave, 1937, p. 214.
land use in this area points to the earlier period as more likely.

c. The Simmons Region

Approximately eight miles southeast from the Indian Springs Wash Area sites additional sites have been recorded in the neighborhood of Simmons.

i. N. A. 5765

The reliable sherd sample includes 86.6% Tizon Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected. As in the Indian Springs Wash area, a very long occupation or two distinct occupations far apart in time are indicated by imported vessel sherds. Tusayan Black-on-Red vessels were imported during the perhaps 965 to 1130 A. D. period of their production. But so was Needles Red-on-Buff, found on post-settlement Hualapai sites. Prescott Gray Ware makes up 8.5% of the sample, perhaps supporting the idea of two temporally distinct occupations, the earlier by the Prescott Branch Indians importing Kayenta-Hopi Branch vessels.

ii. N. A. 5766

The fairly reliable sherd sample consists of 97.2% Prescott Gray Ware and a sherd of Tusayan Polychrome which was produced between about 1150 and 1275 A. D. Among the Prescott Gray Ware types found here is Verde Black-on-Gray, which

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Colton, 1953, p. 75.
was found in association with the same Tusayan Polychrome trade type in Euler's test pit in Wha Ha' Vo cave. The two sites therefore validate each other, and the chronology of Verde Black-on-Gray. There is no evidence that this site was occupied during the time period of concern to this study.

iii. N. A. 5767

The unreliable sherd sample shows only that Prescott Branch and Hualapai pottery was deposited here., Chances are that this was a Prescott Branch site which does not enter into determination of post-1300 A. D. Hualapai territory.

iv. Summary of Simmons Region

Analysis of three ceramic sites shows one to be Prescott Branch occupied up to around 1300 A. D. and one to be Hualapai occupied in late prehistoric times after an earlier Prescott Branch utilization, and a third where too few sherds were recovered to permit interpretation. There was clearly a Prescott Branch occupation in this region apparently ending about 1300 A. D. or soon thereafter. There was also a Hualapai occupation in the same area almost certainly late in the prehistoric period just prior to contact with Anglo-Americans.

d. Long Meadow Ranch Region

Some four miles southsouthwest of Simmons lies the Long Meadow Ranch, in the vicinity of which a number of sites have been recorded.
i. N. A. 5007

The low reliability sherd sample includes 52.4% Prescott Gray Ware and 38.1% Tizon Brown Ware. A sherd of Tsegi Red-on-Orange indicates that the site was in use when that type was being produced by Indians of the Kayenta-Hopi Branch from perhaps 1225 to 1300 A.D. 1/ This was surely the period of Prescott Branch occupation. Later on, the hypothesis that the site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

ii. N. A. 5178

The unreliable sherd sample is thoroughly mixed in types with 13.3% Tizon Brown Ware and a third Prescott Gray Ware. Trade ware includes Deadmans Black-on-Red, produced from about 775 to 1060 A. D. 2/ and Tusayan Black-on-Red made from perhaps 965 to 1130 A. D. 2/

iii. N. A. 5750

The low reliability sherd sample contains 68.5% Tizon Brown Ware. Prescott Gray Ware sherds form 26.3% of the total, showing occupancy of the site at one time by the Prescott Branch Indians. The hypothesis that this site was used solely by Hualapais from time immemorial to their conquest cannot be rejected.

1/ Colton & Hargrave, 1937, p. 94.
2/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
3/ Ibid., Ibid.
iv. N. A. 5751

The very reliable sherd sample includes 92.6% Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to their conquest cannot be rejected. Trade ware from the Kayenta-Hopi Branch gives an idea of the early period of occupancy. Deadmans Black-on-Red vessels were made from about 775 to 1060. 1/ Tusayan Black-on-Red was produced during an overlapping period from about 965 to 1130 A. D. 2/ Then Tusayan Polychrome followed from around 1150 until 1275 A. D. 3/ And finally Tusayan Black-on-White from about 1225 to 1300 productionwise 4/ reached here.

v. N. A. 5752

The unreliable sherd sample includes 70% Tizon Brown Ware and 30% Prescott Gray Ware. Apparently Indians of the Prescott Branch visited this site prior to 1300 A. D., and Hualapais at some later date. The hypothesis that this site was used solely by Hualapais from time immemorial to conquest cannot be rejected.

vi. N. A. 5753

The very reliable sherd sample contains 95.4% Tizon Brown

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1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
2/ Ibid., Ibid.
3/ Colton, 1953, p. 75.
Ware, so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected. Vessels of Tusayan Black-on-Red were imported from the Kayenta-Hopi Branch during the period of production of this type from around 864 to 1130 A. D. 1/ Later on, Tusayan Black-on-White was brought to the site during its production between about 1225 and 1300 A. D. 2/

vii. N. A. 5754

The very reliable sherd sample has 93.8% Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected. Here again Tusayan Black-on-Red indicates occupancy during the period of its production from about 965 to 1130 A. D. 3/ and Dogoszhi Black-on-White indicates the same, having been made from around 1070 to 1150 A. D. 4/

viii. N. A. 5755

The very reliable sherd sample has 85.3% Tizon Brown Ware, so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected. Trade ware on the site indicates either very long-continued occupation, or occupation at an earlier and later period.

1/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
3/ McGregor, 1951, pp. 20, 32; Colton, 1953, p. 75.
4/ Colton, 1953, p. 75.
Deadmans Black-on-Red must have been brought to the site between about 775 and 1060 A. D.\footnote{McGregor, 1951, pp. 20,32; Colton, 1953, p. 75.} On the other hand, Parker Red-on-Buff probably came to the site during the 19th century, and after mid-century at that.

\textit{ix. N. A. 5756}

The low reliability sherd sample contains 79.2\% Tizon Brown Ware. The rest of the sherds are San Francisco Mountain Gray Ware from the pre-1150 A. D. period. Therefore, the hypothesis that this site was occupied and used solely by Hualapais from time immemorial until their conquest can not be rejected.

\textit{x. N. A. 5757}

The very reliable sherd sample includes 93.8\% Tizon Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected. Deadmans Black-on-White trade ware reached the site during its production from 875 to 1130 A. D.\footnote{McGregor, 1941, p. 377.} and Sosi Black-on-White between 1070 and 1150 A. D.\footnote{Colton, 1953, p. 75.} while glass indicates utilization within post-contact times.

\textit{xi. N. A. 5758}

The low reliability sherd sample has 72.7\% Tizon Brown Ware, the remainder Prescott Gray Ware. Therefore, the hypothesis that this site was occupied solely by Hualapais from

\footnote{1/ McGregor, 1951, pp. 20,32; Colton, 1953, p. 75.}
\footnote{2/ McGregor, 1941, p. 377.}
\footnote{3/ Colton, 1953, p. 75.}
time immemorial until conquest cannot be rejected, although there had been an earlier Prescott Branch utilization.

xii. N. A. 5759

The fairly reliable sherd sample includes 90.2% Tizon Brown Ware, so the hypothesis that the site was used solely by Hualapais prior to their conquest cannot be rejected. Tusayan Black-on-Red indicates occupation began before 1130 A. D.\(^1\) perhaps not long after 965 A. D.\(^2\)

xiii. N. A. 5761

The reliable sherd sample contains 95.1% Tizon Brown Ware so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest is accepted.

xiv. Summary of Long Meadow Ranch Region

Analysis of thirteen ceramic sites recorded in the neighborhood of Long Meadow Ranch shows that nine of them are predominately Tizon Brown Ware sites. Two show very late utilization, evidenced by a piece of flaked glass at one and 19th century Mohave sherds at the other (and probably at a third). No ware other than Tizon Brown Ware occurs on seven of these sites in sufficient quantities to indicate occupancy by any group other than the Hualapais at any period. At one of these the Cohonina may have lived prior to the Hualapais,

\(^1\) Colton, 1953, p. 75.

