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NATIVE AMERICANS AT  
MISSION SANTA CRUZ, 1791-1834

INTERPRETING THE ARCHAEOLOGICAL RECORD

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Rebecca Allen



Perspectives in California Archaeology, Volume 5  
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Institute of Archaeology, University of California, Los Angeles

PERSPECTIVES IN CALIFORNIA ARCHAEOLOGY, VOLUME 5

Native Americans at  
Mission Santa Cruz, 1791–1834  
*Interpreting the Archaeological Record*

Rebecca Allen

Institute of Archaeology  
University of California, Los Angeles  
1998

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# Contents

	Acknowledgments	vii
Chapter 1	Introduction	1
Chapter 2	Founding and History of Mission Santa Cruz	8
Chapter 3	Native Americans	19
Chapter 4	Archaeological Investigations	30
Chapter 5	Changes in the Physical Environment	42
Chapter 6	Neophyte Diet and Work Patterns	55
Chapter 7	Material Culture	69
Chapter 8	Cultural Adaptation and Modification	90
	Bibliography	99

For Nancy J. Parezo

*in small recompense for years of  
friendship and inspiration*

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REBECCA ALLEN

# Introduction

**I**N 1769, the Spanish government began its settlement of Alta California. San Diego Mission and Presidio were founded partly in response to Russian and English incursions on lands claimed by the Spanish Crown. Desiring a colony that would not be a large monetary drain on royal coffers, officials felt that the most expedient and economic means of establishing this new colony was through a missionary program. Previously there had been experiments with such programs in other parts of New Spain, including portions of what is now Mexico, New Mexico, Arizona, and Baja California. The intent was to create a taxpaying, Spanish-speaking Colonial peasantry that would settle the land and remain loyal to the king.

In the worldview of the Spanish in the fifteenth to the nineteenth centuries, physical conquest implied spiritual conquest. God had given Spain, in their view, the right to conquer the New World. In turn, colonizers would introduce to Alta California a version of the Christian religion and civilization that expressed the morals and ideals of the Catholic Church. Although Jesuits had long been active in the spiritual conquest of New Spain, most recently in Baja California, royal suspicions over Jesuit political involvement and intentions culminated in the expulsion of Jesuits from the New World in 1767. The Franciscan and Dominican orders took over Jesuit missions throughout the colonies, and it was the Franciscans who initiated the missionization of Alta California.

Following a policy known as *reducción*, the Franciscans gathered native peoples into controlled mission communities. The Spanish government assigned two or more soldiers to each mission to protect Spanish interests and also established presidios to defend their ownership of the land. In only fifty-four years, between 1769 and 1823, the Franciscan order and the Spanish military together established twenty-

one missions and four presidios along the coast of Alta California (figure 1.1). During this same period, secular efforts resulted in the establishment of three pueblos and several private cattle ranches. Mission Santa Cruz was founded in 1797 as part of this colonization effort.

Hispanic colonizers referred to the native peoples as *Indios* and initially did not recognize that they had any social affiliations or a governing order, nor did the Spanish recognize native religions and cultural traditions. The native people recruited to the missions did not, however, see themselves as a single group of people; rather, they viewed themselves as members of specific villages. Hunter-gatherers who generally lived in small groups and who migrated seasonally within a specific area, the native peoples had a way of life suited to local environments.

The Franciscans' intent in the missionization process was to effect a complete psychological, sociological, physical, and spiritual makeover of the native peoples. In their view, Franciscans were bringing civilization where none had existed previously. Members of two native groups, the Ohlone and Northern Valley Yokuts, were recruited as neophytes (new citizens) to Mission Santa Cruz. The Ohlone were recruited from nearby locales, but as their numbers dwindled because of disease, Northern Valley Yokuts were recruited from lands farther away.

Because of the frontier situation and the physical limits that such a situation imposed, the Franciscans introduced an abridged version of Spanish culture, one adapted to the circumstances of colonization (Foster 1960:10). Catholicism was also simplified in its presentation to New World natives. Missionaries also deliberately purified their religion of some cultural sediment that had accumulated over the centuries. The conquest of new lands and new peoples offered a chance to "produce a theologically ideal religion" in the New



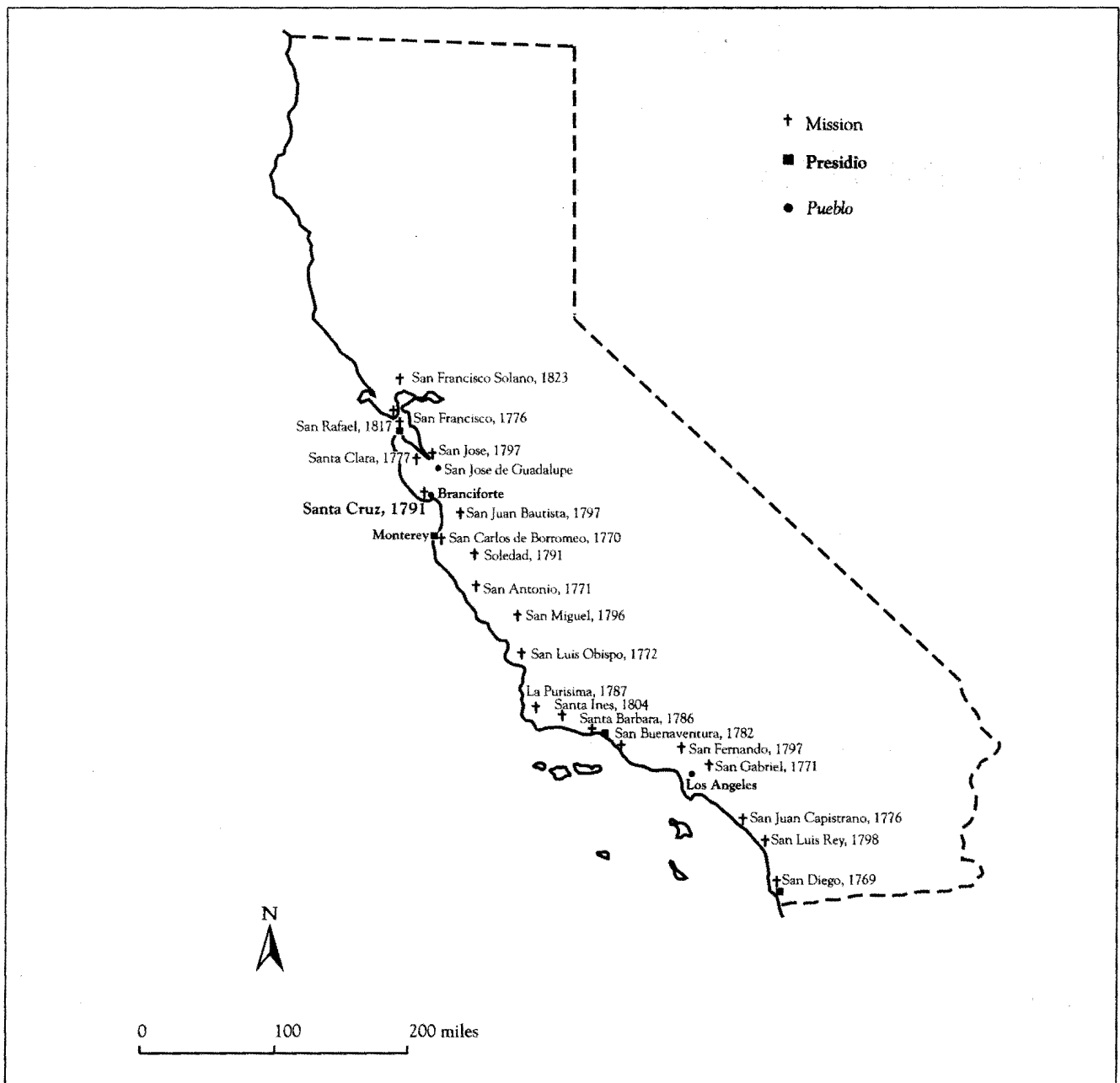


Figure 1.1 Missions, presidios, and pueblos founded during the Spanish and Mexican periods (1769–1834). Illustration by Gina Zanelli

World, free of the taints of paganism (Foster 1960:15). Unconquered lands presented a challenge to the Franciscans—as well as an opportunity to fulfill their vow of self-sacrifice—to Christianize an alien people (Gibson 1966:201).

Native Californians were attracted to the missions for several reasons. Spanish technology greatly interested them, as did possibilities for symbolized wealth such as glass beads. Catholic ceremonies with their elaborate displays and iconography also appealed to the native peoples. Hispanic agricultural practices, including the raising of domestic animals, promised new food sources. The mission system also offered individuals the opportunity of leaving the native society and achieving a new, higher status (Hoover 1989:397).

Others may have joined as a way of maintaining their status. Most native peoples recognized that the colonizers held power, power that may have seemed alien but that could be opposed or used by the native community.

While initial entry into the mission environment was generally voluntary, once they were within the environment, neophytes were forcibly detained. Because the landscape around the missions was quickly altered by agriculture, introduction of new plant species, and devastation by domestic livestock, a return to a native way of life soon became impossible. The Mission period in California was a “time of little choice,” according to Milliken (1995a). Fathers Marquinez and Escudé, stationed at Santa Cruz, offered this



**Figure 1.2** Santa Cruz Mission Adobe prior to restoration. Photograph courtesy of the California Department of Parks and Recreation

explanation of why the natives did not act with animosity toward the Spanish: “the reason they offer no offense is due to the fact that their conquerors have firearms” (Geiger and Meighan 1976:30). Still, the missionaries felt that the end goal of Christianization justified the means. Not all Spaniards agreed that force should be used on the native peoples to maintain converts. Military authorities made several complaints against the missionaries (Torchiana 1933:198). Government officials also protested the rampage of disease among the neophytes, which also worried the Franciscans, who attempted to stop the epidemics. Largely unsuccessful in their efforts, they apparently considered the widespread death to be the will of God. As Archibald notes, the missionaries considered their work of saving souls so important that they “preferred to have dead Christians rather than live pagans” (1978:184).

#### SANTA CRUZ MISSION ADOBE

The Franciscan order required all missionaries to tally the number of neophyte converts at their mission and also to report the number of births, deaths, and marriages. Franciscans recorded the measure of crops planted and harvested, the number of domestic animals, and the construction of mission buildings. These *informes* (annual reports) are one of the best sources of information on the size, structure, and practices of the missions of California. In the 1822 annual report for Mission Santa Cruz, Father Lu s Gil y Taboada reported that:

A Block of Houses was built, 103 varas [a vara equals approximately 33 inches] long, 8 wide and 3 5/6 varas high with walls of 1 1/2 adobe blocks, with tile roof and a corridor on both sides. Their purpose: one section of 23 varas with a wooden loft for storing grain and underneath the farm utensils. The remainder is divided into 10 houses with half lofts where the New Citizens are living. (Santa Barbara Mission Archive-Library, California Mission Documents)

In the 1824 annual report, he added that “7 adobe Houses were built thus finishing the row of 17 houses that was started the year before last as was reported, and they are all exactly alike.” The 1824 section of the larger neophyte housing unit that makes up the Mission Adobe is the only extant mission building at Santa Cruz (figure 1.2). Neophyte families inhabited the Mission Adobe until at least 1837 and perhaps occupied part of the building until 1848 (Kimbrow et al. 1985:64–68).

The ten rooms of the 1822 portion of the building were demolished in 1890. Two Mexican families named Rodr guez and Armas purchased from former neophytes the remaining portions of the seven-room section of the building. Records suggest that the neophytes left peacefully and received some payment for their former property. Roman Rodr guez and his wife Maria Ignacio Alviso moved into the eastern three rooms of the building probably in the late 1830s, living next to some remaining ex-neophytes. Felipe Armas was married to Roman’s niece Maria Antonia Rodr guez. They appear to

have moved into and renovated the western four rooms during the latter part of the 1840s, when the adobe was no longer occupied by ex-neophytes. In 1865, during the Euro-American period, the Armas family sold their half of the adobe to an Irish-American family named Neary. Meanwhile, local folklore had falsely assigned the function of "Guardhouse of the Soldiers" rather than neophyte housing to the Mission Adobe. The local community valued the building as a historical structure because of its supposed connection with Mexican soldiers (Torchiana 1933:326).

In the 1920s, the Neary family left their portion of the building but continued to maintain the adobe as a historical site. Cornelia Lunes Hopcroft, heir of the Rodríguez family, occupied the eastern section of the Mission Adobe during most of the twentieth century. She sold her portion of the structure to the California Department of Beaches and Parks in 1958, with the agreement that she would continue to live there until her death, which occurred in 1983 (Kimbrow et al. 1985). The California Department of Parks and Recreation (DPR) today owns and maintains all of the Santa Cruz Mission Adobe.

#### ARCHAEOLOGICAL INVESTIGATIONS

DPR began archaeological excavations at the Mission Adobe in 1978. Archaeologists excavated small test pits below the four westernmost floors in the Mission Adobe, revealing several distinct layers of occupation. These initial excavations promised great potential for producing rich cultural deposits. In the spring of 1981, the Department conducted more extensive interior excavations before construction of concrete foundations for seismic stabilization (Porter et al. 1981:12–18). These excavations produced archaeological assemblages indicative of the building's potential, although rodent activity and the addition of floor joists during the building's later occupations disturbed Mission-period stratigraphy. During 1984–1985, attention centered on the architectural evolution of the Mission Adobe and on returning the building to its mission-era appearance. In the spring of 1985, DPR conducted excavations with help from the Santa Cruz Archaeological Society and a Cabrillo College Archaeological Field School (Edwards and Simpson-Smith 1987). Archaeologists tested the yard south of the building, uncovering use areas of the neophyte residents and exposing the foundations of what was hypothesized to be the remains of an earlier Indian housing unit (Felton 1987:7), dubbed the "Angled Adobe." Excavation continued intermittently through 1990 in response to development work, uncovering more of the yard areas surrounding the Mission Adobe. DPR archaeologists also further explored the interior mission rooms and the foundations of the earlier housing unit, following the foundations under the east end of the Mission Adobe (Hildebrand 1991).

Artifacts recovered at Santa Cruz Mission Adobe consist of construction materials including the standing structure itself; foundations of the earlier building; ceramics; faunal remains of mammals, birds, fish and shellfish; glass; organic materials such as pollen and seeds; ground and chipped stone; leather; metal; shell artifacts such as beads; and miscellaneous small personal items. DPR staff cataloged all of the archaeological materials from the Santa Cruz Mission Adobe and Angled Adobe. DPR also solicited several specialized analyses, identifications, and reports on such artifact groups as faunal materials (Schulz N.D.; Walth 1990, N.D.) and vegetal remains (Honeysett 1989a, Meyer 1991, and West 1985). All these material remains contribute to a study of contact and cultural modification of native lifeways within a mission setting.

#### DOCUMENTARY SOURCES

While archaeological investigations provide some knowledge of the material life of the neophyte, the ideology of the Native Americans is elusive in both the archaeological and written record. Some artifacts found give tantalizing clues, such as a rosary and religious medallion, which seem to suggest that the neophytes accepted at least some tenets of Christianity. They may, however, have used these items as simple ornaments. Surprisingly few religious artifacts were found in the archaeological record (one religious medal and two crucifixes), all of which possibly date to the Post-Mission period. Combining archaeological evidence with documents provides further insight into the question of ideology. Although the natives themselves left few accounts behind, the remarks and reports of the Franciscans and other observers can help to illuminate the native point of view.

An important exception is the testimony of Lorenzo Asisara, a neophyte born at Mission Santa Cruz, who survived the aftermath of secularization. Historian Thomas Savage interviewed Asisara in 1877, concerning the murder of Father Quintana by neophytes. Notes from the interview are in manuscript form at the Bancroft Library. Historian E.S. Harrison interviewed Asisara in 1890 (1892:45–48). Although Asisara was born at the end of the Mission period (he was baptized in 1819), he offers recollections about mission life from his own experience and that of his father. He castigates some missionaries, like Quintana who was a "bad, distrustful man," and he commends others, like Father Luis Gil y Taboada who was "well liked by all the Indians." Asisara provides some information on local tribal names and native words. Most of his narrative describes life in the mission: his education in music and reading, Indian gambling games, punishments inflicted on the Indians by the missionaries, descriptions of food served to neophytes, their daily work, and how secularization affected the native people. The in-

terviews are remarkable documents and offer a unique statement about the native experience.

Many details of neophyte life also come from the annual reports of the Franciscan fathers. In addition to the raw data about baptisms, marriages, and deaths of the neophytes; counts of livestock; agricultural planting and harvests; reports on building construction and repair, and the progress of the church building and its furnishings, these reports also tell the story of the horrendous death rate of the neophytes, the economic success of the agricultural and livestock undertakings of the missionaries, and church embellishments added to impress and convince the neophytes of the glories of Catholicism. The annual reports for Santa Cruz are mostly complete, with a gap from 1799 to 1810. After 1798, the College of San Fernando in Mexico also required missionaries to produce biennial population reports. Mission confirmation, baptismal, and marriage registers are also extant and available. These detailed records kept track of individual neophytes and often listed their native place of residence, parents, siblings, and other relationships, as well as noting dates of birth (if known), marriage, and death.

In 1812 a government official in Spain sent a questionnaire to the father president of Alta California Missions. This questionnaire solicited information on the natives of California and the progress of the missions (Geiger and Meighan 1976). Missionaries at Santa Cruz responded in 1813. Their answers to questions on native education, Spanish-speaking abilities, feelings about the Spanish, virtues and vices, religion, social status, marriages, curing techniques, food sources, burial customs, and general conditions within the mission have the potential of elucidating the native condition and ideology. The missionaries' viewpoints concerning the neophytes can also be found in their letters to each other and to various government officials, in both Alta California and Mexico.

During their colonization efforts, the Spanish government sent out several exploratory parties. Explorers' journals sometimes offer insights into the workings of the missions from an outside perspective, although they are not entirely without bias for the glories of their government. Especially interesting is a journal from a 1792 visit to California by two small ships searching for the Northwest Passage. The author of the journal is unknown but is suspected to be José Cardero, a scribe and artist (Cutter 1990). Many foreign travelers, mostly associated with trading vessels, also passed through Alta California. Julia Costello (1990) discusses these traders and their associated documents. The most promising sources include the journal or travel notes of Georg van Langsdorff, a German surgeon aboard a Russian trading ship (summarized in Costello 1990:227-229), Frederick W. Beechey, captain of an English trading vessel (Costello 1990:234-235), K.T. Khlebnikov (1990), a functionary of the Rus-

sian American Company, and Jean François de la Pérouse (Margolin 1989), commander of a French scientific expedition. While these foreign travelers often do not give direct accounts of native peoples, they add to the description of life at the missions.

Several libraries and archives house primary documents used in the preparation of this book. During historic research on Mission Santa Cruz, Edna Kimbro and others compiled many of these documents. They are available at DPR in Sacramento and at the McHenry Library Special Collections at the University of California, Santa Cruz. This collection contains documents from the Santa Barbara Mission Archive-Library, the San Francisco Archdiocese Chancery Archive, and Bancroft Library at the University of California, Berkeley. Starr Gurke translated most of the documents deposited at the McHenry Library. Additional resources were found at the California State Library in Sacramento and at the Santa Barbara Mission Archive-Library.

#### STUDIES OF CONTACT AND CULTURE CHANGE

Many essays have been written on contact situations between Native Americans and Europeans throughout North America from ethnohistoric, historic, and archaeological perspectives (see Axtell 1981, Bowden 1981, Fitzhugh 1985, Ricklis 1996). What becomes immediately clear is the complexity of the contact situation and the dynamic nature of what has traditionally been called the acculturation process. Scholars first used the term *acculturation* in the late nineteenth century. It was generally used to mean processes of change and accommodation, through which two cultures became more alike (Garbarino 1983:72). During the mid-twentieth century, acculturation came to mean the merging of cultures through prolonged contact, with the active interchange of cultural traits and material items. Robert Redfield and Melville Herskovits led the field of anthropology in the study of this process, while Ralph Linton initiated studies of cultural contact situations of North American Indians. The Social Science Research Council with the Memorandum for the Study of Acculturation funded many studies, resulting in several publications (for example, Spicer 1961). In these studies, acculturation generally implied that a subordinate group assumed the identity and values of a dominant, colonizing culture. Specific points of research were "the means of introducing change; the degree of resistance to change; the mechanisms of selection; changes in roles and statuses; and final products of change like assimilation, reinterpretation, syncretism, and revitalization" (Garbarino 1983:73).

Acculturation is the term most often employed to describe the experience of Native Americans within the Spanish Mission system in Alta California (Farnsworth 1987,

Farnsworth 1992, Hoover 1989, Hoover 1992, Hoover and Costello 1985, and Schuyler 1978). This is certainly what the Franciscan missionaries intended to accomplish. Both the Spanish government and missionaries hoped that native culture would be wholly dismantled and neophytes would be transformed into the peasant foundation of a Spanish-speaking, agricultural colony. Part of the Spanish government's plan was that Native Americans would learn to live in groups under the direction of the Franciscans. While Catholicism stressed individual conversion, introduction of the religion was to be achieved through communal living, that is, gathering natives into central locations (Spicer 1962:570). The term *assimilation*, absorption into the dominant or colonizing culture, also implies neophyte acceptance of Spanish culture and abandonment of their own. Both acculturation and assimilation connote images of a people passively accepting European ideas and material culture. These concepts are in large part Eurocentric.

Studies in other areas of what is today the United States have also struggled with these terms. Rather than depicting a time of cultural replacement, one recent study posits a model of "relatively rapid transformation" of culture (Rogers and Wilson 1993:6). A study of the Karankawa Indians of central-coast Texas relies upon the term *adaptation* and describes changes in cultural traditions in ecological terms (Ricklis 1996). Adaptation begins when members of two different cultures come into contact. It occurs on both a social and cultural level. The cultures must develop a set of working relationships so that some sort of social system can be established. There is also an adjustment of beliefs and customs as the two cultures integrate (Spicer 1961:519). At Mission Santa Cruz, the result of native and Hispanic interaction was hardly the wholesale imposition of Spanish culture that the Franciscans had intended. Instead what occurred can be described as cultural modification, an adaptation to changing social and cultural circumstances.

### GOALS OF THIS STUDY

Recent historical archaeological works have concentrated on the economies of the Alta California mission system within the larger world system (Costello 1990, Farnsworth 1987). The Santa Cruz Mission Adobe is one of the few standing neophyte residences left from the Mission period in California. As such, it offers a unique framework for studying the dynamic social and economic interrelationships between the native and Hispanic people at a particular mission. It also presents an opportunity to focus on neophyte economic activities.

Since the Indians were removed from their traditional environment and contained within a world dominated by the Franciscans and soldiers, some alteration of native culture had to occur. To understand the nature of neophyte

life within Mission Santa Cruz, a comparison with precontact native life is necessary. Chapter 3 provides an overview of Ohlone and Northern Valley Yokuts lifeways and material culture. In the archaeological record at Santa Cruz, changes in neophyte material culture are notable. Also remarkable is the continuation of native material traditions, although these frequently take different forms from their native precursors.

One model for explaining the retention of native culture is that the neophytes held onto those traditional values and cultural attributes that they could maintain within the mission system. Although they used Hispanic material culture to ensure their survival, native ideology and psychology were not perceptibly altered. Within this model, a culture resulted that mostly resembled pre-Hispanic native society but that was missing some important elements, particularly items of material culture, and substituted other elements created by neophytes within the mission system. Two worldviews were at work within the mission confines: that of the Indians and that of their Hispanic dominators. Native culture possibly remained as varied as it had been prior to Spanish contact. Alternatively, perhaps a sort of pan-Indian culture emerged at all the missions, resulting from the similar situations of the neophytes, incorporating parallel aspects of their prehistoric customs, as well as some Hispanic traits (Schuyler 1978:69–70).

In his seminal study of Indian population decline in California, Sherburne Cook stated:

Since no structural or functional adaptations could occur in the short space of two or three generations, the actual responses of the Indians to the mission system are restricted to visible activity by individuals or small groups and to population changes in the whole group. The visible activity with respect to the mission system could take but one of two forms: obvious opposition or acceptance. (1976:11)

Documentary and especially archaeological evidence from Santa Cruz expands our understanding of native reactions to life inside the missions. Most likely, their reactions fell within a wide spectrum of gray between the black and white of absolute resistance or acceptance. Disease wiped out much of the neophyte population, but those that remained adapted as best they could. Not all these adaptations were successful—the neophytes' numbers continued to dwindle. Modifications in both the material and spiritual life of the neophytes occurred, resulting in a culture that was no longer native in character but could not be characterized as Hispanic. While some Indians fervently retained their native culture and acted against the mission, others seemed to wholeheartedly accept the new way of life. Those who could speak the Spanish language well and outwardly showed many

signs of Hispanicization were called "muy castellano" (Holterman 1970:490). Most neophytes alternately rejected and accepted mission life and its ideals. Native inhabitants of Alta California did not accept Spanish domination as passively as the Franciscans would have liked. They exercised choice when it was possible to do so. Some neophytes expressed their discontent with Spanish domination by simply running away. Others used more subtle means of resistance: lying to the missionaries or refusing to work as hard as the Franciscans wanted. Rumors of armed resistance by the gentile (non-neophyte) Indians against the Spanish were often reported (Torchiana 1933:193), and there were many unsuccessful revolts within the missions (Castillo 1978:103–104). Much to the missionaries' dismay, the natives tenaciously retained many aspects of their own culture. When that culture did not enable their survival, they merged native and Hispanic values in a new worldview that allowed them to function in a mission setting.

One possible reason for retention of native culture was the lack of real integration into Hispanic society. The Spanish government expected neophytes to have a place in the colony but at the bottom of society. Franciscans controlled the economy of the missions, and the government controlled the economy of the presidios and pueblos. Although neophytes raised the food and other goods produced at the mission, their stake in the economic well-being of the mission was limited. This economic separation of Hispanics and natives was not pervasive in Hispanic society in California. In Los Angeles during the Mission period, Native Americans were more active participants in the local economy (Phillips 1980). Life within the missions altered native work patterns, gender roles, and social structure, yet many aspects

of traditional culture remained, including their own economic values.

