

The Mojave River and the Central Mojave Desert: Native Settlement, Travel, and Exchange in the Eighteenth and Nineteenth Centuries

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In the late eighteenth century, the Mojave River and a portion of the central Mojave Desert lying to the east formed a major native travel corridor between the Colorado River and points east and the Pacific Coast. The Desert or Vanyumé division of the Serrano occupied the Mojave River portion of this corridor, while the Chemehuevi branch of the Southern Paiute had settled the desert region to the east of the Sinks of the Mojave, and Desert Kawaiisu ranged to the north of the Mojave River. Mojaves¹ from the Colorado River villages traveled via this corridor to the San Joaquin Valley and coastal southern California. The late eighteenth-century political geography of this area appears to have reflected the importance of this travel corridor to long-distance exchange, and particularly to the exchange involving Pacific coast shell beads, which were circulated far to the east of desert California. Ethnographic information on the local role of Pacific coast shell beads in facilitating intergroup exchange within this desert area is discussed. The settlement geography and inter-ethnic interactions within this central Mojave Desert region are also reviewed. This includes the apparent expulsion of the mysterious 'land Mojaves' or 'like-Mojaves' from the region before 1776, as well as the later displacement of desert Vanyumé Serrano by Chemehuevis during the 1820s and later. New information on the fate of remnant Vanyumé Serranos found on the Mojave River in the 1830s is also presented.

In 1776, a dispute arose between Capt. Fernando de Rivera y Moncada, military commander in Alta California, and Franciscan missionary Fr. Francisco Garcés, over the wisdom of an open Indian trade and intercourse policy. The immediate cause of their disagreement was the decision by Rivera to expel a Mojave Indian trading party from the Colorado River that was visiting at Mission San Gabriel, although the party left before official action could be taken. Rivera doubted the existence of trans-frontier native trade. He believed that the so-called trading party of non-Christian Indians that had visited Mission San Gabriel was in fact composed of military scouts. He saw any Spanish intercourse with distant gentile nations as posing a threat to military security. He was particularly afraid that coastal and interior natives might make contact with one another, in order to make common cause against the Spanish invaders.

Fr. Garcés, on the other hand, well knew that

the visitors at San Gabriel, Mojaves from the Colorado River, had traditionally been engaged in long-distance exchange with southern California coastal groups.

He viewed the interchange of goods with unconverted Indian groups as an admirable vehicle for bringing them into the sphere of Spanish influence, with a view towards eventual missionization. Garcés also understood that the interaction between different native nations that Rivera so feared was in fact a regular feature of native life in southern California. Exchange relations, as Garcés understood, were for the native cultures of the region elements of wider systems of political alliance. He made the following observation:

International Law (*el derecho de las gentes*) allows the commerce of nations with one another; how then can be prevented the

legitimate and most ancient commerce of the nations of the [Colorado] river with those of the sea, which consists of certain white shells? ... Some of the nations who are nearest to the new establishments are most justly irritated with the Spanish soldiers at the outrages they have suffered, especially from deserters; soon, if these same motives be given to the remote nations, they may unite with one another, then will the new establishments be unable to subsist, and still less can others be founded [Coues 1900:I:255-256].

While Garcés believed that Rivera was determined to prohibit native trade, Rivera in his diary denied that such a thing could even exist. Of the Mojave traders at Mission San Gabriel, he said:

...if their only purpose were to trade beads [as] before the Spanish had come, it is clear and evident that what beads are there that they had come to seek out? ... the Indians of the territory of San Gabriel having been found at the first [by the Spanish] to be poor and extremely unfortunate, it follows and is equally evident that if they [the Mojaves] could not have come to trade beads, then not anything else either because the natives of this land lack everything [Burrus 1967:235-236; translation mine].

Rivera here reveals himself as surprisingly incapable of observing and understanding the native cultures that, as an old Sonoran frontier hand, he was supposed to have been experienced in managing politically. It turns out that Garcés had a much keener sense of the politics of cultural conflict and interaction, and of the political dynamics of the interior frontier of Alta California. Let us first consider the experience of native groups in one portion of that colonial frontier, the central Mojave Desert, in the late eighteenth and early nineteenth centuries. I will then examine the role of the long-distance system of exchange maintained by the Mojaves—the institution which so annoyed and confused Rivera—in the colonial-era political and cultural history of this region.

GARCÉS AND THE MOJAVE RIVER

Franciscan missionary explorer Francisco Garcés was based at Tubutama in northern Sonora; from there, he undertook a number of reconnaissance expeditions up the Colorado River and into southern California and northern Arizona in the early and mid 1770s (Coues 1900; Galvin 1965). These journeys were made in coordination with exploration efforts undertaken by other missionary and military personnel in connection with the founding of Franciscan missions in Alta California. Garcés' travels focused on two problems. First, identifying native nations and their political geography, with a view to later missionization, and, second, finding practicable travel routes through the southwestern deserts that could be used in expanding the reach of the Franciscan missions and the Spanish military administration that supported them. In the spring of 1776, having previously traveled in the valley of the Colorado River, Garcés headed west from the river through the Providence Mountains to eventually reach Soda Lake and the 'Sinks of the Mojave' at the eastern terminus of the Mojave River. He then traveled up the river to Summit Valley, at its headwaters, before journeying on to Mission San Gabriel. Later in the spring, he returned eastward from the southern San Joaquin Valley and Tehachapi Mountains to rejoin the Mojave River near modern Barstow, and make his way eastward on the trail system which took him to the Mojave settlements on the Colorado River. A major purpose of this particular journey was Garcés' unsuccessful attempt to find a practicable direct route from the Mojave settlements on the Colorado River to the Spanish administrative headquarters at Monterey.

This expedition and the related travels of Garcés are important in providing a comprehensive picture of the native political geography of the Mojave Desert and the Colorado River region in 1776 (Coues 1900:II:235-246, Galvin 1965:28-39, 58-60). In the case of the trail connecting the Colorado River villages with Cajon Pass and Mission San Gabriel (Fig. 1), the relative location of Mojave, Chemehuevi, and Desert Serrano settlements can also be identified from his account. In

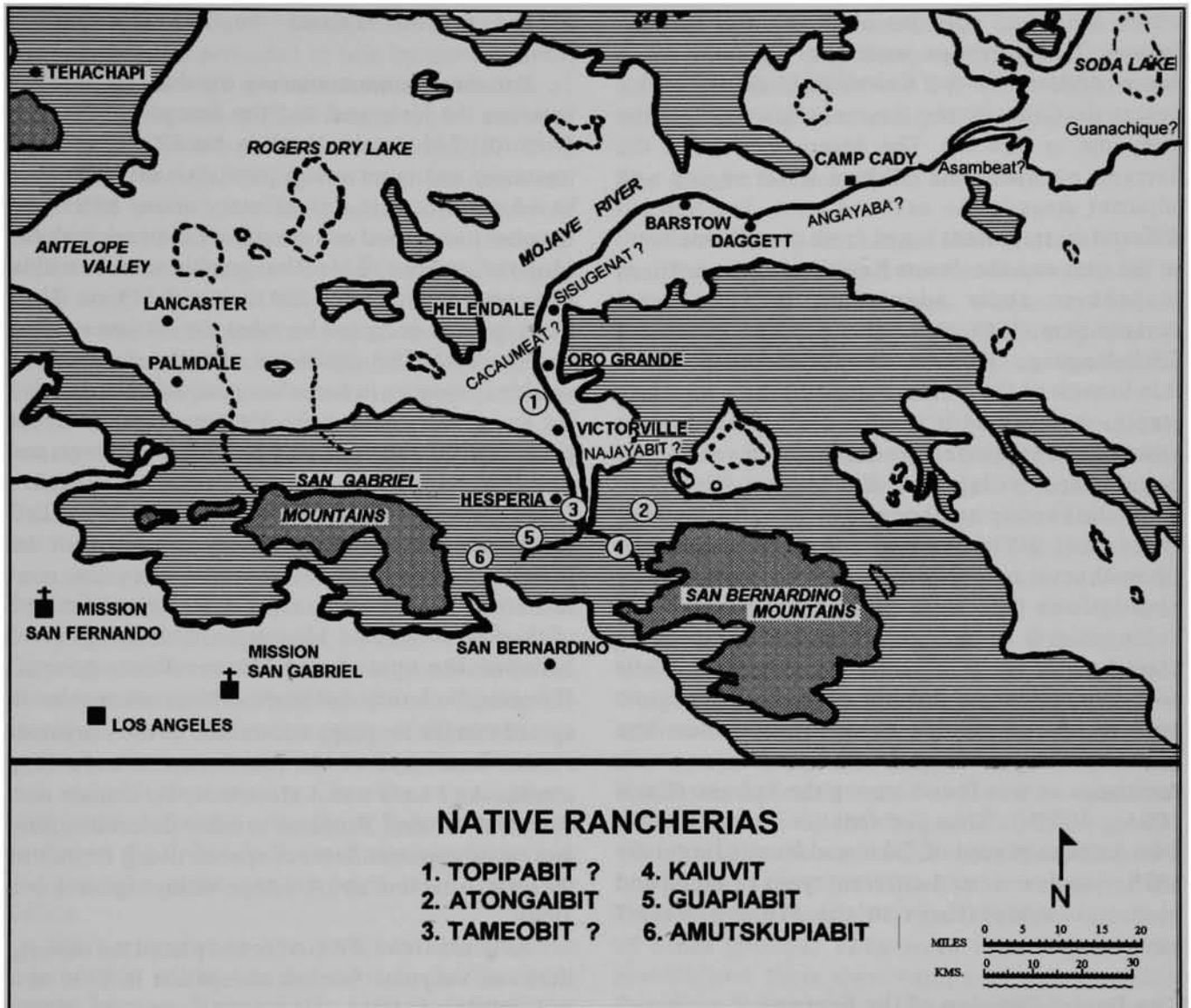


Figure 1. Native Rancherías in the Mojave region.

subsequent sections that discuss the political geography of the Chemehuevi and Desert Serrano, we will refer to Garcés' observations on the locations of individual rancherías and water sources. He found Chemehuevis occupying both southern desert areas south of the Old Woman Mountains and ranchería sites in and to the east of the Providence Mountains. He noted the commencement of Vanyumé (Desert) Serrano occupation along his route of travel at springs located on the eastern edge of Soda Lake. He found additional Serrano-speaking settlements along the length of the

Mojave River. I will consult his information on the location of settlements as I discuss the political geography of native groups that were located on or near the travel corridor connecting the Colorado River with coastal southern California.

POLITICAL GEOGRAPHY OF THE MOJAVE RIVER REGION IN THE LATE EIGHTEENTH CENTURY

In the late eighteenth century, a zone of 'frontier' interaction existed between three groups

which inhabited portions of the central Mojave Desert. These groups were the Chemehuevi, a desert division of the Kawaiisu (*Nuwíwi*), and a desert division of the Serrano, also called the Vanyumé or *Beñeme*. The desert division of the Serrano occupied the Mojave River region and adjacent areas to the east and west. The Serrano differed in important ways from the Chemehuevi to the east and the desert Kawaiisu to the north in respect to their adaptation to the desert environment. Like other Uto-Aztecan groups of Takic language affiliation found closer to the coast, this branch of the Serrano utilized the acorn as a staple, maintained a semi-sedentary settlement system, and supported rancherías with substantial populations; villages on the Mojave River had populations of up to 80 people or more. In contrast, the desert division of the Kawaiisu and the Chemehuevi, both Numic-speaking, had smaller populations that were more mobile and were deployed over a larger land area. The Chemehuevi placed greater cultural emphasis on hunting. Their social organization did not depend on the same system of community exogamy and marriage exchange between ranchería-based clan or sib territories as was found among the Serrano (Earle 2004a, 2004b). Thus the frontier between these Uto-Aztecan groups of Takic and Numic linguistic affiliation demarcated different types of social and economic adaptations to the Mojave Desert environment.

The Desert Division of the Serrano

Both Fr. Francisco Garcés and Jedediah Smith, when traveling through the Mojave River area, heard versions of the Mojave term Vanyumé used to refer to native inhabitants of the river corridor. Kroeber (1925:614-615) also used this term for the native peoples of the Mojave River region, whom he described as a linguistically-differentiated desert division of the Serrano language and culture group. This latter group was historically associated with the San Bernardino Mountains and surrounding areas. The Mojave, for their part, appeared to distinguish between what they called the Vanyumé of the Mojave River and the *Hanguwetse*, a term referring to Serrano-speakers

of the region around the San Bernardino Mountains.

Kroeber's commentaries on the relationship between the Vanyumé and the Serrano of the San Bernardino Mountains, both in his 1925 *Handbook* treatment and in an article published in 1959, were based on somewhat contradictory native testimony. Kroeber had carried out extensive fieldwork with the Mojaves, and one of his ethnographic sources within that group had indicated that the entire Mojave River drainage was occupied by what the Mojaves called the Vanyumé. This conflicted with the statement of an elderly woman, in fact a Vanyumé survivor married for many years among the Mojaves, that the upper portion of the river was occupied by the Serrano and not the Vanyumé. Chemehuevi ethnographic consultants also mentioned a group that they called the *Pitanti* or *Pitanta*, which they equated with the Mojave ethnic category of Vanyumé. They also used the term *Marengayam* to refer to the upland Serrano of the San Bernardino Mountains, and distinguished between the upland and Mojave River groups. However, both they and various Mojave consultants agreed that the language and culture of the Vanyumé/*Pitanti* and those of the *Marengayam* were very similar. As I have noted elsewhere, Fr. Garcés also extended the term Vanyumé to other desert dwelling groups of apparent Serrano speech living further to the west in the southern Antelope Valley region (Earle 1990).

As noted above, Fr. Garcés had placed the easterly limits of Vanyumé Serrano occupation in 1776 at a spring located on the east side of Soda Lake. While Coues (1900:I:238, 258) identified the spring as Marl Springs, it in fact appears to have been located close to the southeastern shore of Soda Lake. Various Chemehuevi ethnographic sources emphasized that the Soda Lake area had been occupied by the *Pitanti* or Vanyumé. From there, Serrano-speakers were found to the westward, inhabiting the lower Mojave River through the modern Daggett-Barstow area; further upstream, other communities of Serrano speech were found to the headwaters of the river.

The Chemehuevi

In the eighteenth century, a group called the *Chemebet* or Chemehuevi was described by Fr.

Garcés on the basis of both his own observations and information provided to him by the Mojaves. He noted that this group occupied portions of desert southeastern California and southern Nevada. He distinguished the *Chemebet* from groups of 'Paiuches' living further to the north and east. The use of the designation *Chemebet* or Chemehuevi for Southern Ute speakers living in adjacent desert areas to the west of the Colorado River in California at the end of the eighteenth century has been uncontroversial. However, there has been some diversity of opinion about whether Southern Ute speakers inhabiting southernmost Nevada in the nineteenth century are to be considered Chemehuevi or Southern Paiute.

At the time of Fr. Garcés' travels through Chemehuevi territory in 1776, this group occupied the Ivanpah, New York, and Providence Mountains in southeastern California, the eastern fringe of Fort Irwin, the Pahrump area in southern Nevada, and the Old Woman and Paiute Mountains. Chemehuevis were also found further south in the deserts to the west of the Halchidhoma. During his travels, Garcés observed a party of Chemehuevis at the southern end of Ward Valley. His information makes it clear that the Chemehuevis could not simply be defined as Southern Paiutes who had settled on the Colorado River. That river settlement did not take place until much later, in the late 1820s.

With respect to the political/geographic relationship of the Chemehuevis to the Southern Paiute proper, Isabel Kelly (1934) defined the Pahrump, Las Vegas, and Cottonwood Island people as Southern Paiute rather than Chemehuevis. However, Chemehuevi elder George Laird, who worked with both Carobeth Laird and John P. Harrington, referred to the inhabitants of the Las Vegas area, Kingston Mountain, and Cottonwood Island as forming part of the Chemehuevi political and cultural sphere (Laird 1976). Laird also believed that groups of Southern Ute speakers that occupied the Providence Mountains and other desert areas to the west of the Colorado River in the late nineteenth century, such as the followers of Chief Tikopur, were groups that could, in cultural terms, be considered fully Chemehuevi. He did not support the view that

'River Paiutes' (southern and northern Chemehuevi) and later nineteenth-century 'Mountain Paiutes' of the Providence Mountains were socially and culturally different groups.