\(^2\) McGregor, 1951, pp. 20,32.
at another, the Prescott Branch Indians.

Two other sites are predominately Hualapai sites, but were apparently inhabited by Indians of the Prescott Branch prior to Hualapai occupancy. Two sites are mixed non-Hualapai sites, but appear to date entirely from before 1300 A. D. and not to enter into determination of Hualapai territory from time immemorial.

The hypothesis that this area was occupied and used exclusively by Hualapais from time immemorial until their conquest cannot be rejected. The hypothesis that no other tribe established a permanent encampment in or used or occupied the area from time immemorial to conquest cannot be rejected, either.

2. Conclusion

Analysis of ceramic collections from sites recorded in 15' Quadrangle Arizona N : 2 reveals that the territory utilized and occupied exclusively by Hualapais once extended a considerable distance south of Walnut Creek where they placed their effective frontier at the end of the pre-contact period. In fact, at least two of the sites bear evidence of use within the immediate pre-contact years or actually post-contact.

The Hualapai utilization does not seem to have extended east of the Chino Wash, nor indeed even as far as that stream. It centered along the Williamson Valley Wash and Indian Springs Wash which join before reaching the Chino.
One excavated site just east of the Chino and about a mile and a half below the mouth of Walnut Creek was a Prescott Branch pueblo occupied from before 900 to after 1250 A. D. Survey of other sites indicates a Hualapai occupation in this same area at some later period.

In the Indian Springs Wash area there seems to have been no Prescott Branch occupation. Three recorded sites are predominately Hualapai, with first occupation prior to 1150 A. D., and apparently 19th century Mohave trade ware on two sites, indicating their utilization toward the end of the prehistoric period if not actually in historic times.

On Williamson Valley Wash there was a mixed occupation in the Simmons area, one Hualapai and one Prescott Branch being recorded. But there is no evidence of non-Hualapai Indian occupants after about 1300 A. D.

In the Long Meadow Ranch area somewhat farther toward the head of the wash, two mixed sites cannot be identified as to their occupants, and fifteen sites were predominately Hualapai. Two seem to have been previously utilized by Indians of the Prescott Branch, one other may have been, and a fourth may have seen some Cohonina residents. But since about 1300 the Hualapais are the only Indians who utilized this area so far as the ceramic evidence shows, and at least two

1/ Spicer, 1936, p. 10.
sites show evidence of late prehistoric or historic use in the form of 19th century Mohave trade ware on one and a flaked bit of glass on the other.

The hypothesis that 15' Quadrangle Arizona N : 2 west of the Chino was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected. Nor can the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle from time immemorial to conquest be rejected.

As stated at the beginning of this section, only a small corner of this quadrangle north of Walnut Creek is included within the territory Hualapais now remember to have been theirs toward the end of the prehistoric period. And the bounds of exclusively occupied territory described in the Petition follow Walnut Creek from approximately two miles west of its mouth.

Therefore, the archaeological evidence of Hualapai occupation of the Indian Springs--Williamson Valley Wash areas extending into historic times or immediately preceding them is of great importance. For it shows Walnut Creek to be a conservative Hualapai frontier apparently reflecting a late prehistoric or early historic withdrawal of Hualapais from the area south of Walnut Creek. Probably this withdrawal was induced by heavy Northeastern Yavapai raiding after those enemy Indians acquired firearms and military superiority over
the Hualapais who lacked them during the years between mid-century and final Anglo-American conquest.

The hypothesis that the Petition was correct in describing all of the territory north of Walnut Creek as sole and undisputed Hualapai territory must be accepted on the basis of evidence of Hualapai land utilization (which appears to have been sole and exclusive) far to the south of that stream up to or almost until conquest.

The hypothesis that the Petition was correct in describing the lands north and west of the ridge dividing the Burro Creek and Santa Maria River drainages as used, occupied and possessed exclusively by Hualapais must also be accepted, since Hualapai land use prehistorically extended considerably east of this divide into the headwaters of washes flowing into Chino Creek from the west.

II. 15' Quadrangle Arizona N : 9

Tizon Brown Ware constitutes 72% of the recorded sherds from sites located in this quadrangle between Burro Creek and the north fork of the Santa Maria River and south of this stream. The next most abundant ware makes up only 10% of the sherds.

1. Site Analysis

a. Gila Pueblo's Congress : 1 : 1

The low reliability sherd sample contains 96% Tizon
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona N : 9 in color,
North of the Santa Maria River.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA N:9

<table>
<thead>
<tr>
<th>SITES</th>
<th>TIZON BROWN WIPED</th>
<th>TIZON GRAY WARE</th>
<th>PRESCOTT</th>
<th>LA PAZ WINFIELD GRAY WARE</th>
<th>LA PAZ WINFIELD GRAY PLAIN</th>
<th>LA PAZ WINFIELD PLAIN</th>
<th>UNIDENTIFIED</th>
<th>TOTAL SHERDS</th>
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<tbody>
<tr>
<td>GP Cng.1:1</td>
<td>96</td>
<td>4</td>
<td>74</td>
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<td>1.4</td>
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<td>25</td>
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<tr>
<td>NA5819</td>
<td>69.8</td>
<td>11.1</td>
<td>15.1</td>
<td>2.4</td>
<td>1.4</td>
<td>126</td>
<td></td>
<td>49</td>
</tr>
<tr>
<td>SD A-75</td>
<td>65.3</td>
<td>28.6</td>
<td>6.1</td>
<td>6.1</td>
<td>49</td>
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<td></td>
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<tr>
<td>TOTAL:</td>
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<td>7</td>
<td>10</td>
<td>7</td>
<td>1.5</td>
<td>2.5</td>
<td>200</td>
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### CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA N:9

<table>
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<tr>
<td>GP Cg.1:1</td>
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<td>96</td>
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<td>TOTAL:</td>
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<td>56</td>
<td>6.5</td>
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### CERAMIC ANALYSIS BY SITES IN 15' QUADRANGLE ARIZONA N:9

<table>
<thead>
<tr>
<th>SITES</th>
<th>Tizon Wiped Orange</th>
<th>Aquar- ius Verde Orange</th>
<th>La Paz Winfield Gray</th>
<th>Unidentified Total</th>
<th>Total SHERDS</th>
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</thead>
<tbody>
<tr>
<td>GP Cg.1:1</td>
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<td></td>
<td></td>
<td></td>
<td>25</td>
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<tr>
<td>NA5819</td>
<td>11.1</td>
<td>4.8</td>
<td>10.3</td>
<td>2.4</td>
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<tr>
<td>SD A-75</td>
<td></td>
<td></td>
<td>28.6</td>
<td>6.1</td>
<td>49</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>7</td>
<td>3.5</td>
<td>6.5</td>
<td>7.</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Brown Ware, so the hypothesis that this site was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected.

b. N. A. 5819

The very reliable sherd sample has 69.8% Tizon Brown Ware without surface alternation, and another 11.1% of this ware with surface wiping of the type made by Havasupais. That Havasupai trade vessels reached a Hualapai encampment on Kirkland Creek seems improbable, so possibly these sherds represent the as yet unidentified pottery of the Yavapais. Second most abundant ware is Prescott Gray Ware with 15.1% of the sample. Therefore, the hypothesis that this site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected. Probably it had been used earlier by Prescott Branch Indians.

c. San Diego's A - 75

The fairly reliable sherd sample includes 65.3% Tizon Brown Ware, second most abundant ware being an as yet unidentified type which might be historic Western Yavapai pottery. Provisionally called Dome Rock Gray, it was first recovered by the author from depressions on the first terrace east of La Paz townsite where Yavapais were said to have been held during the 1870's by a Mohave informant. Here it makes up 28.6% of the sample, and indicates some occupation of this Peeples Valley site by a non-Hualapai group, probably
Western Yavapais. The hypothesis that this site was occupied and used exclusively by Hualapais must be rejected--this site was used by two Indian groups.