Documentary records present a broken, spiritless people, devastated by high death rate and loss of culture (Milliken 1995a). Archaeological study of neophyte housing at Mission Santa Cruz adds to and expands this bleak picture, highlighting the retention of native culture through the study of material remains from neophyte quarters at Mission Santa Cruz. Although their choices were limited by circumstance and historic events, neophytes at Santa Cruz maintained many native cultural patterns. They appear to have retained their own set of values and practiced native economic activities established during the prehistoric period.

Chapter 2 presents the historic background and context of the Hispanic settlements and founding of missions in Alta California, with specific attention to the history and evolution of Mission Santa Cruz. As a basis for comparison of native life within the mission system, chapter 3 describes precontact Ohlone and Yokuts native life, relying on published ethnographic and prehistoric archaeological reports. The chapter also presents documentary evidence of neophyte families last known to have lived in Mission Adobe. Archaeological findings of material life at Santa Cruz Mission Adobe are presented in chapter 4, along with excavation details. Following chapters discuss alterations in the neophytes' lives as a result of missionization. Changes in the physical landscape, native diet, and alterations in material culture are described. The final chapter considers the cultural conflict between the neophytes and Franciscans in terms of the material culture and environment, suggests reasons for failed acculturation efforts, and describes the cultural modification of native life within the mission system.

# Founding and History of Mission Santa Cruz

**I**N THE SIXTEENTH CENTURY, Spain sent ships around the world to search out and claim new lands for its empire. Juan Rodríguez Cabrillo conducted the first recorded European exploration of the Alta California coastline in 1542. Cabrillo's original goal was to find the Straits of Anian, a legendary northern passage between the Pacific and the Atlantic Oceans. Control of such a passage would secure Spain's ascendancy and provide a virtual monopoly on trade with Asia. Cabrillo found a new land, the extent of which was beyond his comprehension, but the fabled straits eluded him. Other explorers followed Cabrillo, looking for a port that could serve as a way station for Spanish ships on their return voyage from Asia.

Jealous of its California rights, Spain had been concerned over the intrusion of foreign enemies on the Pacific Coast since at least 1579, when England's Sir Francis Drake landed on the coast of California after raiding Spanish ports and ships. Almost twenty years later, the King of Spain ordered Sebastián Rodríguez Cermeño to examine the Alta California coast on his return from the Philippines in 1595. Sebastián Vizcaíno mapped the coast of California during his expedition of 1602 to 1603. For the next century and a half, interest in Alta California waned, although plans for colonization of Monterey Bay are occasionally mentioned in official documents (Gerhard 1982:305). Finally, however, foreign interest in the area prompted action. During the mid-eighteenth century, Spain escalated its involvement from exploration to colonization after English entry into the Pacific Ocean and Russian advances into Alaska threatened what it considered its holdings.

## SPANISH PERIOD (1769–1821)

**I**n 1765, José de Gálvez arrived in New Spain. Appointed *Visitador general* (inspector general), he recommended administrative and economic reforms to Carlos III, King of

Spain. As part of his strategy of frontier defense, Gálvez began planning for the colonization of Alta California, hoping this new settlement would not only protect New Spain from foreign incursions but also generate new revenues (Weber 1992:236–242). It was essentially a strategic military move to prevent foreign incursions.

Four exploration parties, two by land and two by sea, arrived in Alta California in 1769, commanded by Gáspar de Portolá. Father Junípero Serra, a Franciscan charged with overseeing spiritual affairs, accompanied the expedition. Gálvez originally planned to establish Alta California as a military colony only, but shortages of men and money made it necessary to involve the Church. In 1767, the King's mistrust of Jesuit political power had moved him to expel all Jesuits from the realm of New Spain. Franciscans of the College of San Fernando in Mexico gained control of the missionary effort destined for Alta California. Missions were to function as economic enterprises that would help to financially support Spain's colonization efforts while creating a stable land base in California (Archibald 1978). The Spanish brought Catholicism to Alta California as both a means and a justification of conquest. Spanish government officials hoped that missions planned for Alta California would be an inexpensive, efficient way to create a Spanish-speaking, taxpaying, and Catholic population in this new colony.

The Spanish had used such missionary efforts for approximately 300 years in North America in Mexico, Florida, Texas, and New Mexico. Alta California was the last Spanish missionary experiment in North America. In other parts of its empire, Spain had changed its strategy to become more like the French version of colonialism. Rather than gathering up natives to become part of rigid mission systems, military leaders plotted to trade with the Indians and make them dependent on European manufactured goods, and therefore on the supplier of those goods, the Spanish government

(Weber 1992:228–229). In this regard, the missions of Alta California were unique in representing the last vestige of a centuries-old policy that had not proven itself in other regions. Still, other Spanish-founded missions remained in what is today Sinaloa, Sonora, Arizona, and Baja California, and the missions of Alta California became an extension of the chain of religious outposts already established in Baja California.

In 1769, construction of temporary buildings for both presidio and mission complexes in the San Diego area began, later replaced with more permanent structures. The following year, another presidio and mission colonized the Monterey Bay area. The purpose of pairing missions and presidios was to create self-sufficient agricultural communities, but initial lands chosen for the missions in the proximity of presidios were not ideal. Both missions, San Diego de Alcalá and San Carlos de Borromeo, were soon reestablished at their present locations, some distance from their military partners.

The goals and ideals of the military and the missionaries were not often in agreement. Military officers in charge of Alta California soon clashed with Father President Junípero Serra over the missionary's proposed plans for expansion. The military was concerned with maintaining control over the colony and preparing for any foreign threats. Serra envisioned a California filled with Christianized Indians living as Hispanic citizens. The caution of the military in expanding Catholic and Spanish control of these lands frustrated and, at times, appalled him. Government bureaucracy tied the military officers' hands, and they were not free to plan the colonization of Alta California as they chose. Above all else, Spanish settlements were bureaucratic institutions. As such, the central Spanish government sanctioned and planned any advances within a colony, holding tight reins over local officials (Bannon 1974:32). Despite some checks on his plans and his frustration with what he perceived as the slow operation of the bureaucracy, Serra quickly established three new missions over the next three years: San Antonio de Padua (1771), San Gabriel Archangel (1771), and San Luis Obispo de Tolosa (1772).

By 1774, seventy soldiers inhabited the entire province of Alta California, dispersed between two presidios and five missions. This number of troops was small compared with the thousands of natives who inhabited the coastline. Not wanting to overextend its resources, the military insisted on approaching the settlement of new missions with reserve. To protect the California ports from foreign threats and to ensure the safety of the missions, the Spanish established two more presidios, at San Francisco in 1776 and at Santa Bárbara in 1782. Serra died in 1784, after having established four more missions. A succession of father presidents, including Fermín de Lasuén, carried out Serra's vision. The

Franciscan missions in coastal Alta California eventually numbered twenty-one, all but three founded before 1800 (see figure 1.1).

Franciscans intended their missions to be self-sufficient communities capable of feeding, clothing, and housing large numbers of newly converted Indians. Initially, this goal was difficult to achieve because of a lack of consistent enthusiasm and support from the Spanish government and the missionaries' lack of geographical knowledge and agricultural expertise. The Franciscans had to learn about local soils, building materials, sources of water, and weather patterns. Many missions failed on their first sites. Some were poor choices and missionaries had to build them anew on more hospitable grounds nearby. After about 1776, new missionary enterprises benefited from the growing body of available knowledge and support from older establishments, an advantage reflected in high initial rates of crop production (Costello 1992). They were also able to help sustain the military and provide for the corporal and five soldiers assigned to each mission as an *escorta* (escort).

#### FOUNDING OF MISSION SANTA CRUZ (1791–1799)

Twenty years after the founding of the first mission at San Diego, established missions were mostly self-sufficient and relative economic stability had been reached. New missions could rely for support on the eleven already in existence. If the crops of the new establishment failed, for example, its sister missions would provide. Starvation was no longer a threat. The already-established missions also contributed livestock, labor, and the necessary clerical vestments and accoutrements to ensure the proper founding and operation of new missions.

During this period of increasing stability, Franciscans established the mission at Santa Cruz (figure 2.1). On St. Augustine's feast day, 28 August 1791, the site of *Misión de Exaltación de Santa Cruz* (Mission of the Exaltation of the Holy Cross) was chosen. Selected as a midway point between Mission San Carlos Borromeo near Monterey and Mission Santa Clara de Asis to the north (see figure 1.1), Santa Cruz fulfilled the need of gathering and controlling the indigenous Ohlone population that had not yet been drawn to the other two nearby missions. It was also to supply Mission San Carlos with needed grain, as the land surrounding that mission was not very fertile. Five of the southern missions donated articles and goods necessary for the establishment of a church, including copes, chasubles, purificators, altar bread iron, altar-bread box, finger towels, albs, surplices, amices, silver cruets, altar coverings, an altar stone, and large and small bells (Engelhardt 1984:3–4). Three of the northern missions contributed livestock and agricultural surplus: mules, horses, mares, steers, calves, sheep, and oxen and wheat and barley seed



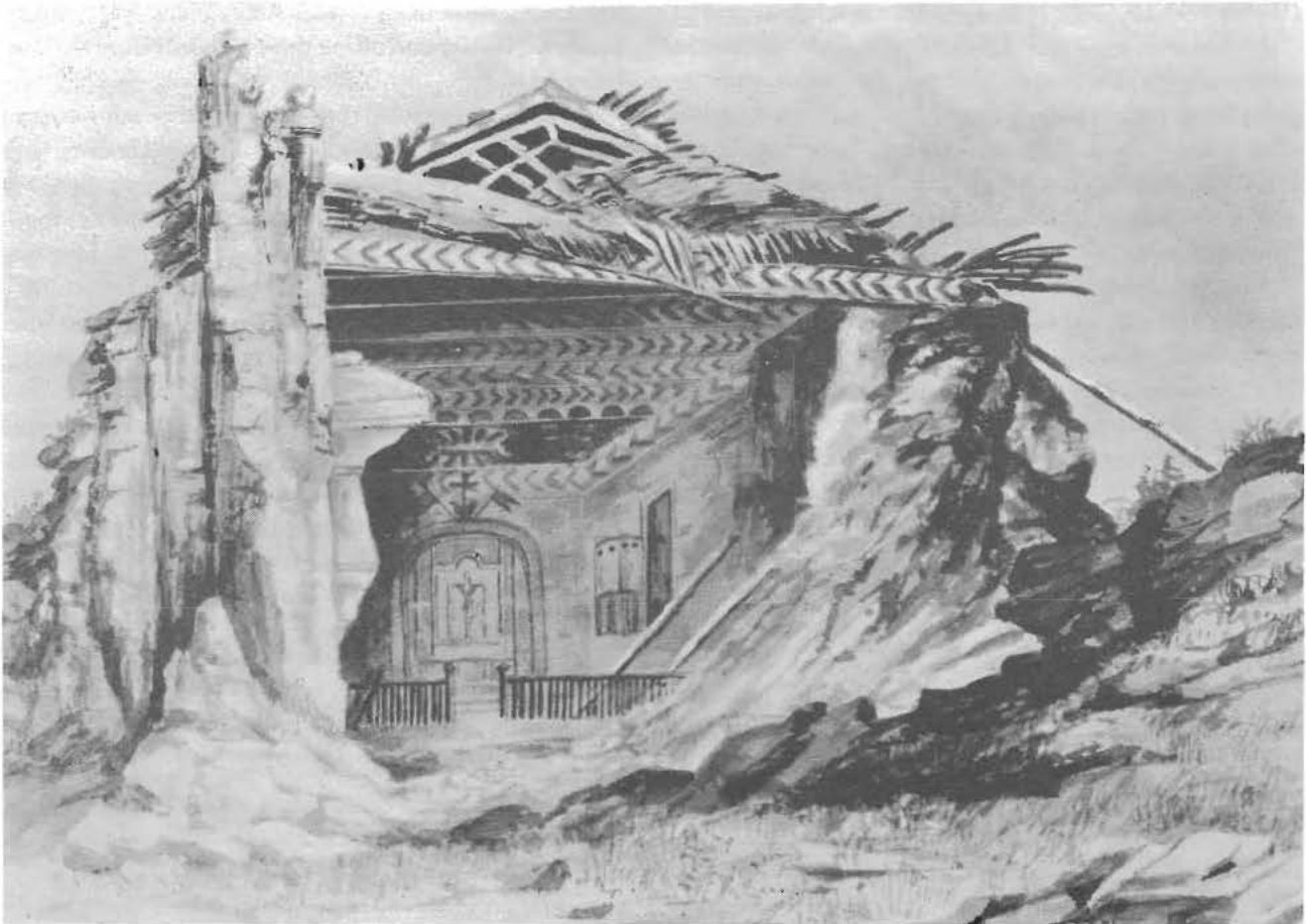


Figure 2.1 Drawing of Santa Cruz church sanctuary in ruins, 1868. Illustration by Mrs. Julia Mattheim. Courtesy of the Santa Barbara Mission Archive-Library

grain(Engelhardt 1984:4).

Fermín de Lasuén presided over the selection of the site of the new mission in late August 1791 and the initial raising and blessing of the Holy Cross. With him were Corporal Luís Peralta and five Spanish soldiers from the San Francisco presidio. Father Lasuén described the ceremony to then Governor Don José Antonio Roméu:

On the day of San Augustin, August 28th, I said Mass, and a cross was raised in the spot where the establishment is to be. Many gentiles came, large and small of both sexes, and showed that they would gladly enlist under that sacred standard, thank God! (quoted in Torchiana 1933:184)

Baldomero López and Isidro Alonso Salazar, the two missionaries assigned to this new site, did not reach the new site until 22 September 1791. Two days later Sugert of the Ohlone Soquel branch, the leader of the nearest Indian ranchería, came to the site of the mission with some of his followers. Ensign Hermenegildo Sal, there as a representative of the interim governor, declared Santa Cruz the possession of the King of Spain and promised to serve as godfa-

ther for any new converts (Torchiana 1933:187). The first baptism at the mission was of an eight-year-old girl from a distant Ohlone village. In early October of 1791, Chief Sugert and his wife Rosuem became the second and third converts (Milliken 1991:178). Missionaries continued to recruit neophytes from nearby Ohlone rancherías in what today are Santa Cruz and southern San Mateo Counties. With the goodwill of the local chief ensured, other natives were attracted to the new religion. At the end of 1791, the annual report numbered eighty-seven converts.

The first buildings constructed at missions were of a rough palisade plastered over with mud and roofed with tules and earth, a construction known as *jacal* (similar to wattle-and-daub structures). These structures closely resembled native traditions of architecture (Webb 1982:100). The annual report for 1791 describes the state of the mission at the end of the year, including the *fabricas* (buildings and other constructions). Both construction methods and dimensions for the missionaries' house are described in *varas* (a *vara* equals approximately thirty-three inches):

There has been built a house of *palizada* [wattle and daub],

twenty-six varas long, and six varas wide, suitably partitioned into living quarters for the fathers and necessary workshops, and the Church of palisade which is twenty varas long by six wide with the Sacristy six varas long by four wide.... (Annual Report, 1791)

Other accomplishments were the construction of corrals for horses and cattle, the enclosure of the orchard, a rudimentary irrigation system, and the planting of wheat and beans.

Mission Santa Cruz's local environment was inviting for several reasons. Raw materials useful to the Franciscans included abundant redwood trees for lumber and a local mudstone for foundations. Both materials were used to construct buildings of the mission complex and were also traded and supplied to other missions. Many vegetation communities existed in the vicinity of the mission (see chapter 3) including marine, riparian, and forested environments (Gordon 1979:17–20). Marine vegetation included kelp beds, surf grass, dune plants such as sagewort and verbena, and pickleweed and salt grass in coastal salt marshes. Tule, cattails, willows, cottonwoods, and sycamore trees grew in riparian areas of freshwater marsh. Dense redwood stands interspersed with Douglas fir were found near the mission, as well as broadleaf evergreen forests, pine and cypress forests, foothill woodlands, and coast live-oak woodlands. Local varieties of trees included madrone, coast and interior live oak, blue oak, grey pine, Monterey pine, and Monterey cypress. Dense vegetation covered the area of Santa Cruz, suggesting a fertile soil and creating a wooded environment. Areas of grassland also dominated the landscape (Gordon 1979:47).

Geologically, Santa Cruz is located in the Coast Ranges of California. A great submarine canyon extends from Monterey Bay out into the Pacific Ocean. The San Lorenzo, Pajaro, and Salinas rivers all drain toward this canyon. The most prominent geologic features of the Santa Cruz area are the seacliffs and marine terraces (Hill 1984:178). Between the coast and the mountains in the northern half of Monterey Bay is an expanse of low hills. The mission was situated on such a hill above the coast. Sedimentary rocks, such as the mudstone used for foundations and chert for the manufacture of projectile points by the local Indians, dominate the region, although there are igneous and metamorphic rocks exposed along parts of the mountain ranges (Gordon 1979:9). Earthquakes were common to the area (and still are today), indications that the mountains of the Coast Ranges are still rising (Hill 1984:31). The climate is mild. Temperatures were mild in the winter, rarely dropping below freezing, and relatively cool in the summer (Hill 1984:30). The Mediterranean climate of the area was suitable for agriculture and raising livestock, and winter rains provided a sufficient source of water.

Despite the mild environment and the rich natural re-

sources, establishing Mission Santa Cruz did not prove to be an easy task. Two years after its founding, both Fathers López and Salazar requested that the College of San Fernando transfer them from Santa Cruz. Father Lasuén's reply to this request expressed his frustration with what he perceived as their lack of missionary zeal:

I have never come upon, or seen, anything like this.... I declare that it is not in my power to grant the request you have made to me... Bear in mind that if all your troubles and demands spring from the temporal affairs [of the missions], there is not even one mission in which I could place you without imposing on you at the same time the management of such affairs. Such obligations are burdensome; but they do not discourage those who, with true zeal, have their hearts set on conversions.... (Lasuén 1965a:287)

By the following year, 1794, Lasuén wrote that the missionaries at Santa Cruz had not again mentioned a transfer. In part to appease them, he assigned a third missionary to Santa Cruz, Father Pedro Esteban, in the hopes of easing the burden on Salazar and López (Lasuén 1965a:316). Apparently the fathers were still not pleased, which weighed heavily on the mind of Lasuén, who wrote in 1795 that "a great deal of what I have to suffer can be traced to the disgust and repugnance that are felt and revealed continuously by Fathers Salazar and Baldomero [López] by reason of the fact that they are still assigned here" (Lasuén 1965a:335).

Although both fathers declared their dislike for temporal duties, they accomplished a great deal in establishing the mission. Within four years after the founding of the mission, the pair had overseen the construction of several corrals for the animals, two temporary churches, adobe buildings for the granary, a *monjerio* (women's dormitory) to house the young girls, a registry office, dispensary, kitchen, privy, and a house for looms, all included in the annual report for 1795. In addition, neophytes constructed a more permanent church of adobe with a stone foundation that was 39 varas long, 9½ varas wide, and as many varas high. Wheat, corn, three kinds of beans (*habas*, *frijoles*, and *garbanzos*), barley, and peas were planted and harvested. By 1794, the mission's livestock had increased to include 350 cattle (seventeen were used as plow animals), 400 sheep, 4 pack mules, 19 horses, 58 mares with their jackasses, and 1 small burro.

Still, the fathers were not content. Salazar finally was relieved of his duties at Santa Cruz in 1795, and Father López the following year. Lasuén reprimanded Salazar's replacement, Fray Manuel Fernández, in the same year of his posting to the mission (1795) for unnecessary brutality in rounding up fugitive neophytes. The father president did not remove Fernández from his post, given the shortage of missionaries in California, but he did assign Father Jose Espí de

Valencia, reputed to be of better temperament, to replace Baldomero López. Three days after reaching Santa Cruz, Espí objected to his assignment — in part because of Fernández — and requested retirement (Lasuén 1965a:380–388).

Beginning in about 1795, missionaries recruited members of Ohlone rancherías a little farther afield, but still local to the area, from southern Santa Clara Valley and the Coast Ranges–Pacheco Pass area. Even at its greatest population in 1796, with 523 neophytes (Jackson 1983:36), Santa Cruz remained one of the smaller mission complexes. Lasuén planned for the founding of five new missions in 1797. His letters assess the condition of the existing missions and their potential for contributing goods toward the proposed missions. He exempted Santa Cruz from this burden as “it has but few possessions, and the damage it has sustained to its Church and dwellings during the winter, and the big losses it has sustained in grain and in other things, all have reduced it to the status of a mission recently established...” (Lasuén 1965b:30).

Attempts to construct the church at Mission Santa Cruz illustrate its period of foundering and resettlement. The first quadrangle, completed in 1795, contained the fathers’ residence, the monjerio, a granary, probably craft areas, and most important, the church. The mission community dominated all aspects of the neophytes’ lives, and Franciscans wanted their attention to be centered on the church during their training. Initial construction of the church had begun in 1793. It was a substantial adobe building with stone foundations and a masonry facade (Webb 1982:133), and the fathers were proud of their efforts. Heavy rains in 1797 and 1798 not only adversely affected both livestock and crops (Archibald 1978:180) but also completely destroyed the first church building and other parts of the quadrangle.

Perhaps partly in response to demands by Father Manuel Fernández, described as “impetuous, violent, cruel, and a bad manager of the neophytes” (Geiger 1969:85), the year 1798 saw a massive increase in the number of neophytes fleeing the mission. In a letter to Governor Diego de Borica, dated 27 January 1798, the complaints of Fernández paint a dismal picture of life at Mission Santa Cruz:

I report, then, to Your Lordship that the Neophytes who have actually fled are 46 male, 34 female Adults, 27 boys, 8 years and under, and 31 girls, altogether 138. Those who assemble for the daily labors are at most from 30 to 40 men.

We still have not planted even half of what we should because all the fields are inundated with water. The Church is falling, for when the water soaked the fresh plaster, the Lime dissolved and was useless. The old Mill Stones resemble stones for honing razors [they are so worn away]...

We are suffering a considerable and very painful loss of livestock. Cows are dying, Horses are dying, particularly the

broken ones. About half the sheep have died and at this rate nothing will be left....The appearance of this poor mission is truly pitiful; it is failing posthaste...

When a whale was beached on this shore, an infinite number of wolves and bears was unleashed here. One of them just injured one of my Neophytes so severely that he is dying. We have killed two. It is urgent that Your Lordship order powder and shot replaced in the *Escolta* [soldiers’] Warehouse, because there is scarcely any left.

I have no more news for now.... (Santa Barbara Mission Archive-Library, translated by R.H. Jackson)

## ECONOMIC GROWTH AND NEOPHYTE DECLINE AT MISSION SANTA CRUZ (1800–1821)

By the next year, 1799, two new missionaries, Fathers Francisco González and Domingo Carranza, were in place at Santa Cruz. Although little is known about this pair (Geiger 1969), they apparently were much more successful in their secular duties. Both the numbers of livestock and the size of the agricultural produce increased several times over from previous years (Torchiana 1933:236). Father Lasuén died in 1803, but he saw the stabilization and the beginnings of prosperity of the missions in California before his death.

Success did not come easily. The church and mill house continued to decay, and much to the disgust of the friars, the henhouse collapsed. Having requested Governor Borica to send one of the colony’s engineers to reconstruct the “pitiful” mission, Fathers González and Carranza reported that the engineer arrived only to spend time in constructing a henhouse. Soon thereafter it suffered the same fate as the other buildings:

The henhouse, which the Sr. Engineer pondered so long with such enormously exaggerated care and declared, as one learned in the matter, that it was bomb-proof, lost one wall during the second downpour and of course the vault fell flat, leaving us, to defray the costs, some hens buried beneath the ruins. This was the tragic end of a structure Sr. Engineer Extraordinary said he would gladly choose to live in if he were Minister of Santa Cruz. Although it is true it was poorly proportioned for that purpose, if only because of its narrow compass, it nevertheless was without doubt more than adequate to provide him with the same fate as the hens. (Santa Barbara Mission Archive-Library, letter dated January 14, 1799, translated by R.H. Jackson)

The early 1800s saw the reconstruction of the quadrangle, including the church (figure 2.1), fathers’ residence, and the monjerio for the single women. An exact recounting of the rebuilding of the mission cannot be provided, because annual reports for the first decade of the 1800s no longer exist

in any of the archives in California. Some construction must have occurred during these years, as references to the upkeep and maintenance of buildings constructed during this time occasionally appear in later annual reports.

At the same time the secular aspects of the mission were prospering, the native population of Santa Cruz was experiencing a drastic decline. The number of natives living at Santa Cruz was never high, but its death rate was alarming. Santa Cruz had one of the lower life expectancy rates of the missions in California. The most devastating cause of death was European-introduced disease against which the neophytes had no immunities. Measles, smallpox, dysentery, pneumonia, tuberculosis, and influenza all attacked the neophyte population over the course of its settlement. Syphilis was among the most deadly of the European diseases (Jackson 1983:36–41). Crowded housing and generally unhealthy living conditions, probably accompanied by psychological stress, contributed to and exacerbated the decline of the native population. Epidemics were all too regular events. In 1802 an epidemic ran through Missions Soledad, San Carlos, San Juan Bautista, and Santa Cruz, claiming at least 155 neophytes (Lasuén 1965b:264). Few neophytes from the local area around Santa Cruz survived to the end of the Mission period. Jackson (1983:36) estimates that in 1834, less than 3% of the native population had been born at the mission or in outlying *rancherías*.