The Desert Branch of the Kawaiisu

A third group that ranged through territory near the Mojave River region was the desert division of the Kawaiisu or *Nuwīwī*, whose mountain homeland was located in the Tehachapi-Paiute Mountain region. Debate has long surrounded the question of the eastern limits of the territory of this desert division of the Kawaiisu, and particularly whether they had occupied the southern portion of the Panamint Mountain and Valley area and the western portion of Fort Irwin (Park et al. 1938, Steward 1938; Zigmund 1938, 1986, n.d.). I have discussed the political geography of the Desert Kawaiisu elsewhere in greater detail (Earle 2004b:71-78). Ethnographic testimony from a wide range of sources confirms the permanent occupation of areas of the central and northern Mojave Desert as far east as the southern portion of the Panamint range and western Fort Irwin by small bands of Kawaiisu speakers, called *Panumint* by the Chemehuevi. These groups were based in the region and were identified with it separately from the Kawaiisu or *Nuwīwī* of the Tehachapi and Piute Mountain regions by members of other groups. They were reported to have maintained their own camps in the southern Panamint Valley region. The northern portion of the range was said to have been occupied by the *Pamiṅkoits* or Timbisha/Panamint Shoshone. *Pamiṅkoits* was a term widely used for the latter group by the Chemehuevi.

Steward (1938) also suggested that the group living in southern Death Valley in historic times, led by Panamint Tom, could be considered of Desert Kawaiisu affiliation. Fowler, Dufort, Rusco, and Esteves (1999:56-57) have reviewed Steward's ethnographic data on the Death Valley area, and indicate that in historic times Kawaiisu speakers might have been found in some parts of southern Death Valley.

In 1932-1933, Isabel Kelly interviewed a number of Chemehuevi consultants, including

Matavium, who placed the *Panumints* or Desert Kawaiisu to the north of Daggett and the nearby Calico Mountains (Kelly 1953). The *Pitanti* (Vanyumé/Desert Serrano) were placed by Matavium at Daggett and in the Mojave River valley (Kelly 1953:17-4, 17-5). Thus the Desert Kawaiisu were recalled as having occupied the west and central portion of modern Fort Irwin north of the Mojave River valley.

The 'Desert Mojave' or *Tiira'ayatawi*

Another group that figured in the political geography of the Mojave River region and the central Mojave Desert was called the *Tiira'ayatawi* by the Chemehuevi. Members of this group were also called Desert Mojaves, Land Mojaves, or Like-Mojaves, on account of a presumed linguistic and cultural affiliation with the Mojaves of the lower Colorado River (Drover 1979:56-60; Kelly 1953:17-11, 17-24-17-27; King 1981:17-18; Kroeber 1959: 294-298, 305-307; Laird 1976:141-142; Van Valkenburgh 1976:5-7). Kroeber discussed fragmentary ethnographic information about the group in 1959; considerable additional ethnographic information is now available that was collected on the Desert Mojave and on the war between them and the Chemehuevis.² The Desert Mojave were stated by a number of sources to have occupied a large expanse of territory, including the Danby and Goffs regions, the Old Woman Mountains, Paiute Springs, the New York, Providence, Old Dad, and Granite Mountains, the "soda lakes" region around Baker, the eastern end of the Mojave River, and the southeastern corner of Fort Irwin. One consultant even placed Desert Mojave occupation of the Mojave River as far upstream as Daggett. Statements were also made alleging Desert Mojave occupation of the Chemehuevi Valley on the west bank of the Colorado River, and also of desert areas as far south as Desert Center, although these latter claims are rather uncertain.

The Desert Mojave or Like-Mojave were said to have spoken a language similar to that of the Mojaves of the Colorado River and to have cremated their dead. They were remembered by Chemehuevi consultants as having dressed in

sheepskin like the Chemehuevi, to have used bows similar to the high-quality bows of the latter group, and to have subsisted on hunting and foraging like the Chemehuevi, rather than practicing any form of horticulture. However, Charles Fremont's account of his 1844 expedition through the central Mojave Desert contained a curious detail about Mojaves living on the Mojave River and engaging in gardening. He encountered a party of Mojaves from the Colorado River, in the company of an apparent Vanyumé Serrano ex-mission neophyte, now residing with them on the Colorado. The ex-neophyte commented that:

Formerly, a portion of them [the Mojaves] lived upon this [Mojave] river, and among the mountains which had bounded the River Valley to the northward during the day, and that here along the river they had raised various kinds of melons [Jackson and Spence 1970:676].

This statement suggests that desert-dwelling Mojaves were living as far west as the Daggett area on the Mojave River, and that they were involved in at least limited horticulture. This statement also hints that the Mojave presence was, in historical terms, relatively recent.

The 'Desert Mojave' or *Tiira'ayatawi* thus were reported by native consultants to have occupied areas that in historic times formed part of the territories of the desert (non-riverine) division of the Chemehuevi in southeastern California, as well as of the Vanyumé (Desert) Serrano of the lower Mojave River. Chemehuevi consultants stated that the Chemehuevis had originally lived to the east and north of the *Tiira'ayatawi* but eventually attacked and exterminated them and took over the bulk of their territory. Chemehuevi sources agree that the territory occupied by the *Tiira'ayatawi* included, at a minimum, the Sinks of the Mojave and Soda Lake, the Okwai area (the New York Mountains), the Providence Mountains and adjacent mountain chains, and the Old Woman Mountains and the Danby region. Some sources place them even further to the south as well. Thus the Providence Mountains were viewed as a core element of the old Desert Mojave territory. One

account mentioned that the former *Tiira'ayatawi* territory had been divided up after consultations between the Serrano, Chemehuevi, and other groups. It was said that the Chemehuevis had finally gone to war with the *Tiira'ayatawi* on account of the latter group's raids, which had involved the killing and eating of Chemehuevi women and children.

The principal question in dating the war, as Kroeber observed in 1959, was whether it had occurred before or after the imposition of Spanish colonial rule in Alta California (Kroeber 1959:307). Garcés' account of his travels along the Colorado River and through the Providence Mountains and up the Mojave River provides no hint that *Tiira'ayatawi*, as opposed to Chemehuevis, occupied the region west of the Colorado River in 1776. If the war postdated Garcés' travels, then the displacement of the Chemehuevi by the *Tiira'ayatawi* in the Providence Mountains and adjoining desert areas would also have to have postdated 1776. The vividness of the accounts of the war and some comments bearing on the number of generations elapsed since the event would seem to hint at a recent date, but on the other hand, Chemehuevi accounts do not speak of their own groups as having been originally expelled from the area by a *Tiira'ayatawi* invasion, recent or otherwise. In addition, the *Tiira'ayatawi* are repeatedly spoken of as having adapted culturally in some ways to life away from the river, using Chemehuevi-style dress and weapons, and supporting themselves through desert hunting. These cultural adaptations, if accurately reported, do not seem consonant with the idea that Mojave river-dwellers had simply raided into the desert around 1800. In addition, the information that we have from Spanish-era sources about the populations living on the Mojave River and about the relations between the Serrano, the Mojave, and the colonists, also do not indicate any colonial-era Mojave or other Yuman-speaker settlements existed in the desert west of the Colorado River between 1776 and 1800, much less during later decades. It would appear that the war between the *Tiira'ayatawi* and the Chemehuevi may have occurred relatively shortly before Garcés' era, given the vivid recollection of events in native oral

historical testimony. This would suggest that control of the travel and exchange corridor had changed hands, and perhaps had done so a relatively short time before the era of Garcés' travels. Such a scenario, however, depends upon the assumption that our ethnographic sources are accurate in describing the cultural characteristics and language of the *Tiira'ayatawi*, and also are correct about the geographical extent of the territory they occupied.

DESERT (VANYUMÉ) SERRANO SETTLEMENT ON THE MOJAVE RIVER, 1776-1820

Diary accounts of travel through the Mojave River region left by Franciscan missionaries Fathers Garcés (1776), Zalvidea (1806), and Nuez (1819) have provided important information on native settlement in the region that can be cross-checked against Franciscan sacramental register data and ethnographic accounts (Cook 1960:247-248; Coues 1900:235-246; Palomares 1808; Walker 1986:236-245, 263-267). The upper river region was more frequently visited, and the native *rancherías* on the upper reaches of the river are better documented.

Elsewhere, I have described Garcés' journey up the Mojave River in 1776:

Traveling up the Mojave River from its terminus just to the southwest of Soda Lake, Garcés appears to have first camped at the eastern end of Afton Canyon. His next camp was probably located around the intersection of Manix Wash with the river. The next day he camped at what he called a *Beñemé ranchería*, 2-3 miles [3-4.6 km.] upriver. This place featured grass, water, mesquite and screwbean trees, wild grapes, and tule reeds, the latter being eaten by the inhabitants. Winter weather at the time prevented them from hunting. This place was probably located in the general vicinity of later Camp Cady, where a riparian woodland stretched along the river. A second *ranchería*, abandoned, was observed along the Mojave River two leagues (5-6

miles, [8-10 km.]) to the west in a place without tule reeds, perhaps half way between Camp Cady and Forks in the Road. There was then a long journey to the next Beñemé settlement, located along the river some 5 leagues (circa 15 miles [24 km.]) to the southwest of the Lenwood-Barstow area. This was probably in the Helendale-Point of Rocks region. It had a population estimated at 40 people, and here he was fed acorn porridge. Another village perhaps 3 miles [4.6 km.] to the south was the residence of a chief who provided him with an elaborate ritual greeting involving acorns and shell beads. Garcés then traveled 2 1/2 leagues south to the Victorville area, and 5 more leagues to another village of 70 people, very likely Atongaibit, on the river just east or southeast of Hesperia, where the ritual greeting was repeated. He later visited a ranchería of 80 residents further upriver in Summit Valley, clearly Guapiabit, before crossing the mountains southward en route to Mission San Gabriel [Earle 2004a:176].

Father Pascual Nuez subsequently chronicled an unsuccessful 1819 punitive expedition down the Mojave River that was directed at the Mojave villages on the Colorado (Nuez 1819). Nuez's expedition log mentions major rancherías that appear to have been the headquarters for localized territorial patrilineal sibs or clans (Earle 2004a:176). These winter-village headquarters correspond to the rancherías of origin that are listed for many individuals baptized at Mission San Gabriel and Mission San Fernando, particularly after 1808. Nuez' account, however, has sown considerable geographic confusion because of his having used a distance value for the Spanish *legua* in his diary that was only about one-third the standard distance of circa 2.6-3 miles [4.2-4.8 km.]. This has frustrated attempts to use his information on the siting of native rancherías to determine their former physical location.

The expedition that Nuez chronicled passed through the upper Mojave River villages of *Guapiabit*, *Atongaibit*, *Topipabit*, *Cacaumeat*, and

Sisugenat. On the lower section of the river below Barstow the expedition camped at *Angayaba*. An advance party then continued east on the river to *Asambeat* and *Guanachique*. *Angayaba* appears to have been located on the river, probably less than a half days' journey east of modern Daggett. A clue as to the location of this place was provided by Nuez's reference to a campsite on the return journey of the expedition from *Angayaba* to San Gabriel: it was a place on the river with water located near a mountain of reddish stone where native grinding stones or metates were quarried. This is clearly a reference to Elephant Mountain, on the north side of the river opposite Daggett, where a native milling-stone quarrying site is located. It can be inferred from Nuez's comments that *Angayaba* was located considerably less than a full day's journey to the east of this quarry site campsite. This might have been at Forks of the Road, the area where the Old Spanish Trail headed away from the river to the northeast, where the river flowed on the surface, or possibly at the wooded section of river around the later site of Camp Cady, further to the east (Nuez 1819:145-146; Walker 1986:263-267). The latter site seems more probable, since Nuez's account makes it clear that *Angayaba* had such abundant supplies of animal feed that it could be used as a place to pasture saddle stock for a future expedition. If this were the site, it would correspond to the area where Garcés encountered a Vanyumé encampment in 1776. A location to the east of Camp Cady in the Afton Canyon region also seems unlikely, because Nuez also mentioned the course of the Mojave River continuing far beyond the ranchería of *Angayaba*, and eventually 'heading into the mountains' (of the Afton Canyon region) far to the east of the ranchería (Nuez 1819:149; Walker 1986:266).

A watering place with feed called *Asambeat*, a day's trip further to the east, is also mentioned. This may possibly have been located in Afton Canyon. At less than a day's journey further to the east, on the trail towards the Colorado River, was the last place reached before turning back, *Guanachique*. This water hole was described as being in pure sand, in a place without feed; it was probably located somewhere in the Soda Lake area.

I have elsewhere compared ethnographic information on Serrano-speaking Mojave River communities, collected by John P. Harrington and other ethnographers, with ethnohistorical data derived from Franciscan sacramental registers and other Spanish and Mexican-era sources (Earle 2004a:178-181). *Guapiabit* and *Atongaibit* on the upper river are ethnographically and ethnohistorically well-attested communities. Further downstream, *Topipabit*, *Cacaumeat*, and *Sisugenat*, mentioned by Nuez, can be identified in sacramental register entries at missions San Gabriel and San Fernando, but are not discussed by ethnographic sources. The analysis of travel and expedition accounts suggests that *Sisugenat* may have been located somewhere in the Helendale-Hodge area, *Cacaumeat* at Bryman-La Delta or further north around Helendale, and *Topipabit* just north of Victorville. South of Victorville, near modern Hesperia, was the site of *Atongaibit*. The location of *Najayabit* is uncertain, but it might have been located on or near the Mojave River above Victorville. *Tameobit* was located at Rock Springs, east of the Mojave River (Harrington 1986:III:274, 313, 411). As I have pointed out elsewhere, all of these communities appear to be of Serrano speech, given both the Serrano-style personal name suffixes that frequently appear among many individuals baptized from these places, and the marriage links between these communities and others of Serrano affiliation further upstream (Earle 2004a:174).

The political geography of the lower Mojave River has been something of an enigma, particularly given that the one source that has provided clues as to the location of *Angayaba* and *Asambeat*, Nuez's expedition account, has been difficult to interpret because of his confusing distance estimates. A community which may correspond to Nuez's *Angayaba* does appear in the San Gabriel mission sacramental registers as *Gaayaba*³. At least nine individuals baptized at San Gabriel are listed as originating at this ranchería. It was formerly assumed that *Gaayaba* was a variant designation for the Serrano ranchería of *Cayubit*, but this does not seem to be the case. Sacramental register entries indicate that this community maintained marriage ties with the upstream communities of *Topipabit*, *Najayabit*, and

Atongaibit. Some of its residents were baptized as late as the mid 1820s, around the same time as members of other Serrano-speaking communities, such as *Mara* (Twentynine Palms), which were very distant from San Gabriel. These facts are consistent with a location for *Gaayaba* on the lower Mojave River.

Kroeber reviewed Nuez's 1819 account, and wondered whether *Angayaba* might have been a term meaning 'red place' ('*anga-va*') in Chemehuevi/Southern Paiute (Kroeber 1959:302). However, John P. Harrington had in some fashion come across the term 'blood mountain' in connection with mountains in the Barstow area (Harrington 1986:III:133:798). A question by Harrington put to Chemehuevi consultant George Laird elicited the Chemehuevi term *an̄kágaiv̄a*, meaning 'red mountain,' in response to a Harrington query about how the name 'Blood Mountain' would be said in Chemehuevi. It is interesting that this place name does appear to be of Numic rather than Serrano origin.

Information collected by both Harrington and Kroeber about an elderly female Vanyumé survivor living among the Mojaves, Moha or Tahamuha, provided additional place names for the region of the lower Mojave River. A place apparently called *Hamuha* or *Tahamuha* in Vanyumé Serrano and *Ahamoha* in Mojave was the birthplace of the woman, and the origin of her name. She was said to have placed it close to and to the west of Daggett, when interviewed by Kroeber, while Harrington was told that it was located two or three miles to the north of Victorville, not near Barstow (Harrington 1986:III:151:515). *Ahamoha* was a place mentioned by another Mojave consultant, and was located north of Daggett, according to Kroeber (1959:299-300). A salt deposit, called *Yava'aviath'I* in Mojave, was also mentioned in a Mojave salt song (Kroeber 1925:762). This was located by a Kroeber consultant a short distance, perhaps a few miles, northeast of Daggett on the river. The salt deposit was said to have been worked by the Chemehuevi, presumably in historic times, and the salt traded to the Mojaves (Kroeber 1902-1903:104:168). Moha also provided information on the birthplaces of her parents, mentioning the corresponding Mojave names. Her mother was born

at a place called *Avi-ahnalye* ('gourd mountain'), and her father at *Chokupaye*. Another Kroeber consultant described *Avi-ahnalye* as a small mountain on the east side of the Mojave River just south of a later settlement that was probably Point of Rocks/Helendale (Kroeber 1902-1903:104:168). He also located a famous place in Mojave lore, '*Kohoye*' of the *Mohave Historical Epic* recorded by Kroeber, whence two Mojave chiefs in ancient times led their clans and resided for five years (Kroeber 1951:74,77,151). This was located on the Mojave River around Oro Grande, where riparian woodland is abundant. An additional settlement location was mentioned by one of Harrington's Chemehuevi consultants as being at Newberry Springs. It was called *Timiya* in Vanyumé Serrano (Harrington 1986:III:147:695). Moha also recalled this place, in speaking with relatives, as one where abundant carrizo-grass sugar was produced (Harrington 1986:III:151:519). Along with the river rancherías, Newberry Springs, south of the river below Daggett, would have been an important settlement location.