2. Summary of Arizona N: 9

Analysis of three ceramic sites recorded in this quadrangle shows that two were occupied exclusively by Hualapais prior to their conquest, and the third was predominately Hualapai. However, this third site was occupied at some time by a group using Dome Rock Gray vessels, probably Western Band Yavapais. Therefore, the hypothesis that 15' Quadrangle Arizona N: 9 was occupied solely by Hualapais must be rejected. Further, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this quadrangle must also be rejected.

Obviously one non-Hualapai group did, apparently the modern Yavapais. Here the Hualapai-Yavapai border has been reached.

The location of one of the sites is unknown, but the other two are south of the north fork of the Santa Maria River. This has important implications. It means that since the area south of the north fork of the Santa Maria was predominately Hualapai, though not quite exclusively theirs, then the area north of that stream may safely be presumed to have been Hualapai solely and exclusively. Therefore, the hypothesis that the portion of 15' quadrangle Arizona N: 9
lying north of the north fork of the Santa Maria River was occupied and used exclusively by Hualapais prior to their conquest cannot be rejected. Nor can the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied that portion of the quadrangle north of the north fork of the Santa Maria River be rejected.

In this quadrangle, the Petition describes the bounds of the territory which only Hualapais occupied and possessed as "along the ridge dividing the watersheds of said Burro Creek and said Santa Maria River." In view of the evidence that Hualapai occupancy predominated even south of the Santa Maria's north fork and was exclusive through prehistoric ceramic times to that stream so far as evidence available goes, the hypothesis that the territory north of the drainage divide between the Santa Maria and Burro Creek was owned exclusively by Hualapais certainly cannot be rejected.

However, the hypothesis that the Petition correctly described the bounds of exclusively owned Hualapai territory from time immemorial to conquest should perhaps be rejected. The ceramic evidence shows that Hualapais exclusively owned, occupied and used the area south to the north fork of the Santa Maria River. By inference from the adjacent quadrangle

1/ Narks, 1951, p. 3-4.
Arizona M : 12 where the south bank of the Santa Maria proper has been surveyed, the Hualapai exclusive use and occupancy area probably included the south bank.

MM. 15' Quadrangle Arizona N : 10

Tizon Brown Ware constitutes 85.9% of the sherds recorded from sites known in this quadrangle. Therefore, the hypothesis that this area was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

1. Site Analysis.

Most of the sites recorded were surveyed by Gila Pueblo so precise locations are not known.

a. Gila Pueblo's
   Congress : 3 : 1

   The unreliable sherd sample is entirely Tizon Brown Ware, so the hypothesis that the site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

b. Gila Pueblo's
   Congress : 3 : 2

   The fairly reliable sherd sample contains 91.1% Tizon Brown Ware, so the hypothesis that the site was used solely by Hualapais prior to conquest cannot be rejected. Occupation began before 1150 A. D., since San Francisco Mountain Gray Ware was imported to the site.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangle Arizona N : 10 in color,
North of Santa Maria River--Kirkland Creek.
### CERAMIC ANALYSIS BY WARES OF SITES IN 15' QUADRANGLE ARIZONA N:10

<table>
<thead>
<tr>
<th>SITES</th>
<th>IWR.COLO. Ware</th>
<th>TIZON Ware</th>
<th>PRES.- S.F.MTN. Ware</th>
<th>WINSLOW Ware</th>
<th>UNI- ORANGE Ware</th>
<th>TOTAL SHERDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP Cg.3:1</td>
<td>100.</td>
<td>6.7</td>
<td>2.2</td>
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<td>2.2</td>
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### CERAMIC ANALYSIS BY TYPES OF SITES IN 15' QUADRANGLE ARIZONA N:10

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### SITES

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c. Gila Pueblo's Congress: 3:3

The low reliability sherd sample is entirely Tizon Brown Ware so the hypothesis that this site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

d. Gila Pueblo's Congress: 3:4

The reliable sherd sample contains 84.3% Tizon Brown Ware so the hypothesis that the site was used solely by Hualapais from time immemorial to conquest cannot be rejected. Occupation began prior to 1150 A.D. since San Francisco Mountain Gray Ware was imported by the residents. It was occupied between about 1250 to 1300 A.D. also, since Jeddito Black-on-Orange was traded in from the Kayenta-Hopi Branch Indians.\(^1\)

e. N. A. 977

The unreliable sherd sample is entirely Tizon Brown Ware at this "fort" near Kirkland. Therefore, the hypothesis that the site was occupied exclusively by Hualapais prior to their conquest cannot be rejected.

f. N. A. 978

The fairly reliable sherd sample has 70.3% Tizon Brown Ware. A Parker Red-on-Buff sherd indicates late 19th century occupation of this site, and Prescott Gray Ware that it was in use prior to 1300 A.D. Therefore, the hypothesis that this

\(^{1}\) Colton, 1953, p. 75.
site was occupied exclusively by Hualapais from time immemorial to conquest cannot be rejected.

g. N. A. 3488

The sherd sample is one Prescott Gray Ware sherd from 40 inches below surface in the side of an arroyo near Kirkland Junction. This obviously is a pre-Hualapai site not affecting the question of Hualapai occupancy in the area.

2. Summary of Arizona N: 10

Analysis of seven ceramic sites recorded in this quadrangle shows six to be clearly Hualapai sites, and the seventh to long pre-date Hualapai occupation of the area. The hypothesis that this area was used and occupied exclusively by Hualapais after about 1300 up until their conquest cannot be rejected. Since no non-Hualapai sites post-dating 1300 are recorded, the hypothesis that no tribe other than the Hualapai ever established a permanent encampment in or used or occupied this area from time immemorial until conquest also cannot be rejected.

The major significance of the archaeological evidence known from Arizona N: 10 is the same as in N: 9 and M: 12—it shows prehistoric Hualapai territory to have extended considerably south of the frontier remembered by these Indians themselves as being the effective one at the end of the pre-contact period. The area and sites discussed lie within the Kirkland Creek-north fork of the Santa Maria drainage south
of the divide between the Santa Maria River and Burro Creek watersheds.

The Petition placed the bounds of territory owned solely by Hualapais at this drainage divide. On the basis of archaeological evidence, the hypothesis that the territory north of the drainage divide was actually occupied, used and possessed exclusively by Hualapais certainly cannot be rejected.

However, the hypothesis that the Petition correctly described the southern bounds of the territory owned exclusively by Hualapais prior to conquest in 15° quadrangle Arizona N : 10 should probably be rejected. Territory owned solely by Hualapais must be, on the basis of the archaeological evidence, considered as having extended at least to the north fork of the Santa Maria River, including Kirkland Creek, taking in the south bank adjacent to the stream.