In direct contrast to the neophyte population, the agricultural crops and livestock flourished. The area surrounding Mission Santa Cruz offered much arable land that was easily irrigated. This land was fertile and produced surpluses of agricultural crops. Wheat, corn, barley, and frioles were staple crops, with other vegetables and fruit planted in smaller numbers. Several foreign visitors to the mission in the early 1800s noted its agricultural wealth. Because grazing lands were abundant, livestock did extremely well, and the mission's herds of cattle and sheep grew in phenomenal numbers. In 1806, mission fathers listed in the annual report more than 2400 head of cattle, 5400 sheep, 120 pigs, 3200 horses, and 20 mules. The same year, the fathers also reported only 466 neophytes (270 men and 195 women).

Once the local *rancherías* were exhausted as a source of neophytes, missionaries looked farther afield to the villages of the Northern Valley Yokuts in San Joaquin Valley. Before this, the Spanish government sent several expeditions into the eastern interior lands to explore the country, assess the potential for expansion, and bring back fugitive neophytes. Though the missionaries were successful in recruiting interior Indians into the mission system, they were not always successful in keeping the neophytes within mission grounds (Phillips 1993:46). Unlike the Ohlone who essentially had no place to run, Northern Valley Yokuts could rejoin villages in the foothills. Sent out to recover neophytes, mili-

tary expeditions encountered villagers who admitted that they held fugitives from Santa Cruz but refused to turn them over. Minor skirmishes resulted in the recovery of some neophytes (Phillips 1993:52–63).

Neophytes expressed their displeasure with the mission system in other ways as well. In 1812, a group of neophytes assassinated missionary Andrés Quintana, who had arrived at Mission Santa Cruz in 1805. Reputedly he was a cruel taskmaster and was sufficiently hated by the neophytes that he was murdered in a deliberate, brutal manner. Initially physicians diagnosed his death as induced by illness, but two years later the exact manner of his death was uncovered and several neophytes were punished. The murder remained in the minds of later missionaries. In 1818, Father Estevan Tapis begged to be relieved of the duty of serving alone at “a mission of friar killers” (Santa Barbara Mission Archive-Library, de la Guerra papers, letter dated April 29).

The missionaries' problems were not simply with the neophytes. Three civilian *pueblos* (town sites) had been established in the eighteenth century to more quickly Hispanicize Alta California and to help supply the military with agricultural foods. San José de Guadalupe in the Santa Clara Valley was the first pueblo, founded in 1777 and settled by fourteen families who originally resided at the presidios of Monterey and San Francisco. El Pueblo de Nuestra Señora la Reina de los Angeles del Río de Porciúncula (today known simply as Los Angeles) was planned in the same year but not officially settled until 1781. The third settlement, smaller than the other two, was located in 1797 at Branciforte near Mission Santa Cruz. This last pueblo was the least successful of the three. The friars at Santa Cruz and the father president protested the founding of Branciforte as they thought it was too close. The civilian settlers, generally of mixed Hispanic, Native, and African backgrounds, were from the poorer segments of New Spain's society and usually came from either the province of Sinaloa or what is today Nayarit. They came to California to acquire land and subsidies offered by the Spanish government, hoping for a better life and expecting to exploit neophyte labor.

Fathers at Santa Cruz feared that the settlers would provide a bad example for the neophytes and tutor the natives in non-Christian behavior. Father Lasuén decried the settlement of Branciforte “within a distance of three or four gunshots of Santa Cruz Mission” as an outrage and the “greatest misfortune that has ever befallen mission lands” (Lasuén 1965a:388). Because of missionary displeasure with the pueblo, the relationship between Branciforte and Mission Santa Cruz was tentative at best. Disputes over land, especially for pasturage, became commonplace.

Other disputes arose over the question of supplies to the missions, presidios, and pueblos. All three groups—the missionaries, the military, and the villagers—were initially

heavily dependent on supply shipments from the Spanish government, shipments that were sporadic at best and hopelessly deficient at worst. The official route by sea was from the naval port of San Blas on the west coast of Mexico, established to supply materials to colonies of the North America coastal frontier. Ships were scheduled to arrive in Alta California twice a year. Soldiers paid for supplies from their wages; missionaries paid from the Franciscans' Pious fund and with agricultural surplus from their missions. The infrequency and irregularity of the official supply ships did not fill Alta California's demand for goods and only added to the tension between missionaries and soldiers. Accusations of one group pilfering goods intended for the other occurred more regularly than the supplies. When problems resulting from inadequate supplies from Mexico were not alleviated, the missionaries soon found another source of manufactured goods in illegal trade with foreign vessels. Plagued by chronic problems with food supply and lack of adequate military armaments, the presidios also traded with the missions, which put further pressure on the missions to be extremely productive.

The lack of supplies and available wealth can perhaps help explain the reaction of villagers from Branciforte to news that a pirate named Bouchard was combing the coastline and raiding for foodstuffs and valuables. In November of 1818, Governor de Sola ordered the missionary of Santa Cruz, Father Ramon Olbés, to gather all neophytes and flee with them to nearby Mission Santa Clara. He considered Santa Clara a safer spot as it was further inland. The governor also requested that the Hispanic settlers in Branciforte collect what goods and food they could so that valuable property would not fall into the pirate's hands. When no raid occurred and Father Olbés returned several days later, he found that the villagers had executed the governor's wishes with determination. Olbés complained to the governor of the sacking of the mission, charging the villagers with "theft, wanton destruction and desecration of the Church and holy images" (Torchiana 1933:258–259). The outraged missionary went on to grumble that the damage by Brancifortians was so bad that there was little choice but to abandon the mission. Mission Santa Cruz remained, but relations with the nearby pueblo did not improve.

Perhaps as compensation for these losses, in the following two years Father Olbés added albs, chasubles, copes, and amices to the stock of mission vestments and made improvements to the church altars with corporals, altar cloths, towels, and purificators. In 1819, Olbés reported a decrease in the livestock and agricultural produce and stated regarding the buildings, "To the extent that circumstances permit, what time and wear destroy is being replaced." The following year, agricultural production and livestock were again up and seem to have recovered from the attack of the insurgents. Father

Olbés reported that missionaries had baptized more than 2000 neophytes since the mission's founding, but that more than 1400 were *difunto* (deceased), leaving only 461.

## MEXICAN PERIOD AND SECULARIZATION (1821–1846)

Mexico's independence from Spain resulted in several important changes. First, trade with foreign vessels was made legal, providing a market for hides, tallow, and agricultural foodstuffs and alleviating the problem of inadequate supplies. Missions now had a bounty of commodities to offer, including agricultural surplus and livestock products. In 1823, the majority of missions signed contracts with the English firm of McCulloch, Hartnell, and Company, which agreed to purchase a certain number of hides and a substantial amount of tallow each year at set prices (Costello 1992). Some missions actively developed their hide and tallow exports, although others increased their crop production, finding willing trading partners in the Russians who had settled Fort Ross near Bodega Bay (Farris 1989). During this period most missions flourished, and the amount and quality of available European and American commodities greatly increased. Frederick Beechey, an English captain, noted that Mission Santa Cruz did a good business in trading agricultural produce (Costello 1990:235). During this period of increased availability of material goods, neophytes constructed the Mission Adobe in 1824 (figure 2.2).

Neophyte populations declined at a slower rate during this period. Particularly unsettling, however, was the unequal gender ratio of the neophyte community at Santa Cruz. Males outnumbered females by almost a two-to-one ratio. The annual report for 1821 listed 519 neophyte residents: 272 male adults, 33 boys, 164 women, and 50 young girls. The following year's annual report listed 499 neophytes: 265 men and 39 boys, but only 159 women and 36 girls. Higher death rates for females may have been owing to the practice of congregating unmarried girls in dormitories, where disease apparently spread more rapidly.

Second, the Mexican government made some twenty-five grants to civilians during this period. In keeping with the populist tenets of the revolution, land was to be distributed to more citizens. Because the missions already held most of the prime agricultural land along the coast, resentment against the missions grew, especially when it was recalled that the religious communities were originally intended to last only ten years, after which time they were to be converted into pueblos (Robinson 1948:28).

Most of the missionaries in California were born in Spain. Their loyalties to the new Mexican government were divided, and many considered themselves royalists. Distrustful of the changes, some refused for several years to take the oath of allegiance to the new government (Torchiana

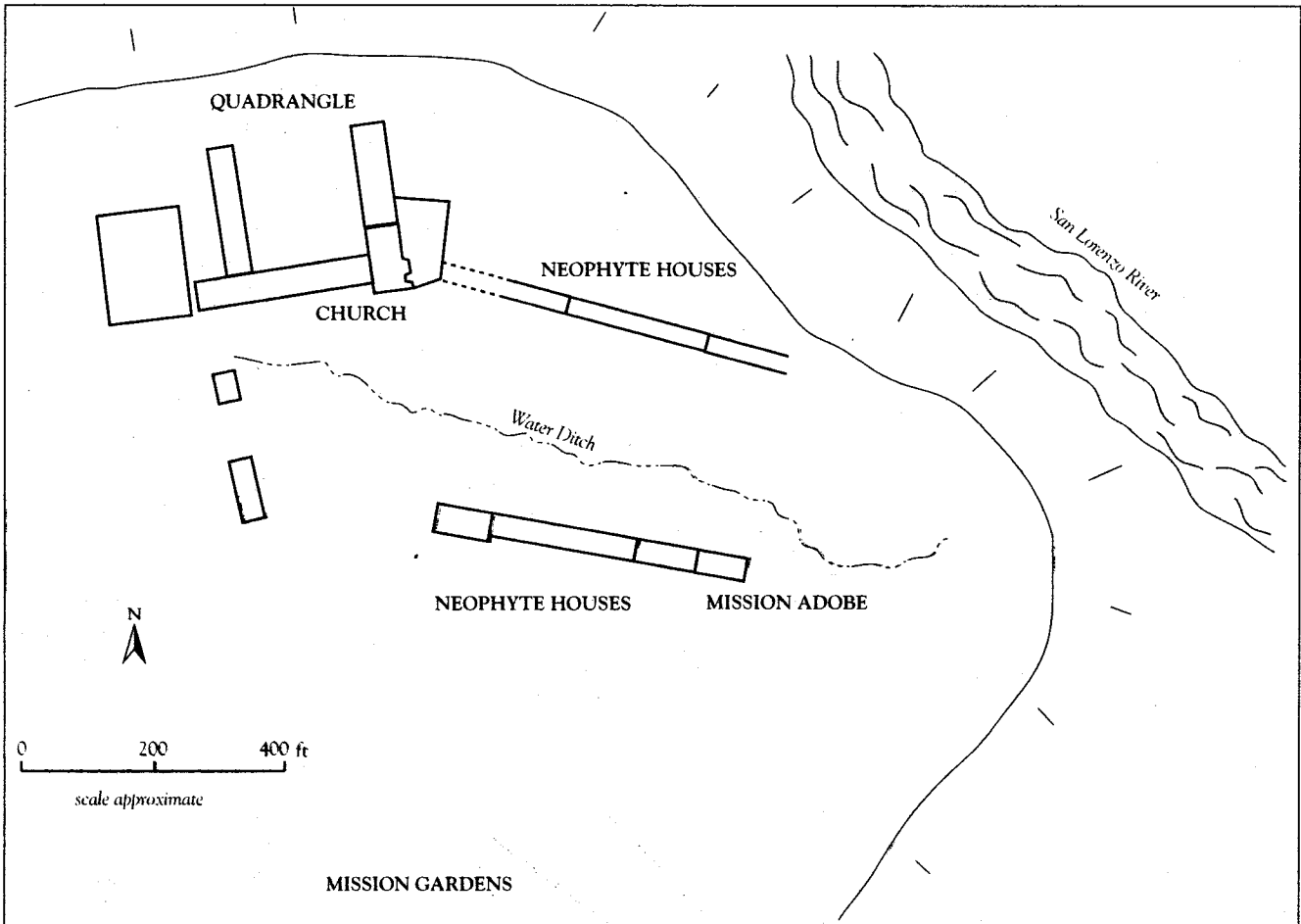


Figure 2.2 Schematic layout of Mission Santa Cruz building and lands circa 1824. Illustration by Gina Zanelli

1933:307). Recognizing both the changes and the uneasiness of the missionaries, the neophytes used the opportunity to express their displeasure with the mission system forcefully. In 1824, for example, the Chumash revolt occurred, involving neophytes from several native groups from Missions Santa Barbara, Santa Inés, and La Purísima (Blackburn 1975, Castillo 1978:103–104, Hudson 1980).

At Santa Cruz, both the missionary in residence, Father Luís Gil, and the neophytes were uneasy. Concerning the “suppression” of the missions in early 1823, Father Sarria protested to Father President Fr. José Señán that the closure of Santa Cruz would not be wise:

This mission is the one that at the present times maintains the Presidio. There is no corn in this jurisdiction and Santa Cruz provides it.... In brief I know of no other mission around here that contributes so much in proportion to its population. Furthermore, according to the present provisioning, at least this year, I am prepared to say that the Presidio of Monterey would not have subsisted [without that aid].

Besides, if Santa Cruz is abolished, what spiritual nourishment will the Villa [Branciforte] have? (Santa Barbara Mission Archive-Library, California Mission Document 2418)

Rumors were not long in reaching the neophyte population. In a letter dated 6 May 1823, Father Gil wrote to Military and Political Governor Luís Argüello that “the Indians have heard there is an attempt to take the mission from them and say they won’t leave because their lands, given them by God, on which they’ve built their houses, etc. etc. would surely be taken from them” (Santa Barbara Mission Archive-Library, California Mission Document 2425). In spite of having knowledge of native unrest, Father Gil was still taken aback by the actions of the Chumash. He wrote Argüello:

...the big news from the South has surprised me in spite of the fact that in all the time I’ve been in the Province I have never formed a good opinion of the Indians or their faith. If they don’t do more [harm], it’s because they can’t. It’s necessary to keep a cool head when you see your neighbor fly into a rage. So I would appreciate your ordering as a police regulation that the Corporal gather every bow and arrow the Cruzans have, visit the Ranchería every month to execute the same measure and finally, watch carefully to prevent the gatherings of 20 or 30 persons which they hold in their houses, and from which unlawful meetings no good can

come. (Santa Barbara Mission Archive-Library, letter dated February 28, 1824, California Mission Document 2581)

Equally upset with his fellow countrymen for the dilemma and threat posed by the revolt, Father Gil wrote to Argüello on 5 April 1824, recounting a discussion with a villager from Branciforte:

A little while ago when Pipi Roque was talking to me about the latest news of the Indians, I told him this: "It could be that some *de razon* [those of reason - referring to Hispanics] are to blame because they have imbued the Indians with liberal ideas: you were one of them and are now bemoaning the fact that they haven't been given their freedom: you know that if they were free, the Province would be lost and even your wives and daughters would suffer for they would be treated abominably." (San Francisco Archdiocese Chancery Archives, letter 1650)

Apparently this message was not well taken, as a few days later a confused Pipi complained to the *mayordomo* (overseer) of Santa Cruz that he was suspicious that his wife had confessed to Father Gil that she and the rest of the village women were fornicating with the Indians. Quashing that particular rumor but still distraught over the notion of the closure of the missions, Father Gil asked for permission to retire.

Father Gil remained at Mission Santa Cruz until 1833, although his requests for permission to retire did not cease. Agricultural produce and livestock steadily increased while neophyte numbers declined. More than any other Santa Cruz missionary, Father Gil was involved in trade with foreigners. His letters mention transactions with Hartnell, an English captain named Cooper, and with the Russians. Father Gil was apparently good at bartering and negotiating: one Russian mentioned that the friar forced the Russian to buy unwanted barley to obtain badly needed supplies of wheat (Khlebnikov 1990:158).

Secularization, the turning of religious communities into civil ones, had long been desired by many of the citizens and soldiers. Governor Neve had called for it in 1782, wanting more interaction between natives and civilians as he thought that such contact would speed up the acculturation process. The missionaries, trusting neither the intentions nor the morals of the soldiers and civilians, wanted separate realms (Weber 1992:261). Complaints about the missionaries and suggestions of secularizing mission communities continued. Finally, with enough political pressure and a Mexican congress willing to consider it, the government declared the missions of Alta California officially secularized in August of 1832. Mission churches were turned into local parishes. All mission lands, livestock, tools, and other assets

were transferred to the neophytes and Mexican citizens.

Some former neophytes gained ownership of lands and sometimes buildings. At Mission San Antonio several Indians were given large parcels of land. At Mission Santa Cruz some former neophytes were given title to rooms of an adobe residence and some lands. For the most part, the Mexican government granted mission lands and holdings to civilians and soldiers, taking control away from ex-neophytes. The native population at Santa Cruz continued to dwindle. By 1832, only 284 ex-neophytes (176 men, 21 boys, 76 women, and 11 girls) remained in residence. The annual report also noted that 2439 neophyte baptisms had occurred since its founding and that nearly 1900 of these neophytes were deceased.

Mission Santa Cruz was officially secularized in 1834. Much of the remaining native population of Santa Cruz dispersed rapidly, looking for employment at nearby ranchos and the neighboring Villa de Branciforte. Father Antonio Suárez del Real, then in charge of the mission, expressed his concern to Governor Figueroa about the welfare of the neophytes if the mission were secularized before harvest time:

...With a little period of waiting they will reap the benefit of their labors and also not have the chance to prowl about, perhaps stealing, as do those who have been freed from other missions. I also beg you to see that those who are freed from here do not incite disturbances with their usual loitering and visiting as happened to me with the Santa Clarans who, since they have congregated in the Pueblo, have had to be threatened. (San Francisco Archdiocese Chancery Archives, 14 July 1834, letter 2117)

Secular administrators appointed by the governor and the remaining missionary took a full inventory of all the belongings of Mission Santa Cruz in 1835, resulting in squabbles over property rights, its buildings, and its effects. By 1839, only 71 former neophytes remained. While much of the mission lands were immediately taken over and the neophytes effectively dispossessed, some land and buildings were deeded to approximately twenty-five residents. Even these few grants were soon sold to local Hispanics, although a small number managed to retain their property on Mission Hill until the mid-1860s (Kimbrow et al. 1985:68-69).

Before secularization, the civilian populations at San José, Los Angeles, and Branciforte had never really prospered. In part this was because the military, purchasers of the pueblos' agricultural foodstuffs, set outrageously low prices. Civilians were unable to compete successfully with the missions and their large labor pool of neophytes, although civilian agricultural lands and population slowly grew as soldiers retired from the presidios, acquired land grants, and joined civil settlements with their families. After secularization, civil-



Figure 2.3 View of the town of Santa Cruz in 1856 by Henry Miller (1990). Courtesy of the Bancroft Library

ians intended to emulate the success of the missions in the hide and tallow trade. Large ranchos soon replaced the missions as centers of economic production. Some mission buildings were taken over, especially those that were more substantial and not rapidly deteriorating. Many neophytes continued to live on mission lands, although they now worked for Mexican rancheros rather than for the missionaries. Secularization did the neophytes little good, only further displacing and dispersing an increasingly demoralized population. In contrast, the pueblos and growing civilian communities around the presidios and some missions began to prosper, becoming the centers of social life and mercantile activity.

#### EURO-AMERICAN PERIOD (1847– )

Alta California was annexed by United States in 1847, part of the booty of the Mexican-American War. The Treaty of Guadalupe Hidalgo, signed the following year, sealed the formal transfer of California to the United States. Citing indefinite boundaries and lack of paperwork, the US court system did not recognize many Mexican land grants. It is likely that greed had an influence on the court decisions. Some 340 land grants were surveyed and recognized in the 1850s. The discovery of gold in the western foothills of the Sierra Nevada in 1848 resulted in one of the largest migrations in human history. New immigrants quickly overwhelmed the Hispanic residents of Northern California.

In 1840 an earthquake had demolished the church tower at Mission Santa Cruz. In 1856, traveling artist Henry Miller noted that the mission church was surrounded by ruins and some smaller houses built in the "Spanish style of adobe" (Miller 1990:15). His drawing of the mission (figure 2.3)

shows the church and a partial quadrangle of buildings, and the houses of Branciforte on the flat below the mission. Soon after Miller's visit, in 1857 earthquakes leveled the church (Baer 1958:193). For many years, the mission complex stood abandoned, as more of its pieces and materials were hauled away. At different points in time, the abandoned shell of the church served as a stable, storeroom, and school. The Mission Adobe itself was occupied as a two-family residence.

After California had been part of the United States for about 40 years, interest in the state's Hispanic past grew. Using fiction as an outlet to castigate US citizens for their mistreatment of Indians, Helen Hunt Jackson (1884) published *Ramona*. The novel told the story of a small Indian band struggling to survive the US invasion of the land and of a romance between an Indian boy and a Scottish-Indian girl. She intended to shame the public with the description of traumas this couple suffered because of interaction with Euro-Americans. Instead, it fostered a romanticization of the Hispanic tradition in California, evoking a pastoral vision of the missions and ranchos of a bygone era. A new form of architecture, inspired by Hispanic traditions and later dubbed the Mission Revival style, also became a popular and enduring fashion in California. California's building on the fairgrounds of the 1893 Columbian Exposition in Chicago was an enormous structure with three façades in the Mission Revival style.

The mission church and the surrounding quadrangle buildings were the focus of popular architectural interest. Often the most substantial buildings of the mission complex, they were the ones most likely to survive. While the number of tourists visiting these sites rose in the late 1880s,





Figure 2.4 Modern one-third size replica of Mission church at Santa Cruz

the condition of California's missions deteriorated rapidly. Tessa L. Kelso of the Los Angeles Public Library organized during this period the Association for the Preservation of the Missions and enlisted the help of Charles Fletcher Lummis, explorer, writer, publisher, and early photographer of the Southwest pueblo cultures. Lummis took on the cause of the missions as his own and in 1895 established the Landmarks Club whose goal was to preserve and restore California's mission history. In the process, they were also promoting tourism in Southern California. George Wharton James (1905) published his popular work *In and Out of the Old Missions*. His book encouraged even more tourists to add California missions to their itineraries.

In many cities, civic groups and resident clerics, concerned about the deterioration of the missions, began efforts toward restoration. The late nineteenth and early twentieth centuries saw the restoration of several of California's missions. By the late 1880s, the Church at Santa Cruz had long been razed and a new Gothic-inspired church constructed on the site. Citizens of Santa Cruz began to raise

funds for the reconstruction of the mission church in the 1920s (Kimbrow et al. 1985:70). When enough funds for the replication efforts were secured in 1931, a smaller one-third size likeness of what enthusiasts envisioned as the original appearance of the mission church was built one block from the Church's original location. This building still stands today, surrounded by modern development and obscured by telephone lines (figure 2.4).

For the most part, the Native American contribution to the mission was ignored. Interpretations at the mission church focus on the missionaries and their influence and on the importance of the Catholic religion. Beginning with the donation of Mission Adobe, however, the California Department of Parks and Recreation began to adjust this traditional interpretation. After years of archaeological and architectural investigations (Felton 1987), the Adobe was restored to its mission-period appearance to the extent possible, given alterations of the building and surrounding landscape. Rooms inside the Adobe's museum now illustrate Native American life within the mission compound.

# Native Americans

**A**NTHROPOLOGISTS have traditionally separated California's Native Americans into distinct cultures based on the type of natural resources exploited and differences in spoken languages. By the beginning of the historic period in 1769, more than a hundred different dialects were spoken in prehistoric California. Linguists classify the native languages of California into the six language stocks of Penutian, Athabaskan, Algonkian, Yukian, Hokan, and Uto-Aztekan. Penutian is a widely scattered language stock including languages spoken in what is today California, Oregon, Washington, British Columbia, and Mexico. In California, Kroeber (1925) included Wintun, Miwok, Maidu, Yokuts, and Costanoan in the Penutian language stock. Scholars such as Shipley (1978:82–85) later refined this stock to include the language families of Wintuan, Maiduan, Yokutsan, and Utian. The Utian family encompassed the Miwokan and Costanoan languages. Northern, Southern, and Foothill Yokuts peoples spoke dialects of the Yokutsan language family. Franciscans recruited two groups of Penutian speakers to Mission Santa Cruz: the Costanoan (today called the Ohlone) and Northern Valley Yokuts.

Native peoples of California developed adaptive strategies to take advantage of seasonally available food sources. Occasionally they used fire or selective gathering to increase production of food resources (Hornbeck 1983:36–37). Through such management techniques, they both maintained and transformed their surroundings with constant human intervention. They lived in a managed environment (Blackburn and Anderson 1993). At the time of the first Spanish settlement (1769), the native population numbered more than 300,000. Individuals' lives focused largely on their own locality. Most people did not travel more than ten to fifteen miles from their village, a trait Heizer and Elsasser called "extraordinary localism" (1980:203). Established tra-

ditions of trade made it possible for villages to exploit local resources and maintain access to desirable resources in nearby environments (Bean 1976:105). Endowed with an environment rich with possibilities, California natives further exploited the potential of their physical world through social organizations based on hunting-gathering technologies. The nature of social organization varied, but common practice was to ally with others through marriage, kinship, and organization of access to natural resources and trade goods. Rituals such as dancing and feasting combined and reinforced these ties (Bean 1976:120).

Anthropological descriptions of precontact native cultures are a compilation of ethnographic and archaeological data. There are many assumptions implicit in these descriptions, mostly concerning the applicability of ethnographic data to the prehistoric past. Cultures are usually presented as having certain traits and utilizing specific subsistence strategies. The societies these depictions largely portray are mostly static, making description and definition of native cultures an easier task but masking their adaptability. All cultures survive and prosper by reacting successfully to alterations in the environment, natural resources, and climate and to the actions of neighboring or intruding peoples.

Historic accounts describe the recruitment of Ohlone and Northern Valley Yokuts to Mission Santa Cruz. These California natives, however, saw themselves as members of specific villages, perhaps related to others by marriage and kinship but viewing the village as the primary identifier of their origins. Many variations of culture and ideology existed within and between villages.