Serrano Exploitation of the River Region

Serrano occupation of the central and lower Mojave River drainage, from an ecological prospective, required some interesting modifications of the subsistence regime practiced by Serrano-speaking communities to the south, nearer the headwaters of the river. The upstream communities emphasized consumption of abundant supplies of the berry-like fruit of the California juniper (*wa'at*), such as was found in the mesa zone to the northwest of *Guapiabit* and to the west of *Atongaibit*. They also enjoyed fairly direct access to mountain zones in the San Bernardino range where both acorns and piñon pine nuts were available. Various sources indicate that pine nuts and acorns were both being exported down the Mojave River at least as far as the *Sisugenat-Cacaumeat* region, and perhaps farther, to feed these Serrano-speaking populations in their desert settlements. Archaeological evidence includes Drover's (1978:183-184) recovery of protohistoric acorn remains from a campsite near the eastern end of the Mojave River. This movement of tree-crop

staples was supplemented by the local availability downriver of several important foods, including mesquite and screw bean on the one hand, and carrizo-grass sugar (produced by aphids on the leaves of *Phragmites* or carrizo grass) on the other. Tule reed roots, cottontail rabbits and jackrabbits, desert bighorn and pronghorn, and the desert tortoise were additional important subsistence resources. A Mojave consultant of Kroeber's recalled the Vanyumé on the river as exploiting "snared rabbits and birds, and deer, [and] mesquite" (Kroeber 1902-1903:103:292). Garcés noted the use of "curious snares" made of "wild hemp," found abundantly in the area (Coues 1900:I:241). Archaeological evidence at sites in the Cronese Basin at the east end of the Mojave River also suggests protohistoric native consumption of freshwater mussel (*Anodonta dejecta*), although this has not been confirmed ethnographically (Drover 1978:201). These subsistence resources helped to support village populations of 40-80 people in the river settlements. The benefits conferred by the long-distance exchange route along the Mojave River travel corridor also appear to have helped to support Vanyumé Serrano occupation of the river.

Fr. Garcés was extremely surprised and impressed when, upon reaching native rancherías upstream from Barstow, he was honored by being presented with strings of beads, and having the chiefs' several wives sprinkle him with acorns and shell beads as an honorific greeting. This occurred in several communities (Coues 1900:I:244-246). This ritual at once reminds us of the importance of the importation of acorns downriver, and indicates the relative wealth of chiefs in these communities. It is likely that gift exchanges with Mojave and other traveling and trading parties on the river trails contributed to this wealth. Mojaves journeying toward the west on the Mojave River route were dependent on the hospitality of villages en route for food and shelter, as they did not carry their own supplies (Harrington 1986:III:167:20). They were accustomed to travel in groups for protection, and were reported by Garcés, for example, to travel unarmed, and thus unable to hunt. The Mojave were known to fear a sort of supernatural pollution or sickness caused by

contact with foreigners and their food, yet they were nevertheless avid to travel widely and visit such foreigners as guests (Kroeber 1902-1903:104:81).

Davis (1962), in his review of California native trade and exchange, noted that only the Modoc and Mojave were known to travel great distances in their trading expeditions. He attributed the feasibility of such travel to the fearsome military reputations of both groups, and the implied threat of retaliation against those who might attack such trading parties. This does not appear to adequately explain the forging of conditions of safe conduct, however. Positive reciprocity associated with the benefits of exchange probably played an even more important role. This is suggested by the social and political ties that existed between the Mojave and the Vanyumé Serrano, as we shall see.

An additional motivation for Vanyumé Serrano occupation of the lower river was the exploitation of salt sources (Kroeber 1925:762). This included the extraction of salt around Soda Lake, where an excellent product could be obtained. Fragments from an extensive thin sheet of mineral salt found just under the crusted surface of the dry lake could be collected and transported out in carrying nets. This appears to have accounted for the extension of Vanyumé Serrano occupation eastward to the east shore of Soda Lake, as noted by Garcés. Other salt sources were located in the Barstow-Daggett area. A considerable demand for imported salt is known to have existed among native communities in the San Bernardino Mountains.

Chemehuevi Occupation of the Providence Mountains, Lanfair Valley, and Piute Spring Region, and the Mojave River-Colorado River Trail

The portion of the Mojave River-Colorado River trail system located east of Soda Lake consisted of several variant routes through the Providence Mountains-Mid-Hills mountain chain. George Laird identified *Paasa* ['garden field' (Piute Spring)] as the first spring and camp location on the trail route westward from the Colorado River toward Soda Lake. He noted that the trail, crossing Lanfair Valley, then reached *Tooyagah* ['center of

the pass' or 'boulder pass' (Rock Spring)], just east of a pass leading west through the Providence Mountains. A variant of this route passed *Monompaaganti* ['bunchgrass water' (Vontrigger Spring)]. Laird then placed *Aipavah* ['Boy Water' (Kessler Springs)] as the next water hole on the route, although this may have been an error, given that *Aipavah* is located rather far north towards the Ivanpah Mountains (Laird 1976:137, 291, 306, 315, 326). Travelers on the road from the Colorado in the mid and late nineteenth century next stopped at Marl Spring, 5 miles [8 km.] west of the Rock Spring-Cedar Canyon pass through the mountains. Another spring on the trail to the west was located on the southeast shore of Soda Lake. From there the trail crossed the lake and reached the east end of the Mojave River.

Fr. Garcés, on his westward journey in early March of 1776, apparently turned southwest from the trail described by Laird to parallel the Providence Mountains, before crossing through a more southerly pass, perhaps at Foshay Spring, and crossing the Kelso Dunes of the Devil's Playground to reach the spring at the east side of Soda Lake. On his return in May of that year, Garcés journeyed across the Kelso Dunes on a slightly different route from that of March and reached a Chemehuevi ranchería in the dunes where several Mojave traders were laying over on account of illness. He then crossed the Providence Mountains via a southern pass and headed northeast to another spring, perhaps Hackberry Spring, where another Chemehuevi ranchería was encountered. A second spring and Chemehuevi settlement was located about 4 miles [7 km.] to the southeast. This may have been Vontrigger Spring.

Later native sources refer to four waterholes located along the route of travel for this section of the trail. Nuez's 1819 diary states that natives from the Mojave River region mentioned the watering places of *Guanichique* [*wan-it-yik?*], probably in the Soda Lake region; *Chinchinipobeat*, the next watering place to the east, noted as short of water; *Uchique* [*huči-yik?*], consisting of three waterholes; and *Patsoboabuet* [*pač apāovea?*], where abundant grass and flowing water were found. The last-named spring was probably *Paasa* (Piute Spring). It is not clear whether

Chinchinipobeat and *Uchique* may correspond to Marl Springs and Rock Spring. These spring names appear to have been given to Nuez in Serrano rather than Chemehuevi (Nuez 1819:150-151). The Kitanemuk Serrano suffix *apāovea* or *pāvea* designates a spring or body of water (Anderton 1988:465).

I have elsewhere discussed the settlement regime of the Chemehuevis in this area (Earle 2004b:91-93,108-112). In different canyons in the Granite and Providence Mountains and the Mid-Hills to the north, where springs were accessible, winter and early spring camps were established where a local band would congregate. Later in the year, groups foraged from temporary camps, which were sometimes located as much as 13-16 km. [8-10 mi.] away from water. The Granite-Providence-Mid-Hills range, and other ranges to the north and northeast, provided springs that attracted game such as mountain sheep, and also provided piñon pine nuts. Mesquite beans and yucca were also found in the region, along with hard seeds. Hunting, particularly of the desert bighorn, was a cultural obsession for the Chemehuevi, and they were equipped with sinew-backed juniper-wood bows that were among the most powerful to be found in the Southwest. Major springs were occupied on a temporary basis by Chemehuevi bands of 15-30 people. The Kelso Wash drainage, which formed part of the Mojave River-Colorado River trail, was the site of a number of temporary camping locations.

THE MOJAVE RIVER-COLORADO RIVER ROUTE AS A TRAVEL AND EXCHANGE CORRIDOR

In the spring of 1776, Garcés had observed a number of different Mojave trading parties engaged in exchange with coastal California (Coues 1900:I:237, 243, 268, 302). While traveling westward through the territory of the Chemehuevis, he had encountered a party of Mojave travelers and traders returning from the Santa Clarita Valley of northern Los Angeles County. While on the Mojave River, he passed a second Mojave group returning from Mission San Gabriel. It was the latter party of travelers whom Capt. Rivera wanted to have

arrested, in order to discourage travel and exchange contact between missionized and trans-frontier gentile Indians. Later on, during his travels in the spring of 1776, Garcés encountered Mojave traders in the Santa Clarita Valley region and in a Kitanemuk ranchería in the Tehachapi Mountains. These Mojaves were familiar with the 'foreign' villages where they were staying as guests, and with travel routes in the region (Fig. 2). Garcés observed his Kitanemuk-speaking hosts in a ranchería in Tejon Canyon 'dosing' their Mojave guests with a potent mixture of wild tobacco and lime, which made the guests dizzy, much to the amusement of the hosts (Coues 1900:I:275-277).

The presence of Mojave traveler-traders in the Santa Clarita Valley and in the Tehachapis reflected the fact that both coastal southern California and the southern San Joaquin Valley were major trade destinations. Marine-shell beads were obtained directly from Chumash-speaking groups, as mentioned in the diary of Fr. Font in 1776. The Channel Islands Chumash were famous as manufacturers of shell beads, particularly those made of *Olivella* (King 1990). However, shell beads were also obtained from southern San Joaquin Valley groups. Some of these beads were of the clam-shell disc type imported up the Cuyama Valley from Chumash territory to Kern and Buenavista Lakes. These were highly prized by Yokuts groups, and sometimes featured asphaltum inlay on their edges. While olivella disc and split-punched beads were also found in the southern Valley, clam discs were considered the most valuable shell bead among Yokuts and southern Sierra Nevada groups, according to Frank Latta's Yokuts consultants (Latta 1948:71).

The travel route to the southern San Joaquin Valley passed via the Antelope Valley region and the Tehachapi Valley. The San Buenaventura area provided access to shell beads made by the Chumash of the Channel Islands. During mission times, missions San Gabriel, San Fernando, San Buenaventura, Santa Barbara, and San Luís Obispo were visited by Mojave traders, who passed to their descendants recollections of witnessing neophyte religious devotions (Harrington 1986:III:156:284). The journey from the Colorado River to the southern San Joaquin Valley was said to take ten

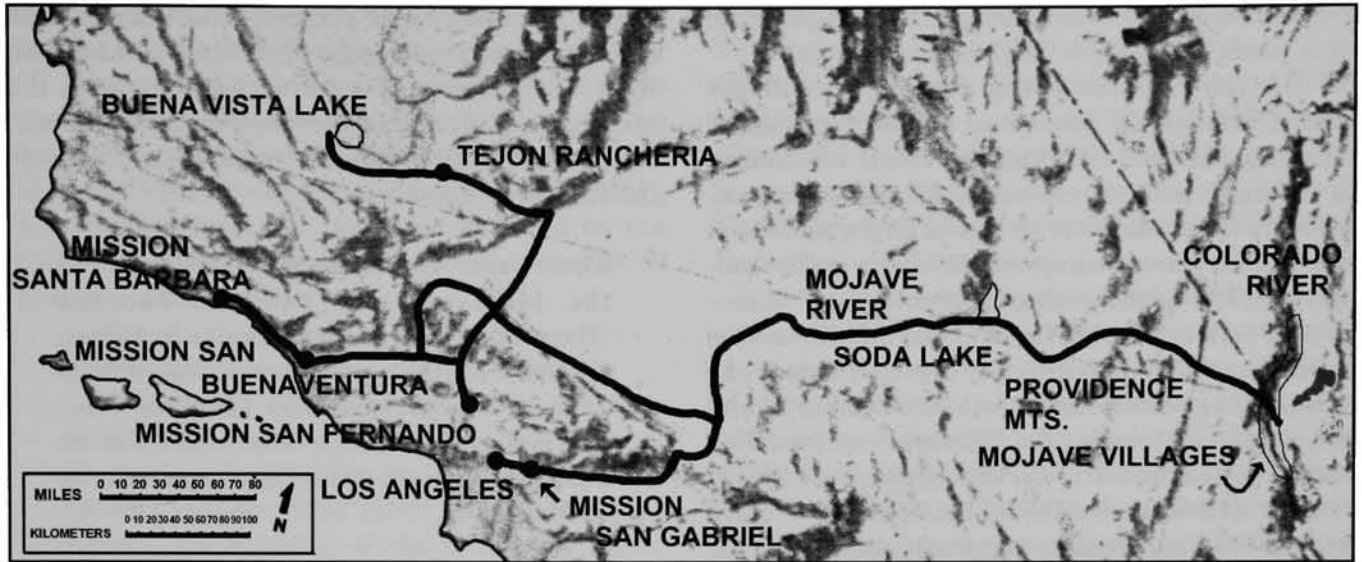


Figure 2. Some major travel routes of Mojave traders, late 18th and early 19th Centuries.

days, while travel to the San Buenaventura coast took fifteen or sixteen days (Cook 1960:247). The months during which Mojave trading parties were reported as active in Spanish-Mexican sources included the spring, early summer, and fall. The spring months were probably a period of more intensive travel (King 1976:304-305).

The regions that the Mojave passed through in their travels also had sacred associations for them. Muroc Dry Lake at Edwards Air Force Base was associated with spring sites for travelers, but was also regarded by the Mojaves as the site of a mythic event, a battle between sacred birds of prey. Further to the west, in the Tehachapi Mountains, the three peaks of Avi Hamoka represented a sacred place where the Mojave culture hero Mastamho had once lived (Harrington 1986:III:152:243). These were only a few of the number of Mojave sacred sites scattered far to the west of the Mojave homeland, sites that spiritually linked the Mojave to the landscapes through which they were traveling. Partly on account of this culturally highly elaborated Yuman practice of assigning (or more properly, "dreaming") supernatural associations to the landscape, Mojave travelers in the Mojave River region assigned their own names and cultural significance to many places and landscape features there.

The exchange of shell beads and abalone from coastal southern California to the Mojave settlements

on the lower Colorado River provided a medium of exchange deployed in the Mojave Desert itself, as described below. However, a principal destination for southern California shell beads via the Mojave River and the Mojave villages was the Hopi settlements in northern Arizona—Oraibi in particular. Hughes and Bennyhoff (1986:255) assert, on the basis of archaeological evidence, that a sharp decline occurred in Pacific Coast shell-bead exchange to interior Oregon, Idaho, Utah, and northern Arizona during the protohistoric period (1500-1816), apparently in reference to shell beads from central California sources. However, it is clear that northern Arizona continued to receive large quantities of shell beads from southern California. Various aspects of the exchange of shell beads and other goods between southern California and the Southwest has been discussed by Brand (1938), Colton (1941), Davis (1961), Farmer (1935), Heizer (1941), Ruby (1970), and Tower (1945). Several excavations of Mojave River sites have also yielded information on the importation of shell beads. King (1983:68-87) has analyzed shell bead types dating from circa A.D. 1100-1300 recovered from the Oro Grande site (Ca-SBr-72) on the Mojave River. Schneider (1989:9-13, 97-103) has reported on a site on Afton Canyon (Ca-SBr-85) on the lower river where shell beads dating from a similar time period were found. Drover (1979:173-177) also reports occupations in the

Cronese Basin of the lower Mojave River region with shell beads dating from roughly the same era.