NN. Territory Used and Occupied Exclusively by Hualapais

According to Positive Ceramic Evidence

The preceding sections have presented detailed ceramic evidence that Hualapais enjoyed sole and exclusive possession, use and occupancy of all or part of thirty-three 15° quadrangles in northwest central Arizona within the region claimed by the Hualapai Tribe to have been its ancestral territory. Positive evidence of Hualapai exclusive use and occupancy has been recorded from these areas, analyzed in the present study.
THE HUALAPAI COUNTRY
Northwest Central Arizona

FROM UNIVERSITY OF ARIZONA'S ARCHEOLOGICAL SURVEY BASE MAP

15' Quadrangles Where Ceramic Evidence Indicates Solely Hualapai Land use from Time Immemorial until Anglo-American Conquest.
CERAMIC ANALYSIS BY WARES OF TERRITORY USED AND OCCUPIED SOLELY BY HUALAPAI FROM TIME IMMEMORIAL TO ANGLO-AMERICAN CONQUEST

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CERAMIC ANALYSIS BY WARES OF TERRITORY USED AND OCCUPIED SOLELY BY HUALAPAI FROM TIME IMMEMORIAL TO ANGLO-AMERICAN CONQUEST

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TRACES OF: Hopi Utility, Little Colorado Gray Ware, Bidahochi White Ware, Homolovi Orange Ware, Winslow Orange Ware, Wingfield Plain Ware, Adamana Brown Ware, Alameda Red Ware, Alameda Brown Ware.
and presented. These quadrangles are Nevada DD: 16 south of the Colorado River, Arizona F: 4, 7, 8, 12, 15 east of the crest of the Black Mountains and 16; Arizona G: 1, 2 south of the Colorado River, 6, 7, 9, 10, 13, 14, 15 and 16; Arizona H: 9, 10, 13, 14 and 15; Arizona M: 2, 4, 5, 6, 7, 8, and 12 north of the Santa Maria River, and Arizona N: 1, 2, and 9 and 10 north of the north Fork of the Santa Maria-Kirkland Creek channel.

The hypothesis that the Hualapais enjoyed sole and exclusive use and occupancy of these areas cannot be rejected, nor can the hypothesis that no other tribe of Indians ever established a permanent encampment in or used or occupied these quadrangles from time immemorial to Anglo-American conquest.

In addition, certain other quadrangles may be logically included in the area used and occupied exclusively by Hualapais, even though no positive evidence has been presented concerning them—because none is yet available. For example, the hypothesis that 15' quadrangle Arizona G: 5 was used and occupied solely by Hualapais cannot be rejected, because it is surrounded by quadrangles from which positive evidence of exclusive Hualapai land use has been presented: Arizona F: 4, 8, 12 and G: 1, 2, 6, 9 and 10.

By the same token, the hypothesis that 15' Quadrangle Arizona M: 3 was used and occupied solely by Hualapais from
time immemorial to conquest cannot be rejected because it is also surrounded by quadrangles for which positive evidence has been presented (Arizona G : 14, 15, 16 and M : 2, 4, 6, 7 and 8).

This makes a total of twenty-eight complete quadrangles covered and seven partial ones.
CHAPTER X
NON-CERAMIC ARTIFACTS

This study is essentially a study of ceramic remains in northwest central Arizona. The bulk of the sites analyzed are open sites exposed to the elements where perishable materials soon rotted and disappeared. Only durable artifacts have survived at these sites, meaning pot sherds and stone tools.

Stone is a much less plastic material than clay for making artifacts. It is far less subject to the cultural modifications of the artificer. Therefore, objects made from relatively plastic clay which are then baked into near-indestructability reflect cultural differences much more readily than do stone artifacts. The resistant nature of the material greatly limits the possible range of variability in the manufacture of stone implements, and therefore their cultural diagnostic value.

A. Projectile Points

The class of stone artifacts showing the greatest influence of their makers is that of projectile points. A number of projectile points have been recovered from the various
sites surveyed in the Hualapai country. Unfortunately the
shape or shapes of the arrowheads made by Hualapais in times
past is not known. While it proved possible to recover a
single Hualapai pot which had been preserved by a member of
the tribe, it has not proved possible to locate even one ar-
rrow. Nor have museum collections checked yielded an example.

It might be possible to employ the survey procedure fol-
lowed in identifying Hualapai pottery in the identification
of Hualapai arrowpoints. Unfortunately, there are at least
three difficulties in such a procedure: 1) The known purely
post-contact Hualapai sites yielded no projectile points,
probably as a result of the introduction of firearms. 2)
The Hualapais assert that Hualapai point makers followed no
tribal pattern in chipping out points. Each man made his ar-
row points as he pleased, so there may have been several ty-
nes of Hualapai points. 3) The Hualapais also point out
that survey collections are subject to error in that non-
Hualapai points may occur on Hualapai sites. This situation
occurred at Hualapai encampments raided by hostile tribes,
where the attackers fired their arrows at the Hualapais.
Similarly, when Hualapais attacked settlements in enemy coun-
try, they tended to lose a number of their arrows in the
attacked rancherias.

All of these difficulties combined have prevented any
use of projectile points in defining Hualapai territory.
B. Crunching Slabs

Another class of stone artifact showing a considerable response to cultural norms, although much less than projectile points, is that of stones employed in the reduction of hard vegetable foods to meal or pulp form (also for reducing other materials such as rock for clay vessel tempering, or pigments for skin painting). The variability of such utensils arises partly from the number of types of stone from which they may satisfactorily be fashioned, and partly from the relatively large size of the utensils which permits elaboration of form not possible because of structural weakness in smaller stone artifacts.

There are three basic mechanical methods of reducing hard food substances to a more edible form: pounding, crushing or crunching and grinding. Therefore, the stones employed for this purpose fall generally into three classes: those designed for pounding, those designed for grinding, and those designed for crushing. Stone mortars and pestles are the most specialized implements for pounding up hard foods (but the same implements can be made of wood). Stone metates (the nether stone) and manos (hand-held stones) are employed to grind up hard foods. The mortar characteristically has a deep circular hole pecked into it, into which the cylindrical pestle is plunged. The breaking up of the food is accomplished by percussion, by the end of the pestle striking it.
The metate, in contrast, characteristically has a flat grinding surface across which a flat-surfaced mano is rubbed back and forth, pulverizing the food by abrasion.

The third type of stone implement employed by Indians for the purpose of breaking up hard foods is probably an ancestral form of both mortar and metate. This is a slab shaped nether stone with a shallow basin upon which food is pounded with the edge of a mano or crushed by rocking the hand muller back and forth, rather than ground, although some actual rubbing may be done. The shallow basin is produced by artificially pecking it out with harder stone hammers, for the food pounding and crushing results in very little wear, and the pulverized softer foods are given only a swirl or two with the mano although grains may be actually ground. When such a slab shaped stone is also used for grinding foods, the basin is deepened by the wearing abrasive action of the mano grinding on the nether stone. The resulting basin is ovoid, since the mano employed is held generally in one hand and moved in a rotary motion. (The mano used with a metate is perhaps more typically held in both hands, and worked back and forth.)

1. Hualapai

This crushing or pounding slab is the characteristic food reducing implement of the Hualapai Indians. Such a slab with its mano is today still an important part of kitchen e-
quipment of most Hualapai households. Broken pieces of such stones are found on many prehistoric sites in the Hualapai country.