## OHLONE

Ohlone-speaking peoples inhabited the area from central San Francisco Bay to Monterey Bay and east to

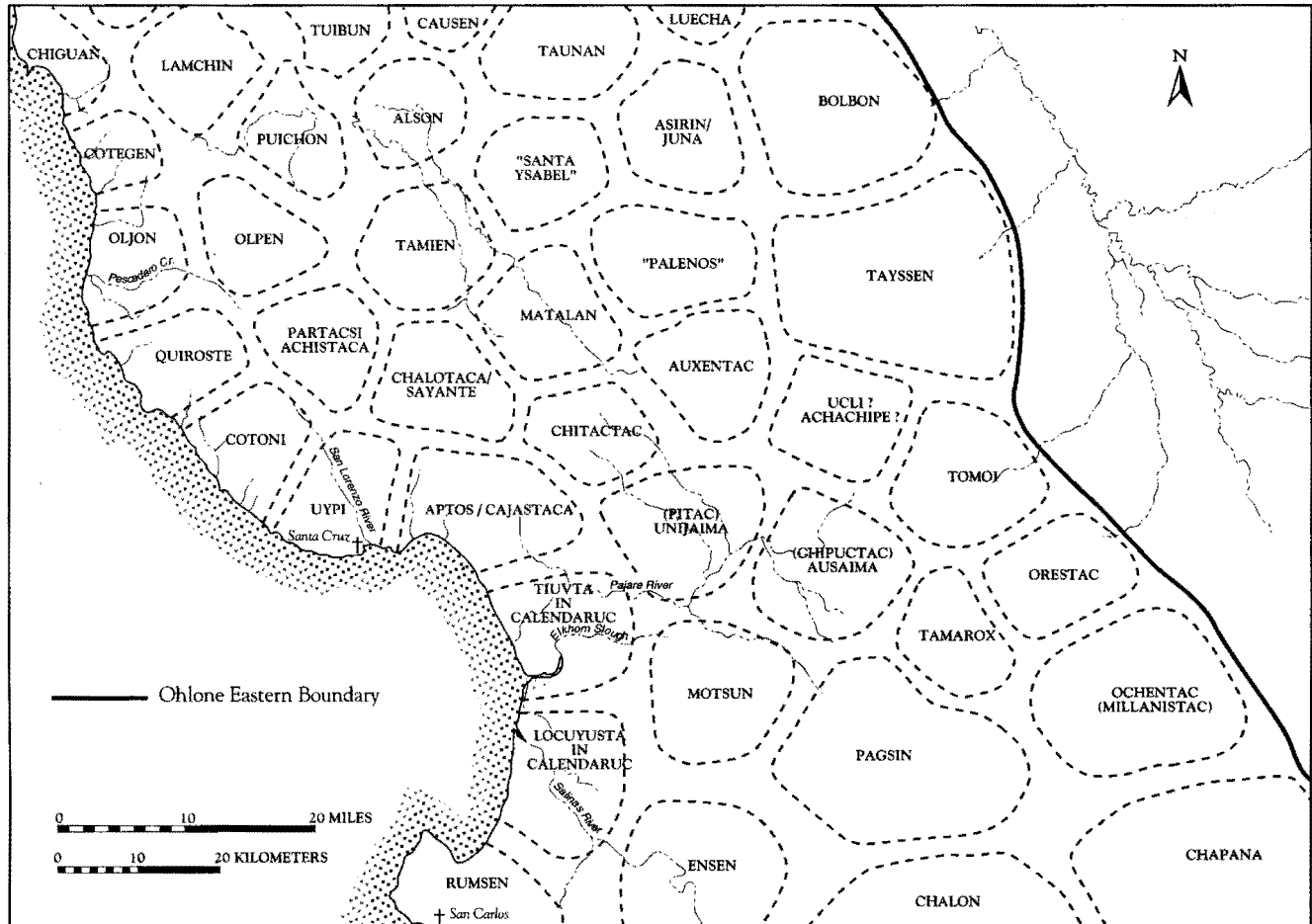


Figure 3.1 Approximate boundaries of prehistoric Ohlone political groups. After Milliken (1993). Courtesy of the Far Western Anthropological Resource Group

the crest of the Coast Ranges, first inhabiting the area around 500 AD (Levy 1978:486). Reconstruction of Ohlone political geography is quite complex, based mostly on mission registers (Milliken et al. 1993:29). Figure 3.1 shows one possible set of boundaries between groups. Recent study has shown that the Costanoan language family likely extended into the inner Coast Ranges, just west of the San Joaquin Valley and bordering Northern Valley Yokuts territory (Milliken 1995b:165). The common designation of these people as Costanoan is probably from a Spanish word meaning "people of the coast" (Heizer and Elsasser 1980:16). An alternate name for these people seems to have been first introduced by C. Hart Merriam, an ethnographer who studied descendants of mission neophytes during the first decade of the twentieth century. Using an Indian phrase, Merriam called them *Ohlonean* (Milliken 1988:61). The term may have originated from a village, *Oljone*, along the coastline below the San Francisco Bay area. This village name has been extended to include peoples who spoke similar languages and shared similar cultural attributes. Both Costanoan and Ohlone are misleading terms because the villages whose language and culture had a common base never saw themselves as a single

distinguishable culture. Modern-day descendants of these people prefer the term Ohlone to Costanoan (Bean 1995, Galvan 1968, Margolin 1978).

In his research on demographic patterns, Jackson (1983) estimates the native Ohlone population near Santa Cruz at around 1700 people at the time the mission was founded. Levy (N.D.) and Milliken (1988, 1995b) identify additional villages besides those cited by Jackson from their studies of mission baptismal records. Jackson's population estimate may be high. Milliken (1988:73) offers a population figure of around 500 to 700, or about three to four persons per square mile, which agrees more with Baumhoff's (1963) estimate of the population near Monterey Bay. Estimating the size and political organization within Ohlone villages is also a complex process. In Central California, village sizes were ethnographically recorded as having 20 to 500 members.

Milliken (1988:63) describes four basic types of villages. Single village bands and multi-village political groups were based on seasonal rounds as the native population moved from one food resource to another. Stable single-village and multi-village political groups maintained permanent villages with year-round access to food resources. Villages occasion-

Table 3.1 Vegetation communities in the Monterey Bay area

Plant communities	Dominant species	General locations
Broadleaf evergreen forests	Madrone, tanbark oak, coast and interior live oak, California laurel, blue blossom	Higher hills and slopes of Santa Cruz Mountain. Often intermixed with stands of redwood and Douglas fir forests.
Chaparral	Chamise, manzanita, <i>Ceanothus</i>	Slopes and ridges of Santa Cruz and Gabilan mountains
Closed-cone pine and cypress forests	Monterey pine, knob-cone pine, Monterey cypress	Area of present-day Año Nuevo and on the Monterey peninsula
Coast live-oak woodland	Coast live oak, intermixed with poisonoak, coffee berry, <i>Ceanothus</i>	Higher hills and slopes of Santa Cruz Mountain. Often intermixed with stands of redwood and Douglas fir forests.
Coastal salt-marsh vegetation	Pickleweed, salt grass, salt rush	Elkhorn Slough and near the Pajaro River mouth and the mouth of Baldwin Creek north of Santa Cruz
Foothill woodland	Blue oak, Maul oak, black oak, grey pine, Coulter pine	Slopes of Gabilan Mountains and the Sierra de Salinas
Grassland	Perennial bunch grasses	Valleys and flats
Intertidal and splash-zone vegetation	Eel grass, surf grass, algae, sea palm	Limits determined by lighting, wave exposure, and tidal action. Primarily found near rocky ledges, boulders, and cobbles from the shoreline.
Offshore kelp beds	Varieties of kelp and woody chain bladder	Shallow offshore zones at depths less than approx. 60 ft. Distribution controlled mainly by availability of a hard bottom.
Redwood; mixed redwood, and Douglas fir forests	Coast redwood, Douglas fir, fern, redwood sorrel	Middle elevations on slopes of Santa Cruz Mountains. Redwoods extend downslope in some areas to less than 1000 ft. from ocean.
Riparian vegetation	Freshwater marshes: tule, common cattail, sedges. Woodlands: willows, cottonwoods, box elder, sycamore.	Drainages along the lower courses of major streams such as the Pajaro River
Strand vegetation	Dune and beach vegetation: lizard tail, beach bur, sagewort, verbena, sea rocket. Coastal scrub vegetation: eriogonum, sage, lupine, bluff lettuce.	Along inner beach margins, coastal cliffs, and hills

Source: Gordon 1979:17–20

Note: More detailed discussions of vegetation communities and lists of specific plant species can be found in Barbour and Major's *Terrestrial Vegetation of California* (1988).

ally established camps to take advantage of more distant edibles. Although it is unknown what kinds of social organization characterized the Ohlone peoples who were later recruited to Mission Santa Cruz, what is clear is their awareness and adaptive utilization of a variety of seasonal foods.

#### Environmental Context

Diverse biotic communities allowed for variation in food

sources. The area around Monterey Bay and Ohlone territory was comprised of twelve identifiable vegetation zones (Gordon 1979:17–20), listed in table 3.1. Local plant communities varied from offshore kelp beds to large stands of redwood and Douglas fir in the Santa Cruz mountains. Reconstructing the prehistoric environment around Monterey Bay is made complex by the historic introduction of foreign plant and animal species (see chapter 5). The diaries of early

Hispanic explorers of the area such as Pedro Fages and Father Juan Crespí describe an area rich in woodlands and grasslands (Gordon 1979:47). Coastal shore environments also dominated the natural environment of the Ohlone, who took advantage of the ocean's resources. Located in the Coast Ranges geomorphic province of California, Ohlone territory had Mediterranean climate, with temperate weather throughout the year.

Faunal populations in the Monterey Bay area were as diverse as the plant communities (Gordon 1979:139–217). Predators included grizzly bears, mountain lions, wolves, and coyotes. Herds of tule elk gathered in areas of riparian vegetation, primarily in marsh areas of the lower Salinas and Pajaro valleys. Pronghorn antelope and black-tailed deer ranged over grasslands. Smaller mammals included cottontail rabbits, raccoons, meadow mice, and ground squirrels. Native birds species numbered more than three hundred and included condors, turkey vultures, short-tailed albatross, southern bald eagles, geese, quail, clapper rails, terns, burrowing owls, white-tailed kites, horned larks, Stellar's jays, western mourning doves, western meadowlarks, Brewer's blackbirds, gulls, killdeer, and numerous varieties of ducks. Ocean wildlife included fur seals, gray whales, sea otters, elephant seals, and sea lions as well as marine fish species such as sturgeon, steelhead, and jacksmelt (Gobalet 1992). Freshwater fish included species such as the Sacramento perch, thicktail chub, and hitch (Schulz 1995). Mollusks and other aquatic invertebrates such as red abalone, California mussel, and Pismo clams also inhabited Monterey Bay. Elkhorn Slough contained plentiful numbers of Olympia oyster.

The following descriptions of how the Ohlone lived in this rich environment are based on several sources (Davis 1974, Heizer and Elsasser 1980, Gobalet 1993, Kroeber 1925, Levy 1978, Margolin 1978, Milliken 1985, Milliken 1988, Schulz 1995, and Stodder 1986). These are generalizations. No doubt there was much variation of behavior between and within villages.

### Subsistence

Life was for the Ohlone essentially a series of treks, following the seasons and exploiting available foods. Primary foods were acorns and shellfish. Consequently, the Ohlone divided their temporary settlements between coastal and inland sites. Coastal resources included clams, mussels, fish, kelp, waterfowl, seeds from various coastline grasses, and both small and large game from the ocean and near the shore. Inland resources included acorns and other vegetal staples and riverine resources of game and fowl. Fish remains from prehistoric sites indicate utilization of freshwater and marine species. Depending on the resource and the time of year, the Ohlone sometimes lived together in villages and moved the

entire village as necessary. Other times, especially in the spring, the pattern was to break into smaller family groupings that could make more efficient use of the available resources. Patterns of life varied with the seasons, requiring intense periods of labor during seasons of gathering or during hunting, alternating with periods of general relaxation and leisure.

The seasonal round of food availability was a predictable pattern. During autumn nuts were gathered, including acorn from both tanbark oak and black oak, buckeye, laurel, hazelnuts, and pinenuts. Hunting of game took place, primarily black-tailed deer, elk, antelope, rabbits, squirrels, and raccoons, along with occasional hunting of sea mammals such as sea lions and beached whales. The Ohlone also hunted waterfowl and other birds, including several varieties of geese and ducks, as well as mourning doves, robins, and quail. Intermittent gathering of shellfish was crucial to Ohlone diet. Winter brought reliance on stored acorn meal and other nuts, continued hunting of small game and waterfowl, and occasional gathering of shellfish. With spring came the gathering of some plants. Important seeds included those gathered from plants such as dock, tarweed, chia, gray pine, and holly-leaf cherry. Gatherers harvested roots and young shoots, including roots of the wild onion, wild carrot, and cattail and young shoots of clover, chuchupate, and thistle. Shellfish and game continued to be important supplements. Summers brought harvesting of wild-grass seeds and gathering of berries such as blackberries, strawberries, elderberries, gooseberries, and manzanita berries. Shellfish, fish, and game, as always, remained part of the food resource.

Tasks of gathering and hunting food were divided between the sexes. Tasks assigned to women included plant harvesting and food preparation, while hunting and fishing were designated as tasks of the men. Both men and women probably gathered shellfish, although this task was more often performed by women and children. All members of a village participated in the gathering of acorns and other nuts. Women and children also hunted and trapped smaller game such as rabbits and insects. Once obtained, Ohlone usually distributed food on an egalitarian basis among the members of the village. The quality and quantity of food consumed by a family depended largely on the gathering and hunting abilities rather than any sort of distribution according to rank or hierarchy.

Not passive users of the landscape, the Ohlone took advantage of their knowledge of the natural world to increase its bounty and accessibility. Both their hunting and harvesting had tangible effects on the kinds and quantity of animals and plants in the area. They also used fire to maintain these natural resources, to retard the growth of brushy chaparral species, and prevent accumulation of large quantities of dead vegetation that might cause an uncontrolled fire.

Clearing of low brush also increased grazing areas for game. The surrounding landscape not only provided food resources but was also the source of quarries for chert and other stone, vegetal materials used for medicines, basket materials, clothing, and housing.

### Technology and Material Goods

Clothing, for the most part, was minimal. Men most often went naked or sometimes covered themselves with mud during colder seasons. Women generally wore a two-piece skirt made of deerskin and shredded plant fibers of tule or bark. For colder seasons, natives used a rabbit skin blanket as a mantle and for bedding. Blankets or cloaks could also be made from sea otter, fur, deerskin, or duck skin. Most Ohlone wore some kind of ornament, usually made of feathers, bone, shell, or a combination of materials.

Locally available vegetal resources provided the materials necessary for shelter. Common winter houses were made of a base conical structure of bent willow poles covered with brush or tule matting. Depending upon their size, these structures housed six to twenty people. During the winter, the Ohlone often moved from individual houses and entire village sites, abandoning older structures. This helped to control infestation and general refuse. Spring and summer dwellings were much more informal. Other structures included in the village were sweathouses for men, separate houses for menstruating women, and granaries, resembling miniature dwellings, for seed and acorn storage. Villages sometimes constructed large assembly houses and fences of brush or laurel branches for dance-ceremony enclosures.

Other articles made from local vegetal materials included tule balsas (canoe-like boats) propelled by double-bladed paddles. Village men made hunting bows and arrow shafts from vegetal materials. Cordage, used for many purposes, was made from milkweed fibers or nettle. Women used vegetal materials such as willow shoots, rush, and tule to make baskets, which were mostly twined but occasionally coiled as well. They used baskets mostly for the gathering, preparation, and cooking of food. Specific types of baskets include seed-beater baskets, burden baskets, water bottles, winnowing baskets, dippers, cradles, and cooking baskets. More elaborate baskets were sometimes decorated with shell beads—especially of *Olivella* but sometimes of clam or abalone—feathers, or both. Basketry traps were also used for catching fish. Wood was often used to make gaming pieces, as were bone and some vegetal materials.

The Ohlone used local stone materials for tools and weapons, exploiting both chipped-stone and ground-stone technology. They manufactured a variety of tools, including such chipped-stone artifacts as projectile points, knives, scrapers, and drills, as well as more informal flake tools. Most of the chipped-stone materials were made from locally available

chert. More formal tools such as projectile points and drills were manufactured of obsidian. Not locally available, obsidian had to be traded into Ohlone territory. Ground-stone tools included mauls, metates, mortars, pestles, net sinkers, anchors, and pipes. The Ohlone used many materials to manufacture ground-stone tools, primarily basalt and granite, but also quartzite, andesite, and sandstone. Local minerals such as hematite and white clay were used as pigment.

### Social Life and Ritual

Calling the leaders of Ohlone villages captains, kings, or chiefs, early Spanish descriptions remarked upon their leadership role in warfare and prowess in archery. Native concepts of leadership were not the same as those held by the Spanish. Leaders were generally respected for their organizational skills and in-depth knowledge of the landscape and its potential for subsistence. Duties of the village leader or leaders included giving visitors food; caring for the poor in the community; directing rituals; and organizing and overseeing hunting, fishing, gathering, and warfare expeditions. People in the community saw the leader more as an advisor than an absolute ruler. The community leader frequently conferred with a council of elders and relied upon them for direction and advice. Leadership roles were generally hereditary, and village heads could be either male or female.

Family and community ties formed the basis of most relationships within the village. Marriage was an important institution as it was the primary means of uniting the various clans and lineages of a community. Because members of the same lineage could not intermarry, most looked to nearby villages for spouses. Marriage was central to intervillage connections. Marriages generally took place between individuals from villages that were three to ten miles apart from one another. Marriages were not always permanent. Divorce and remarriage were permissible but uncommon. Polygyny was also acceptable. A man who had more than one wife often married sisters.

In addition to the common practice of intervillage marriage, a prolific trade and exchange practice took place not only between neighboring villages but also with more distant villages. Trade was customarily conducted as an exchange of goods of roughly the same value. Barter took place between cultures with a common border. For example, the Ohlone supplied mussels, salt, and abalone shells and dried abalone meat to nearby Yokuts on their east border. In exchange they received piñon nuts and obsidian from the Yokuts. *Olivella* shells were traded to the Sierra Miwok to the northeast, and clam shells and beads were received from the Coast Miwok on the northwest coast above Ohlone territory. Trade was not the only form of interaction with neighbors. Warfare was also common between adjacent Ohlone villages and with nearby villages of different native cultures.

Fighting most often occurred over access to food resources and potential marriage partners. Ethnographically recorded conflicts took place between Ohlone peoples and neighboring Esselen, Salinan, and Northern Valley Yokuts peoples.

Ritual and a common mythology also helped to bind together the members of a village. Central to Ohlone mythology was coyote, appearing, both as culture hero and as trickster. Coyote and his son Duck Hawk were believed to have taught the Ohlone the proper ways to live. The Ohlone view of life was animistic; they saw potential life force in all elements of the natural world around them. Ritual provided a way of understanding this world, as well as serving as a mechanism of controlling the animism, at least to some extent. Ritual involved many ceremonies and actions, including chants, material offerings, and traditional dances. Dreams were also considered important and were considered guides for future actions and for understanding the present. To guide a community through the world of ritual, a village relied upon shamans. These shamans were more religious instructors than leaders. The Ohlone believed that shamans could control the weather, ensure good crops of vegetal foods and an abundance of game, and cure sickness. They were also considered to have potentially evil designs, and the Ohlone sometimes killed shamans believed to be malevolent witches.

Music was highly important to ritual. It was used not only during dances and important ceremonies but was central to the telling of mythology and other rituals. The Ohlone had a variety of musical instruments used during rituals. These included not only their own voices but also whistles made of bird bone, wood, or other hollow vegetal materials, flutes of alder, rattles of wood and cocoons, and stringed instruments such as a musical bow. Other material items important to ritual were feathered rods and meal ground from acorns or seed used as offerings in holy places. Tobacco, usually mixed with lime from seashells, was eaten, and used both as an intoxicant and an emetic. Vomiting induced by tobacco, together with fasting, was used to induce dreams that would help direct an individual's life.

Some important rituals to Ohlone life were those that took place at the death of a village member. The dead were usually cremated shortly after death and sent to the world beyond with the chants and ceremonies, ensuring that they would stay in that other world and not harm the living. The names of the dead were forbidden to be mentioned to ensure their continued absence from the living world.

#### NORTHERN VALLEY YOKUTS

Yokuts territory was based in the San Joaquin Valley and extended from the San Joaquin River Delta south to Tehachapi Pass. Its eastern boundary was approximately the lower Sierran foothills east to the lower Kern and Kings Rivers. Within this larger culture were approximately fifty dis-

tinct tribes, each with its own dialect, name, and territory. The term *Yokuts* is an English approximation of a native term for people. The Spanish called these people *Tulareños* for the large areas of tule marshes in Yokuts territory (Heizer and Elsasser 1980:15–16, Kroeber 1925). The Yokuts belong to the Penutian language stock, but there were many dialects of the Yokutsan language family, each with several variations. But for all their differences, the language spoken was “remarkably homogeneous” (Silverstein 1978:446). Anthropologists generally divide the Yokuts people into three geographical areas: Northern Valley, Southern Valley, and Foot-hill. Territorial holdings of the Northern Valley Yokuts focused on the San Joaquin River, extending northward to just above present-day Stockton and southward to a large bend in the San Joaquin River, north of Tulare Lake (figure 3.2). These were the peoples recruited to Santa Cruz after about 1810, as the numbers of Ohlone at the mission began to dwindle from disease.

Knowledge of the Northern Valley Yokuts is limited. Because of disease, missionization, and the incursions of miners during the 1850s gold rush, most of the Northern Valley Yokuts people have disappeared. Neighboring cultures absorbed some of those who did survive. What is known about the Yokuts comes from written records of missionaries, early explorers, and early travelers. Archaeological evidence is also important in determining their lifeways (Wallace 1978a:462). It is known that Mission Santa Cruz recruited neophytes form the village of Tejey, Yeurata or Yeunata, Mallin, Houcon, Hapnis, and Notualls (Jackson 1983:35), but the size of these villages or the number of their inhabitants is nearly impossible to learn.

Population estimates for Northern Valley Yokuts before Spanish contact vary. Cook (1955) estimated a population of more than 25,000. He based this calculation on documentary records and analogies with other native cultures. Baumhoff (1963) revised this estimate to more than 31,000 people, based on his observations of available major food resources. Baumhoff suggested that most Northern Valley Yokuts lived close to the San Joaquin River. Near the river the resources could support more than ten people per square mile, whereas away from a river the environment could support only two to three persons per square mile.

#### Environmental Context

The territory of the Northern Valley Yokuts was in what has been called the Great Valley (Hill 1984:28–29). This area, also called the Central Valley, is characterized by great expanses of flat lands. It was formed when the mountain ranges of California rose from the sea, and the edge of what is now the Great Valley became the coastline. As water wore down the Sierras the valley was filled with debris and the new Coast Ranges to the west rose up. The lower portion of this

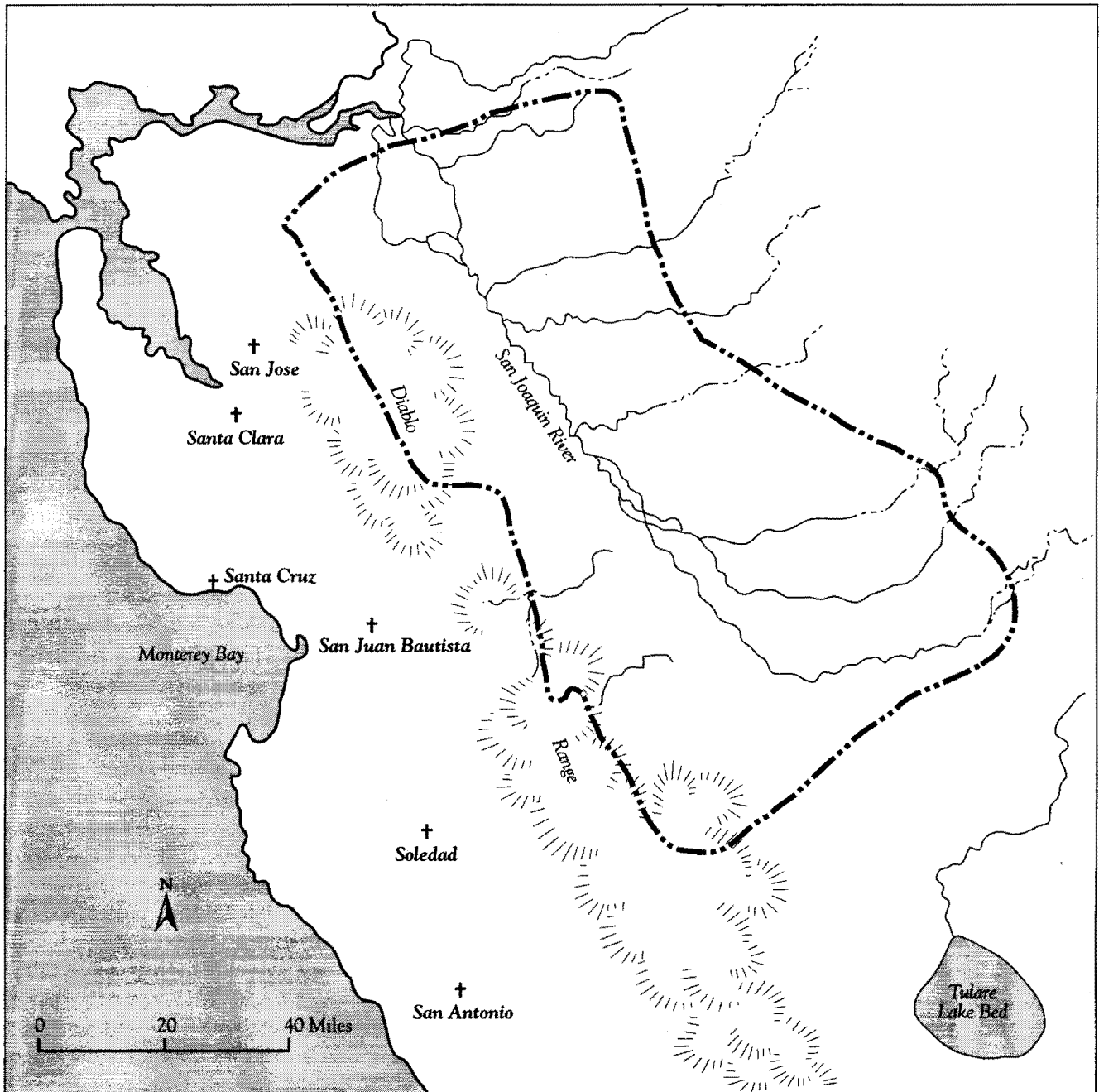


Figure 3.2 Northern Valley Yokuts territory. After Wallace (1978). Illustration by Gina Zanelli

region is known as the San Joaquin Valley. The summer climate of in the San Joaquin Valley is generally dry and hot, and winters are cooler.