The route of travel from the Mojave villages passed through the territories of the Walapai and Havasupai before reaching the Hopi, referred to in the early historic era as the *Moqui*. A journey from the Colorado River to Oraibi might take about two weeks. Garcés traversed this route in the summer of 1776 in the course of a politically unsuccessful visit to Oraibi. The Walapai and Havasupai were culturally and politically closely related, and Garcés suggested that both the Walapai and Havasupai divisions of the "Yavapai" (as he called them) were hostile to the Mojaves (Coues 1900:II:450-452). Relations between the Mojave and the Walapai were by no means always hostile, however, as indicated by Garcés's own account. Ethnographic sources, for example, indicate that the Walapai were sometimes recruited by the Mojaves as military allies. Walapai traders were also recalled as having brought goods from the east to the Mojaves. Both the Walapai and Havasupai were engaged in this exchange system, and the latter group was well-known as a close political ally and trading partner of the Hopi.

In the late eighteenth and early nineteenth centuries, Oraibi and the Hopi continued to firmly maintain their independence from political and religious domination by the New Mexicans—hence Garcés' frosty reception in 1776. The Hopi were, however, linked to circuits of exchange involving the Hispanic economy of New Mexico. By Garcés's time, Oraibi was already a center for the accumulation of pilfered Spanish stock. Cows and horses were also found in the territory of the allied Havasupai. Metal awls, woven cloth shirts, and Spanish-style leather belts were seen by Garcés even among the Walapais. These had been exchanged westward from the Hopi via the Havasupai.

The Walapai and Havasupai produced mescal and deer, antelope, and mountain sheep hides, and red ochre, which they exchanged to the Mojaves and the Hopi. The Walapai received maize from the Havasupai, and horticultural products from the Mojave. The Havasupai also gave baskets, horn ladles, and tobacco to the Hopi. From the Hopi they received different kinds of cotton cloth, buffalo

hides, turquoise, and pottery. The Walapai and Havasupai received marine-shell beads and abalone from California and yellow pigment from the Mojaves, and circulated them eastward. On Garcés' return from Oraibi to the Colorado River, he made the following comment:

There came with me to this ranchería...[of the Mojaves] two Yabipais Jabesua [Havasupai] who brought mantas [textiles], [woven] leggings, and pieces of cowhide to trade with the Jamajabs [Mojaves] for shells—only for white seashells, for no others do they receive in exchange [Coues 1900:II:414].

Some of the marine-shell beads traded to Oraibi and the Hopi were then circulated eastward to Zuñi and Santo Domingo Pueblo, which were centers of bead exchange (Frisbie 1974). Strings of California shell beads constituted a widely-used medium of exchange in the Southwest. Turquoise from Santo Domingo and Cochiti was also exchanged westward through Oraibi. The Hopi dominated the weaving craft in the Southwest, creating blankets, mantas, sashes, and leggings. This Hopi production was a mainstay of the westward exchange circuit through the Mojave settlements toward the southern California coast (Ford 1983:711-715,719-720).

Several early observations about the Mojave River travel corridor itself emphasized the important role played by the Hopi pueblos as an eastern destination for California shell beads. The travel account of Antonio Armijo, who opened the route between New Mexico and Los Angeles in 1829-1830, mentions the Mojave River as "the river valley of the Hayatas [Mojaves] at whose far end arrives the trail that departs from *Moqui* [Hopi] traveled by the *Moquines* [Hopis] with the object of trading shells with the aforementioned *Hayatas* [Mojaves]" (Walker 1976:270; translation mine). Armijo's statement appears to have reflected a commonly-held but mistaken belief that the Mojave River itself flowed eastward all the way to the Colorado River, joining it and the trail from Hopi in the vicinity of the Mojave villages. His comments also suggest that at the time of Armijo's transit of the middle and upper reaches

of the Mojave River it was commonplace for the Mojave Indians to be found traveling along it.

Fourteen years later, in 1844, Frémont came upon a party of Mojaves and an apparent Desert Serrano survivor while traveling on the lower Mojave River. He was told by the Spanish-speaking Serrano survivor that the Mojaves lived on the Colorado, but that they continued to travel to coastal settlements:

They sometimes came over to trade with the Indians of the Sierra, bringing with them blankets and goods manufactured by the Monquis (sic) [Hopi] and other Colorado [River] Indians. They rarely carried home horses, on account of the difficulty of getting them across the desert, and of guarding them afterwards from the Pa-utah Indians... [Jackson and Spence 1970:676].

Archaeological evidence of such cotton textiles has been found in the southern San Joaquín Valley. In the vicinity of the Tulamni Yokuts ranchería of *Tulamniu*, on the shores of Buena Vista Lake, a cemetery yielded a cotton textile 'blanket,' perhaps dating from the eighteenth century, that was clearly of Southwestern Pueblo manufacture. Given the intensive trading activity of Mojaves in the southern San Joaquín Valley in the late eighteenth and early nineteenth centuries, it appears likely that this was transported there by the Mojaves in their role as intermediaries in the Southwest trade (Gifford and Schenck 1926:104-105). In 1776, Fr. Pedro Font described a Southwestern-style cotton blanket worn by a Chumash at Rincon, on the Santa Barbara Channel (Bolton 1931:257).

An additional type of 'blanket' exchanged by the Mojaves in coastal California was referred to in an 1822 report (Johnston 1984:13-14). This was a type of heavy-weave textile used by Californians as a saddle blanket; it was said to have been woven of wild sheep hair, and to have been produced in the colors white, black, and black and white. The Spanish and Mexicans called these *tirutas*. The manufacture of this type of blanket was attributed to the Mojaves, probably incorrectly. While ethnographer John P. Harrington was told of Mojave attempts at weaving plain white cotton cloth later in the nineteenth century,

this kind of wool blanket must have been produced in the Southwest, perhaps from the wool of cimarrón or other domesticated sheep, since mountain sheep (bighorn) would not seem to qualify as a viable source of wool for weavers. The same report also mentioned Mojave traders carrying deerskins toward the coast. These may have been obtained from the Walapai, Havasupai, or Chemehuevi.

References to the Mojaves in colonial documents provide additional details about the goods being exchanged by them in California. A party of eleven Mojaves trading at the Yokuts village of *Chugualcama*, located in the San Joaquín Valley east of Mission San Miguel in 1800, had brought 'blankets' and shirts of deer or antelope skin. The chief of the place said that they came every year to exchange these items for beads. In 1819, Mojaves were observed by Lt. Estudillo trading wool and cotton textiles with the Yokuts of Buena Vista Lake for beads and locally-made *Apocynum* textiles. In 1816, Mojaves were reported by Capt. De La Guerra at Santa Barbara as coming to trade blankets and mineral pigments. Mojave trading parties that regularly visited Mission San Buenaventura, as well as Mission San Fernando and the Santa Barbara Presidio, during the decade after 1810, traded wool blankets and red ochre for beads, light rope, and 'frezadas' (textiles) (California Archives, Provincial Records, 12:35; Cook 1962:161). Harrington also mentioned the transport by the Mojaves of willow staves to the coast as exchange items, as well as a type of root-gum avidly sought by California groups (Harrington 1986:III:155:470-471, III:167:374). The exchange of cotton and wool cloth and buckskin for coastal shell beads was an important element in this trade system, but apparently not the importation of ceramic vessels to the coastal region. Jay Ruby (1970) has provided an excellent review of evidence for a more generalized prehistoric exchange of Pacific coast shell items to the Southwest in return for ceramic vessels. In historic times, this importation of ceramics into California does not appear to have been a significant feature of long-distance exchange for the Mojave.

Shell Bead Production and Exchange After the Spanish Colonization of Coastal California

Recent research focused on the socio-economic

evolution of prehistoric Chumash groups in coastal southern California has highlighted the development of shell bead manufacture among the Channel Islands Chumash (Arnold and Graesch 2001; Kennett and Conlee 2002; Preziosi 2001). Seriation of shell bead types manufactured by the Chumash provides us with information on changes in regional shell bead styles and production after the Spanish conquest of coastal Alta California in 1769. Traditional Olivella wall and saucer disc beads with ground and smoothed edges were typical of the end of late prehistoric times. Such wall disc beads appear to have been made as late as the late 1770s. By circa 1780, *Olivella* disc beads with rough chipped and unground edges appear among the Chumash in both mission and village cemetery contexts (Gibson 1992:24; King 1974:89-92, 1990:179-184, 194-196). This shell bead type was produced as late as the 1830s, and late-type specimens have been recovered from San Buenaventura Mission contexts. From 1780 through the 1830s, the reported average disc diameter of this shell bead type nearly doubled, from 4.5 to 8 mm, and the final finishing work on bead edges was greatly reduced. Thus during historic times, Olivella shell beads continued to be manufactured, while the amount of craft labor expended per bead dropped significantly (King 1990:180-181). In late mission times, in the 1820s and 1830s, the production of shell beads was common around San Buenaventura Mission, where Channel Islands Chumash bead-producers had been resettled. Other Chumash from the islands were removed to Mission La Purísima, where bead production appears to have taken place as well (Hageman and Ewing 1991:8, 24).

References to shell beads used by the Mojave indicate that such Olivella chipped or rough disc beads were imported by them in early historic times. One Mojave consultant's comment to Harrington mentions beads that looked like "broken fragments of a bottle," and were obtained from the "Tule River" [Yokuts] Indians of the San Joaquín Valley. It was said that a string of these beads a yard long was worth a horse. A Mojave consultant, Jack Jones, told Kroeber that beads were flat and irregular in shape (Kroeber 1902-1903:103:391). A Chemehuevi consultant mentioned white disc beads, obtained from "some

Indians who lived on the ocean." These were "like a button" and "rough on both sides, he thinks" (Kelly 1953:18-56). Such rough disk Olivella beads have been recovered archaeologically in large quantities in the southern San Joaquín Valley (Gifford and Schenk 1926:58-61). Voegelin also mentions large quantities of clamshell disks from Santa Barbara routinely being hoarded in historic times by the Tubatulabal of the southern Sierra Nevada (Voegelin 1938-1940:50).

In addition to use in adornment, shell beads were used in exchanges within Mojave communities. It was recalled, for example, that a Mojave could use beads or war captives as a means of acquiring land for cultivation (Kroeber 1902-1903:103:390). Shell beads from the southern California coast and littoral area were also used by the Mojave in exchanges with neighboring groups within the Mojave Desert during the late eighteenth and early nineteenth centuries. Kroeber (1925) observed that his ethnographic data did not suggest that shell beads were particularly important as an exchange medium for the Mojaves. This observation apparently reflected the increased prominence of blue and white porcelain trade beads as items of personal adornment and medium of exchange for the Mojave by the 1860s. These replaced the white shell beads and blue turquoise beads that had traditionally been worn. Whipple described these latter traditional beads, a standard element of male Mojave attire in 1853:

Strings of wampum, made of circular pieces of shell with holes in the center, by which they are strung, often several yards in length, and worn in coils about the neck. These shell beads, which they call "pook," are their substitute for money, and the wealth of the individual is estimated by the amount he possesses. Among the Cuchans, in 1852, a foot of length was worth a horse. Divisions to that amount are made by the insertion of blue stones, such as by Coronado and Alarcón were called Turkoises, and are now found among the ancient Indian ruins. Frequently blue beads are substituted for the more valuable stones [Sherer 1994:52-53].

The turquoise was obtained from neighboring desert groups. A Chemehuevi consultant mentioned to Isabel Kelly that the Mojaves had exchanged shell beads with the Chemehuevis for horses, and then later used blue and white trade beads for the same purpose (Kelly 1953:18-53). Whipple also noted that the order of preference for European goods by Mojaves trading with him in 1853 was small white or large blue trade beads, red blankets cut into strips 6 inches wide, white cotton cloth, and 3-4 yard pieces of calico. Late in the nineteenth century, the introduced currency of the whites was said to have become the dominant exchange medium.

Shell Beads and Inter-Group Exchange Within the Mojave Desert

Earlier in the nineteenth century, including the decades immediately following the Chemehuevi settlement of the Colorado River in the early 1830s, beads made from shells of Pacific Coast origin continued to be important as a medium of exchange. Chemehuevi consultants provided information on exchanges by Mojaves and river-dwelling Chemehuevis with desert Chemehuevi and other groups at this time (Kelly 1953:18-54-18-57). These exchanges were based upon the different resources and different kinds of craft production that were found among Colorado River groups, as contrasted with mountain and desert dwellers away from the river. The Chemehuevi called the shell beads *ximp i*. They were exchanged by the Mojave with the Chemehuevi/Southern Paiute of *Pahrump* and Las Vegas for wild tobacco, rabbit-skin blankets and robes, turquoise, red 'paint,' rabbit nets, buckskins, and buckskin bags. Mojave horticultural produce, particularly maize and beans, was also exchanged to the Chemehuevi/Southern Paiute for these items. Mojaves also obtained rabbitskin blankets from Moapa Southern Paiute. It was noted by a Mojave consultant that "Mohaves then had beads they wanted to trade for rabbit skins" (King 1983:86; Kroeber 1902-1903:104:177).

After the move by some Chemehuevi groups onto the Colorado River by the 1830s, their economy had changed sufficiently that they traded

for items that they had traditionally produced while living on the desert, but could no longer make. The items they traded for, made by Chemehuevis living away from the river, included the excellent Chemehuevi sinew-backed bow, turquoise, rabbit-skin robes, elder wood used for making flutes, and rabbit nets and carrying nets. They traded shell beads, buckskins, and ironwood for knife handles in return. The Cahuilla also exchanged stone knives and shell beads with the Chemehuevi away from the river for rabbit nets, red paint, buckskins, and turquoise.

Mojave demand for wild tobacco was said to have been heavy. As noted above, this item was obtained from desert Chemehuevi. It is also likely that Mojave trading expeditions that visited the San Joaquín Valley also obtained excellent semi-cultivated 'wild tobacco' from the Kawaiisu of the Tehachapi region, who specialized in producing this item. The Mojaves also traded goods to the Quechan of the Yuma region in the early nineteenth century, including horses and blankets (Harrington 1986:III:167:374). Some Gulf of California clamshell beads of Cocopa origin may also have been exchanged upriver to the Mojave in the 1830s and 1840s (Gifford 1931:37-38, 55; Kelly 1953:18-95).

The social organization of trading activity, as an aspect of Mojave social life, has not yet been really clarified by the ethnographic data at hand. There are indications that individuals who were successful 'dreamers' within the Mojave religious tradition, and who were also successful in amassing wealth, including foodstuffs for distribution to clients, attracted political followings. Bead wealth would have played a role here, and it is possible that such individuals may have helped to organize or sponsor long-distance exchange expeditions.

THE MOJAVE RIVER AND THE FRANCISCAN MISSIONS

After the visit of Garcés, the Serrano-speaking communities of the upper and lower Mojave River remained outside the orbit of direct missionization efforts for almost another twenty years. In the later 1790s, limited recruitment to the Franciscan missions of San Gabriel and San Fernando, the

latter established in 1797, began to occur. This recruitment process spanned the years from approximately 1795 through the beginning of the 1830s, but was most active after 1808 (Mission San Fernando Rey de España n.d.; Mission San Gabriel Arcangel n.d.). Neophyte unhappiness over harsh mission discipline led to conflict between these Serrano speakers and Spanish missionary and civil authorities. This conflict was to lead to the use of coercion and military force against native communities in the region. Internal conflicts between Christianized and gentile Serrano-speakers was also a feature of this process.

During the period from the late 1790s through the early years of Fr. José María de Zalvidea's tenure at Mission San Gabriel, circa 1808-1809, the recruitment of adult Serrano-speakers to Mission San Gabriel had lagged (Mission San Gabriel Arcangel n.d., Vol. 2, ff. 47r-160v). By 1805, the great majority of the Gabrielino-Tongva communities found in the greater Los Angeles-San Gabriel region had experienced significant population loss due to either recruitment to the missions or gentile wage labor and residence in the pueblo of Los Angeles or its native 'barrio,' *Yangna*. Even by this date, a non-mission settler (or military retiree) economy and labor market was beginning to emerge (Earle 2004c). This type of labor contracting invited native people to bypass the missions and forego the necessity of religious conversion. During the period from 1795 through 1805, as non-mission rancho holdings first began to appear in the region as grants to military retirees, native people laboring on these holdings might continue to live in their nearby home villages or to reside on the rancho holdings. The latter arrangement had become more common by the decade of the teens. Gentile laborers were paid in goods, particularly cloth, or by way of 'al partido' or half-share arrangements, where native workers would receive a share of the crops they produced.