Unfortunately for the goal of the present study—definition of the pre-conquest territory of the Hualapais—such crunching slabs have been used by adjacent Indians of other tribes, and for many centuries. They differ from the mortar and the metate, true. But they are and were never limited in use entirely to one tribe or one period of time. They apparently represent the earliest form of food reducing implement out of which more specialized mortar and metate developed, but which has itself survived to the present among some less sedentary Indian groups. Therefore, it has proved impossible to employ this type of artifact significantly in the definition of pre-conquest Hualapai territory

HUALAPAI CRUNCHING SLABS IN USE AT PEACH SPRINGS, ARIZONA, ETC.

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CRUNCHING SLABS OBSERVED DURING ARCHAEOLOGICAL SURVEYS

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2. Havasupai

The Havasupai employ a pounding-crunching slab quite like the Hualapai slabs, except for being generally somewhat larger:

The grinding slab, on which nearly all wild and cultivated seeds are ground, is roughly rectangular, 80 by 50 cm., by 10 cm. thick. A smaller slab, carried with a moving camp, is 60 by 30 cm. A shallow oval, but nearly rectangular, depression is pecked in one face with a hammerstone. The stone of which they are made is so tough that the process of producing a proper trough is very lengthy: on this account they are highly prized. The mano (ya'ha'dja'a) is roughly a prolate spheroid 17-22 cm. long, with short diameters of 7.5 and 10 cm. The woman sits in front of the slab which rests flat on the ground, with its face slightly tilted toward her. The corn, beans, etc., are first pounded with the end of the mano, and then crushed with a pounding, rocking motion of the stone. The meal is brushed off forward with the side of the hand into a tray basket. The chaff is separated by swinging the basket, throwing its contents into the air, and at the same time blowing off the lighter particles. The clean meal is then replaced on the slab to be pulverized by grinding with an additional slight rocking motion, forward and back, and to a lesser extent sideways. 1/

The reducing motion described is clearly pounding and crushing rather than a grinding operation, and Spier might better have termed the nether implement a crushing or pounding slab. The motions he described are those of pounding followed by crushing by rocking the muller back and forth, not grinding.

3. Yavapai

The Yavapais used both metates and pounding slabs, ap-

1/ Spier, 1928, p. 114.
parently. The essentially pounding and crunching action used in reducing some foods has been described for this tribe, although labeled as grinding. "NE Yavapai.--Metates seen of 2 types: (1) flat or slightly concave; (2) troughlike. Usually found, rarely made...Sometimes muller used for pounding on metate. In grinding lemon berries, muller worked in both hands with rocking or crushing motion away from user. Muller not shoved over face of metate, but given slight rolling motion as far as wrists would flex." The effect of this type of reducing motion would be, as implied, crushing rather than grinding, resulting in very little wear on the nether stone due to abrasion by the mano.

4. Mohave

The Mohaves employed fully developed and differentiated pounding and grinding implements, but evidently not the crunching slab. "The Mohave metate for corn, wheat and beans is a rectangular block of lava on which a cylindrical muller is rubbed back and forth. It is therefore the Pueblo type of implement except for not being boxed or set into the ground...Mesquite beans are crushed with a stone pestle in a wooden mortar, the hard seeds remaining whole..." As illustrated, the metate closely resembles the Paiute nether grinding stone. The entire upper surface seems to have been used for grinding except near the end away from the grinder, where a plat-

1/ Gifford, 1936, p. 280. 2/ Kroeber, 1925, p. 736.
form developed. 1/ The Mohave term for this implement, ahpe/2/, is cognate to Hualapai crunching slab.

5. Maricopa

The Maricopa–Kaveltcadom–Halchidhoma community on the Gila River in modern times has ground hard foods like its Pima neighbors, possibly as a result of copying them, possibly because they have long used equipment similar to that of the riverine Mohave.

The metate was a flat slab, roughly rectangular, with one prepared face used for grinding with a hand stone or mano. The metate was of a granite-like stone; the mano of a hard, close-grained sandstone. One small metate seen was roughly twenty-one inches long by fourteen inches wide and two inches thick. It was perfectly flat transversely, but, on its working surface, slightly concave longitudinally. The mano in use with this was as long as the metate was wide, and had a width such as to be conveniently grasped (fifteen inches long; five and a half inches wide; two inches thick). It was of rectangular cross-section...

When the metate was to be used, the woman knelt behind it. A pestle or other convenient stone was placed under the near end to raise it. A cloth was spread under the far end to catch the ground meal: the unground grain was in a basket by the side. The mano was grasped with the hands so that the fingers were over the forward edge, the thumbs over the rear. It was moved to and fro, perfectly flat for most of its stroke, but rocked, i.e., the near edge raised, at the end of the stroke toward the body to catch more grain under it... When the surface became too smooth to catch the grain, it was roughened by pecking with a fragment of hard stone... 3/


2/ Kroeber, 1948, p. 33.
in the manner of the crunching slab. The form of stone used by the Halchidhoma while still on the Colorado is not known.

6. Prescott Branch

The Prescott Branch Indians also employed crunching slabs, even during the period when they were living in stone masonry dwellings and subsisting mainly off agricultural produce. At Kings Ruin, besides grooved metates with flat bottoms and straight side walls, upon which food was undoubtedly ground,

The broken parts of eight small sandstone grinding slabs were found in the rooms of the pueblo. These seem to have been irregular in shape and were probably not more than a foot in length in any case. They show shallow depressions of irregular shape in which the grinding had been done. Two of these found in Room 6 show traces of hematite dust and perhaps indicate the chief function of the implements, that is, grinding paint stone. 1/

7. Southern Shoshoneans

The Paiutes apparently differed from the Eastern Upland Yuman tribes in that they reduced hard vegetable foods by grinding, using a backward and forward rubbing motion of a mano held in both hands.

Among the Paviotso, the back of the metate was employed as a base on which to shell seeds, but the actual mealing process was accomplished by grinding. 2/ The mano was about

1/ Spicer, 1936, p. 54.
2/ Lowie, 1924, p. 204, 215.
as long as the metate was wide, the entire surface of the nether stone being used in grinding, yielding a different surface appearance from that of the artificially pecked out basin of the Hualapai crunching stone although both were simple slabs.

The Moapa Paiutes also ground with a two-handed mano on a slab metate which tended to have a trough worn into it.

The Surprise Valley (Groundhog-Eater) Band of Northern Paiutes also used a "flattish, unsquared slab, the face worn evenly and untroughed" as a metate.

To the west of Hualapai territory, the Shoshonean Cahula Indians also used a slab-shaped nether reducing stone. "The metate is nothing but a flat stone, oval or somewhat rectangular in shape. It is made of granitic or metamorphic rock...very slightly hollowed. Some pieces show hollowing only in that part of their area which is actually rubbed in use." Grinding is clearly implied in this description.

8. Interpretation

The available facts about types of milling stones shaped and used by Hualapais and Indians of neighboring tribes

1/ Lowie, 1924, Fig. 2, p. 204.
2/ Ibid., p. 205 and Fig. 3.
4/ Kroeber, 1908, p. 51.
permit some interpretation of territorial relationships.

Much less can be done than has already been accomplished by ceramic analysis, but a couple of conclusions can be offered.

a. The Paiute Frontier

The fact that the Paiutes employed a slab-shaped grinding stone with an appearance quite different from that of the Hualapai crunching slab permits the generalization that there is no known evidence of Paiute food reduction by grinding south of the Colorado River in Hualapai country. On the basis of available evidence, the hypothesis that the territory south of the Colorado was used and occupied solely by Hualapais prior to Anglo-American conquest cannot be rejected. Nor can the hypothesis that Paiutes did not establish permanent encampments south of the Colorado be rejected.