In their natural history of the area, Stebbins and Taylor (1973) defined four major plant communities: riparian woodland, freshwater marsh, valley grassland, and oak woodland. Table 3.2 lists plant community information summarized by Schulz (1981), who derived his information from a study of historical maps and compilations of vegetation data. Occurrence of faunal species varied with the vegetation communities (Schulz 1981). In the riparian woodland could be found beaver (although rare), raccoons, and numerous deer. Tule

elk were the fauna that dominated freshwater marsh areas, although they wandered throughout the valley floor. Also found in the marshlands were geese and other waterfowl. Grasslands supported abundant wildlife including elk herds, waterfowl, antelope, valley quail, rabbits, ground squirrels, and pocket gophers. Deer and grasshoppers were the most abundant animals in the oak woodlands. Schulz (1981:8) added two ecological zones that were important to the native inhabitants of the Central Valley: open river channels and lakes and sloughs. Anadromous fishes were the most plentiful resource of the open river channels, including king salmon, sturgeon, and steelhead. Lakes and sloughs also sup-



Table 3.2 Vegetation communities in San Joaquin Valley

Plant communities	Dominant species	General locations
Freshwater marsh	Tules, cattails, sedges, rushes	Large areas of low-lying terrain on the valley floor
Oak woodland	Valley oaks, interior live oaks, blue oaks, buckeye	Lower foothills and valley floors in areas of deep alluvial soils
Riparian woodland	Cottonwoods, valley oaks, Oregon ash, white alder, black walnut, willows, elderberry, grape vines	Natural levees lining major rivers
Valley grassland	Bunchgrasses, annual grasses	Near freshwater marks areas on the valley floor, extending into lower foothills

Source: Schulz 1981:8-35

Note: More detailed discussions of vegetation communities, and lists of specific plant species can be found in Barbour and Major's *Terrestrial Vegetation of California* (1988).

ported large numbers of fish, primarily Sacramento perch and varieties of minnows.

The presence of the Northern Valley Yokuts greatly affected the San Joaquin River basin and the surrounding valley. The Yokuts people were not passive users of the environment. Through fire, they improved the harvesting of vegetal crops, so vital to their survival, and hunted deer, surrounding their quarry with flames. They grew tobacco, which was important to ritual. Awareness of their environment also brought knowledge of other resources such as materials used for shelter, comfort, and ornamentation. The following ethnography of Northern Valley Yokuts life and material goods is summarized from several sources (Davis 1974, Gayton 1930, Gayton 1948, Gayton 1976, Heizer and Elsasser 1980, Latta 1949, Schulz 1981, and Wallace 1978a).

### Subsistence

Subsistence of the Northern Valley Yokuts focused on the natural resources of the San Joaquin Valley. Most important were salmon fished from the rivers and acorns gathered from the oak woodlands. The Yokuts adapted their lives to the resources and ecological communities of the valley environment. Rivers and other bodies of water offered salmon, sturgeon, Sacramento perch, suckers, and various large minnows. Also from the river and adjacent sloughs available were freshwater mussels, waterfowl such as geese and ducks, and turtles. The valley offered many vegetal resources, primarily the acorn that could be ground into a thick soup or gruel, as well as tule roots and many seeds. Large and small game such as tule elk, pronghorn antelope, deer, jackrabbits, squirrels, birds, and an assortment of insects supplemented this diet, including nutritionally rich grasshoppers.

Villages of the Northern Valley Yokuts were generally located in riparian woodlands along bodies of water such as small lakes and near the San Joaquin River itself, where they

would have access to both riverine and valley food resources. Like the neighboring Ohlone, village life revolved on a seasonal round. Spring, roughly from March through May, brought the growth of important vegetal resources and the salmon run. Summer, from June to October, was a time of harvest. The Yokuts village broke into family groups who established small summer camps to exploit the bounty. Winter, from November through February, saw the reestablishment of the larger villages. Energy focused on preparation of stored food gathered in summer and on indoor activities, although men hunted when the weather permitted.

### Technology and Material Goods

Little is known about the clothing of Northern Valley Yokuts. Probably it was similar to other Yokuts peoples. Southern Valley Yokuts men either went naked or wore simple breechclouts, and women wore tule and rabbit-skin skirts, similar to those worn by the Ohlone (Wallace 1978b:450). Many ethnographic references note shell ornaments and necklaces, especially made from *Olivella* shell. The shells were probably secured in trade or gathered during periodic expeditions to the coast.

Structures, including houses, were made of tule stalks that could be found in the freshwater marshes bordering the San Joaquin River. Houses were constructed with an oval framework of light poles. Overlapping tule mats were then attached to the poles. Family houses were in flat areas, and accessibility to riverine resources was considered important. Houses were situated according to family preference. Sweathouses and ceremonial and dance houses were also noted among the Northern Valley Yokuts, the latter constructed similarly to homes.

Ethnographers recorded only minimal information on the remainder of their material items. It is known that fish were hunted with bone- or antler-tipped harpoons and that small

dragnets equipped with small stone sinkers were also used. Like their neighboring Ohlone, Northern Valley Yokuts probably used tule rafts. Known artifacts made of vegetal materials include baskets, mostly for food preparation and food containers. Both coiling and twining technologies were used. Women used bone awls in the manufacture of baskets. Various vegetal materials were processed in mortars and pestles. Chipped-stone artifacts such as projectile points, knives, and scraping tools were made of the locally available materials of chalcedony and chert. Obsidian had to be traded in. The Northern Valley Yokuts also produced a simple earthenware pottery, perhaps indicating that while villages took advantage of seasonal foods, they were generally more sedentary than their western neighbors.

### Social Life and Ritual

Individuals recognized allegiance to their village. Northern Valley Yokuts commonly lived in small villages of around three hundred people within a given area. Usually there was a large main village with smaller villages clustering nearby. Settlements were generally located near watercourses, on natural levees above the San Joaquin River flood zone, with regular seasonal breakups during the harvesting of vegetal crops. Each village was composed of several families.

The political organization of the Yokuts can best be described as layered and complex, with many officials. Primary managers of the people's social and religious life included the chiefs, *winatums* (messengers of the animal spirits), subchiefs, dance managers, and spokesmen. Depending upon its size, a village could have one to three chiefs. Chieftainships were normally hereditary, and chiefs were generally more wealthy. Wealth and status were marked by larger houses, more material goods, first access to traders and the materials they offered, and the ability to support more than one wife. The rest of the community was generally without class distinction. Each lineage within a village was patrilineal and was believed to be sponsored by an animalistic totemic representative. Other distinctions were caused by some families being more wealthy and influential—due to their personal qualities and achievements, not their lineage. Marriage was viewed as important for linking lineages and establishing important village ties. Like other Native Americans in California, the Yokuts were mostly monogamous, although divorce was permitted and generally accepted.

Little is known of Yokuts religion and spiritual life. What is apparent is that their rituals were based on and directly related to the pattern of the seasons. Most rituals and dances occurred in the spring when families were still together before the summer breakup of villages. During the late summer, the coming of winter was marked by ritual. Winter was a time for storytelling. Many dances, ceremonies, and other festivities took place, organized by the complex political lead-

ership. People attending the celebration or ritual paid for its cost. Many vegetal materials were important to Yokuts ritual, primarily the datura root, which was used as an intoxicant. Tobacco was also ingested, mixed with lime, as an intoxicant and emetic.

The mythology of the Yokuts was filled with many supernatural creatures. They may have participated in *Kuksu*, a north-central California cult known for its impersonations of gods. Rituals decreed a special spiritual relation with animals and the natural world. It was believed that prior to the arrival of humans, the world was dominated by animals. Man could exploit animals for food and other resources, but all animals were considered peers. Animals had a basic kinship with humans and provided the basis of all human lineages. Above all, animals, especially during the hunt, were to be treated with respect. The Yokuts had a similar relation and ideal for other resources in the natural world.

Shamans provided a link to the natural world and the surrounding environment. The natural and spiritual worlds of the Yokuts were seen as filled with both evil and good sources of power, and shamans were believed to tap into both these sources. The result was an equivocal position, one that could result in simultaneous respect, reverence, and fear. Because shamans could acquire great power, often through fear, cooperation and alliances with political chiefs were common. Shamans could not inherit their position or their power. They found their experience through dreams and success in treating the ill and injured. Shamans expected payment for their cures. Every shaman who undertook a cure was at risk, as shamans who frequently lost patients were considered evil and could be killed by other members of the village community. Most villages shared their shamans, who traveled between communities.

Other contacts with neighboring villages and other peoples were through trade. Northern Valley Yokuts are known to have supplied dogs to the neighboring Miwok to the north and received baskets, bows, and arrows in return. From the Ohlone, the Yokuts received mussels and abalone shells. The Yokuts also had trading connections with Salinan peoples to the southwest. Other trade commodities include salt, acorn meal, and pine nuts. Another common contact with outside peoples was through war, mostly over territorial disputes or access to natural resources. The Yokuts fought among themselves and with nearby peoples. When warfare occurred, the political chief advised, but those recognized as the best warriors led the men of the village.

### CONTACT WITH THE HISPANIC POPULATION

Interaction with the Spanish and later with Mexican-Americans drastically altered the lifeways of both Ohlone and Northern Valley Yokuts. Initial European explorations into Ohlone territory began in 1602, when Sebastián

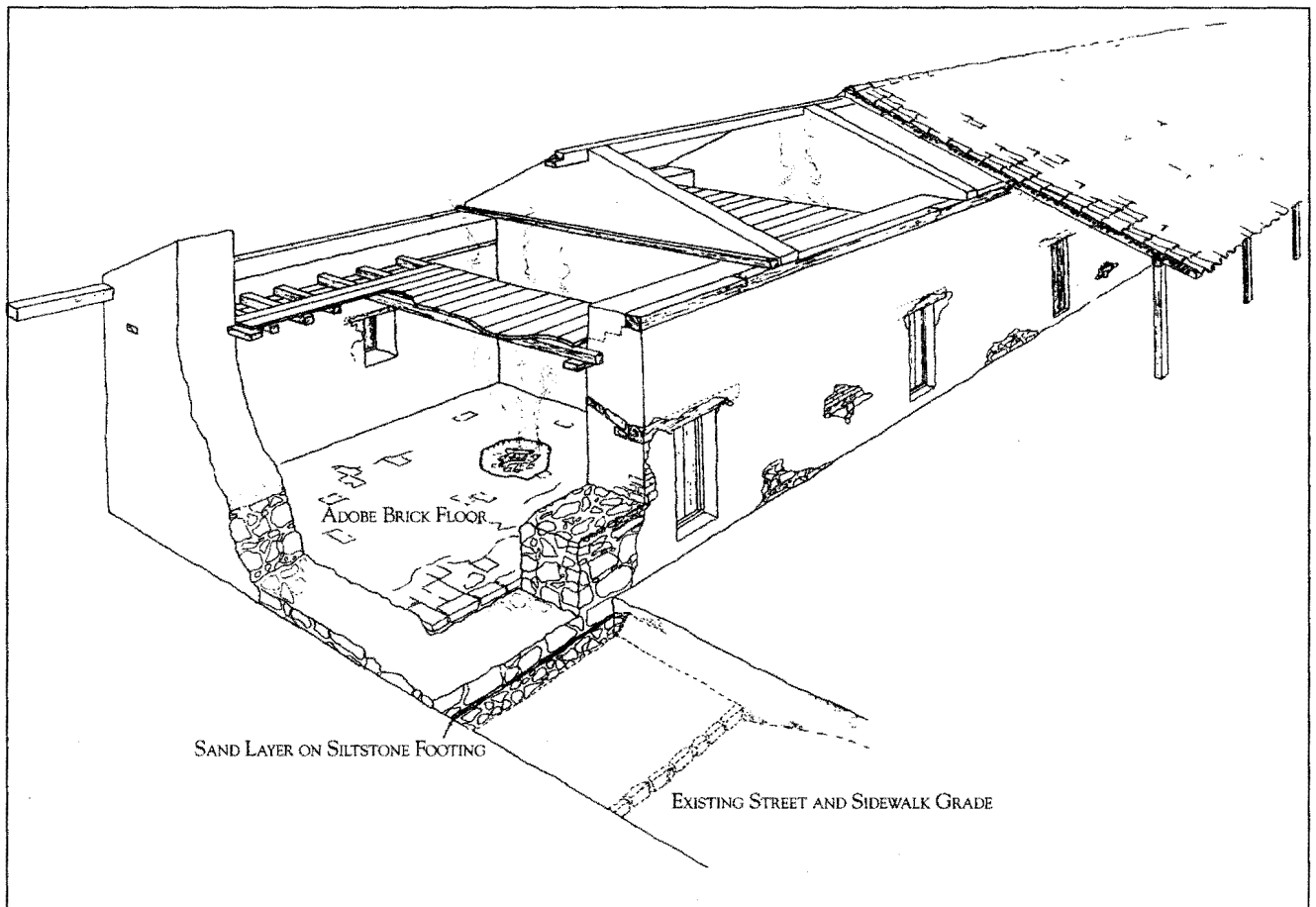


Figure 3.3 Cutaway perspective of a Mission-period reconstruction of the Mission Adobe. *Illustration by David L. Felton*

Vizcaíno explored Monterey Bay. He mapped the coast and assigned several place-names still in use today, but his exploration had little impact on the local people. The first year of Spanish settlement in Alta California permanently altered the type and duration of native exposure to European peoples. After an initial reconnaissance into the territory, the Spanish founded San Carlos de Borromeo in 1770, the year following initial settlement. Franciscans eventually established seven missions in Ohlone territory. Missionaries recruited other cultural groups, further disrupting the continuity of the native people. Eventually, the Ohlone shared the territory that was once theirs with the Esselen, Foothill Yokuts, Southern Valley Yokuts, Northern Valley Yokuts, Plains Miwok, Saclan Miwok, Lake Miwok, Coast Miwok, and the Patwin, along with Euro-American newcomers of Spanish, Mexican, and European descent.

New diseases brought by the settlers caused the most profound changes in native life. As the natives had no immunity, diseases could wipe out entire families and generations, forever disrupting native continuity. Missions and military establishments also altered the environment. The indigenous way of life based on the seasonal round was disrupted or suspended as the outsiders introduced new plants and animals,

new demands and uses, and new perspectives on the surrounding landscape.

Hispanic explorers initially encountered the Northern Valley Yokuts during the first decade of the nineteenth century. Expeditions were sent eastward to explore the San Joaquin Valley, to reconnoiter the landscape for the possible Spanish settlement, and to find new recruits for the missions. The Franciscans did not establish missions in Northern Valley Yokuts territory, instead, the Yokuts were transplanted westward and recruited into Missions San José, Santa Clara, Soledad, San Juan Bautista, San Antonio, San Miguel, and Santa Cruz. Like the Ohlone, the Northern Valley Yokuts people found themselves among strangers, both of native Californian and Euro-American ancestry.

As noted in chapter 2, Ohlone were first recruited into Mission Santa Cruz in 1791. Once the Ohlone population began to dwindle, mostly because of disease, Franciscans actively recruited Northern Valley Yokuts into the mission, beginning in 1810. Once inside the mission, neophytes were expected to live within the mission compound. Initially they lived in more traditional ways, but the mission environment soon affected their living conditions.

## NEOPHYTES LIVING IN THE SANTA CRUZ MISSION ADOBE

Missionaries do not mention housing for most of the Indian population in their earliest annual reports, except the *monjerio* for the young women. Neophytes likely constructed wood-framed dome huts covered with tule that were their traditional form of housing (Levy 1978:492). These houses were within sight of the quadrangle, the center of life at the mission. It seems probable that the Angled Adobe (see chapter 4) was constructed during the early part of the 1800s, but its exact date of construction is unknown. In 1809, Father Antonio Rodríguez reported the construction of twenty-five houses for the neophytes. This is the first time housing for neophyte population is mentioned in the extant annual reports. Still, this housing would not have contained all neophytes living at Mission Santa Cruz.

Neophyte laborers constructed the Mission Adobe (figure 3.3) in 1824, completing a row of rooms. Surviving land deeds identify the names of the ex-neophytes who were apparently given title to rooms in the Mission Adobe when the Mexican government turned Mission Santa Cruz over to civil authorities in 1834. Presumably these were the families living in the Adobe secularization. The following summarizes information found in census, baptismal, burial, and marriage records, which further identify the native residents of the Mission Adobe and their families (Kimbrow et al. 1985:137–154).

José Victoriano, listed as a horse breaker in the 1843 census and as a shoemaker in the census of 1845, occupied one room. He married twice and had at least seven children,

three of whom died in infancy. Baptismal records list the village of José Victoriano's birth as Teje, a Northern Valley Yokuts village. After secularization, José Victoriano and his family did not move back into that territory. They seem to have left the Mission Adobe in 1843, when they moved to a nearby *ranchería* (village site), located well beyond the mission orchard. An ex-neophyte named Isidro and his wife Maria Buena, also from the village of Teje, received title to two Mission Adobe rooms in the late 1830s. The 1834 census listed Isidro's occupation as an overseer. Maria had two children by a former marriage, and she and Isidro had two. In 1852, when ethnographer E.L. Williams visited Santa Cruz, he noted Isidro as one of the oldest Indians living there (Savage 1877). Historians know little of Juvenal de la Cruz, who was given title to room 3 of the Mission Adobe, along with someone named either Bernardo or Bernarda. The village of Juvenal's birth was not listed in the baptismal records, indicating he was born at the mission. The 1834 census listed an ex-neophyte named Rustico living in a later-demolished section of the Mission Adobe. Baptismal records do not indicate the village of either Rustico or his parents, although his mother is listed as a widow from Santa Clara, possibly indicating all three were born within the mission system. In 1834 Rustico is listed as a cornfield laborer; the 1845 census listed him as a drover. He married Maria Alvina, and they had at least five children. Rustico and Maria had abandoned their rooms by 1841, when they moved to a nearby *ranchería*. Material culture representative of these neophyte families was discovered by DPR excavations at the Mission Adobe (described in chapter 4).

# Archaeological Investigations

**A**RCHAEOLOGICAL INVESTIGATIONS at Mission-period sites in California began in the 1930s. Spurred mostly by efforts to reconstruct mission buildings, especially churches, exploration of building foundations usually dictated the kind and amount of archaeological investigations conducted. Recovered artifacts served as illustrations in museum cases inside the historic buildings. This pattern was common for historical archaeology during this period (Schuyler 1977). Between 1940 and 1960, archaeology at Mission-period sites continued to focus on restoration-related work, but it also began to recognize other possibilities for expanding knowledge of the history of the period. In the late 1960s, as approaches became more anthropological, archaeologists began to ask new questions of the archaeological and archival records and to find correlations between the two (Barker et al. 1995). Researchers recognized the potential for reconstructing not only buildings but also lifeways of native and Hispanic peoples. Several archaeologists have conducted studies in Alta California that bear comparison with the materials recovered from the neophyte dwellings at Santa Cruz.

## EXCAVATIONS AT OTHER CALIFORNIA MISSIONS

**F**rom 1934 to 1938, large-scale excavations took place at Mission La Purísima. A joint effort between the National Park Service, the Civilian Conservation Corps, and the California Division of Beaches and Parks (now the California Department of Parks and Recreation), the project was an interdisciplinary effort to reconstruct several mission buildings accurately. Reconstruction efforts guided all archaeology (Whitehead 1980). Excavators investigated several major buildings and features, including church, missionaries' residence, workshops and quarters, water system including fountain and cistern, a neophyte residence, tallow and soap

works, and cemetery. Although the effort was exemplary for its time, inadequate stratigraphic controls resulted in a lack of association with historic features and chronology. Still, many artifacts recovered are useful for comparative purposes.

James Deetz (1963) of the University of California, Santa Barbara, further investigated the neophyte residence at La Purísima. One goal of this excavation was to study Chumash acculturation rates by comparing artifacts from this residence with artifact collections from a nearby protohistoric village. Because of an absence of male-oriented native artifacts such as chipped stone and a heavy presence of female-oriented native artifacts including many cooking tools, Deetz suggested a differential rate of acculturation among the neophytes based on gender. Other researchers have recognized that the room was actually the residence of the Hispanic nurse at the mission (Costello 1990:270–276). Despite the problems with his interpretations, Deetz initiated the break from strictly restoration-oriented archaeology at mission sites and showed the potential of material culture for informing anthropologists about historic lifeways.

Roberta Greenwood's work at Mission San Buenaventura between 1974 and 1976 produced important information on its layout and history. A museum and park complex now houses the recovered remains (Greenwood 1975, 1976). Archaeological investigations focused on neophyte residences and other buildings. Most useful for comparison are Michael McIntyre's (1976) analyses of a refuse feature associated with the mission occupation, Robert O. Gibson's (1976) discussion of the shell and glass beads, and an analysis of the faunal materials (Romani and Toren 1975).

The year 1976 also saw the initiation of excavations at Mission San Antonio that continue to the present time, under the direction of Robert Hoover of the California Polytechnic State University. Between 1976 and 1978 archae-

ologists excavated neophyte residences. The resulting report (Hoover and Costello 1985) provides important information on architectural detail, living areas used by neophyte families, and acculturative changes suggested by the material remains. This report is invaluable for comparative purposes. Further excavations have taken place at Mission San Antonio on the tile kiln, the soldiers' residence, the house of the vineyardist, and the workshops.

At Mission San Juan Bautista, John Clemmer (1961) did limited excavations at the neophyte residences. He provided construction details and correlations between census reports and building construction records. Glenn Farris (1991a, 1991b, 1992a) reexamined these findings and further outlined and excavated the foundations of the neophyte residence. Although artifact recovery was limited, comparisons with materials from Mission Santa Cruz have proven useful.

Finally, artifact comparisons are possible with materials recovered from recent excavations at La Soledad (Farnsworth 1987), Santa Inés (Costello 1989), and Santa Clara (Hylkema 1995). Excavations at Mission Soledad began in 1983 in the west wing of the mission known as the *convento*, an area inhabited by the Franciscan missionaries, but also included limited testing in neophyte residence areas and on part of its aqueduct system. Interpretations of this excavation concentrated mostly on the acculturation rate of the neophytes. At Mission Santa Inés, excavations in the *convento* wing began in 1985 and continued through 1988. The resulting report contains seven special studies on artifact types. Construction of a major roadway in 1989 resulted in the accidental exposure of human remains and burial goods associated with Mission Santa Clara neophytes. Artifacts included in the cemetery include glass beads and *Olivella* shell beads.

#### PREVIOUS EXCAVATIONS OF FEATURES AT MISSION SANTA CRUZ

From 1981 to 1984, Cabrillo College conducted a field school at a Mission-period neophyte residence at Santa Cruz. The remains of this adobe are on private property. An earlier salvage operation was undertaken when a developer exposed building foundations while constructing condominiums on the land in the late 1970s. Cabrillo College subsequently conducted their field school on an adjoining parcel. The College named this structure the Lost Adobe of Mission Santa Cruz. Trench testing uncovered the foundations of a building. Further probe testing explored the extent and shape of the interior and exterior footings. A preliminary assessment of the artifacts found that many recovered materials were from the Mission period. The building form was further examined and several interior rooms explored. Archaeologists recovered many materials relating to the habitation of neophytes (Edwards et al. 1984). The last season of excavation in 1984 focused on the seemingly anomalous gaps

in the front and back foundations of the Lost Adobe. Profiles of the gaps showed them to be shallow ditches. The ditches, researchers hypothesized, may have been a drainage system, constructed to control the problem of winter rainwater runoff (Edwards and Simpson-Smith 1987).

The church and convento defined the original quadrangle pattern of Mission Santa Cruz. The quadrangle extended west and north from the church. South of the quadrangle was an area known today as Mission Plaza Park. This open area was originally a common space used for many purposes. The shape changed and size of the common area decreased over the nineteenth century. During the twentieth century it expanded as historic buildings collapsed or were destroyed. Test excavations in the fall of 1988 revealed architectural remains that appeared to date after the Mission period. Investigations also recovered many artifacts that could date to the Mission period, including chert; shell beads; shellfish remains; cattle bone; and European, Chinese, and Mexican ceramics. Archaeologists defined two butchering disposal areas, although their date was undetermined (Hampson 1989), and located a Mission period tanning vat several blocks west of the mission quadrangle (Dietz 1986).

#### EXCAVATIONS AT SANTA CRUZ MISSION STATE HISTORIC PARK

In 1978, the California Department of Parks and Recreation (DPR) conducted the first of a series of archaeological and historic building investigations at the Mission Adobe, the seven-room neophyte structure that has survived to the present time (figures 4.1, 1.2, and 3.3). DPR-sponsored excavations have continued intermittently to the present. The purpose of the first excavation was to determine whether the building had significant archaeological research potential. Excavation was limited to four rooms of the Armas-Neary (west) side of the adobe, as Cornelia Hopcroft was still residing in the Rodriguez (east) end. The presence of wood floors in the building also restricted excavations.

Archaeologists dug small test excavation units and auger holes below the floors of four existing rooms of the Mission Adobe (rooms 4–7). Excavators laid out units in spaces between floor joists where only a few boards could be dislodged. In most units, only loose fill was removed. Archaeologists also placed five units in two rooms on the west end of the building, later recognized as rooms 6 and 7. This test study revealed architectural features of the building and several distinct layers of occupation, as well as evidence of a fire pit in one room (room 6).