On account of these conditions, even as late as 1806 the area immediately to the east of Mission San Gabriel included a number of rancherías that were still partially inhabited by non-Christian Indians. In addition, during most of this decade, native adults, particularly Serranos, resisted undergoing baptism themselves, preferring to bring their infants and young

children to San Gabriel for baptism. Fr. Zalvidea, who had commenced his duties at Mission San Gabriel in 1806, made this comment:

Another drawback arises [from the gentile Indians working for the settlers], namely, that the [Indian] adults delay having themselves baptized. In this service of their masters they live according to their pagan notions and practices. This freedom which they lose by adopting Christianity, inspires them with a great disaffection for Christianity. The only thing we gain is baptizing the children in immediate danger of death; also some in the state of good health... [Meighan and Geiger 1976:129].

A review of baptismal register entries for 1800-1809 is quite startling in verifying Zalvidea's statement (Mission San Gabriel Arcangel n.d., Vol. 2, ff. 47r-160v). While some Serrano speakers from the San Bernardino region, the San Bernardino Mountains, and the upper Mojave River had been recruited to Mission San Gabriel prior to 1810, the great majority of these were children and unmarried young adults. The decision by gentiles to permit their children to be baptized was frequently inspired by a desire to receive gifts of cloth or other goods from the missionaries. The obtaining of cloth or other items also motivated non-missionized native people to bypass the missions and to labor in the settler economy. Both corporal punishment and the pursuit and punishment of *cimarrones* (runaways) prompted heightened native resistance to the mission enterprise. This unrest was only one feature of a wider pattern wherein the Serrano wished to engage the Spanish colonial enterprise in order to obtain strategic goods, particularly cloth, but tried to avoid the complete loss of their personal and cultural autonomy.

The Upper Mojave River in 1806-1808

The upper Mojave River region was visited by several Spanish military expeditions in 1806 and 1808, as this area was increasingly pulled into the orbit of Spanish ecclesiastical and civil

administration. This zone to the north of Cajon Pass still lay completely beyond the limits of Spanish settlement and economic exploitation, but after 1805 was frequently subjected to Spanish military forays. The first expedition that visited the area, in August of 1806, was commanded by Gabriel Moraga. He was accompanied by Fr. José María de Zalvidea, who would soon become notorious as the energetic but brutal head missionary at Mission San Gabriel. After passing eastward through the Antelope Valley from the direction of the San Joaquin Valley, Zalvidea's expedition visited the rancherías of *Atongaibit*, *Guapiabit*, and *Amutskupaibit*, where Zalvidea performed baptisms. He counted 83 individuals present in *Atongaibit* and 46 in *Guapiabit* (Cook 1960:247). This expedition was principally concerned with identifying possible interior mission sites.

Two years later, in the autumn of 1808, Sgt. José Palomares led troops and neophyte auxiliaries from Mission San Fernando on two forays north across the frontier of Spanish settlement. These were intended to track down runaway neophytes. Palomares had already been involved, earlier in the year, in detaining and then pursuing a group of seven Mojaves who had come to Mission San Fernando to trade, one of whom was subsequently beaten to death by his soldiers (California Archives, Provincial Records 11:128). The first autumn expedition unsuccessfully attempted to capture a prominent native chief, Kepawish, based in the southeastern foothills of the San Joaquin Valley, who was harboring mission neophyte runaways. Palomares then returned from a refit at Mission San Fernando to continue hunting for neophytes harbored by gentile chiefs in the southern Antelope Valley and on the upper Mojave River to the east. He visited *Kwarung* and *Maviayek* in the Antelope Valley, and then traveled east to *Atongaibit* on the upper Mojave River. He had found *Maviayek* and *Atongaibit* virtually deserted on account of their inhabitants having been invited to an acorn-gathering fiesta in the mountains above Summit Valley by the inhabitants of *Guapiabit*. At this time, the various exogamous clan communities located on the river and in other desert localities continued to interact in fiesta contexts to maintain the long-distance circulation

of acorns as a food resource. At the host ranchería of *Guapiabit*, Palomares was able to carry on indirect negotiations with native chiefs whose communities were gathering acorns, probably of the black oak, in the mountains to the south of Summit Valley. He attempted to get the chiefs to turn over the neophyte refugees from the missions that they were harboring. The chiefs refused. They pointed out their unhappiness over the fact that they had previously been promised gifts of cloth by Fr. Zalvidea at Mission San Gabriel if they would bring such mission neophyte absentees back to the mission. When they had done so, they received not the promised cloth from Zalvidea, but nine consecutive days of flogging. Palomares was not in a position to pursue these ranchería chiefs in the mountains where they were gathering. He was thus forced to depart by way of Cajon Pass without the 'apostates' he had been ordered to recover (California Archives, Provincial State Papers, Missions and Colonization 1:229-239).

Mission Unrest and Military Expeditions, 1810-1816

Palomares' frustrations in dealing with the runaway problem, and native resentment over Zalvidea's conduct as the new master of Mission San Gabriel, were aspects of an escalating conflict based on Serrano resistance to Zalvidea's rather punitive approach to Franciscan missionization. The pursuit and punishment of neophyte runaways was one of the most volatile elements in this situation. Zalvidea responded to gentile Serrano distaste for his mission regime with particular cruelty, as Hugo Reid noted in 1852, based on the recollections of his Gabriellino wife, Victoria (Dakin 1939:270-275). This led to gentile Serranos and neophyte Serranos and Gabrielinos organizing a revolt at Mission San Gabriel in the fall of 1810 (King 2003:9-12).

In a report of July 4, 1811 to Alta California Franciscan Mission Father President Tapis, Frs. Zalvidea and Miguel stated that Serrano speakers from 'the mountains,' inhabitants of the rancherías of '*Angayaba*' [on the lower Mojave River], '*Amajaba*' [the Mojave settlements], and '*Yuajay*,' had united in a conspiracy to attack the mission

(California Archives, Archive of the Archbishopric 2:85). 'Yuajay' may possibly refer to the 'Joakayam,' a group designation for Southern Paiutes commonly used by the Serrano. The native inhabitants of the mission were said to have maintained regular relations with these groups. Frs. Zalvidea and Miguel stated in their report that "nearly all of the Indians of this mission [were] involved, more or less, in the insurrection." It was later noted by Fr. José Sánchez in an 1822 report that the attack force from the gentile rancherías had reached within two *leguas* [ca. 8 km. (5 mi.)] of the mission before turning back on account of the presence of local troops and civilians hastily assembled to guard it (Payeras 1822). Fr. Tapis later claimed that the attacking force had numbered some 800 natives. The attackers were said to have carried off stock encountered in their line of march, including 3,000 sheep that were later recovered. Ensign Gabriel Moraga had been ordered to San Gabriel on November 27, 1810 to protect the mission, in the midst of some initial official confusion about whether it was Indians or settlers who were menacing it.

The July 4, 1811 report also noted continued disturbed conditions and neophyte defiance since the 'insurrection,' including an attempt to free native prisoners from the mission guardhouse by mission neophytes in December, and the repeated forced entry of a mission storehouse in March. Zalvidea and Miguel also mentioned, as a major participant in the unrest, "the pagan captain of the Rancheria of *Najayabit*, who has yet to be captured, and whose rancheria is in the mountains of Mission San Gabriel, and two and a half days journey from it" (California Archives, Archive of the Archbishopric 2:85). The ranchería of *Najayabit* appears to have been located in the upper Mojave River region. The missionaries went on to relate that during the spring of 1811, the captain of *Najayabit* had sent his brother in a commission to the Mojaves with the gift of a load of beads, in order to persuade them to attack Mission San Gabriel again. Only half the shipment of beads arrived because the other half was lost by the brother during a river crossing. The Mojaves were said to have insisted that more beads be sent, since the quantity that reached them was small for the number of men who would have to be recruited for such an attack.

In their report, the missionary fathers also noted the importance of the posting of a strong guard at the mission, capable of pursuing *cimarrón* (runaway) neophytes. Otherwise, more and more neophytes would flee, forming 'gangs' on horseback, as had already happened. They claimed that such gangs of horse-mounted *cimarrón* neophytes had already operated in the region, "and served the [mission Indian] Christians as a postal service for their communicating with the Rancherías [involved in] the insurrection" (California Archives, Archive of the Archbishopric 2:242).

At this time, there were also concerns about a wider conspiracy against the missions. In February of 1811, Gov. Arrillaga was informed about the whipping of 10 runaway neophytes who had committed depredations at Mission San Buenaventura. In March, he learned of an investigation held at Mission La Purísima to determine whether native villages of the southern San Joaquin Valley had conspired to attack missions Santa Barbara and San Buenaventura (California Archives, Provincial State Papers 19:11).

The San Gabriel Mission burial register reported the deaths of two neophytes at the ranchería of *Amutskupiabit* [near Cajon Junction] that appear connected to military activities in the region at the time of the November, 1810 revolt, as was another reported death of an Indian lanced by a soldier (Mission San Gabriel, Libros I, II de Difunciones, Partida Nro. 3030 (11-8-1810), Partida Nro. 3031 (11-9-1810); Partida Nro. 3033 (11-18-1810). The first of these deaths may have been at the hands of the Mojave raiding party returning from the direction of Mission San Gabriel. Moraga dispatched Sargento José María Pico on a reported total of "14 campaigns in the mountains adjacent to San Gabriel, in which he [Pico] sought to punish and capture all the chiefs of the uprising that took place that year, and to quiet the other pagans of said nation who were in revolt" (California Archives, Provincial State Papers, Benecia, Military 43:11). Twenty-four neophytes of Mission San Gabriel and sixteen gentile Indians were sent as prisoners to the Santa Barbara Presidio in February of 1811. Deaths of

San Gabriel neophytes held prisoner at the San Diego Presidio are reported in the burial register of Mission San Gabriel in July of 1811, and this and the captivity of other neophytes were reported as causes of further native unrest at the mission by Frs. Miguel and Zalvidea. The number of deaths of neophytes at their home villages that were recorded by Zalvidea in 1811 also suggests increased neophyte flight.

It also appears likely that the 14 'pacification' campaigns of Sgto. Pico also involved the use of coercion to 'recruit' ranchería residents for reduction to missions San Gabriel and San Fernando. This is suggested by the fact that a large number of family units from Serrano communities were baptized en masse during 1811. This was particularly the case in the spring of 1811, and included communities located to the southwest and south of the San Bernardino Mountains and in the Cajon Pass and Upper Mojave River region, as well as in the mountain zone itself. Community chiefs were among those involved in these mass 'recruitments.' Cumulative totals for individuals baptized from communities in the Cajon Pass and upper Mojave River areas include 77 for *Amutskupiabit*, 80 for *Guapiabit*, 62 for *Kaiuvit*, and 40 for *Atongaibit* and *Najayabit* (Earle 2004a:178). Further downstream, *Topiapabit* totaled 21, and other downstream communities less than 10. These figures are partial due to the disappearance of Mission San Gabriel baptismal register pages for part of 1794-1795, most of 1816-1819, and part of 1821. While a significant proportion of the populations of the first five listed communities had been 'recruited' by the end of 1815, this was less true for downstream communities.

Further unrest caused Moraga to be called back in late 1811, when it was rumored that a force of 700 Mojaves or Yumas again planned to attack Mission San Gabriel. In 1813, the mass baptism of approximately 117 people on May 13-17, including families from upper Mojave River communities, may also indicate further official action to 'encourage' neophyte recruitment to Mission San Gabriel. Fr. Señan also reported in 1813 that a number of both Christians and gentiles who had been involved in the 1810 uprising were

still absent, "even from their home territories." Some of them had fled all the way to the Mojave villages on the Colorado River, where they had taken refuge. Señan observed that the Mojaves were traditional enemies of some of the local Serrano native people who had taken refuge with them. Here he was referring to those Serranos living in the more southeasterly mountain territory of this group who, like the Cahuilla, had political and economic ties to the Halchidhoma, enemies of the Mojave (California Archives, Archive of the Archbishopric 2:158-159).

In January of 1816 and again in late 1816, Moraga took troops to the upper Mojave River region. The latter of these two campaigns followed an altercation involving Mojaves trading in the Los Angeles area. In his instructions for the latter campaign, Moraga was ordered to ascertain whether a group of California settlers and native auxiliaries had previously taken the Mojave River trail to the Colorado River to attack the Mojave villages and bring horses back from there. Moraga got as far as the village of *Cacaumeat*, southwest of modern Barstow, during this expedition. In the same year, *cimarrón* neophytes operating on horseback in the upper Santa Ana River and San Bernardino Mountains areas were pursued by the Spanish military, and orders prohibiting Indians from riding on horseback were also issued (California Archives, Provincial State Papers 19:29).

Nuez and the Mojave River Expedition of 1819

Another expedition, led by Moraga and chronicled by Fr. Joaquín Pascual Nuez of Mission San Gabriel, traveled down the Mojave River in 1819. This undertaking had been ordered by Gov. Sola due to official fears about a possible massive Mojave attack against Mission San Gabriel. The rumored Mojave threat had followed a tragedy at San Buenaventura Mission in early May of that year. A party of 20 Mojaves had come to the mission to trade blankets for local goods such as beads with the mission neophytes and to greet Fr. Señan. A member of the mission *escolta* had instead locked the Mojaves up in the guardhouse, and had attempted to steal a blanket from one of

the Indians. When the latter objected to this theft, a scuffle ensued wherein several Spaniards were killed. The Mojaves were then killed, captured, or fled. This case caused a sensation. It was believed that there was a real danger of the Colorado River nations combining with the Yokuts of the San Joaquin Valley and neophytes at the missions to make war on the colonists. Throughout the summer and fall of 1819, Spanish soldiers and missionaries in the region received numerous reports from native sources of Mojave plans to attack missions San Gabriel, San Fernando, and San Buenaventura (California Archives, Benicia Military 20:290; California Archives, Provincial State Papers 69:236-238; Santa Barbara Mission Archive Library, De La Guerra Collection 2, Folder 446 [Señal to De La Guerra (9/14/1819)]).

As a result of this situation, another military expedition was ordered for the Mojave River area by Gov. Solá, who had noted becoming "weary" of having to deal with all of the warnings of imminent attack (California Archives, Provincial State Papers 69:236-238). The operation had the objective of marching all the way to the Colorado River to attack the Mojave villages and burn their crops. Such a move was seen as appropriate, given that Mojaves were being blamed for the recent killing of both Christian and gentile Serrano speakers in their home villages on the Mojave River.

The expedition of 50 soldiers left San Gabriel on November 22, 1819. The communities of *Amutskupiabit* and *Guapiabit* were passed through on the way to *Atongaibit*, where the bodies of Christian and gentile residents of the region allegedly recently killed by Mojave raiders were interred in a mass grave. The expedition continued on through *Topipabit*, *Cacaumeat*, and *Sisugena* to *Angayaba*, east of modern Daggett. An advance party then marched east to *Asambeat* and *Guanachique*. One ranchería visited during the march was specifically mentioned as being deserted, but encounters with native residents are not mentioned for the other communities, although some of them are known to still have been occupied in 1819. Part of the expedition made it just past the Sinks of the Mojave toward the east, before feed and water problems caused a breakdown in

the expedition's mule transport. This caused the operation to be aborted before reaching the Colorado River villages.

The "burned bones and skulls" said to belong to four Christian Indians who had fled from Mission San Gabriel, three neophyte runaways from Mission San Fernando, and some gentiles, all of whom had reportedly been killed by the Mojaves, were recovered at a place circa 7-8 km. [4-5 mi.] to the north of *Atongaibit* on the river in the Rancho Verde area. It appears that the bodies had been previously burned or incompletely cremated. To the north of *Topipabit*, other remains of gentiles were found, and further remains as well to the southwest and northeast of *Sisugena*. Near *Guanachique*, the advance guard found a group of 14 gentile Indians, who reported that a man belonging to their group had been killed by the Mojaves, and an adult woman abducted. Nuez' report makes it clear that the Mojave military activity that had caused the homicides observed on the Mojave River trail was based at the Colorado River villages, and not directed from settlements located closer to the Spanish establishments in southern California.

The political circumstances surrounding the December 1819 expedition were complex and remain somewhat obscure. The immediate reason for the campaign was to punish the Mojaves for homicides they were believed to have committed in the Mojave River area. *Atongaibit* was indicated as having been a particular target of Mojave attacks. However, some seven *cimarrones*, four neophytes who had fled from Mission San Gabriel and three from Mission San Fernando, were also reported as victims of the Mojaves. Remains were found with supposedly incriminating Mojave war clubs observed nearby. In addition, the group of "terrified" gentiles, apparently Serrano speakers, who were found wandering in the Soda Lake region, had been victims of a very recent attack. The expedition also encountered a gentile from a principal downriver settlement, *Angayaba*, who had been at the Mojave villages seven days before. He was recruited as a guide by the expedition, but apparently his loyalties were not under suspicion, as he was allowed to travel armed. He eventually killed the expedition's Serrano interpreter and fled with the

latter's horse and arms. Thus the Mojave were not the enemy for all inhabitants of the area.