Oral traditions of southern Paiute gathering and hunting in company with Hualapais south of the river have been presented above. The lithic evidence indicates that the Paiutes did not stay south of the river long enough to lose or break any slab-shaped grinding stones. Even though such stones were valuable, and probably carried with great care, if Paiutes had been south of the river very long, examples of their grinding tools might be expected as evidence.

b. Occupants of Matnyoo'oo Klavalava Sites

The ceramic evidence from sites Arizona G : 4 : 2 and
G : 4 : 3 has already been present. It indicates Cohonina occupation prior to about 1150 A. D., with sherds present at both sites which cannot be accurately assigned either to San Francisco Mountain Gray or Tizon Brown Ware. Ceramic evidence of Hualapai occupation is present in low proportions.

The conclusion that Hualapais occupied these sites after the Cohonina occupation ended is strengthened by the lithic evidence. Hualapai type crunching slabs were found both at the hilltop masonry structure along with nether stones used also for grinding, and at the edge of the fields which Hualapais claim were formerly cultivate by members of the Pine Springs Band. The prehistoric Cohonina appear not to have employed crunching slabs, however. At the westernmost excavated Cohonina sites which have been reported upon, "Of stone objects, by far the most abundant were metates and manos. The former were of the trough and platform type." The twenty metates recovered had been pecked into shape and grinding was done with a linear motion. A couple of "milling bases" were recovered which were unshaped, on which grinding was done with a circular motion. But none resembled the shaped crunching slab of the Hualapais or Havasupais.

1/ McGregor, 1950, p. 73.
2/ McGregor, 1951, p. 87.
Therefore, the crunching slabs found at Arizona G: 4: 2 and G: 4: 3 may be regarded as additional evidence of Hualapai occupation in post-Cohonina times. This is one of the few specific conclusions as to Hualapai distribution which can be drawn from lithic evidence. Along with the conclusion as to the Paiute-Hualapai territorial relationship, it demonstrates the very limited utility of stone artifacts for purposes of a distributional tribal study such as this one.
CHAPTER XI

TERRITORY IN WHICH HUALAPAI LAND USE WAS SOLE AND EXCLUSIVE

The ceramic and lithic evidence presented in this report has demonstrated that the hypothesis that the Petition correctly described the bounds of territory used and occupied solely and exclusively by Hualapais must be rejected. This evidence does, however, permit a fairly accurate definition of that area.

Analysis of the ceramic remains from sites in northwest central Arizona shows positive evidence that thirty-three 15' quadrangles were used and occupied solely by Hualapais from time immemorial until Anglo-American conquest and settlement. These are Nevada DD:16 south of the Colorado River, Arizona F : 4, 7, 8, 12, 15 east of the crest of the Black Mountains, and 16; Arizona G : 1 south of the Colorado River, G : 2 south of the river, G : 6, 7, 9, 10, 13, 14, 15, and 16; Arizona M : 2, 4, 5, 6, 7, 8, and 12 north of the north fork of Santa Maria River; Arizona N : 9, 10, 13, 14, and 15; and Arizona N : 1, 2 and 9 and 10 north of the north fork of the Santa Maria River--Kirkland Creek. Two additional 15' quadrangles from which ceramic evidence is not available, Arizona
G : 5 and M : 3 are entirely surrounded by the quadrangles enumerated, and the hypothesis that they were also used and occupied solely by Hualapais from time immemorial to conquest cannot be rejected, as to do so would require positing the theory that some other tribe held non-contiguous territories, one of them far within Hualapai territory, an explanation neither the most economical nor consistent with the nature of Indian land tenure.

Ceramic evidence defining the limits of areas shared by the Hualapais with neighboring tribes has also been presented.

The 15' quadrangles Arizona A : 16, G : 4 and H : 1 and 5 were shown to have been mostly shared with the related Havasupais. Furthermore, the eastern limit of the territory occupied and used exclusively by Hualapais in these quadrangles was established. West of this line are located the 15' quadrangles Arizona A : 15 south of the Colorado River, G : 3 east of the river and G : 8, 11 and 12 from which ceramic evidence is not presently available. Lithic evidence from G : 8 is identified by Hualapais as theirs, and in form supports this identification. Since the limits of Havasupai land use have been located east of here, the hypothesis that these areas were also used and occupied exclusively by Hualapais from time immemorial to Anglo-American conquest cannot be rejected.
The 15' quadrangles Arizona M : 9, 10, 13 and 16 have been demonstrated to have been shared by the Hualapais and their friends the Jalchedunes from time immemorial until the expulsion of the latter tribe from the Colorado River about 1830. By logical inference from the theory of customary land use of the area out to the drainage divide on either side of a river by a sedentary tribe inhabiting the river bottoms, this shared area was assumed to include 15' quadrangles Arizona M : 14 and 15 also, although ceramic evidence from those areas is not available. Similarly, the area north of the Santa Maria in 15' quadrangle Arizona M : 11 from which no ceramic evidence is available is assumed to have been sole and exclusive Hualapai territory by inference from the situation farther up stream, the area south of the Santa Maria River being part of the region shared with the Jalchedunes (Halchidhoma).

Historic evidence indicates that after the expulsion of the Halchidhoma, this area was taken up by the Hualapais throughout the region north of Bill Williams Fork, and by the Western Band of Yavapais south of that stream.

The 15' quadrangles Nevada DD : 14 east of the Colorado River, Arizona F : 2, 6, 10 and 14 east of the river and 15 west of the summit of the Black Mountains were demonstrated to have been shared by the Hualapais and the Mohaves. The ceramic evidence presented for 15' Quadrangle Arizona L : 2
both east and west of the river shows it to have been used and occupied solely by Mohaves. By logical inference from the theory of utilization of surrounding arid slopes within range of springs by sedentary riverine agricultural tribes, it was concluded that the Mohaves made use of the western slope up to the summit of the Black Mountains although ceramic evidence of Mohave land use is available primarily from the east bank of the river. From sites in the passes in the southern part of the Black Mountains historical evidence is also available to support the conclusions reached from the ceramic evidence. By this reasoning that part of 15' Quadrangle Arizona L : 3 west of the crest of the mountains and a line from there to The Needles is assumed to have been territory shared by the Mohaves and Hualapais; that part east of the crest and line to be territory used and occupied exclusively by Hualapais. By the same reasoning, 15' Quadrangle Arizona L : 4 and L : 7 and 8 north of the crest of the Mohave Mountains are assumed to have been used and occupied solely by Hualapais. Although no ceramic evidence is available from these areas, Hualapai oral tradition provides some details of former land use here.