These layers included cultural debris from both the neophyte occupation and later Mexican-American families. Excavation units produced construction debris such as roof tile, pieces of chalkstone, cut nails, and fragments of adobe

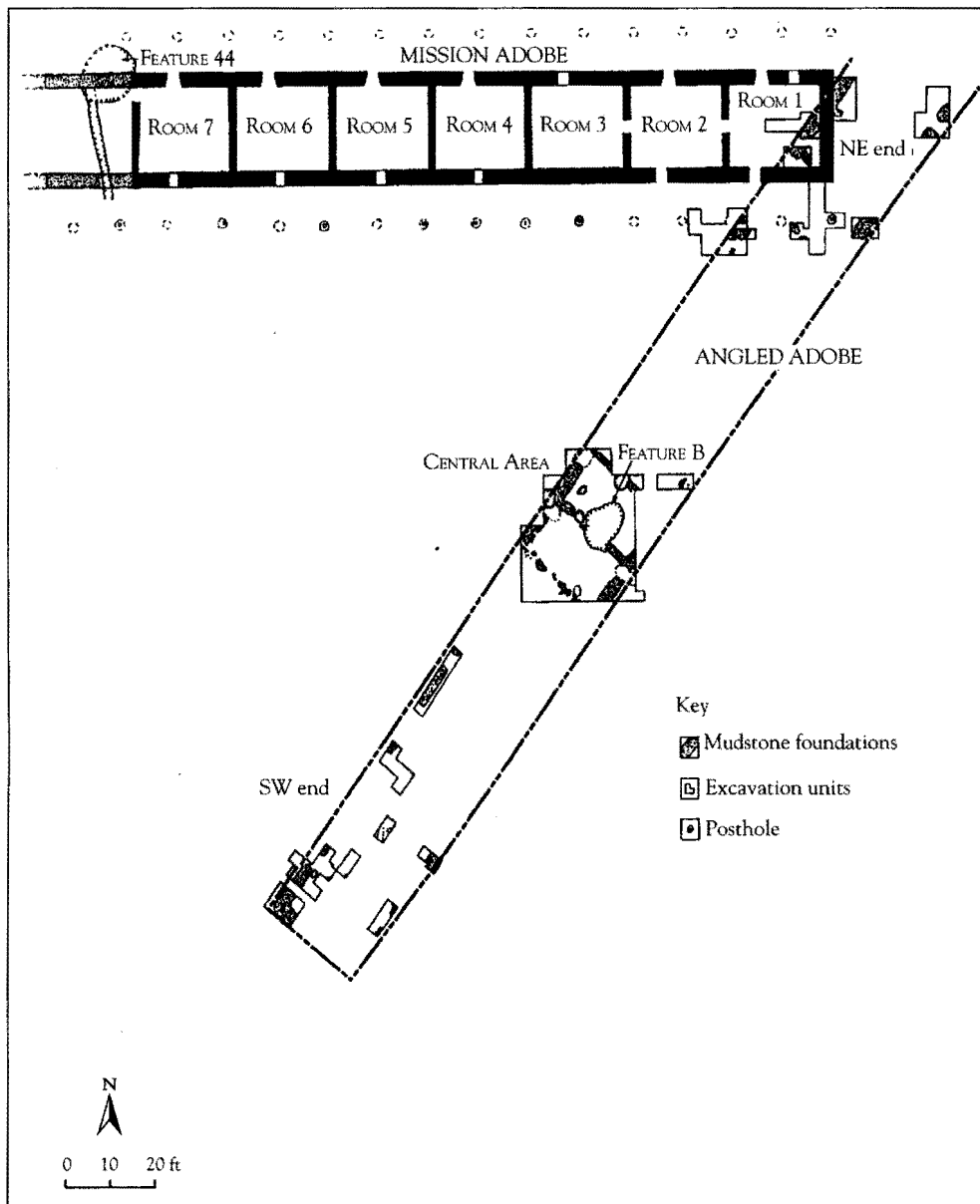


Figure 4.1 Excavations in the Mission Adobe and Angled Adobe

brick. Archaeologists recovered ceramics, chipped stone, iron fragments, drawn glass beads, *Olivella* disk beads, shellfish remains, window glass, and ground-stone artifacts. The most important result of the test units was to suggest the potential for further, more detailed excavations for interpreting the history of the building and of the people who had dwelled there (Porter et al. 1981:17–18).

Three years later in the spring of 1981, DPR conducted excavations before the installation of two concrete foundations to stabilize the building (Porter et al 1981:12–14). Archaeologists placed an excavation unit at the far west end, on the exterior of the Mission Adobe. This revealed an extension of the original foundation, suggesting that the building had formerly extended further west. Researchers thought that the extension was part of the ten rooms of an original mission building demolished in the late nineteenth century.

Excavations produced good archaeological assemblages in spite of the stratigraphic disturbance from rodent activity, the addition of floor joists, and several later alterations to the building. The 1981 work also provided evidence that adobe bricks had been used as floor paving in one room (room 5) and cross-sectioned a well-defined fire pit near the center of the same room.

From 1984 to 1985, attention focused on analyzing the architectural evolution of the Mission Adobe to provide information needed to plan the restoration of the building to its appearance in the Mission period (Felton 1987). Archaeologists carefully removed selected Post Mission period additions, woodwork, and plaster to reveal the underlying structure. They also uncovered physical evidence of the original Mission-period building, including information on the “floor plan, adobe construction techniques, door and win-

dow size, location, framing and closure, wall plaster and finish, adobe block floors, fire pits, roof height and pitch, loft size and construction, and historic grades" (Felton 1987:7).

In the spring of 1985, DPR conducted excavations in the yard behind the Mission Adobe. The purpose of the test exploration was to uncover a wing extending from the south side of the adobe, shown on an 1850 map (Hildebrand 1991:40). Ground penetrating radar and soil resistivity tests were used to check for subsurface anomalies and appeared to identify a soil disturbance indicative of a building. A long trench was dug in an area of radar anomaly. Excavation exposed a variety of features and artifacts attributable to neophyte residents. Archaeologists also uncovered mudstone foundations, the long axis of which lay in a diagonal position relative to the Mission Adobe (figure 4.1). Use of a metal probe and pinflags outlined a lengthy structure. This diagonal construction was not the wing shown on the 1850 plan; it was later suggested to be the remains of an earlier Indian housing unit (Felton 1987:7) and dubbed the Angled Adobe. Subsequent units were selectively located to expose mudstone features defining several small rooms and projected continuation of these features. Later excavations uncovered foundations nearer and perpendicular to the south exterior wall of the Mission Adobe. Archaeologists thought these foundations were the remains of a cookhouse constructed by the Rodriguez family, probably the structure that appears on the 1850 sketch (Hildebrand 1991:52).

In the spring of 1986, Cabrillo College held an archaeological field school at Santa Cruz Mission State Historic Park. The field school focused primarily on the south end of the Angled Adobe, with the goals of determining the southern extent of the building and identifying interior partitions. Subsurface investigation uncovered the exterior foundations of the building, but interior foundations did not appear at locations projected on the basis of earlier findings, leading archaeologists to hypothesize interior walls made of palisade or mud plaster. Excavations also revealed several features including a drain-like rock alignment, postholes, and a hearth (Edwards and Smith 1987:6–8).

During the next field season (1986–1987) attention turned primarily to the Mission Adobe itself. A construction crew, working under the direction of the archaeologists, removed most post-1850 architectural elements in preparation for restoration of the building to its configuration of 1820s to 1840s. Samples of building materials from all phases of construction were recovered and retained for future study. After floorboards were removed, archaeologists excavated the accumulation of overburden on the original adobe floors after each room was gridded off into four sections. Workers screened all dirt for artifacts and floated selected soil samples for floral remains (Hildebrand 1991:79). In room 1, at the west end of the building, stratigraphic analysis was made

more complex because of the presence of the Angled Adobe partially underlying the building (McHugh 1987:13). The cookhouse foundations and the room perpendicular to the Rodriguez side of the adobe were further explored. Excavation also confirmed the original placement of corridor posts on the south exterior of the Mission Adobe on the Armas family (west) side of the structure.

Demolition and reconstruction work on the Mission Adobe dictated the following year's (1988) archaeological investigations. Archaeologists monitored demolition, construction, and subsurface work in the surrounding yard area and inside the adobe. Reconstruction efforts revealed many more of the Mission-period architectural features of the building, including doorways, thresholds, construction details of the original adobe floors, and original mud plaster. Archaeologists documented these findings and recovered additional architectural samples. Other excavations in the yard area around the Mission Adobe exposed the original surface and more postholes of the south corridor of the building. Investigations continued on the foundations of the cookhouse and the south end of the Angled Adobe.

Archaeological monitoring of construction work in the late summer of 1988 revealed an important bone-filled pit at the west end of the Mission Adobe along the north wall (figure 4.1, feature 44). The building had once extended much further to the west. Feature 44 lay underneath the extension of the 1822 to 1824 mudstone foundations, predating the Mission Adobe. Hispanic artifacts and the bones of introduced domestic animals suggested that this pit was from the Early Mission period (pre-1822) and had the potential for answering several research questions concerning neophyte diet (Hildebrand 1991:159–163). Excavation units also further exposed the mudstone foundation of room 8, the first of the demolished rooms that once lay west of the standing building, as well as the south corridor surface and postholes. While monitoring the installation of a new drain for the reconstructed south corridor, archaeologists uncovered a narrow, roof tile-covered water channel that perhaps delivered water from the central Mission-period ditch (*zanja*) to some unidentified features south of the Mission Adobe. Alternatively, the ditch may have been a drain for water runoff from the north side of the building (Felton 1995).

The Loma Prieta earthquake in October 1989 affected the time schedule and goals of that year's archaeological investigations. Although the ground movement damaged the Mission Adobe, it survived the earthquake and aftershocks relatively intact. Some hairline cracks in the walls expanded, additional cracks appeared, and some interior walls spalled badly. Damage was minimal, in part because of the strengthening of the building by the recent restoration work (Hildebrand 1991:196–200). Archaeologists documented the location of new cracks and other damage to the Mission





Figure 4.2 Room 4 of the Mission Adobe, reconstructed to resemble its appearance in the Mission period

Adobe before they were repaired, and restoration proceeded.

Interpretive plans for the Mission Adobe called for room 4 to be an exhibit of reconstructed neophyte quarters (figure 4.2). Construction work stabilized and repaired the room following the aftershocks, and excavations focused on making it suitable for exhibition and interpretation. Workers further investigated this area and repaired minor earthquake damages. As part of the interpretive plan, a window was placed into the floor of room 1 to show the underlying foundations of the other building (Hildebrand 1991:203).

After evaluating and repairing building damage, attention again turned to the area of room 8 outside the west end of the building and further exploration of the possible short section of water ditch (Hildebrand 1991:204–207). Archaeologists exposed additional footings of room 8 and made an unsuccessful search for the original Mission-period adobe floor. Investigations also further defined the ditch and its complex relationship to the footings in room 8.

The last field season to produce artifacts and data for the present study was in 1990 to 1991. Attention focused primarily on finishing the reconstruction work and the interpretive displays, which limited archaeological investigations. Workers removed all historic corridor surfaces on the exterior of the Mission Adobe, replacing them with new floors that could sustain heavy visitor impact while still projecting an image of the original surface. Excavations were made in the backyard area while monitoring installation of an enclosing fence. Subsurface investigation recovered few artifacts during this field season (Hildebrand 1991:213–219). Only limited archaeological work in the yard area of the Mission Adobe has occurred since 1991.

## STRATIGRAPHY

DPR archaeologists excavated areas in natural or cultural stratigraphic layers whenever possible. They differentiated strata through subjective observations during excavation. Figure 4.3 is a typical stratigraphic profile, drawn from room 5. Although there were general similarities, stratification varied throughout the site, and each major area was considered separately in terms of its strata and corresponding temporal assignments. In contrast, Cabrillo College archaeologists used arbitrary 6-inch levels in their investigation of the southwest end of the Angled Adobe. While these arbitrary levels can be partially correlated with the natural and cultural strata, the match is not perfect.

Gross temporal categories can be assigned to the strata identified at the Mission and Angled Adobes. These periods apply specifically to Mission Santa Cruz archaeology and its sequence of building construction and habitation (see tables 4.1 and 4.2). A few neophytes remained in the building into the 1840s, but the character of the deposits of the Post Mission period (after 1834) reflect mostly the material constituents of the artifacts and strata resulting from the activities of the Mexican and Irish families that resided in the Mission Adobe. This is preceded by the Late Mission period (circa 1824–1834), dating roughly from construction of the surviving seven rooms of the Mission Adobe to the time of secularization. The Early Mission period (circa 1800–1824) dates from the estimated time of construction and occupation of the Angled Adobe. Beneath the strata from the Early Mission period was sterile subsoil, generally lacking in artifacts. Table 4.2 presents volumes excavated from proveniences within the Mission and Angled Adobes and their corresponding yard areas. While determination

Table 4.1 Stratigraphic deposits

Period	Calendar date	Activities
Post Mission	1834 –	Postsecularization occupation of Mission Adobe, non-neophyte habitation
Late Mission	Circa 1824 to 1834	Construction and occupation of Mission Adobe, neophyte habitation
Early Mission	Circa 1800 to 1824	Construction and occupation of Angled Adobe, neophyte habitation
Subsoil	Prior to 1800	Sterile sediment lacking in artifacts

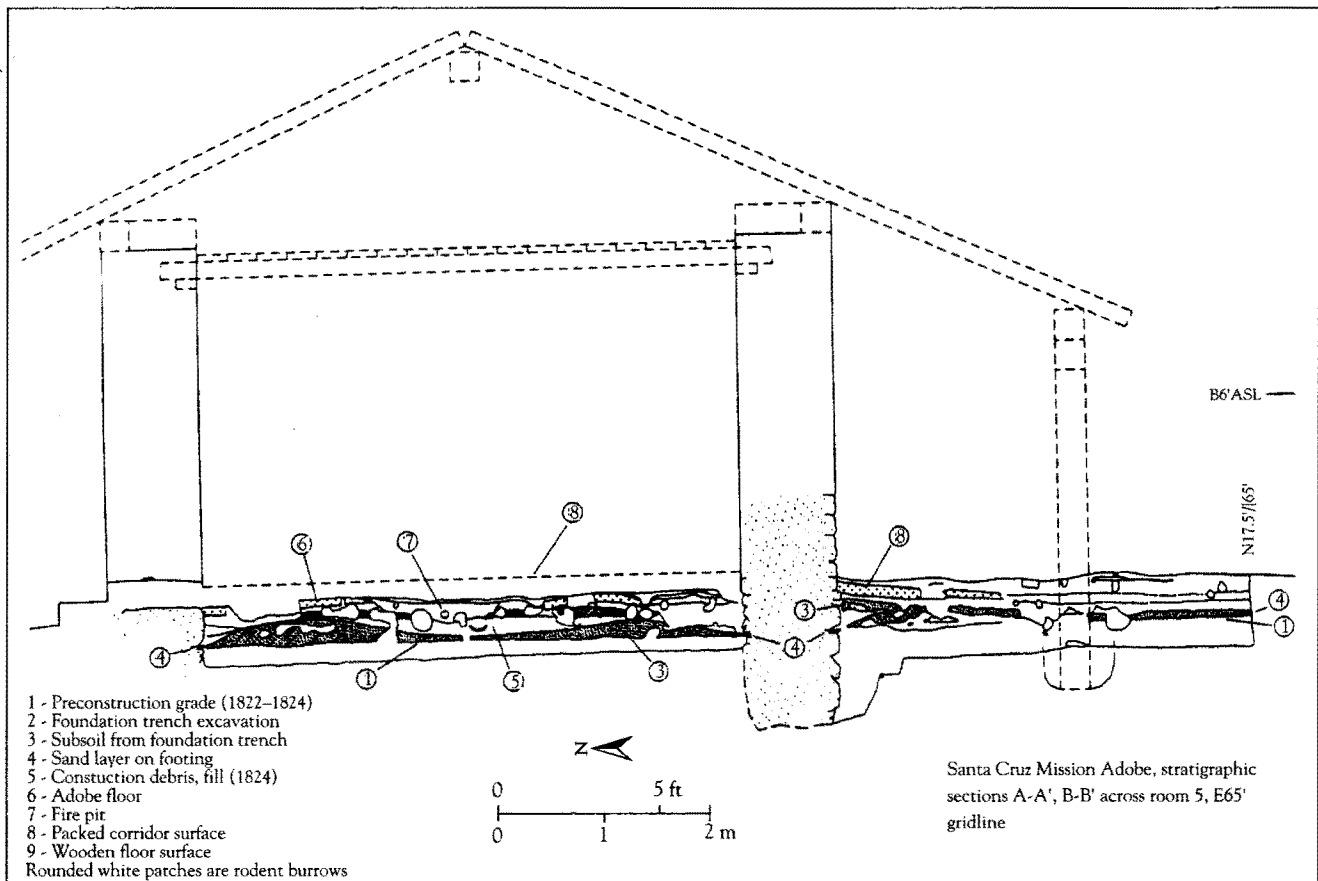


Figure 4.3 Santa Cruz Mission Adobe, stratigraphic profile across room 5 and south corridor. Illustration by David L. Felton

of volume can be important, especially when sites are excavated using regular square units, it becomes less significant in stratigraphic excavations. More important is the relationship of artifacts to particular strata and association with particular features and living areas. The importance of artifact association and consideration of deposition processes in interpreting the archaeological record is addressed below in the discussion of strengths and weaknesses of the artifact collection.

Strata at the site identified during excavation were often not discreet because of human and animal activity, which caused the mixing of deposits. Natural mixing processes blurred many archaeological units (see table 4.2). Some areas were more disturbed than others—particularly the loose fill under the wooden floors in the Mission Adobe that was badly churned by rodent and construction activities. This fill was found to contain artifacts representative of the full occupation span of the building. These and other layers that could not be reliably assigned to a particular period were called mixed deposits. The following is a descriptive summary of the stratigraphy and features within each general excavation area, as provided in the annual field progress reports (Hildebrand 1991) and Cabrillo College accounts (Edwards and Simpson-Smith 1987).

#### MISSION ADOBE

Some correspondence occurred between the interior and exterior stratigraphy of the Mission Adobe (figure 4.3). Inside the Mission Adobe, overlaying the building's original adobe floors, were deposits that yielded the bulk of artifacts. These were not sealed deposits but loose fill, or overburden, including materials deposited on and under the floors throughout the life of the building and material from deeper strata, redeposited by rodents. The overburden (stratum 1) was a mixed deposit that included both mission and Post-Mission artifacts. Rodent activity and construction disturbed this fill. Artifacts from the overburden are labeled as being from mixed deposits.

Although the floor plan of the building had been heavily modified by successive renovation, archaeologists could differentiate mission rooms (the arrangement of the adobe during its occupation by neophytes) and later additions. Figure 4.1 illustrates the layout of the original configuration of the building; figure 4.3 shows a typical interior and exterior cross section, across room 5 and the south corridor. Each room had several features in common, including a centrally located fire pit. The condition and contents of the pits varied in configuration. Many rooms had secondary fire pits. Mission-period floors were made of adobe blocks, laid into a

Table 4.2 Excavated areas: deposits and volume of excavated earth (in cubic feet)

Provenience	Early Mission	Volume	Late Mission	Volume	Post Mission	Volume	Mixed Deposits	Volume
<b>Mission Adobe</b>								
Room 1	✓	1.55	✓	8.58			✓	42.33
Room 2	✓	0.50	✓	Und.			✓	Und.
Room 3			✓	2.35			✓	Und.
Room 4			✓	0.11	✓	Und.	✓	Und.
Room 5			✓	45.59			✓	Und.
Room 6			✓	15.69	✓	Und.	✓	Und.
Room 7			✓	8.30	✓	Und.	✓	1.03
Room 8			✓	0.60			✓	Und.
South corridor, west side			✓	84.35			✓	Und.
Rodriguez cookhouse area	✓	5.25					✓	Und.
<b>Angled Adobe</b>								
Northeast end	✓	64.86					✓	Und.
Central area	✓	86.32			✓	Und.	✓	Und.
Southwest end (Cabrillo College)	✓	162.60			✓	Und.	✓	3.13
Yard, Feature 47	✓	12.60					✓	Und.
Yard, central area	✓	19.07						
Yard, west side (south corridor)	✓	115.85						
Feature 44, bone pit	✓	24.3					✓	Und.
<b>TOTAL</b>						492.90		165.57

Und. = undetermined

✓ Indicates deposits found

Note: Early Mission deposits: ca. 1810 to ca. 1824; Late Mission deposits: ca. 1824 to 1834; Post Mission deposits: post 1834; and Mixed deposits: date of deposition uncertain

shallow bed of mud mortar in simple rows with no elaboration. The underlying surface below the adobe block floor showed evidence of construction techniques. Builders scattered earth removed from foundation trenches, pieces of adobe block, fragments of mudstone, and chunks of *tejas* (roof tile) over the area of the original grade in all subfloor areas excavated. Before laying an adobe block floor, neophyte laborers leveled the construction rubble in each room, providing an even surface raised about 30 cm above the original grade surface. Each room also had unique characteristics the archaeology had to address. These are summarized below along with the condition of the archaeological features.

### Room 1

This part of the Mission Adobe overlaps the northeast end of the Angled Adobe. As a result, the stratigraphy was more confusing than in the rooms in the rest of the building. Gopher burrows and tunnels further mixed the stratigraphy of the room. At least two remodels of the floor including the addition of wooden joists occurred during the Post Mis-

sion period. The adobe block floor was present in this room but in poor condition, as was a fire pit dating to the Late Mission period. Many important Late Mission period artifacts came from this room.

### Rooms 2 and 3

The adobe block floor was present in the eastern half of room 2 but in relatively poor condition owing to later floor construction and rodent activity, closely resembling that of room 1. Around 1885 the Rodriguez family knocked out the partition between rooms 2 and 3 to expand the interior space. This construction completely removed the original adobe block floor of the western half of room 2 and all of room 3. As a result, the stratigraphy in rooms 2 and 3 was not intact, although archaeological investigations uncovered in room 3 the bottom of a fire pit from the Late Mission period.

### Room 4

This room had the most intact Late Mission period assemblage and features. Consequently, it was selected as the ar-

chaeological room for interpretation at the Mission Adobe. It had the best-preserved adobe floor. During the Mission period, early occupants patched the floor by creating a layer of broken tejas and covering them with a mud mortar. Partial removal of the adobe floor blocks for construction of a viewing platform revealed a continuous layer of mud mortar under the blocks, further evidence of construction technologies. Two fire pits were found in this room, one in the center and the other in the northeast corner. Also uncovered were sixty-two roughly square holes in the Late mission floor, varying slightly in depth and size. Mission records indicate that a cobbler or leather worker lived in this portion of the building. Archaeologists suggested that these holes were the marks of a portable shoe last with a pointed end that could be hammered into the ground or work bench to anchor it. Recovered pieces of leather and the fragments of several shoes supported this hypothesis.

#### Room 5

Porter et al. (1981) reported on the excavation of a 2½ foot trench in room 5. Archaeologists also investigated the room during the 1986 to 1987 field season, revealing portions of a well-preserved adobe block floor. Also present was a large floor area repaired with a mud mortar patch, although it did not show the elaborate preparation of room 4. In 1981, archaeologists had excavated half of a centrally located fire pit. During removal of the overburden in the later field season, the field crew investigated the other half of the fire pit. Excavations also revealed a secondary fire pit located against the west wall of the room.

#### Room 6

Like room 5, room 6 had only portions of a preserved adobe block floor. It too showed heavy patching with mud mortar, especially in the northeast corner and near the doorway. Even after these repairs, the floor was uneven. Later Post Mission period inhabitants must have recognized this, as they partially excavated trenches for floor joists laid for the wooden floor in the west half of the room but set joists directly onto the ground surface in the eastern half. Rather than a single central fire pit, room 6 had several small fire pits clustered haphazardly in the center of the room. One pit was deeper than the others and had a granite and basalt cobble lining. Two additional smaller ash deposits against the western wall were too small and shallow to be pits.

#### Room 7

The original adobe floor of room 7 was badly disturbed. Partial collapse of the room and exposure to the elements before occupancy by the Armas family in 1848 to 1851 greatly contributed to its decay. The adobe floor was barely discernible in the western third of the room. A large, 4-foot diam-

eter central fire pit in the room was, bisected by floor joist trenches from the Post Mission period. A secondary fire pit was located in the eastern portion of the room and a third was found in burned area near the south wall.

#### Room 8

Archaeological monitoring of restoration work revealed the partial foundations of the room that once extended westward from room 8 as well as feature 44, a large bone-filled pit and trash deposit. The foundation of the rooms bisected the pit, suggesting use of the pit before the construction of the Mission Adobe. Its stratigraphic position under the foundation of the Mission Adobe identified feature 44 as belonging to the Early Mission period, before the 1822 construction date for the western end of the Mission Adobe. Archaeologists also discovered a subsurface water channel under room 8, made of inverted, overlapping roof tile buried in a narrow ditch. It may be related to the *zanja* and constructed for carrying water to the south yard of the Mission Adobe.

#### South Corridor

Excavations revealed evidence of several postholes along the south corridor of the Mission Adobe. Archival documents indicate that the Adobe had a low-pitched tile roof with wide overhangs on each side of the building. Archaeological evidence seems to support this reconstruction. In the south window of room 7, two large posts with tenons on one end were recycled, serving as lintels for a window renovated circa 1848 to 1851. The length and shape of these posts suggest that they served as supports for the south corridor. Dimensions of the excavated postholes closely matched these posts and the projected mission roof line, further supporting this theory. Additional archaeological investigation revealed several hard-packed surfaces that once formed the original corridor floor. The surface sloped southward away from the Mission Adobe, probably for drainage. Relatively rich mid-nineteenth century (Post Mission) assemblages were recovered above the corridor surface, with earlier pre-1824 materials below.