Fr. Sanchez, in an 1822 report, provided one version of the Mojave attacks. He mentioned that in 1819 the Mojaves had arrived on the upper Mojave River with the intention of attacking Mission San Gabriel:

...but coming upon some fugitive Christians that were staying among their gentile relatives, they unleashed their wrath on them, [and thus] there was hardly anyone left who could give the alarm, nevertheless they deduced that there might be one [who could] and knowing this they returned to their country, which is distant from this mission something like 80 leagues [Payeras 1822 :271].

The principal Spanish preoccupation was a possible Mojave attack on Mission San Gabriel, but given the past history of alliance between the gentile Serrano and the Mojaves, they would have also have been concerned about the possibility of such an alliance. The Mojave were sheltering Serrano-speaking refugees and clearly looked to the continuation of relations of alliance with local gentile communities, perhaps with a view to hostilities against the Spanish. However, since 1810 the Spanish pressure to absorb native populations from rancherías in the Mojave River region into missions San Gabriel and San Fernando had changed the native political landscape of the area. The fact that fleeing neophytes (presumably no friends of the Spanish) were reported as being attacked is noteworthy. The killing of both neophyte runaways and gentile villagers suggests a political scenario more complex than simply a struggle between local native pro- and anti-Spanish factions, with the latter supporting the Mojaves. The Serrano villages on the Mojave River had long maintained social ties with the Mojaves, and had previously repeatedly conspired with them against the Spanish, so they were not traditional enemies. The case of the gentile from *Angayaba* makes it clear that not all residents of the Mojave River were being targeted by the Mojaves, but rather supported them. However, the conditions of alliance of

Mojave River villages with the Mojaves early in the decade seem to have eroded with the increased recruitment of community populations to the missions. It is also possible that the recent expeditions in the area, including those of 1816, made the remaining residents of local communities, including resident runaways, wary of cooperating militarily with the Mojaves.

The Spanish, for their part, seemed confident enough of political domination of the Mojave River communities that Nuez proposed a plan for a future expedition to the Colorado River, involving maintaining a supply dump and a substantial *remuda* of horses at *Angayaba* for some months prior to the expedition! Previous Spanish military forays into the region had not, however, arrested the flow of fleeing neophytes moving back into the area, including several who had returned to their home communities. If an attempt at an alliance had fallen apart, or a Mojave demand for an alliance along the lines of previous episodes of political cooperation against the Spanish had not been honored, the characteristics of the resulting raiding seem plausible. This is the most reasonable scenario that can be guessed at in the absence of more complete information, and provided that Nuez's account can be relied upon on various key points.

However, such a scenario is based on the assumption that the Mojaves in fact intended to attack or harass the Spanish settlements. It is remarkable that over a number of decades both the Spanish and gentile and neophyte natives in the zone of coastal colonial settlement tended to promote the idea of a massive Mojave and Colorado River native threat. Each group had motives for doing so, and both neophytes and gentiles tried to emphasize this threat on various occasions for their own political purposes. Alarms about Mojave plans to attack, some generated by visiting Halchidhoma dignitaries, persisted through 1823, and there was official discussion of building walls around missions San Gabriel and San Fernando.⁴ Yet the threat seems not to have ever quite led to an armed clash on a large scale. On the contrary, the Mojaves stubbornly persisted, in the teeth of Spanish fearfulness of their intentions, in visiting the coastal establishments to engage in trading and 'visiting.'

Jedediah Smith and Desert Serrano Settlement

The situation of native settlement on the lower and upper Mojave River after 1819 has been illuminated by the accounts left by Jedediah Smith of his travels through the Mojave River region in 1826 and 1827 (Brooks 1977:91-92). In 1826, Smith encountered a number of resident Vanyumé Serrano when he and his trapping party visited the Mojave villages on the Colorado River during his trek to California. Smith observed horses kept by the Mojaves that had been stolen from herds in coastal California, and bought several of them. He engaged several of the Serrano refugees from the missions to serve as his guides as he followed the Colorado River to the Mojave River trail, and then made his way up the Mojave River. The guides had family members camped in the vicinity of Daggett and Barstow. One of them was able to locate a cache of blocks of carrizo-grass sugar that he knew about stored along the river. Smith later camped with a group of "Wanyumah" Serranos on the upper river, perhaps near Victorville. He observed the hunting of jackrabbits with long nets, and was fed acorn and pine nut porridge, as well as a 'bread' made of juniper berries. At this date the procurement of pine nuts and acorns by groups based downriver from Summit Valley still continued. When Smith exited the southern California settlements by way of Cajon Pass and Antelope Valley en route to northern California, he passed through the ranchería of *Atongaibit*, which was apparently still occupied.

When Smith returned the following year leading another party of trappers, he was attacked at the Mojave settlements while crossing the Colorado River; this was in retaliation for the killing, months before, of Mojaves by another party of trappers. He and other survivors of his group reached the eastern end of the Mojave River. At around the western edge of Afton Canyon, Smith encountered a camp of 'Paiutes,' probably Chemehuevi/Southern Paiutes, with whom he bartered cloth, knives, and beads for several horses, carrizo-grass sugar, and water containers. Further upstream, in the vicinity of modern Victorville, he stopped at an encampment of Serrano speakers,

from whom he obtained two more horses. Smith's accounts of his journeys from the Colorado and up the Mojave River indicate that Desert Serranos were still resident on the Mojave River at the time, but that Chemehuevi/Southern Paiutes were present on the lower river as well by this date.

The Mojave River Settlements and the Missions

After 1819, some populations of Serrano speakers continued to occupy the Mojave River, although communities along the river had been partly depopulated by mission recruitment. As I have noted, Jedediah Smith's account suggests that a community near Victorville, perhaps *Topipabit*, may have still been occupied as of 1826-1827. This appears to have been the case with *Atongaibit* as well. There continue to be individuals from some of these river communities reported as baptized during the 1820s at Mission San Gabriel, with an individual listed from *Angayaba* in 1825 and from *Najayabit* in 1829. As noted above, native people were still resident on the river in the late 1820s, and *Atongaibit* appears to have not yet been abandoned. While Serrano-speakers from the region continued to be baptized, we note the complete absence of Mojaves and the virtual absence of Chemehuevis in the baptismal rolls in this or later decades. These latter groups could not be linked into the system.

Moha and the Fate of the 'Vanyumé' or Desert Serrano

In the wake of the missionization of a significant portion of the native population of the Mojave River by the late 1820s, Jedediah Smith's account of the region indicates the continued presence of at least several remnant Serrano-speaking local groups. As previously noted, while carrying out research among the Mojave, Kroeber interviewed an elderly woman whom he was told was a survivor of the Vanyumé inhabitants of the river from this era. The woman, known to Kroeber as Moha, told him that her local group, located on the lower Mojave River, had been massacred at Newberry Springs "by Mexicans, it is said"

(Kroeber 1959:308). She was taken away to live with relatives married to the Mojaves, she explained, and she herself later married a Mojave man.

This story was told to Isabel Kelly in a slightly different form by native consultants, who also learned it directly from Moha. However, Harrington heard another account from his Mojave consultant Ohue (William Osler) in 1911.⁵ He was told of a Mojave man named *nfitfakwara* who was still living on the west side of the Colorado River opposite Fort Mojave. He had been married to the Vanyumé Serrano woman known to Kroeber as Moha in Mojave and Hamuha in Vanyumé Serrano. Harrington's consultant Ohue told him that the woman's real name was Tahamuha, and that she had been named for her birthplace, located two or three miles to the north of Victorville on the west bank of the Mojave River. He also noted that Moha's group had been based in the Daggett area. He said that the attack on this band had been made by Mojaves and not Mexicans. At the time, Mojaves were continuing to travel to the pueblo of Los Angeles to trade blankets and root-gum for horses, and some Mojaves had not come back from such trading expeditions. An investigation of the circumstances was said to have demonstrated that they had not been killed by whites. Blankets believed to have been carried by the deceased were reported to have been verified as in the possession of members of Moha's group in the Daggett area. It was said that a group of some 200-300 Mojaves was organized to take vengeance on Moha's people. This was reported to have taken place when Ohue's mother was young, and she remembered it having happened. While it was said that all the Vanyumé Serrano were killed, some Vanyumé then "came over here to get seeds, and the Mojave kept them here, mostly about Beaver Lake" in the Colorado River Valley (Harrington 1986:III:151:518-519). Jack Jones [Nyavarup], a Mojave consultant of Kroeber's in 1902, corroborated the account, mentioning that the Mojave trading party numbered 15, and was carrying blankets and root-gum to Los Angeles.^{6, 7} The party had been missing for two years when incriminating blankets and gum were said to have been found by other trading parties (Kroeber 1902-1903:103:292).

Ohue's account claimed, however, that while some members of Moha's group were carried off to the Mojave settlements, other Vanyumé Serranos also survived. These were noted as having eventually ended up at the Tejón community southwest of the Tehachapi Valley in the San Joaquín Valley foothills. Jack Jones also noted to Kroeber that there were Vanyumé survivors who had ended up at Tejón. Ohue noted that Moha had a brother named Tavastan who had also eventually settled at Tejón, and who had fathered five daughters. Kroeber had heard of a man called Tavastan, of apparent Vanyumé background, although he apparently could not confirm his suspicion that Tavastan might somehow be connected with Moha's group. He surmised, probably correctly, that Tavastan must have been a Mojave derivation of the Spanish given name 'Sebastián' (Kroeber 1959:304-305).

Tavastan was visited by Ohue at the Tejón Ranchería in circa 1896, at which point he was very elderly. This man may have been the Sebastian Lobo, aged 90, listed among a total of some 20 native residents of the Tejón Ranchería in the 1900 U.S. Decennial Census.⁸ Ohue asked Tavastan the Vanyumé term for bead, and the latter offered a word recognizable as Serrano. Ohue referred to the Tejón Ranchería as populated by 'Vanyumé,' since the native Kitanemuk Serranos resident there were of similar speech to Vanyumé Serranos who had migrated there. It appears that Tavastan had, in his youth, lived among the Mojaves, for he asked Ohue about Mojaves that he had known then, who by the time of Ohue's visit were long dead. Tavastan had a cousin named Tatakwapa in Mojave, who had remained among the Mojave, living at *kavhuwah*^a, and whom Ohue had known when the latter was a boy. He was recalled as a singer of the Tumanpa Vanyumé, a Vanyumé Serrano song genre about a supernatural journey to *Matavilya-vova*, near Barstow, that was nevertheless sung with Mojave words. Kroeber had been told that a Tejón Indian 'chief' named Tavastan or a relative of his had been the source of this major Mojave song genre, and here Tatakwapa may have played a role (Kroeber 1925:759).

There was an additional account given to Harrington by Ohue of the 'war' against the

Vanyumé Serrano living on the Mojave River. It was recalled that groups of Mojaves had made trading expeditions to the Tule River Indians, or Yokuts. They were also accustomed to travel to a 'mercado' in the San Bernardino area to trade. Ohue said that another Mojave, Jim Johnson, had heard from his father (who passed away around 1888) that he was with a group of Mojaves that had gone to San Bernardino to trade, and had taken some horses from Mexicans in the area on the way back. They were chased by the settlers, and several Mojaves were killed. At this point the conflict with the Vanyumé occurred, when the latter were killed. This was said to have been in retaliation for the killing of Mojaves by the Vanyumé. Johnson's father was wounded in the arm and the leg during this expedition but recovered. As a result of the attack on the Vanyumé, three males and two females from the group were brought to the Mojave villages. However, approximately 15 other members of this group ended up living at a 'reservation' at the Tejón, but were dead by 1911 (Harrington 1986:III:154:0328).

These accounts focus on the apparent end of Vanyumé Serrano occupation of the Daggett-Barstow area, without providing a secure date for the affair. It probably occurred during the 1830s. However, other accounts suggest a continuing presence of mobile groups of Serrano-speaking native people, including ex-neophytes, in the Mojave River area and the Ord Mountains as late as the mid-1840s and 1850s. On two occasions in 1845, Benjamin D. Wilson led an expedition that fought with a group of Serrano- and Spanish-speaking ex-neophytes they encountered on the Mojave River (Walker 1986:135-136). It seems likely that these were native to the region, if they were occupying camps requiring knowledge of desert watering places. In addition, as late as 1860, native groups including Serrano speakers operated in the Ord Mountains area south of the lower Mojave River. These groups appear to have had ties to Chemehuevi/Southern Paiute groups further to the northeast, and also were involved in the 'trading' or purloining of saddle stock. The activities of such groups help to explain a Chemehuevi reference in Kelly's notes to 'Pitanti' stock raiders, apparently well after the 1830s.

Twentieth-century ethnographic information relating to the former political geography of the Mojave River region was collected by John Harrington. The recollections of *Yuhaviatum* Serrano consultants provide a description of the political geography of the Mojave River and nearby areas that apparently reflect changed conditions after the 1830s. Much of the upper river region was assigned to the political territory of the *Kaiyuyam* localized clan or sib, based in the northwestern San Bernardino Mountains. The section of the river between modern Victorville and Barstow was sometimes said to have been occupied by a local Serrano-speaking group called the *Maviatam*. The lower river formed the northern edge of a vast desert territory called *Temtak*, which was sometimes said to have been claimed by the Serrano *Pervetum* clan of the northern San Bernardino Mountains. The various rancherías found all along the river by the Spanish, and recorded in mission registers, were not mentioned by Harrington's consultants as the headquarters of localized clans. This was despite the fact that the rancherías of *Guapiabit* and *Atongaibit* were recalled by these consultants. As I have discussed elsewhere, this changed description of the native political geography of the river appears to reflect a relative depopulation of Serrano speakers in the region after around 1830 (Earle 2004a:178-181). The same ethnographic sources also report both friendly and unfriendly visits of Chemehuevi/Southern Paiutes to the San Bernardino Mountains, perhaps before the 1850s.

The Chemehuevis After 1840

By the decade of the 1840s, a southwesterly movement of Chemehuevis into the western Mojave Desert had accompanied the intensification of stock raiding across the frontier (Earle 2004a, 2004b, 2005, Phillips 1993). Native accounts of encounters with 'Paiutes' in the San Bernardino region, La Puente, and even as far south as Temescal Canyon in Orange County, attest to their raiding out of this part of the Mojave Desert. By the early and mid 1850s, bands of Chemehuevis are known to have been operating in the Mojave River drainage and at Lovejoy Springs in the

Antelope Valley. In 1860, a military detachment under Maj. James Carleton was sent to the Mojave River region to punish local native bands suspected of attacks on white travelers. Several of these groups were Chemehuevi. During the 1860s, Chemehuevis were involved in incidents with both settlers and cowboys in the river region and with a military garrison posted at Camp Cady, east of Daggett. They were later said to have occupied the lower Mojave River around this time under a chief named Pachalka. They later established settlements on the north slopes of the San Gabriel Mountains, the southern foothills of the Antelope Valley, and in the Angeles National Forest, and were also encountered in the modern Edwards Air Force Base area (Earle 2005:141-142). By the 1830s, other groups of Chemehuevi had moved to the east to settle on the Colorado River, where they adopted a number of cultural institutions from their Mojave neighbors. For Chemehuevis in the western desert, traditional subsistence-based camp life lasted until at least 1890 in the Antelope Valley, and as late as 1905 on the Mojave River.

THE MOJAVE EXCHANGE CIRCUIT DURING THE ERA OF MEXICAN RULE

The opening of the Old Spanish Trail in 1829-1830 brought the Mojave River further into the sphere of white settlement, although a permanent white presence on the river would not occur until the 1850s (Thompson and Thompson 1995:51-58). The Mojaves on the Colorado had remained in relative isolation by the rerouting of the Old Spanish Trail to Santa Fe to avoid crossing the Colorado at the Mojave villages. During the 1830s and into the mid-1840s, the Mojave continued to use the trail corridor through the central Mojave Desert to trade with the southern California coast and the southern San Joaquín Valley. Cook (1962:158) has suggested that the 1819 tragedy at San Buenaventura led to a sharp decline in Mojave trading activity toward the coast. It appears that the Colorado River Indian scare of 1819, which lingered through the early 1820s, did lead to some disruption of trade with the coastal missions. It is also true that the Mojaves did eventually become

involved to some extent in horse raiding, apparently sometimes under cover of their trading expeditions. This trafficking in horses was apparently not yet common in the 1820s, however, for Jedediah Smith noted that the number of horses he saw in the Mojave villages in 1826-1827 was very small. Nevertheless, even in 1819, Mojave survivors of the San Buenaventura incident were able to tell their Spanish interrogators how many days it would take to ride from the Mojave villages to the coast—the journey on horseback took only about two days less than the 16-day trip on foot (Cook 1962:161). By the 1830s, the Mojave exchange of *tirutas* and buckskins to the Mexicans of the Los Angeles region in return for horses was well established. One Mojave consultant recalled that the Mohaves got woolen blankets and open-sided Indian poncho shirts, originating further east, from the Walapai, in return for horses exchanged eastward to them (Kroeber 1902-1903:104:177-178). The Walapai also continued to provide buckskins and red pigment to the Mojave. However, the eastward movement of saddle stock by the Mojave, as noted by Frémont, was made difficult by the lack of water and feed east of the lower end of the Mojave River, as well as by the threat of possible Chemehuevi/Paiute attack. The political context of this threat is unclear, since the Mojave and Chemehuevi of the Colorado River were on relatively good terms at this time. Nevertheless, by the early 1850s, Mojaves made it clear to American parties that they guided westward to the Mojave River that stock raiders of Chemehuevi/Southern Paiute affiliation were a hazard to travelers in the region.