With the evidence presented, which has been all that is now available, the limits of territory used by Hualapai Indians can be defined.
The Hualapai Indians enjoyed from time immemorial sole and exclusive use and occupancy of a territory bounded as follows: Beginning at a point midstream of the Colorado River marked by the intersection of said river with a line projected northward from the northernmost tip of the plateau ridge between Prospect Valley and Mohawk Canyon; thence southward along said projected line to the plateau ridge; thence along the crest of said ridge (or the top edge of the western rim of Mohawk Canyon) to the top edge of the Aubry Cliff escarpment; thence along said escarpment's top edge to its southern end; thence easterly to Mount Floyd's northernmost peak and along the top edge of the plateau escarpment north of Ash Fork; thence southerly along the top edge of the plateau escarpment east of Ash Fork; thence southwesterly along the top edge of the plateau escarpment of Black Mesa south of Ash Fork; thence southeasterly in a line across Chino Valley to the junction of Walnut Creek with the Chino; thence south to Kirkland Creek and the north fork of the Santa Maria River and westerly along the Santa Maria River to its junction with the Big Sandy River; thence north along the Big Sandy to the neighborhood of Signal; thence westerly along the crest of the drainage divide north of Bill Williams Fork including the Mohave Mountain crest to The Needles; thence northeasterly on a line to the southern tip of the Black Mountains; thence generally northward along the
crest of said Black Mountains to Fortification Hill inside the Great Bend of the Colorado River; thence in a line to the midstream of said river at the said Great Bend; and thence following the midstream of said Colorado River to the point of beginning.

In addition to the resources within this large area, the Hualapais had available to them a share of the resources of regions lying beyond it which they shared with neighboring related or friendly tribes.

To the northeast, the Hualapais and their Havasupai relatives shared the water and food resources of an area bounded on the north by the Colorado River, on the west by the limits of the territory used and occupied exclusively by Hualapais just described as a line due north of the tip of the plateau ridge between Prospect and Mohawk Canyons to the Colorado River; the crest of this ridge south to the upper edge of the Aubry Cliff escarpment; thence following said upper edge to the southern tip of the said escarpment; thence easterly on a line to the northern peak of Mount Floyd. On the east the bounds ran almost due north (about a day's range east of the water holes Ikisa Ha', Ha' Pooyowo Kischava and Ha' Kawhalva along the channel of upper Chino Wash) past Round Mountain to the rock tank Wauwila Ha'; thence north-northwesterly to the water hole Ha' Kathskwawa (east of Rose Well); thence northwesterly to the water holes at Wauwila Kwa'
in the headwaters of National Canyon; thence northerly along the channel of said canyon past Chekoodama rock tank to its intersection with the Colorado River.

To the south, near Bill Williams Fork, the Hualapais from time immemorial until about 1830 shared with their friends the Halchidhoma, with whom they intermarried, an area on both sides of that stream. The northern edge of this area has already been described in delimiting territory used and occupied exclusively by Hualapais as the crest of the drainage divide north of Bill Williams Fork—a divide not everywhere sharply marked. It may be taken to be roughly a line from Grossman Peak (the highest point in the Mohave Mountains) to McCracken Peak to the vicinity of the ghost town of Signal on the Big Sandy River. From here the bounds of this shared area ran south along the Big Sandy to its junction with the Santa Maria; thence southeasterly to the crest of the Bill Williams Fork drainage basin on the south side; thence westerly along said crest to the crest of the ridge dividing the drainage of the Colorado River from that of the Bill Williams, thence northerly along this crest (which includes north of the Bill Williams the ridge of the Mohave Mountains) to Grossman Peak again.

After the expulsion of the Jalchedunes or Halchidhoma from the Colorado River about 1830, the southern limit of territory used and occupied exclusively by Hualapais became
Bill Williams Fork itself between its beginning at the junction of the Big Sandy and Santa Maria, to the point where the Mohave Mountains extend down to the river, thence following the crest of said range westward.

To the west, the Hualapais from time immemorial, at least during periods of peaceful relations with the Mohaves, shared the area between the crest of the Black Mountains and the Colorado River with the Mohaves.

The eastern edge of this shared region has already been described as the western limit of territory occupied and used solely by Hualapais: a line from The Needles northwesterly to the southernmost tip of the Black Mountains, then generally northerly and westerly along the crest of said range to the summit of Fortification Hill inside the Great Bend of the Colorado River; thence on a line from said summit to the midstream of said river. The western side of this shared region was defined simply by the Colorado River down to the thickly settled area of Mohave Valley itself where the Mohaves enjoyed sole and exclusive use and possession of the flood plain and lower bajada slope.
The Area in which Hualapais Enjoyed Sole and Undisputed Use, Occupancy and Possession is indicated in pink. The Area Hualapais Shared with Mohaves is indicated in green. The Area Hualapais Shared with Havasupais is indicated in blue. The Area Hualapais Shared with Halchidhomas till 1830 is indicated in orange.
APPENDIX I
THE IDENTITY OF YAVAPAI POTTERY

When this study was initiated, the ceramic characteristics of the pottery produced by the Mohave and Southern Paiute neighbors of the Hualapais was known. In the course of this study, Hualapai and Havasupai pottery has been identified. This knowledge of ceramics has enabled a fairly precise definition of territory used and occupied solely by the Hualapais from time immemorial to Anglo-American conquest, and the areas shared by them with their Mohave, Havasupai and Halchidhoma neighbors based upon ceramic ware distributions. Up to the present time, however, it has proved impossible to establish the identity of Yavapai pottery. The most that can be done is to state the range of hypotheses available for testing at this point.

A. Prescott Gray Ware Theory

The hypothesis that Yavapais made Prescott Gray Ware has in its favor essentially the fact that the range of the historic Yavapai coincides in part at least with the range of the prehistoric Prescott Branch Indian tribe. It has also in its favor that Prescott Gray Ware seems to be related to Tizon Brown Ware and other Yuman ceramics—it was tempered with the same lavish hand, and firing was not closely
controlled. However, although some vessels fired orange, the basic aim of Prescott Branch potters seems to have been a reduced gray ware, which is contrary to Yuman firing practice. The temper was larger and coarser than Yumans generally employed, and the vessels were better finished than anything Yumans produced (until the Maricopas learned burnishing from the Pimas, at least).

This hypothesis has against it the fact that Prescott Gray Ware seems not to have been produced after about 1300. The modern Yavapai were probably first seen in their modern habitat (which it has been suggested they reached around 1400 A. D.) in 1582, possibly. A further difficulty is that the makers of Prescott Gray Ware lived in stone masonry houses, and their cultural development had pursued a course sufficiently long for these to have developed from single-room excavated pit-houses to multi-roomed pueblos built on the surface. If the Prescott Branch Indians were the ancestors of the Yavapais, then the cultural loss of stone masonry dwellings and intensive agriculture during the period between 1300 and 1582 must be postulated, for the Indians seen by

1/ Spicer, 1936, p. 13-14; Colton, 1953, p. 75.
2/ Bartlett, 1945, p. 42.
3/ Schroeder, 1952b, p. 112.
4/ Spicer, 1936, p. 16.
Spaniards in the latter year were non-sedentary, brush-shelter dwelling Indians.

The Yavapai themselves obviously remember no valid traditions on this subject. "Informants...thought red-ware sherds and black-on-gray sherds obtained at ca. 6000 ft. e-lev. on Senator highway near Prescott might be Yavapai. However potsherds of same types from surface of extensive King Brothers' ruin in Chino valley declared not of Yavapai manufacture."

B. Tizon Brown Ware

The hypothesis that the Yavapais made some type of Tizon Brown Ware has in its favor the occurrence of sherds of this ware on sites within the northern historic range of the Yavapais. It also has in its favor the fact that all the other Eastern Upland Yumans made some form of this ware, and that the aboriginal pottery of the Western Upland Yumans can hardly be distinguished from it.