#### ANGLED ADOBE

The exact construction date of the Angled Adobe is uncertain. Annual reports are missing for most of the first decade of the 1800s. By process of elimination, it seems likely that neophytes constructed the Angled Adobe during that decade. Artifacts recovered from the Angled Adobe (discussed in later chapters) support the conjectured date of construction. The location of the adobe on the site of a later neophyte dwelling and an artifact assemblage resembling that of the habitation debris found inside the Mission Adobe strongly suggests that the Angled Adobe served as neophyte

quarters. Possible reasons for the building's collapse are discussed in chapter 5.

Both DPR and Cabrillo College conducted excavations in the Angled Adobe, using two different methodologies. As previously stated, DPR archaeologists excavated the site according to its stratigraphic layering. Cabrillo College laid out a north-south excavation grid and used arbitrary 6 inch levels to excavate the southwest end of the building. Some correspondence occurred between the stratigraphic and arbitrary layers, although correlation is not exact.

### Northeast End

The overlapping of the Mission Adobe on top of the Angled Adobe foundations in the northeast corner of the building further confuses interpretation of the archaeological record. Demolition of the Angled Adobe and the creation of a leveled area in preparation for the construction of the Mission Adobe blurred the relationship of the two buildings, but the foundations of the Angled Adobe were archaeologically distinct. The footings were in good condition, partially because broken roof tiles and other rubble capped them before construction of the Mission Adobe. Deep excavation of adjacent School Street during the 1890s obliterated the extreme northeast end of the Angled Adobe. Just south of room 1, in the yard and corridor area of the building, additional footings of the Angled Adobe were found in good condition. Because of overlap of these two buildings, assigning apparently mission-related artifacts from room 1 to the Early or Late Mission periods was difficult.

### Central Area

Overburden and disturbed soils were common in the central area and surrounding yard. A few areas contained a hardened adobe layer that was likely mission related, but it produced few artifacts. Excavations uncovered a stratum that probably dated to the Early Mission period, although some mixing occurred where this stratum directly interfaced with the overburden. The central area had several important features, including portions of mudstone foundation walls, gaps in the foundations that probably served as doorways, and a fire hearth. Low spots in the doorways were rich in faunal and floral deposits, possibly reflecting household debris that had accumulated over several years.

Archaeologists found several trash pits of the Post Mission period. One of these pits probably represents the location of a late-nineteenth-century outhouse. The contents of the privy found in the central area of the Angled Adobe show the kinds of mixing of stratigraphic cultural layers that can sometimes occur. Along with late-nineteenth-century ceramics, glass, and metal found in the privy deposit were artifacts frequently associated with the Mission period, including chipped stone, edge-decorated English earthenware,

annular ware, and Chinese export porcelain.

### Southwest End (Cabrillo College)

Cabrillo College field students excavated strata in the southwest end of the building in arbitrary 6-inch levels using a grid system that corresponded to the orientation of the building. Using Cabrillo College field notes, David L. Felton has compared these arbitrary units with the students' stratigraphic section drawings (or profiles). He determined that levels below one foot most likely represent relatively undisturbed deposits of the Early Mission period (Felton 1992). The Cabrillo College excavations uncovered exterior mudstone foundations of the Angled Adobe along with some anomalous foundation gaps that, like those in the central area, probably served as doorways. Archaeologists also expected to find interior foundations. Instead, excavations showed evidence of several postholes in the interior of the building, perhaps suggesting the use of palisade walls for interior partitions.

### RODRIGUEZ YARD, COOKHOUSE

The primary goal of excavation in the cookhouse area was to expose foundations perpendicular to the south exterior wall of the Mission Adobe, which represented an addition built by the Rodriguez family sometime during the 1840s. Most of the recovered artifacts were from the Post-Mission period. Some mission related artifacts occurred in these areas such as spire-lopped *Olivella* shell beads. The presence of these artifacts probably relates to neophyte use of the general yard area where the cookhouse was later constructed. During subsequent construction of the cookhouse, deposits and artifact assemblages were mixed.

### FORMATION OF THE ARCHAEOLOGICAL RECORD

To realize the potential research value of the artifacts recovered from the Mission and Angled Adobes, it is important to understand the constraints and complexities of the archaeological record. Rarely is an archaeological site pristine. Edward Harris (1979:9) notes that artifacts, and by extension the archaeological record, are not "...subject to a normal life-cycle or to the process of evolution by natural selection." Human activity is largely responsible for creation of the archaeological record. Both deliberate and inadvertent actions by humans also determine whether a site is destroyed or conserved. Artifacts deposited in earlier periods are sometimes disturbed by later habitation and construction. As a result, earlier artifacts become part of later deposits. Time passes and additional depositions and disturbances occur. This complexity is compounded when the earlier materials are displaced upward through natural processes and animal activity, becoming mixed with contemporary arti-

facts. Erosion, decay, plant growth, and natural movement of the soil all affect the location and deposition of archaeological materials. Animals such as rodents and earthworms can further confuse the stratigraphy with their burrowing and storing. Before archaeologists can assess a site in terms of its research potential, there must be an understanding of both natural and human activities that impact the archaeological record.

Many activities and events have disturbed the archaeological record of the Mission and Angled Adobes (Felton 1995). While it was possible to distinguish some strata of the Early and Late Mission periods, several deposits have been subsequently mixed. Rodent activity was evident in virtually all areas, especially inside the Mission Adobe, where gopher burrows disturbed much of the Mission-period stratigraphy and floor levels. Subsequent habitation of the Mission Adobe by the Mexican-American and Irish-American families who purchased the Adobe from the ex-neophytes added layers to the stratigraphy of the building and yard areas. Activities of the families also contributed to mixing of strata. Any attempt to reconstruct Mission-period deposits must consider the effect of this long-term habitation and how it altered the site's stratigraphy.

Stratigraphic disturbance is often compounded when new buildings are constructed on the site of earlier ones—particularly when the building material is earthen like adobe. When earlier sediment, along with its matrix of earlier artifacts, is used in the construction of later buildings, a mixing of earlier and later stratigraphy and artifacts results. Deposition, excavation, building, and collapse often make up a cyclic process that results in complex depositional realities. For example, the Mission Adobe has undergone many stages of remodeling, collapse, and renovation. In several rooms later occupants excavated trenches into the original Mission-period surface to lay joists for wooden floors. In the yard area on the Rodriguez side, several additions were made to the building, including the cookhouse. Part of the west end (room 7) collapsed before the Armas family remodeling of the building in 1848 to 1851. As a result, the Late Mission period floor in the eastern half of the room badly deteriorated (Hildebrand 1991:87). In effect, formation of the archaeological record at Santa Cruz Mission State Historic Park continues. In preparation for restoration of the Mission Adobe to its mission-era appearance, a team of archaeologists stripped away the various layers of the building (Felton 1987). Simultaneously, architects and construction workers renovated and partially reconstructed the building. Each alteration left its mark on the archaeological record.

Because it was where the Mission Adobe was con-

structed directly on top of the northeast end of the Angled Adobe, room 1 was perhaps the most complex area in terms of stratigraphy, depositional mixing, and assignment of artifacts to a specific period. To construct the Mission Adobe, the Angled Adobe (at least its northeast end) had to be completely leveled. Portions of the Angled Adobe appear to have been scavenged and reused in the later building. A dendrochronologist performed tree-ring analyses on several construction elements of the Mission Adobe (White 1988). Dates taken from a joist plate, a rafter plate, and two lintels cluster between 1823 and 1826, fitting in nicely with the known construction date of 1824 for the seven-room structure. One roof plate was anomalous, dating to circa 1810. This date would appear to match the hypothesized date range (1800–1810) of the Angled Adobe, suggesting that the builders reused wooden elements of this or another earlier building (Farris and White 1988). Several adobe blocks in the upper north wall of mission room 1 had plaster and whitewash on interior surfaces, suggesting reuse of adobe blocks and wooden members. It is likely that roof tile was recycled as well. The short period of existence of the Angled Adobe implies that the building was not stable and may represent a learning stage of adobe construction at Mission Santa Cruz (see chapter 5). The construction of the Mission Adobe on top of the foundations of the Angled Adobe resulted in the general mixing of artifacts from the Early and Late Mission period. This mixing was compounded by renovations made by later occupants.

Archaeological deposits of both the Mission and Angled Adobes have been seriously disturbed, but mixing of these deposits does not mean that their value is immediately negated. The integrity of the archaeological record is most often defined by the intact quality of site stratigraphy. Archaeologists must also define a site's importance by its ability to provide interpretations of past events. Although the integrity of strata has been compromised, the ability of the archaeological record to associate archaeological materials with a particular function or time frame has not been lost. Artifacts recovered from the Mission and Angled Adobes have retained their ability to inform about the building's inhabitants and to help reconstruct the lives of the neophytes. The archival record is equally important in this reconstruction. Documents left by Hispanic missionaries, soldiers, citizens, and the diaries of foreign travelers give some details of neophyte life within a mission setting. Yet with a few exceptions (Castillo 1992), the native perspective is missing from this documentation. This lack of archival information on neophyte life and habits, and the possibilities that the archaeological record and artifacts can

Table 4.3 Criteria used for inclusion of artifacts

		CONTEXT OF STRATIFICATION		
		Mission deposits	Mixed deposits	Post-Mission deposits
IDENTITY OF ARTIFACTS	Mission period	Included	Included	Included as indications of stratigraphic mixing
	Unknown	Included with explanation	Mostly not included—some artifacts included with explanation	Not included
	Post Mission period	Sometimes included as indications of stratigraphic mixing	Not included	Not included

fill this gap, increases the significance of the excavations at Mission Santa Cruz in spite of their less-than-ideal integrity.

#### STRENGTHS AND WEAKNESSES OF THE ARTIFACT COLLECTION

For cataloging purposes, DPR archaeologists grouped all recovered artifacts together by lots. Each lot represents a discreet area (such as excavation unit and level) used by archaeologists in the field to record both horizontal and vertical provenience. Later, during laboratory processing, David L. Felton gave each lot a temporal assignation according to the strata from which the lot was recovered: Early Mission, Late Mission, Post Mission, or mixed deposits. These designations were determined by reading field notes in combination with site drawings and profiles (Felton 1992). The designations generally correspond to stratigraphic layers, with some problems resulting from strata mixing. Artifacts that pertain to a particular period can occasionally be found in unexpected strata. For example, glass trade beads associated with Early or Late Mission periods are sometimes found in deposits from the Post-Mission period. In such cases, the artifact has to be considered on an individual basis, and its inclusion with other Mission-related material is a subjective decision. Many strata are discreet, making the assignment of artifacts to a particular period possible. A more complex issue is the usefulness of artifacts recovered from mixed-deposit layers.

A complicating factor in directly comparing Early and Late Mission archaeological deposits is the amount or volume of soil excavated. Whenever possible, Larry Felton (1992) estimated the volume of each stratum excavated throughout the site. Based on these figures alone (see table

4.2), it would appear that deposits of the Early Mission period heavily outweigh those from the Late Mission period. This does not present an entirely accurate picture. As stated above, the stratigraphy inside the Mission Adobe was compromised by occupation of the Post-Mission period, resulting in widespread occurrence of layers labeled mixed deposits. Many artifacts from these mixed deposits, by form and function, are attributable to the Mission period. Inclusion of mixed-deposit artifacts with Mission-period assemblages increases not only the artifact sample but also the overall volume of soil excavated. Comparison between archaeological assemblages from the Mission and Angled Adobes is useful and illustrative of overall patterns and changes in material culture, although readers must bear in mind what is being compared.

Another factor that has significant impact on the interpretation of the artifact assemblage is the choice of areas excavated. Both DPR and Cabrillo excavations focused primarily on the buildings. Some yard areas such as the south corridor were investigated, but these areas were secondary to excavations within the buildings. Rooms within the buildings represent occupation areas. Yard areas usually represent activities of trash scatter and deposit. Formation of these types of features implies separate activities, representing different aspects of neophyte daily life.

Cycles of occupation and deterioration of the Mission Adobe and destruction of the Angled Adobe affected both the number and types of artifacts deposited in the archaeological record. Occupants have lived in the Mission Adobe almost continuously since its construction. Among the artifacts represented in the archaeological record are mostly materials lost, discarded, or simply abandoned. For example, after the sale of the building to the Mexican-American fami-

lies, ex-neophytes left behind those materials that they considered no longer useful. Many materials that make up the archaeological record were deliberately discarded. This is especially true of artifacts from archaeological features such as fire hearths and the large bone pit. It can be assumed that some items such as the small but valuable glass beads and bone ornaments were simply lost.

Artifacts recovered from the excavations at Mission Santa Cruz can generally be placed in three categories: discrete artifact assemblages that are identifiable with the Mission-period occupation of the building, large groups of artifacts from mixed deposits that could belong to either mission or Post Mission periods, and artifacts that by identification or context are clearly associated with occupants of the Post Mission period. Table 4.3 presents criteria used for inclusion of artifacts in the present study. In the first case, Mission-related materials include artifacts produced solely by Mission Indians or Euro-American artifacts used predominantly during the Mission period. Artifacts in the mission category include shell beads, several varieties of glass beads, chipped-stone artifacts, ground stone, bone artifacts, mission pottery, majolica, and blue-on-white Chinese export porcelain. Examples of artifact materials that could originate from either mission or Post-Mission periods, are shellfish, mammal, fish, and floral remains. Only samples from stratigraphic layers definitely associated with Early or Late Mission periods are used in this study. Some artifacts that occur in mixed deposits but can be associated with neophyte occupation of the building are included in the descriptions of native technology and material culture. Chipped stone, bone artifacts, and shell beads are examples. Artifacts known to date to the Post-Mission period are not included in the present study. Several databases were created to help summarize and study the artifact collections.

The archaeological record represents only a fraction of the material culture available to Native Americans in the mission context. It follows that it also represents only a small

portion of their everyday lives. Differences in the material assemblage of Ohlone and Northern Valley Yokuts are not discernible from one another in this archaeological context. Most material items recovered do not contain stylistic characteristics that would reflect a group's identity. Extrapolating from the known recruiting dates of the two groups, it could be assumed that Ohlone people lived in the Angled Adobe and Yokuts lived in the Mission Adobe. Another possibility is that Ohlone peoples also occupied the Mission Adobe, as they had lived longer at the mission and were therefore likely to have been given a higher priority for permanent housing. Documentary evidence suggests that both Yokuts and Ohlone occupied the Mission Adobe. Distinguishing Native American artifacts from artifacts of Hispanic or European origin is often possible. Even this line is blurred, however, as neophytes used many European artifacts, and Hispanic residents quite possibly used some native items.

For the most part, variations in the Mission-period archaeological assemblages of the two buildings are negligible. Recovered cultural materials generally have more similarities than differences. Evidence from the archival record suggests that once inside the mission system, neophytes could no longer identify themselves solely with their native cultures. Given the limitations of both the archaeology and the written records, and cultural realities of mission life, recovered artifacts must be viewed as representing the assemblage of an amalgamated group of Native American neophytes with cultural traits stemming from Ohlone, Yokuts, and Hispanic traditions. It is the archaeological assemblage of a culturally changed group. The archaeological assemblage has much in common with both native and Hispanic material culture but cannot be wholly identified with either. It represents a unique material culture with ties to both traditions but with a character all its own that has significant potential for reconstructing neophyte life within a mission setting.



# Changes in the Physical Environment

**H**ISPANIC COLONIZATION caused dramatic alterations of the physical environment in California. Along with settlement by missionaries, soldiers, and settlers came the intrusion of foreign plants and animals the newcomers brought with them. Old World species rapidly overwhelmed, replaced, and displaced many types of native plants and animals. The result was a physical world that in many ways was no longer recognizable to California's native inhabitants. Construction of the mission, with its many buildings and rigid, organized space, compounded the effect of an environment transformed.

Earliest Spanish accounts of the area near Mission Santa Cruz describe a steep and overgrown terrain filled with willows, cottonwood, and sycamore. Other plants that impressed the early missionaries included the mountain lilac, azalea, manzanita, and madrone (Torchiana 1933). Huge, majestic redwoods grew on the slopes of the Coast Ranges facing the Pacific Ocean in stands that extended from present-day Oregon to northwest San Luis Obispo County. At higher elevations the region supported pine and fir forests. In low-lying areas near the ocean were pockets of marsh grasses, or "tule lands," providing areas for wetlands wildlife and plants (Beck and Haase 1974:8). All three of the vegetation zones were larger and more stable in the past than they are today. Changes wrought by European settlers and their animals altered the physical landscape surrounding the mission with extraordinary rapidity and thoroughness.

Franciscan missionaries introduced many new species of plants to the environment of Alta California. Many of these plants were agricultural, providing food staples for mission communities and neophytes as well as surplus that missionaries traded for material items that neophyte labor could not produce at the missions. Along with common agricultural products such as wheat, beans, and corn came weeds.

The missionaries, with neophyte labor, controlled the growth and propagation of their agricultural products, but they could not control the weeds. Native plants succumbed to weeds such as chicory and sow thistle. Native plants were also unable to withstand the impact of the domesticated animals brought by the new settlers. The mission cattle and sheep literally chewed apart the native landscape, helping to open a way for the hardier European domestic plants and weeds, better adapted to the feeding habits of such grazing animals. The importation of nonnative plants to California significantly and irreversibly changed the landscape surrounding the missions and the lifeways of the native peoples.

A study of vegetal materials such as pollen samples from adobe blocks and charred or desiccated plant remains recovered from archaeological contexts can reveal the intensity and degree of change. These sources contain complementary information. Pollen samples from adobe blocks consist of largely incidental inclusions that provide data on the general environment surrounding a particular building at the time of its construction. Plant remains from archaeological contexts such as fire pits, on the other hand, reveal conscious selection of vegetal materials for specific human uses, especially as a source of food.

## POLLEN ANALYSIS OF ADOBE BLOCKS

**B**ecause neophyte laborers used local soils to make adobe blocks, the pollen found in blocks can give a general idea of surrounding vegetation at the time of construction. Soil scientist George Hendry conducted the earliest studies of plant content in adobe blocks from buildings in California, Arizona, and northwestern Mexico (Hendry 1931, Hendry 1934, Hendry and Bellue 1936, and Hendry and Kelly 1925). His purpose was to construct a chronological framework for the introduction of European weeds and agricul-

tural plants to the western region of the New World. Hendry studied plant remains from Mission period adobe bricks at San Antonio, San Fernando Rey, La Soledad, San José, San Juan Bautista, and San Francisco de Solano. He also took samples from two Mexican period rancho buildings in Monterey County and one in Sonoma County. More recently, researchers have conducted studies of plant materials from adobe blocks with some success at Mission Santa Inés (Duncan 1989, Honeysett 1989b) and at two Mexican-period adobes near Mission San Antonio—the Sanchez Adobe (Miksicek 1991, 1995a) and the Gil Adobe (Miksicek 1995b). Pollen studies of adobe melt have proved less useful (Miksicek 1995a).

G. James West (1985) identified and initially interpreted pollen recovered from five adobe blocks and two plaster samples from the Mission Adobe at Santa Cruz. For comparison, archaeologists took a pollen sample from an adobe block taken from a historic building today known as the Branciforte Adobe, constructed during the Post Mission period. Samples were chosen based on their location within the Mission Adobe and their ability to represent habitations of both the Mission and Post Mission periods. Although the sample was small, some initial conclusions and hypotheses concerning the surrounding landscape are possible. Table 5.1 gives raw data counts from the pollen samples. From these same samples, Elizabeth Honeysett (1989a) identified seed remains and desiccated plant remains. This study was less conclusive but provided useful information on the kinds of plants found in the immediate environment.

The pollen analysis demonstrated the replacement of native plants by introduced vegetation, or more colloquially, the takeover by new species of weeds. European weeds of the mustard family (Compositae, Cruciferae) had the highest pollen counts in the adobe block and plaster samples from the Late Mission period (figure 5.1). Native redwood (*Sequoia* sp.) also had a high presence. Pollen from grasses (Gramineae) and sunflower (Compositae) families each accounted for less than one-tenth of the material recovered. Though they are probably native plants, identification of species is uncertain. Other exotic weeds such as the chicory and sow thistle family (Liguliflorae) were also present, followed by native plants such as the goosefoot pigweed family (Chenopodiaceae) and native trees of oak (*Quercus* sp.), pine (*Pinus* sp.), and alder (*Alnus* sp.). Nonnative plants constitute at least 40% of the pollen sample, and possibly as much as 60%, or approximately half of all the pollen in the environment around Mission Santa Cruz.

It cannot be assumed that the pollen assemblage exactly represents all the plant communities in the Santa Cruz vicinity. Still, the amount of pollen from nonnative plants in the samples at this relatively early date (circa 1824) is impressive, especially considering that most of the pollen rep-

resented weeds and not species cultivated for food. The story is similar for the adobe pollen samples from the Post Mission period. By the 1830s to 1840s, exotic plants made up over half the pollen count, although the sequoia, grass, and sunflower families are still present. Encroachment of the environment by exotic plants was almost incidental to the Franciscan plan for the landscape surrounding the mission, but devastating to the Native American cycle of collecting and harvesting wild plants.

## PLANT REMAINS

Seeds and other plant remains recovered from archaeological contexts within the Mission Adobe and Angled Adobe tell a similar tale of European plant encroachment in the environment surrounding Mission Santa Cruz. Archaeological contexts from which vegetal remains were taken include adobe bricks, fire pits, trash deposits, floors, exposure of doorways, and soil samples from several archaeological strata.

Elizabeth Honeysett (1989a) identified seeds and other vegetal remains in adobe bricks from the Mission and Branciforte Adobes. These remains were not as readily quantifiable as the pollen samples because of the inflorescent nature of the wheat remains. Some observations can be made concerning the presence and absence of species in the bricks from the Late Mission and Post Mission periods. Several native plants, including spike bent grass (*Agrostis exarata*), sedge (*Carex* sp.), goosefoot and pigweed (*Chenopodium* sp.), forget-me-not (*Cryptantha* sp.), foxtail barley (*Hordeum cf. jubatum*), rush (*Juncus bufonius*), pineapple weed (*Matricaria matricarioides*), and common soliva (*Soliva sessilis*) occur in adobe blocks from the Late Mission period. These species are completely absent in blocks from the Post Mission period. Conversely, some exotic plants that were not in adobe blocks from the Late Mission period appear in blocks from the Post Mission period, including wild oat (*Avena fatua*), bur-clover (*Medicago polymorpha*), and catchfly (*Silene gallica*). Most of the quantifiable seeds from adobe blocks from the Post Mission period were from nonnative plants, especially wheat.

Deborah Meyer (1991), a botanist in the California Department of Food and Agriculture, identified plant remains from archaeological contexts within the Mission and Angled Adobes. These vegetal remains are presumably remnants of meals consumed by neophytes within the confines of the Mission and Angled Adobes. Most of the vegetal remains submitted for identification were charred. Unlike pollen preserved in dry adobe blocks, most archaeological contexts are subject to the deteriorating effects of moisture, although carbonization helps protect samples. It can be assumed that many uncharred vegetal remains did not survive in the archaeological record. Rodent disturbances probably also af-

**Table 5.1 Pollen samples from adobe blocks taken from the Mission Adobe (Late Mission period, ca. 1824) and Branciforte Adobe (Post Mission period, after 1834)**

Species/Family	Common name	Origin	Mission Adobe*	Branciforte Adobe*		
<i>Centaurea</i> sp.	Star thistle	Introduced	1	0		
Compositae (low stalk)	Probably mustard family	Introduced	712	567		
Cruciferae	Mustard family	Introduced	26	2		
Geraniaceae	Geraniaceae family	Introduced	23	18		
Leguminosae	Bean family	Introduced (New World native)	1	4		
Liguliflorae	Chicory, sow thistle, dandelion	Introduced	77	69		
<i>Aesculus</i> sp.	Buckeye	California native	1	0		
<i>Alnus</i> sp.	Alder	California native	27	11		
<i>Artemisia</i> sp.	Coastal sage	California native	9	4		
Chenopodiaceae	Goosefoot, pigweed family	California native	47	18		
Corylaceae	California hazel family	California native	1	2		
Cyperaceae	Sedge family	California native	3	1		
<i>Eriogonum</i> sp.	Wild buckwheat	California native	17	6		
<i>Gilia</i> sp.	Cushion gilia	California native	9	8		
<i>Lithocarpus</i> sp.	Tan oak	California native	2	6		
<i>Pinus</i> sp.	Pine	California native	31	15		
<i>Plantago</i> sp.	Plantain	California native	3	3		
Polemoniaceae	Phlox, gilia family	California native	1	1		
Polygonaceae	Wild buckwheat family	California native	17	7		
<i>Pseudotsuga</i> sp.	Douglas fir	California native	3	3		
<i>Quercus</i> sp.	Oak	California native	43	13		
Rhamnaceae	Buckthorn-ceanthos family	California native	3	0		
<i>Rhus</i> sp.	Poison oak	California native	4	1		
Rosaceae	Rose family	California native	4	6		
<i>Sequoia</i> sp.	Sequoia	California native	664	267		
Umbelliferae	Parsley family	California native	3	1		
Caryophyllaceae	Pink family	California native?	1	0		
Compositae (high stalk)	Sunflower family	California native?	184	107		
Gramineae	Grass family	California native?	205	123		
Onagraceae	Primrose family	California native?	5	6		
Unknown	Unknown	Unknown	291	135		
Total introduced			840	35%	660	47%
Total native			892	37%	373	27%
Total native?			395	16%	236	17%
Total unknown			291	12%	135	10%
<b>TOTAL</b>			<b>2418</b>	<b>100%</b>	<b>1404</b>	<b>101%</b>

\* Raw pollen count  
Source: West 1985

fects what materials occur. Quantifying surviving vegetal remains gives information about neophyte diet (further discussed in chapter 6) and also the kinds, numbers, and types of plant materials around the mission. Table 5.2 summarizes vegetal remains from combined archaeological contexts of the Early and Late Mission period.