However, along with the trade to the coast, there was also continuing Mojave trade with the gentiles of the *Tulares* (the San Joaquín Valley). Estudillo observed Mojave bead traders at Buenavista Lake in the southern San Joaquin Valley in the fall of 1819, and the interior trade continued to flourish, with the Yokuts serving as bead exchange intermediaries with the Chumash on the coast. This Yokuts-Mojave exchange and intercourse also continued to worry the Spanish authorities, who wanted to build a redoubt in the Tehachapi Mountains region to keep the Mojaves separated from the Yokuts of the southern San

Joaquin Valley. Yet this interior trade was destined to long outlast Spanish rule, and endured into the 1840s. The trading party described by Frémont in 1844 was returning from the Tehachapi Mountains by way of the southern Antelope Valley trail and the Mojave River when Fremont's party encountered them. They were described as carrying both water gourds and bows, and thus were capable of defending themselves. Information on the continued use of shell beads by the Mojave and in exchanges between different desert groups at this time makes it clear that shell bead acquisition was still a core activity for Mojave traders.

The relative isolation of the Mojave villages from foreign interference ended after the American annexation of California and the Gold Rush. The Mojaves were repeatedly visited by American military exploration parties, and a military installation was built at the villages in 1859 to secure that crossing of the Colorado from Mojave attack. This brought about the end of Mojave political and cultural independence.

LONG-DISTANCE EXCHANGE AND THE POLITICAL GEOGRAPHY OF THE CENTRAL MOJAVE DESERT

This paper has provided an overview of the political geography of the Mojave River region and adjacent areas in the late eighteenth and early nineteenth centuries. The distribution of settlements and of ethnic groups in the central Mojave Desert appears to have been affected by the importance of the exchange and travel route between the Colorado River and the Pacific coast that was maintained through the area.⁹ The travel and exchange corridor that the Mojave River represented was not the only reason for settlement along the river. The density of settlement along the river corridor, however, appears to have been higher than would have been the case if acorn and piñon pine food resources had not been circulated downriver. In other words, the maintenance of population densities, subsistence regimes, and winter village settlement patterns associated with Serrano culture in upland areas further south were projected northward along the river. This northward extension of settlement is reminiscent

of the northeastern frontier of the interior Chumash, where a major route of travel and exchange extending northward into the southern San Joaquin Valley was occupied by the Chumash. In the case of the Serrano-speaking communities of the Mojave River region, there existed a considerable differential in local group population size between the Serrano speakers and their Desert Kawaiisu neighbors to the north and Chemehuevi to the east. This may have been helpful from a military-political standpoint in maintaining the Serrano occupation of the river corridor and desert springs to the south and east of the river. Such an extension of occupation, with its attendant necessary adaptation to desert conditions through strategies such as the importation of staples, presumably conferred offsetting political and economic advantages. Political advantages involved the maintenance of long-term alliance relationships with Mojave communities and chiefs that assured Serrano support for Mojave trading and exchange activities.

It is also tempting to think that the possible political and economic benefits of occupying the Colorado River-Mojave River travel and exchange corridor may have played some role in the drama of the replacement of the *Tira'ayatawi* by the Chemehuevi as occupants of the Providence Mountains portion of the travel route. The sense that Garcés had in 1776 that the Chemehuevis could be considered political clients of the Mojaves seems to have been bound up with their role as hosts of Mojave traders on that section of the trail, and frequent hosts they certainly were. Mojave use of the travel route depended, of course, on the maintenance of political alliances with the Chemehuevi living to the west of the Mojave settlements.

The vast geographical scope and complexity of the exchange system itself reinforces our developing understanding of the central role played by shell beads as a medium of exchange and of storage of value in California and the Southwest. As has been mentioned above, even within the Mojave Desert itself, shell beads served to organize a complex pattern of intergroup exchanges of material goods and resources. The exchange circuits linking the riverine Mojave with desert

groups such as the Chemehuevi, where shell bead exchange articulated a highly developed environmentally-based interdependency, are of particular interest.

The use of shell beads was not restricted to the exchange of goods, of course, since beads were also status markers. Vanyumé or Desert Serrano chiefs used them in ceremonies emphasizing the prestige of visitors and hosts, and Mojaves and Chemehuevis wore them as indicators of wealth and prestige. In addition, the accumulation of shell beads played a critical role in the operation of the ceremonial economies of California and southwestern Great Basin groups. The development and spread of the institution of annual or periodic mourning ceremonies within these areas marked the emergence of a principal regional form of what some have called a ritual mode of production. In this kind of political economy, ritual and feasting contexts are a major motor for the production and stockpiling of foodstuffs and craft goods. Like pigs in the highlands of New Guinea, shell beads in California served as an essential means of stockpiling economic credit and value, in preparation for the holding of large-scale feasts such as the mourning ceremony.

EXCHANGE AND THE COLONIAL FRONTIER

The persistence of the shell bead trade through the Mojave Desert during the eras of Spanish and Mexican rule at first glance seems surprising. The circumstances of the Spanish conquest and Franciscan missionization of the Chumash, including the introduction of glass trade beads, would have seemed likely to end the circuits of bead exchange at an early date. The movement of Chumash communities into the Franciscan missions by circa 1804-1806, and the lower incidence of Chumash avoidance of mission recruitment in comparison to natives in the Los Angeles region, would also appear to have put an end to shell bead production. Yet while this native craft industry changed, it did not disappear, as Chester King and other researchers have documented. The fact that this production did survive was due in part to the continuing

exportation of shell beads to gentile groups across the California colonial frontier.

It is also surprising that not only did shell bead production survive on the coast, but circuits of exchange of native craft goods—both in the areas of Spanish settlement and in native communities beyond the frontier—persisted as well. It is important to recognize that the desire for access to European goods, particularly cloth and metal items, was indeed strong for native individuals and communities on both the coast and in the interior of California. It was a principal consideration for native involvement with the Franciscan missions and for native labor contracting with Hispanic settlers. Yet the native peoples of California could not offer any commodity, apart from their labor, that could be exchanged to link them to the world of European goods. Initially, the only point of economic engagement that would secure access to these goods was the Franciscan missionary enterprise. Yet the major role played by the missions in provisioning the Alta California settlements put them in the position of controlling and limiting the availability of these non-native goods. The supply of mission goods for non-resident natives was manipulated and restricted by the missionaries to promote neophyte recruitment. This situation was partly responsible for the persistence of the circulation of native goods, since the latter were not completely replaced by this limited array and supply of European-style (or Mexican-style) goods carefully managed within the mission economy. These were limited as compared with the goods to be found in the trade circuits of insular Mexico, for example. As the settler economy in the Los Angeles region developed, an alternative means of obtaining European goods via non-mission labor gradually emerged, an alternative that was viewed with alarm by the missionaries.

By the early 1830s, a second alternative for access to European goods—stock raiding—was becoming available for some gentile trans-frontier native groups. This involved the exchange of captured saddle stock for European goods smuggled into California from New Mexico. Raiding to capture this saddle stock became intertwined with previously existing trans-frontier

exchange circuits and with the comings and goings of neophyte *cimarrones* fleeing from the Franciscan missions. Along with raiding, our data suggest that the Mojaves integrated the licit procurement of horses in coastal California into their long-distance exchange system. The proliferation of the horse, both for culinary purposes and for transportation, across the political and cultural frontiers of Hispanic settlement was a serious challenge to the administrative system of the invaders. The native objective of obtaining horses was in itself a form of resistance. The initial Spanish monopoly of the use of the horse had been perhaps their greatest military asset.

As early as 1810, the trans-frontier circuits of exchange of goods involving not only the Colorado River groups but also coastal California and the 'Tulares' native communities of the San Joaquín Valley had become enmeshed with the routes of flight of neophyte refugees. The destinations of runaways often reflected the axes of pre-existing political and exchange ties between coastal and interior communities. These were based, in turn, on long-established environmental and production complementarities. The identification of routes and destinations of the mission *cimarrones* helps to map out pre-existing and continuing relations of native political alliance and economic exchange.

Our ethnohistorical information on the Mojave River area from the 1770s through the 1840s makes it clear that the Mojave River communities of Vanyumé Serrano had developed long-standing political and social ties with the Mojaves of the Colorado River villages. The traditional social context of these ties is evident enough, given the real day-to-day dependence of Mojave travelers and traders on the hospitality of their Serrano hosts as they negotiated the Mojave river route. The gifts of shell beads and other goods that were certainly bestowed as reciprocal exchanges for this hospitality cemented these relationships. The question of what made the Vanyumé Serrano a distinct group in respect to neighboring Serrano clan/sib groups in the San Bernardino Mountains region can be answered in terms of this reciprocal relationship. Those Serranos who were called the Vanyumé by the Mojaves were their exchange partners and hosts on the corridor to the coast. Those Serrano speakers the Mojaves called the

Hanguwetse, the Serrano of the San Bernardino Mountains and the foothills and valleys to the south and east, were implicated in exchange with their enemies, the Halchidhoma (Harrington 1986:III:158:252-253).

When communities in the upper Mojave River region became involved in wider 'conspiracies' against Spanish mission and military control, they repeatedly attempted to recruit the Mojaves as participants, in part through the offer of gifts of coastal shell beads in return for their participation. As the Mojave River Serrano-speaking communities were recruited to missions San Gabriel and San Fernando after 1795, the distant Colorado River settlements of the Mojave became a place of secure refuge for runaways, as well as a base for raiding and other resistance by these *cimarrones*. As the Desert Serrano population still resident on the river dwindled after the opening of caravan traffic in 1829, the Mojave settlements became the temporary or permanent home of a number of Desert Serrano or Vanyumé survivors. This paper has provided new information on these survivors and their links to the Mojave communities and to the Tejón ranchería.

In the Mojave River region, a long-standing system of long-distance exchange created local reciprocal relations that were used by members of the native communities that had been pulled partially into the mission system to invoke the assistance of native groups beyond the reach of colonial rule. As the 'circuits of refuge and raiding' between the coast and interior grew after 1800, the mission economy and its political program faced increasing resistance. Yet the resistance had to be overcome, because the missions themselves, like steamboats that had to chop themselves up to feed their boilers, were running out of neophyte fuel due to internal demographic collapse. Yet attempts to coerce away the resistance simply led to more difficulties.

What was dramatic about the Vanyumé Serrano and Mojave connection in colonial times was the scale of distances involved in the continuing political and economic ties between them, and the degree to which the native communities at the interior pole of this circuit of economic circulation and political refuge were manifestly beyond the

reach of Spanish military power. The Mojaves could march to La Puente, but it didn't work the other way around. The Spanish equestrian advantage couldn't be made to extend to the Colorado River. Something of a similar but less dramatic situation obtained with the Yokuts groups of the San Joaquin Valley, who were difficult for the Spanish to come to grips with militarily. Scholarly attention has recently been directed at trans-frontier interior-coastal native political ties in Hispanic California and their relation to neophyte flight, resistance, and stock raiding. This paper has attempted to show how political relations of resistance across the colonial frontier ran parallel to a continuing system of exchange of native goods, which linked the Colorado with the coast and with the Tulareño groups of the San Joaquin Valley.

Rivera was naive in believing that the native peoples of California were too technologically primitive to have been engaged in such long-distance exchange. He was right, however, to be concerned about the political implications of continuing traditional interactions between native groups across the colonial frontier. Fr. Garcés, for his part, was correct in his appreciation of how circuits of exchange could cut across political and cultural boundaries. He understood how these circuits of native exchange could and would be reoriented with the appearance of the colonial economy on the coast. What he was not destined to live to witness was how various forms of native resistance to missionary cultural penetration involved the application of traditional long-distance economic and political ties to new purposes of resistance. This resistance involved flight from the missions, labor in the non-mission economy, the pilfering of stock across the frontier, and the maintenance of 'regions of refuge' beyond the reach of the Spanish/Mexican state, regions that continued to exchange goods with one another and with the Hispanic settlements for nearly 80 years after the Spanish conquest.

NOTES

1. Traditionally, a difference in spelling has been used to distinguish between the Mojave Desert or

other geographical features, and the 'Mohave' culture or people. Contemporary Mojave descendants prefer a single spelling for both, which is the usage adopted here.

2. While Kroeber stated that the Mojave of the Colorado River, for their part, had no recollection of a Mojave or Yuman-speaking group living on the desert to the west of them, research notes prepared by John P. Harrington during his fieldwork with the Mojaves in 1911, and Kroeber's own fieldnotes, suggest otherwise. There is a reference, for example, to a last sighting of the *Hamakava Kwaihta*, as the Mojave called the *Tiira'ayatawi*, at 'avi-kwaθ'utuf'. This place was a promontory at the northeast end of the Newberry Mountains, adjacent to Newberry Springs on the south side of the Mojave River Valley. Harrington was also told that the *Hamakava Kwaihta* wore their hair bobbed at the base of the ears, unlike the Mojaves themselves. There is also a mention of the *Hamakava Kwaihta* in a Mojave origin story, *The Chuhueche Tale*, compiled by Kroeber and published posthumously in 1972. In that story, reference is made to a desert valley where a 'Hamakava Kwaihta' village is located (Kroeber 1972:49).

3. Regarding baptismal entries for *Gaayaba*, see Mission San Gabriel n.d. Books I, II of Baptism, Baptismal Entries #4390 (6/16/1809); #4692 (4/12/1811); #4693 (4/12/1811); #5019(6/2/1811); #5088 (11/20/1811); #5318 (5/15/1815); #5322 (5/15/1815); #5654 (1/7/1815); #6821 (3/6/1822); #6879 (11/5/1822); #7273 (1/15/1825); #7330 (6/28/1825).

4. Forbes (1965) and Clifton Kroeber and Bernard Fontana (1986) have discussed the political and military alignments of lower Colorado River groups in the late 18th and early 19th centuries. Of particular relevance to our discussion is the conflict between the Mojaves and Halchidomas that culminated in the expulsion of the latter from the river. This has been dated at circa 1828 by Alfred Kroeber, although this process of expulsion, and the role of the Chemehuevi in occupying former Halchidoma territories, may have been more complex and drawn out than has traditionally

been assumed. The ethnographic fieldnotes of Harrington (1986), Kelly (1953), and Kroeber (1902-1903) shed much new light on this complicated story. The Halchidhomas were allied with some eastern Serrano and Cahuilla groups that lay astride Halchidhoma trade and exchange routes to the coast. These passed through the Twenty Nine Palms region (Mara) and the Coachella Valley, respectively. Bean and Mason's (1963) edition of Romero's 1823 expedition account of his journey through Cahuilla territory toward the Colorado River is helpful in documenting these economic and political ties of the Halchidhoma with southern California groups. Several visits were made by Halchidhoma chiefs to southern California and even Monterey in 1821-1823. They emphasized the need for an expedition to suppress the Mojaves, which would presumably relieve Mojave military pressure on the Halchidhoma. The Halchidhoma delegations were also selling child captives, apparently Quechans, in the Los Angeles region.

5. Ohue, or William Osler, was born in 1865 and resided in the Mojave Valley/Ft. Mojave region at the time of Harrington's fieldwork in 1911 (Colorado River Agency 1921, Entry No. 727 [no pagination]). He was a widower at the time, and without dependent family. Harrington considered him an exceptional consultant, widely traveled and very knowledgeable about native culture and cultural geography.

6. Kroeber noted in 1959 that, aside from Moha's version, he was not given additional information by the Mojaves about who attacked the Vanyumé and what the motive was. Jones had in fact provided this information in 1903, although without mentioning Moha by name.