The occurrence of wiped sherds of the type made by the Havasupais at the extreme southern edge of Hualapai territory where it seems improbable Havasupai vessels would be imported perhaps indicates the Yavapais made a surface-altered type of Tizon Brown Ware. This theory is supported by discovery of a pure site of wiped Tizon Brown Ware on Cherry Creek east of

1/ Gifford, 1936, p. 280.
Prescott. Some undistinguished plain brown and carbonized sherds excavated from Turkey Creek Cave (N. A. 2477), identified by Yavapais as a place they formerly occupied, may also have been produced by Yavapai potters.

C. La Paz Gray

The hypothesis that Yavapais made La Paz Gray has in its favor the occurrence of this type (mixed with Lower Colorado River Buff Ware) on excavated depressions apparently marking former brush shelters on the first terrace east of the Colorado River at the former town of La Paz, Arizona. This site was identified by a Mohave guide as one where Yavapais had been held by the U. S. Army during the period of activation of La Paz as an army camp. The Lower Colorado River Buff Ware may be interpreted as the remains of vessels traded from the Mohaves who had moved down into the Chemehuevi Valley and were more or less cast in the role of hosts to both the captive Yavapais and Hualapais who were also held here in 1874-1875. This hypothesis also has in its favor the known distribution of this type at other river-side sites probably visited by Western Yavapais, in the Papagueria and near the Santa Maria River.

1/ Gifford, 1936, p. 346 and Plate 8a.
D. Wingfield Plain Theory

The hypothesis that Yavapais made Wingfield Plain has in its favor the occurrence of this type within the range of modern Yavapais, and the fact that this type could easily be classed as a type of Tizon Brown Ware differentiated by lack of a scummed surface, abundant schist temper visible on the surface, and the huge size of the temper, and also the fact that it has been recovered from dwelling remains which suggested to the excavator wickiup type construction.  

This hypothesis has against it the fact that the makers of Wingfield Plain also inhabited stone masonry dwellings, and this type has been classified as a Hohokam Buff Ware type.

E. Trade Ware Reliance

The hypothesis that Yavapais made no pottery has in its favor the fact that no archaeologist has as yet been able to identify it. The mixture of Lower Colorado River Buff Ware with La Paz Gray at the La Paz captivity site may indicate the Yavapais acquired both from the Mohaves. The abundance of sherds of Hualapai, Pima and riverine Yuman origin generally in historic Yavapai territory supports such an interpretation.

2/ Ibid., p. 105-106.
This hypothesis has against it the fact that Yavapais definitely claim that their ancestors made pottery, and Yavapai oral tradition preserves some details of processes.

F. Band Differences

The hypothesis that different Yavapai bands made different types of pottery has in its favor the multiplicity of candidates for Yavapai pottery, and their different distributions. The known distribution of La Paz Gray, for example, coincides fairly well with the historic range of the Western Band of Yavapais. The known distribution of Wingfield Plain coincides somewhat with the historic range of the Northeastern Band of Yavapais, but it got to places no living Yavapai ever saw.

This hypothesis has against it the lack of cultural differentiation between Yavapai bands in other cultural traits, and the general homogeneity of Yuman cultures.

G. Conclusion

None of the hypotheses offered can as yet be accepted or rejected on the basis of available evidence, although it seems fairly clear that neither Wingfield Plain nor Prescott Gray Ware was made by the modern Yavapais. More surveying and excavation must be carried out before the identity of Yavapai pottery can be established.
APPENDIX II
KEY TO INFORMANTS

In the text statements obtained from interviews with living Hualapais and others are enclosed in quotation marks and followed by an identification in parenthesis, i.e. (XZ Dec. 1 p 100). Statement in quotation marks are verbatim copies from my field notes. These are word for word transcriptions of respondents' statements when I was able to record interviews directly with a typewriter or tape recording machine. Otherwise, they are approximations of what was said, preserving the respondent's words to the best of my memory, trained for this type of recording by some three years' field research prior to the initiation of this study. Such notes were made in outline form while traveling or in similar circumstances, and typed out in full the same night or following day depending on field circumstances. The date and page in the reference refer to my typed field notes on 5 x 8" sheets in chronological order.

Respondent List

1. AM Mrs. Adam Majenty. Born in Milkweed Band (daughter of KC), married into Big Sandy River Band. b. 1908.

-802-
   Son of Walapai Jim.  Mother's band Wi Kawhata Pa'a.  Widower.
4. CM  Charles McGree.  Born ca. 1903, son of M and TM.  
   Married to Yavapai (1st, Chippewa (2d).  Economic success off reservation.
   Lives at Hackberry.
9. FLW  Mrs. Frances Lovin Woodward, Anglo-American,  
   Kingman.  Member first City Council; daughter former Mohave  
   County Sheriff.
12. GT  Grant Topija, Hualapai-Anglo, born 1907.  Mother  
   from Wi Kawhata Pa'a; nephew of Indian Jeff, curer.
13. IO  Isidoro Olea, Mexican-American.
14. JB  John Boston, born ca. 1882 in Milkweed Band.  Died  
   winter 1954-55.
15. JM (John) Matuck. Born ca. 1877 in Ha' Kasa Pa'a. 
   Burned to death winter 1954-55.

16. KC Kate Crozier. Born ca. 1864 in Milkweed group of 
   Plateau Band. Ex-scout for U. S. Army, survivor of 
   captivity at La Paz on Colorado River Indian Reserve-
   tion.

17. LK Lucy Kuni (or Cooney). Born ca. 1873-74 in Juni-
   per Mountain Band.

18. LN Lloyd Nuttycomb, Anglo-American, born 1881.

19. LW Lillie Wilder, born ca. 1896. Married into Ha' Ka-
   sa Pa'a.

20. M (Indian or Cap) McGee, born 1874 in Big Sandy River 
   Band, raised in Ha' Kiacha Pa'a. Cattleman outside 
   reservation formerly (retired).


22. N Mrs. Mary Nodman, born ca. 1865 in Ha' Kasa Pa'a. 
   (Hualapai-Shiwits)

23. O Designates observations made by author.


25. PT Paul Talieje, born ca. 1887 in Whala Pa'a. (?). 
   Resides at Valentine.


27. RM Robert Martin. Mohave. School bus driver. Married 
   to Hualapai.

   Blinded by dynamite blast in 1930's.

30. SM Mrs. Seth Mapatas. (Sivathija). Wi Kawhata Pa'a.  
    (Sister of RW).

31. TL Tom Lane. Born ca. 1884 in Truxton Canyon Band.

    (Wife of M; mother of CM)

33. YB Young Beecher. Born ca. 1873 in Ha' Kasa Pa'a.

34. GW George Walker. Born in Cerbat Mountain Band.
APPENDIX III

STANDARDS OF SHERD SAMPLE RELIABILITY

In order to simplify discussion of the survey collections and indicate the relative reliability of sherds samples without cluttering the text with additional figures for the reader to keep in mind and evaluate, the sherd samples have been classified in six categories of reliability:

<table>
<thead>
<tr>
<th>Reliability Level</th>
<th>Number of Sherds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unreliable</td>
<td>1 to 15 sherds</td>
</tr>
<tr>
<td>Low Reliability</td>
<td>16 to 30 sherds</td>
</tr>
<tr>
<td>Fairly Reliable</td>
<td>31 to 50 sherds</td>
</tr>
<tr>
<td>Reliable</td>
<td>51 to 100 sherds</td>
</tr>
<tr>
<td>Very Reliable</td>
<td>101 to 1,000 sherds</td>
</tr>
<tr>
<td>Very, Very Reliable</td>
<td>1,001 sherds and up</td>
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</table>
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