7. Mojave consultants of the early 20th century claimed that they were not sure what the willow staves or the root-gum were used for by California groups. The root-gum was eagerly sought by the Vanyumé and other California peoples.

8. Sebastian Lobo appears on Enumeration Sheet 4 of the 1900 U.S. Decennial Census, California, Kern County, 8th Judicial Township, 29th Enumeration

District, dated June 21, 1900. This Township and District included the Tejón Ranch and the Tejón Ranchería. Sebastian Lobo was listed in a special Indian Census form along with other residents of the Tejón Ranchería. Lobo was noted as having been born in April of 1810, and although his age was listed as 89 on the enumeration sheet, he would have been aged 90 if the date of birth listed were correct. His tribal affiliation was listed as 'Piute' rather than 'Tejón,' that of other residents of the ranchería. One other person, José Liebre, listed as born in March of 1818, was also listed as of 'Piute' affiliation. Both men were widowers who lived alone. The 'Paiute' listing suggests that these men were of 'foreign' origin, although the 'Piute' designation would in fact be mistaken if Lobo were our 'Tavastan.' The early birth date, the fact that the month and year of birth were apparently known, and the use of an Hispanic given name, all suggest that a Vanyumé rather than a Paiute affiliation for Lobo is plausible.

9. Ruby (1970) provides a useful review of ethnohistorical sources on southern California-Southwest exchange. This paper has focused only on the Mojave exchange route through the central Mojave Desert, and has not attempted to treat the wider phenomenon. I have noted, however, the unusual characteristic of the long-distance travel and exchange relationships of Mojaves in comparison to other groups in the region, which makes the Mojave exchange system rather unique in southern California. It should be borne in mind, nevertheless, that other lower Colorado River groups, including the Halchidhoma and the Quechan, maintained less far-reaching exchange links and alliances in the direction of the Pacific coast as well. Forbes' (1965) ethnohistory of the Quechan emphasized the ramifying effects of these alliances for inter-group relations over a wide area to the west and east of the lower Colorado River.

REFERENCES

- Anderton, Alice
1988 The Language of the Kitanemuks of California. Ph.D. dissertation, Department of Linguistics, University of California, Los Angeles.

- Arnold, Jeanne and Anthony P. Graesch
 2001 The Evolution of Specialized Shellworking Among the Island Chumash. In: *The Origins of a Pacific Coast Chiefdom: The Chumash of the Channel Islands*, Jeanne E. Arnold, ed., pp. 71-112. Salt Lake City: University of Utah Press.
- Bean, Lowell J. and William M. Mason
 1962 *Diaries and Accounts of the Romero Expeditions in Arizona and California, 1823-1826*. Los Angeles: Ward Richie Press.
- Bolton, Herbert E.
 1931 *Font's Complete Diary, Anza's California Expedition, 1774-1776*. Berkeley: University of California Press.
- Brand, D.D.
 1938 Aboriginal Trade Routes for Sea Shells in the Southwest. *Yearbook of the Association of Pacific Coast Geographers* 4:3-10.
- Brooks, George R., ed.
 1977 *The Southwest Expedition of Jedediah S. Smith: His Personal Account of the Journey to California, 1826-1827*. Los Angeles: Arthur H. Clark Co.
- Burrus, Ernest (ed.)
 1967 *Diario del Capitán Commandante Fernando de Rivera y Moncada*. Madrid: Ediciones J. Porrúa Turanzas.
- Colorado River Agency
 1921 Census of the Mojave Indians of the Colorado River Agency on June 30, 1921, taken by Augustine F. Duclos, Superintendent. Washington, D.C.: Bureau of Indian Affairs.
- Colton, H.S.
 1941 Prehistoric Trade in the Southwest. *Scientific Monthly* 52:308-319.
- Cook, Sherburne F.
 1960 *Colonial Expeditions to the Interior of California: Central Valley, 1800-1820*. University of California Anthropological Records 16(6):239-292. Berkeley.
- 1962 *Expeditions to the Interior of California: Central Valley, 1820-1840*. University of California Anthropological Records, 20(5):151-214. Berkeley.
- Coues, Elliott (ed.)
 1900 *On the Trail of a Spanish Pioneer: The Diary and Itinerary of Francisco Garcés (Missionary Priest) in His Travels Through Sonora, Arizona, and California 1775-1776*. 2 vols. New York: Francis P. Harper.
- Dakin, Susana Bryant
 1939 *A Scotch Paisano in Old Los Angeles: Hugo Reid's Life in California, 1832-1852, Derived From His Correspondence*. Berkeley: University of California Press.
- Davis, James T.
 1961 *Trade Routes and Economic Exchange Among the Indians of California*. University of California Archaeological Survey Report 54. Berkeley: University of California Press.
- Drover, Christopher E.
 1979 *The Late Prehistoric Human Ecology of the Northern Mohave Sink, San Bernardino County, California*. Ph.D. dissertation, University of California, Riverside.
- Earle, David D.
 1990 *New Evidence on the Political Geography of the Antelope Valley and Western Mojave Desert at Spanish Contact*. In: *Archaeology and Ethnohistory of Antelope Valley and Vicinity*, Bruce Love and William H. DeWitt, eds., pp. 87-104. Antelope

- Valley Archaeological Society, Occasional Papers 2. Lancaster: Antelope Valley Archaeological Society.
- 2004a Native Population and Settlement in the Western Mojave Desert in the Eighteenth and Nineteenth Centuries. Proceedings of the Millennium Conference: The Human Journey and Ancient Life in California's Deserts, Barstow, California, May 9-12, 2001. Ridgecrest: Maturango Museum Press.
- 2004b Ethnohistorical and Ethnographic Overview and Cultural Affiliation Study of the Fort Irwin Region and the Central Mojave Desert. Report prepared for TRC Solutions, Inc., Salt Lake City, Utah. Earle and Associates, Palmdale, Ca.
- 2004c Native American Labor Outside of the Franciscan Missions in the Los Angeles Region During the Eras of Spanish and Mexican Rule. Paper presented at the Fifty-fifth California History Institute: Spanish and Mexican California History and Cultural Legacy. University of the Pacific, Stockton.
- 2005 Chemehuevi Population Movements and the Numic Frontier in the Western and Central Mojave Desert after European Contact. In: Papers in Antelope Valley Archaeology and Anthropology, Roger W. Robinson, ed., pp.135-146. Antelope Valley Archaeological Society, Occasional Papers 4. Lancaster: Antelope Valley Archaeological Society.
- Farmer, M. F.
1935 The Mojave Trade Route. *The Masterkey* 9(5):154-157.
- Forbes, Jack D.
1965 Warriors of the Colorado: The Yumas of the Quechan Nation and Their Neighbors. Norman: University of Oklahoma Press.
- Ford, Richard I.
1983 Inter-Indian Exchange in the Southwest. In: Handbook of North American Indians, Vol. 10: Southwest, Alfonso Ortiz, ed., pp.238-255. Handbook of North American Indians, William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution.
- Fowler, Catherine S., Molly Dufort, Mary K. Rusco, and Pauline Esteves
1999 In the Field in Death Valley: Julian Steward's Panamint Shoshone Fieldwork. In: Julian Steward and the Great Basin: The Making of an Anthropologist, Richard O. Clemmer, L. Daniel Myers, and Mary Elizabeth Rudden, eds., pp. 53-59. Salt Lake City: University of Utah Press.
- Frisbie, Theodore R.
1974 *Hishi* as Money in the Puebloan Southwest. In: Collected Papers in Honor of Florence Hawley Ellis, Theodore R. Frisbie, ed., pp. 120-142. Papers of the Archaeological Society of New Mexico 2.
- Galvin, John
1965 A Record of Travels in Arizona and California 1775-1776. Translated and edited by John Galvin. San Francisco: J. Howell Books.
- Gifford, E.W.
1931 The Kamia of the Imperial Valley. Bureau of American Ethnography Bulletin, No. 97. Washington, D.C.: Smithsonian Institution.
- Gifford, E.W. and Egbert Schenck
1926 Archaeology of the Southern San Joaquin Valley, California. University of California Publications in American Archaeology and Ethnology 23 (1):1-22.
- Gibson, R.O.
1992 An Introduction to the Study of Aboriginal Beads from California. *Pacific Coast Archaeological Society Quarterly* 28(3):1-45.

- Hageman, Fred C. and Russell C. Ewing
 1991 An Archeological and Restoration Study of Mission La Purísima Concepción: Reports Written for the National Park Service by Fred C. Hageman and Russell C. Ewing. Prepared and Edited for Publication by Richard S. Whitehead. Santa Barbara, CA: Santa Barbara Trust for Historic Preservation.
- Harrington, J. P.
 1986 The Papers of John Peabody Harrington in the Smithsonian Institution, 1907-1957, Vol.3: Native American History, Language, and Culture of Southern California/Basin. White Plains: Kraus International Publications.
- Heizer, R.F.
 1941 Aboriginal Trade Between the Southwest and California. *The Masterkey* 15:185-188.
- Hughes, Richard E. and James A. Bennyhoff
 1986 Early Trade. In: *Handbook of North American Indians: Vol. 11, Great Basin*, Warren L. d'Azevedo, ed., pp.238-255. *Handbook of North American Indians*, William C. Sturtevant, general editor. Washington, D.C.: Smithsonian Institution.
- Jackson, Donald and Mary Lee Spence.
 1970 The Expeditions of John Charles Fremont. Volume I: Travels From 1838 to 1844. Urbana: University of Illinois Press.
- Johnston, F. J.
 1983 Overland, California to Mexico Post-1783. *San Bernardino County Museum Association Quarterly* 31(1-2):1-36.
- Kelly, Isabel T.
 1934 Southern Paiute Bands. *American Anthropologist* 36(4):548-560.
 1953 Notebooks of Las Vegas Band, Southern Paiute and Chemehuevi field notes.
- University of California Archives 138.1m. Anthropology Documents 17-18.
- Kennett, Douglas J. and Christina A. Conlee
 2002 Emergence of Late Holocene Sociopolitical Complexity on Santa Rosa and San Miguel Islands. In: *Catalysts to Complexity: Late Holocene Societies of the California Coast*, Jon M. Erlandson and Terry L. Jones, eds., pp. 147-165. Los Angeles: Cotsen Institute of Archaeology, University of California, Los Angeles.
- King, Chester
 1974 The Explanations of Differences and Similarities in Shell Beads in Prehistoric and Early Historic California. In *'Antap: California India Political and Economic Organization*, L.J. Bean and T.F. King, eds., pp. 77-92. Ramona, CA: Ballena Press.
 1976 Chumash Inter-village Economic Exchange. In *Native Californians*, edited by Lowell Bean and Thomas Blackburn, pp. 289-318. Ramona, CA: Ballena Press.
 1981 Background to Prehistoric Resources of the East Mojave Planning Unit. In *Background to Historic and Prehistoric Resources of the East Mojave Planning Unit*, by Chester King and Dennis G. Casebier, eds., pp. 1-52. California Dessert Planning Program, United States Department of the Interior, Bureau of Land Management, Riverside, California.
 1982 Beads and Selected Ornaments in Archaeological Studies at Oro Grande, Mojave Desert, California, Carol H. Rector, James D. Swenson, and Philip J. Wilkie, eds., pp. 68-87. Redlands: San Bernardino County Museum Association.
 1990 Evolution of Chumash Society: A Comparative Study of Artifacts Used for Social System Maintenance in the Santa Barbara Channel Region Before A.D. 1804. New York: Garland Publishing.

- 2003 Japchubut Ethnohistory. Prepared for the United States Department of Agriculture, Southern California Province, Angeles National Forest, Arcadia, California. Topanga, CA: Topanga Anthropological Consultants,.
- Kroeber, Alfred L.
 1902-1903 Mojave Ethnographic Notes and Records, A.L.Kroeber Papers, 1869-1972. University Archive, Bancroft Library, University of California, Berkeley.
 1925 Handbook of the Indians of California. Washington, D.C.: Bureau of American Ethnology Bulletin 78.
 1951 A Mojave Historical Epic. University of California Anthropological Records 11:71-176.
 1959 Ethnographic Interpretations, 7-11. University of California Publications in American Archaeology and Ethnology 47(3):235-310.
 1972 More Mohave Myths. University of California Anthropological Records 27.
- Kroeber, Clifton and Bernard L. Fontana
 1986 Massacre on the Gila : An Account of the Last Major Battle Between American Indians: With Reflections on the Origin of War. Tucson: University of Arizona Press.
- Laird, Carobeth
 1976 The Chemehuevis. Banning: Malki Museum Press.
- Latta, Frank
 1949 Handbook of Yokuts Indians. Bakersfield: Kern County Museum.
- Mission San Fernando Rey de España
 n.d. Book I of Baptisms, 1797-1855. Mission San Fernando Rey de España, San Fernando, California.
- Mission San Gabriel Arcangel
 n.d. Books I, II of Baptisms, 1773-1821. Mission San Gabriel Arcangel, San Gabriel, California.
- n.d. Libros I, II de Difunciones, 1774-1855.
- Nuez, Fr. Joaquín Pascual
 1819 Diary of Fr. Joaquín Pascual Nuez, Minister of San Gabriel, and Chaplain of the Expedition Against the Mojave Indians, Begun by Lieutenant Gabriel Moraga, November, 1819. Santa Barbara Mission Archive Library, Alexander Taylor Collection, Vol. IV, pp.137-152.
- Palomares, José
 1808 Diary of José Palomares. Provincial State Papers, Missions and Colonization, Vol. I, pp. 232-242. Bancroft Library, University of California.
- Park, Willard Z., Edgar Siskin, Anne M. Cook, William T. Mulloy, Marvin K. Opler, Isabel T. Kelly, and Maurice L. Zigmund
 1938 Tribal Distribution in the Great Basin. American Anthropologist 40(4):622-638.
- Payeras, Fr. Mariano
 1822 Diario de la caminata que hizo el P. Prefecto Payeras en unión del P. Sánchez...Año de 1822. Santa Barbara Mission Archive Library, Santa Barbara.
- Phillips, George Harwood
 1993 Indians and Intruders in Central California, 1769-1849. Norman: University of Oklahoma Press.
- Preziosi, Aimee M.
 2001 Standardization and Specialization: The Island Chumash Microdrill Industry. In: The Origins of a Pacific Coast Chiefdom: The Chumash of the Channel Islands, Jeanne E. Arnold, ed., pp. 151-163. Salt Lake City: University of Utah Press.
- Ruby, Jay
 1970 Culture Contact Between Aboriginal Southern California and the Southwest. Ph.D. dissertation, Department of

Anthropology, University of California,
Los Angeles.

Sherer, Lorraine M.

- 1994 *Bitterness Road: The Mojave: 1604 to 1860*. Novato: Ballena Press.

Steward, Julian H.

- 1937 *Linguistic Distributions and Political Groups of the Great Basin Shoshoneans*. *American Anthropologist* 39:625-634.
1938 *Basin-Plateau Aboriginal Sociopolitical Groups*. Bureau of American Ethnology Bulletins 120.

Thompson, Richard and Kathryn Thompson

- 1995 *Pioneer of the Mojave: The Life and Times of Aaron G. Lane*. Apple Valley, CA: Desert Knolls Press.

Tower, D.B.

- 1945 *The Use of Marine Mollusca and Their Value in Reconstructing Prehistoric Trade Routes*. *Papers of the Excavator's Club* 2(3).

Van Valkenburgh, R. F.

- 1976 *Chemehuevi Notes*. Indian Claims Commission Docket No. 88-330. In: *Southern Paiute ethnography* [by] Isabel T. Kelly. *Chemehuevi notes* [by] Richard F. Van Valkenburgh, pp. 225-253. New York: Garland Publishing, Inc.

Voegelin, Erminie Wheeler

- 1938 *Tubatulabal Ethnography*. University of California Anthropological Records 2(1):1-84.

Walker, Clifford J.

- 1986 *Back Door to California: The Story of the Mojave River Trail*. Barstow: Mojave River Valley Museum Association.

Zigmond, Maurice L.

- n.d. *Ethnographic Field Notes, Kawaiisu*, ca. 1936-1974. On file with the Department

of Linguistics, University of California,
Los Angeles, California.

- 1938 *Kawaiisu Territory*. *American Anthropologist* 40(4):634-638.

- 1986 *Kawaiisu*. In: *Handbook of North American Indians: Vol. 11: Great Basin*, Warren L. d'Azevedo, ed., pp. 398-411. Washington, D.C.: Smithsonian Institution.