Wheat was the most commonly recovered type of plant remain from archaeological contexts. Over half the identified seeds were of wheat (figure 5.2). Other European foods introduced to the Mission Santa Cruz area were peaches, watermelon, fava bean, barley, walnut, olive, peas, almonds,

and cherry (possibly plum or apricot). Common European plants or weeds recovered from archaeological contexts include holly, bull mallow, bur-clover, and catchfly. Cheeseweed was also found in some quantity (4%). Europeans used the edible seeds and young shoots of this plant as a food source (Clarke 1977:186–187), but Native Americans in California used it primarily as a poultice to cure running sores, boils, and swelling (Bocek 1984:250, Heizer and Elsasser 1980:247, and Mead 1972:129–130).

Before the arrival of the missionaries, both Yokuts and Ohlone peoples relied on vegetal sources as a staple of their

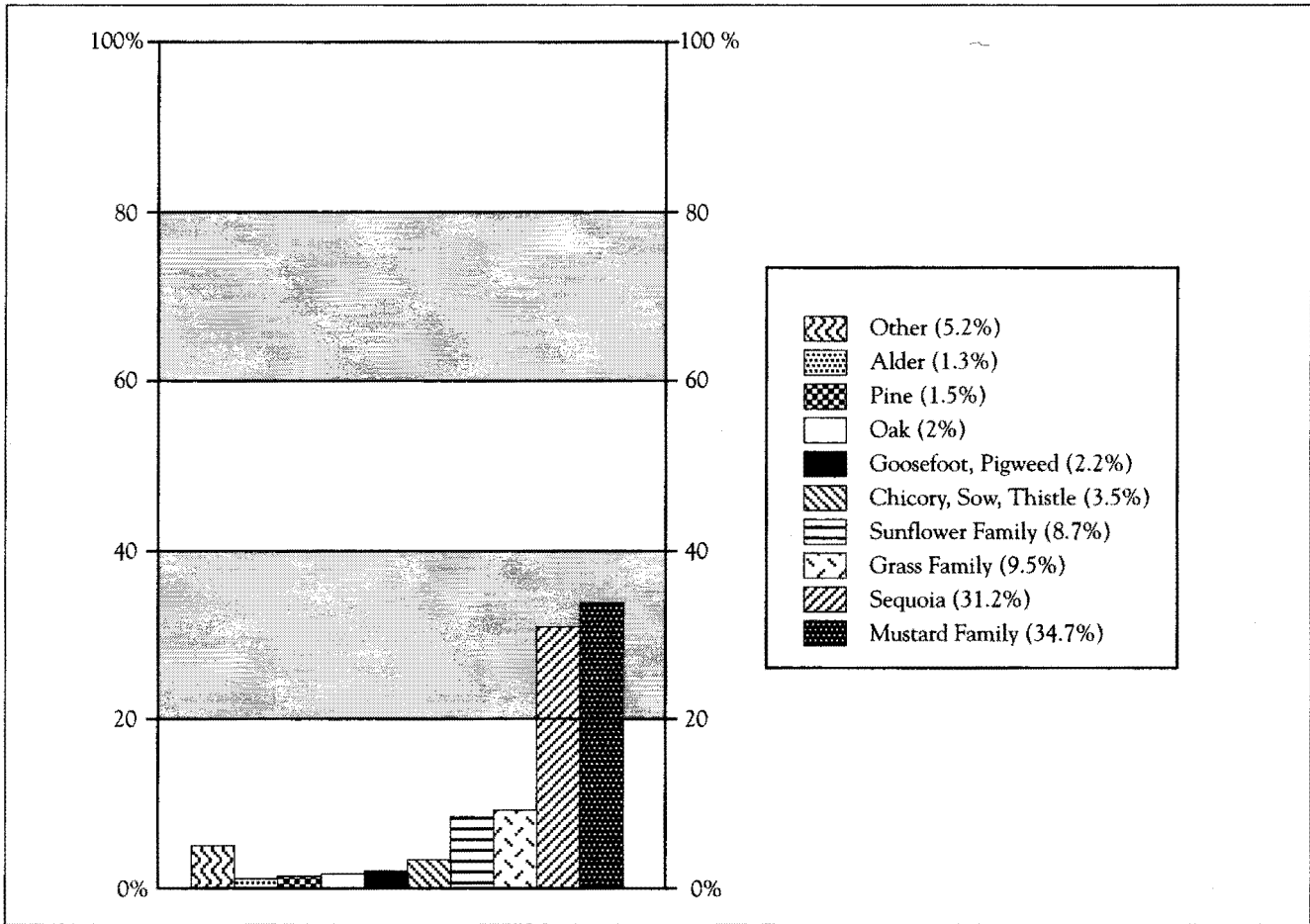


Figure 5.1 Pollen from samples of the Late Mission period

diet (see chapter 3). These peoples had a complex understanding of plant cycles and uses in the native landscape (Blackburn and Anderson 1993, Bocek 1984). Suggestive of the drastic makeover of the environment surrounding the mission, archaeological investigations recovered only one commonly used vegetal native food source in any quantity. Hazelnuts make up less than one-tenth of the excavated plant remains. The staple of the native diet, the acorn, is entirely absent. Other native plants not used as foods, including catclaw, redwood, violet, and grape, were recovered in small numbers.

Figure 5.2 shows the extent to which imported plants dominated not only the neophyte diet but also the surrounding agricultural landscape during the Mission period. Table 5.2 summarizes species origin of Mission period vegetal samples. More than 60% of the remains are introduced exotics. Franciscans also imported a variety of New World plants that were not native to California. Some Native American groups in the Greater Southwest area of New Mexico and Arizona grew corn, squash, beans, and bottle gourds. Their agricultural use in coastal California, however, was unknown before their introduction by missionaries, presumably from Mexico. These New World native plants make

up a significant portion (over 15%) of the recovered food remains. Less than 10% of the vegetal remains are from California plants native to the Santa Cruz area.

As the landscape surrounding Mission Santa Cruz changed drastically, neophyte uses of that landscape also had to change. Use and availability of the native vegetal environment were decidedly curtailed. Following the typical seasonal round described in chapter 3 was no longer possible. Neophytes had to adjust quickly to this makeover of the physical environment. These changes forced the neophytes to look at their surrounding landscape in new ways. They altered and adapted their diet (see chapter 6) and also learned over time to make medicinal uses of some invading vegetation, such as the cheeseweed.

**CHANGES IN THE ENVIRONMENT CAUSED BY INTRODUCTION OF DOMESTIC ANIMALS**

The 1791 annual report details the number of livestock at Mission Santa Cruz. Other missions contributed livestock to help establish Santa Cruz: "Cattle, large and small, including the Yokes, five in farm use, five not, one hundred thirty head, which Mission Santa Clara gave to Santa Cruz, except for five Yokes given by the Mission of Our Father

Table 5.2 Vegetal remains from the archaeological contexts from the Mission period

Species	Common name	Origin	Seed count	
<i>Citrullus lanatus</i>	Watermelon (majority charred)	Introduced	19	
<i>Hordeum vulgare</i>	Barley (all charred)	Introduced	11	
<i>Ilex</i> sp.	Holly	Introduced	6	
<i>Juglans regia</i> , <i>Juglans</i> sp.	Walnut	Introduced	2	
<i>Malva nicaeensis</i> , <i>Malva</i> sp.	Bull mallow	Introduced	2	
<i>Malva parviflora</i>	Cheeseweed (majority charred)	Introduced	40	
<i>Medicago polymorpha</i>	Bur-clover	Introduced	2	
<i>Olea</i> sp.	Olive (majority charred)	Introduced	5	
<i>Pisum sativum</i>	Pea (all charred)	Introduced	3	
<i>Prunus dulcis</i>	Almond	Introduced	3	
<i>Prunus persica</i>	Peach (all charred)	Introduced	45	
<i>Prunus</i> sp., <i>Prunus</i> spp.	Possibly cherry, almond, Plum, or apricot	Introduced	6	
<i>Silene gallica</i>	Catchfly (charred)	Introduced	1	
<i>Triticum</i> spp.	Wheat (all charred)	Introduced	477	
<i>Vicia fava</i>	Fava bean (all charred)	Introduced	16	
<i>Cucurbita</i> sp., <i>Cucurbita</i> spp.	Squash or pumpkin	New World native	12	
<i>Lagenaria</i> sp.	Bottle gourd	New World native	10	
<i>Phaseolus vulgare</i> , <i>Phaseolous</i> sp.	Bean (all charred)	New World native	34	
<i>Zea mays</i>	Corn (all charred)	New World native	106	
<i>Acacia</i> sp.	Catclaw	California native	3	
<i>Corylus cornuta</i> var. <i>californica</i>	Hazelnut (majority charred)	California native	80	
<i>Sequoia sempervirens</i>	Sequoia	California native	2	
<i>Umbellularia californica</i>	California bay (all charred)	California native	7	
<i>Viola</i> sp.	Violet	California native	4	
<i>Vitis</i> sp.	Grape (majority charred)	California native	4	
Unknown	Unknown (half charred)	Unknown	132	
Total introduced			638	61.8%
Total introduced - New World native			162	15.7%
Total California native			100	9.7%
Total unknown			132	12.8%
TOTAL (100%)			1032	

Source: Meyer 1991

San Francisco," according to reports by Fathers Ysidro Salazar and Baldomero Lopez. Mission San Francisco also contributed 146 sheep, and Mission Santa Clara gave ten mares, a jackass, a colt, three tame horses, four broken horses, and two additional horses that disappeared by the end of the year. The fathers also reported that they had acquired eight mares and their offspring and three additional broken horses, although they do not specify the animals' origins. Finally, the fathers listed four tame mules given by other missions and one mule that they had found.

Pasturage available near the mission was lush, and the climate were ideal for European domestic animals. Also present was an abundance of native grasses (soon devoured by introduced stock) and plenty of freshwater sources. Mission livestock responded to this almost ideal environment

by reproducing at a rate that surprised the Franciscans (table 5.3). For the first six years, only cattle, sheep, horses, and mules were at the mission; other species were introduced later. After about 1798, there were so many animals that the fathers could only estimate their numbers. Occasionally what the missionaries called "beasts" devoured the domestic animals, but the appetites of local predatory animals such as the bear and mountain lion could not keep up with the rapidity of reproduction by the livestock. The soldiers went on sporadic expeditions to destroy the predators, leaving the terrain even further open for proliferation of the introduced species.

The Franciscans introduced smaller animals such as swine and goats in 1797. These animals had limited uses and did not breed as rapidly as the cattle, sheep, and horses. After

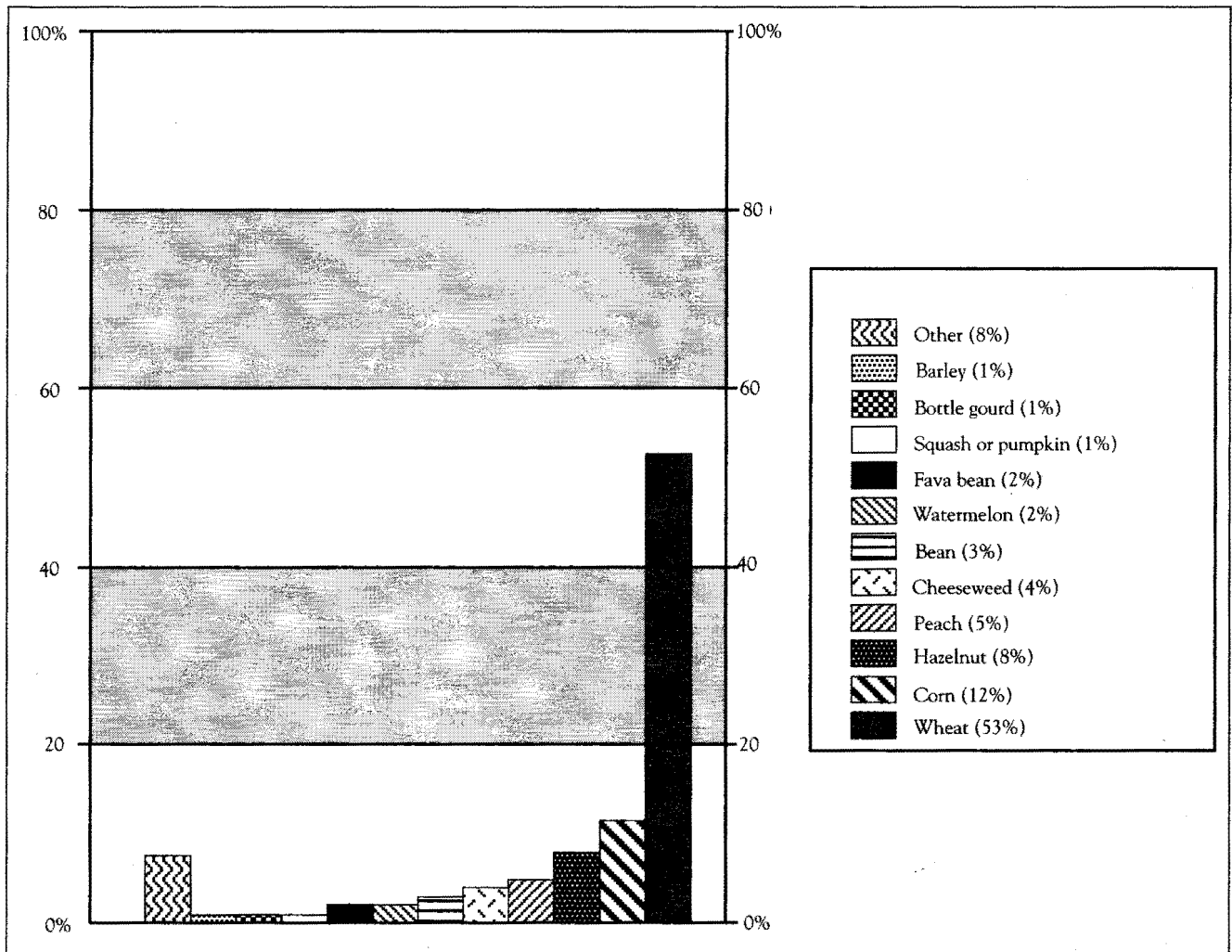


Figure 5.2 Vegetal remains from Mission period archaeological contexts

1819, however, their numbers were still too many to count individually. Missionaries estimated the number of swine and goats and included them with the sheep under the term *ganado menor* (small livestock). Poultry were not included in the annual reports. The henhouse disaster detailed in chapter 2 implies that there were many chickens and roosters at the mission, but their numbers went unreported and referenced only in passing in letters of some of the priests. Most missions also raised turkeys but in small numbers (Archibald 1978:180).

The major advantage of these animals was their ability to reproduce and thrive without much intervention from the missionaries. Georg Von Langsdorff, a German surgeon aboard a visiting Russian ship, describes the missionaries' approach to their stock:

The cattle, horses, and sheep do not require any particular care and attention. The herds are left out in the open field the whole year through and only a sufficient number are kept in the neighborhood of the establishments to serve their immediate wants. When a supply of cattle is wanted, some

of the converts [neophytes] and soldiers are sent out into the fields on horseback, and with slings, which they throw very dexterously, they catch by the horns the number required (quoted in Archibald 1978:180).

These domestic animals bore little resemblance to their modern-day counterparts. Both cattle and pigs were more feral than docile. Leaving the animals to fend for themselves in surrounding pasturelands only increased this tendency to wildness. Alfred Crosby describes most of the cattle and swine in North America in the eighteenth century as "fast, lean, and mean (1986:178)." The Franciscans, with the use of neophyte labor, exerted some control over their animals. One of the first building projects at Mission Santa Cruz was the construction of cattle and horse corrals (1791 annual report). Two years later, the missionaries report that neophytes had repaired the cattle corral. After that, they do not mention the corrals or other structures to house the animals, except for the collapse of the ill-fated henhouse.

Kept primarily as a source of food, animals were also used for agricultural labor and as a source of raw materials. Cattle,

Table 5.3 Count of livestock at Mission Santa Cruz

Year	Cattle	Sheep	Horses	Mules	Swine	Goats
1791	130	146	36	5	—	—
1792	180	170	36	7	—	—
1793	260	300	44	5	—	—
1794	350	400	60	5	—	—
1795	530	1100	183	—	—	—
1796	650	1150	360	12	—	—
1797	750	1500	500	29	14	—
1798	997	1006	544	47	12	—
1806*	2400	5400	3200	20	120	—
1809*	2000	3499	1000	23	50	10
1810	800	4944	800	19	33	10
1811	800	3000	800	17	70	28
1812	1100	3500	1110	16	86	40
1813	2800	3000	730	16	50	43
1814	3300	3600	740	25	46	28
1815	3400	3600	689	26	40	26
1816	3400	5700	408	27	50	30
1817	3390	6000	390	40	100	39
1818	#	6000	260	38	150	50
1819	3300	5600	270	44	**	**
1820	3000	5700	290	34	—	—
1821	2700	5800	368	31	—	—
1822	2450	6200	400	25	—	—
1823	2700	5000	420	20	—	—
1824	3000	6000	416	26	—	—
1825	2900	8200	420	32	—	—
1826	3400	8300	430	48	—	—
1827	3600	8000	850	52	—	—
1828	3700	5500	900	80	—	—
1829	3000	5000	900	70	—	—
1830	3000	4827	276	107	—	—
1831	3500	5403	276	82	—	—
1832	3600	5211	400	95	—	—
1833	3312	2782	—	—	—	—
1834	3730	2900	510	71	40	—

\* Gap in annual reports available.

\*\* After 1819, count for swine and goats included in total for *ganado menor* (small livestock, mostly sheep).

# Number illegible.

Source: Annual reports

sheep, and pigs supplied meat for the fathers, neophytes, the small contingent of soldiers, and the majordomo (overseer). Cattle were valuable for their hides and as a source of tallow. Goats were probably raised for meat and milk. Wool provided a raw material for making blankets and clothing. The number of cattle and sheep varied in response to the numbers slaughtered for hides, tallow, and food (figure 5.3).

Mission annual reports usually detail the number of animals specifically allocated for agricultural purposes. The number of cattle reserved to yoke was small in comparison to their total numbers. By 1796, the fathers had reserved thirty cattle for use in plowing and ten trained for plowing but not used, presumably as backups. Their numbers in-

creased to thirty-six in farm use by 1806, dropped off to only six yoke animals in 1810, but grew to sixty cattle in farm use by 1820. The number of cattle reserved for the yoke stayed above thirty until the Mexican government secularized the mission. Other specialized farm animals included several burros. Mules were reserved for riding and carting. As the number of mules increased, the annual reports were careful to specify the number of unbroken and broken animals.

The rapid increase in the population of horses presented the missionaries with a dilemma. Tame and broken horses were used for transportation and herding. Franciscans allowed the rest of the horses to roam, as they were not used for food. Their numbers increased rapidly enough that they

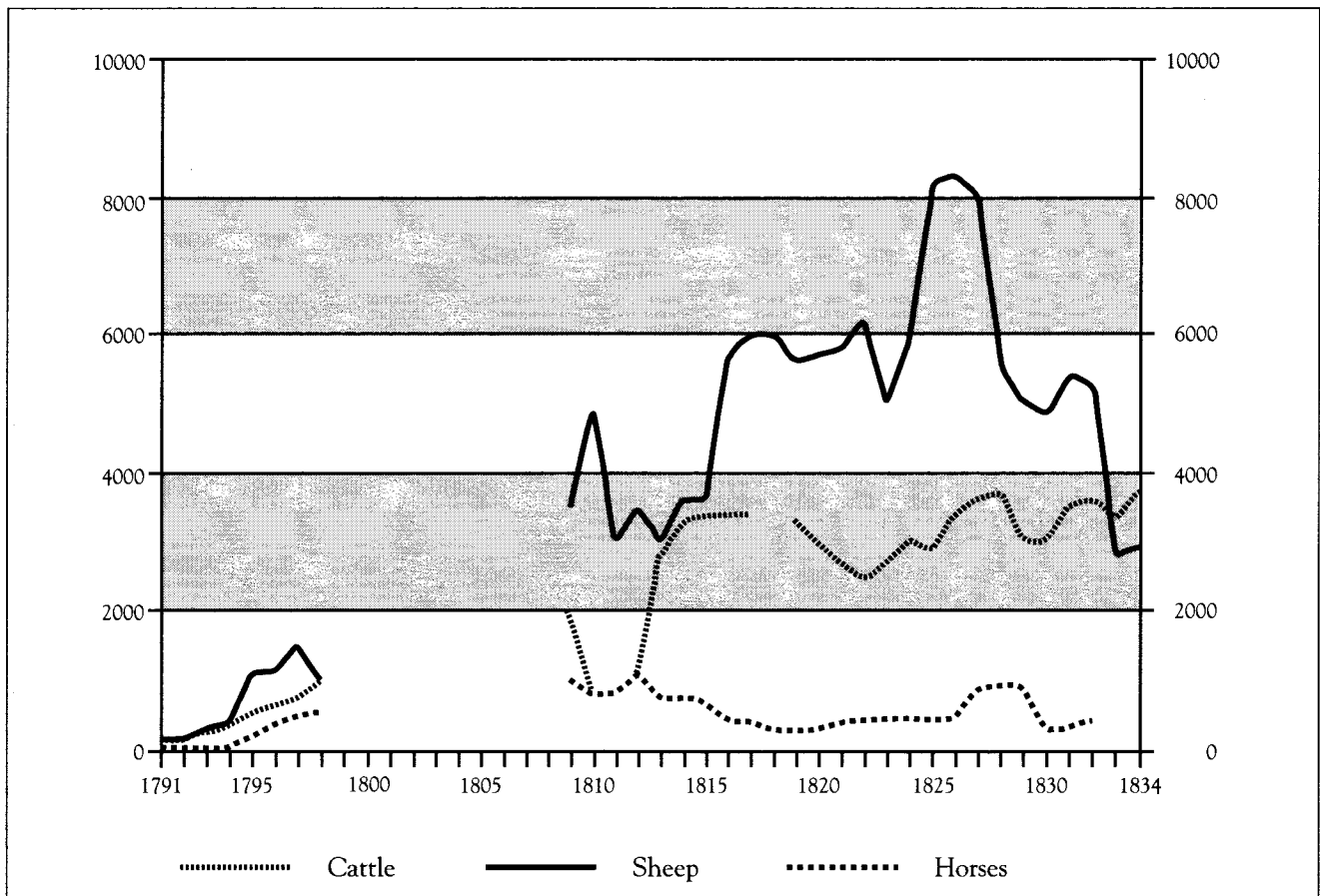


Figure 5.3 Number of livestock at Mission Santa Cruz, calculated from annual reports

began to compete for prime grazing lands with the cattle and sheep. In response, missionaries orchestrated mass slaughters of horses. In 1806, Von Langsdorff reported that the Governor of Monterey had told him that at Missions San Francisco, Santa Clara, and Santa Cruz presidio soldiers systematically slaughtered more than twenty thousand horses during the preceding years to contain their rapid proliferation (Archibald 1978:180). This strategy kept the number of horses at Mission Santa Cruz below a thousand after about 1810, dipping in some years to fewer than three hundred (see figure 5.3).

The impact of these large numbers of domestic animals on the surrounding landscape was cumulative. The cattle and sheep consumed all the native grasses down to their roots. Worse, they compacted the soil as they grazed, making it ill-suited for native plant regeneration. Annual Mediterranean-type plants such as rye and oats grew in place of the native perennial bunch grasses and plants (Brown 1987:9–8). These imported plants were hardier, and their root system had adapted to compacted soils with less moisture. The devastating effect of domestic animals on native plants in large part accounts for the success of the imported plants and weeds documented above. Plowing finished off many native perennial grasses.

Cattle did not contain their chewing to the native grasses; they also attacked leaves, shrubs, branches, seedlings, and even smaller trees amongst the grasslands. Only the hardiest survived the onslaught, resulting in grasslands with occasional solitary trees. Only the steep ravines and slopes cattle and sheep could not reach remained heavily forested or grass-woodlands similar to the native landscape (Brown 1987:9–9). The alteration of the food resources rapidly drove out or discouraged the few indigent animal competitors. Deer migrated to areas uninhabited by the cattle or sheep. Neophytes relied even more on the agricultural environment created by the Franciscans for their food resources.

#### CHANGES IN THE DOMESTIC ENVIRONMENT

If the Franciscans and the species they introduced had a significant impact on the surrounding physical landscape, their impact on the domestic environment where the neophytes lived could be described as overwhelming, at least from the viewpoint of the Native Americans. The construction of large buildings must have radically restructured the neophytes' daily perceptions of the physical environment. According to Franciscan beliefs, all aspects of neophyte work and life should center on the quadrangle. Buildings in the quadrangles contained not only the church and the mis-



**Table 5.4 Buildings listed in the 1834 Mission Santa Cruz of the church proper of inventory**

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2 rooms for keeping church vestments
1 room where musical instruments were kept
1 room used by the seamstresses
1 room the Father's dwelling where there were two serving
1 room serving as parlor
1 room serving as storeroom
1 room that has served as an office
1 room serving as dining room
1 room serving as kitchen
1 room serving for husking grain
1 room Father's dwelling
1 room serving as library
1 room serving as storage for ironwork
1 granary, storing barley, wheat, corn, lentils, peas, beans
1 room named the monjerio with corral
1 id. that serves as privy
1 id. where flour is sifted
2 rooms where a native lives
1 room shop for ironworks
1 room, workshop for weaving with another where wool is carded
1 room where spinning for the looms is done
1 room, workshop for making shoes and saddles
1 storeroom
1 granary, storing mostly corn
1 loft, storing beans
1 loft, storing wheat
1 granary, storing corn
1 granary, storing deer hides, sealskins, and metates
2 rooms with 1 mill in each
1 room where wheat to be ground is kept
1 room called a guest room
1 guest room
1 workshop for making hats
1 entry way that serves as passage to orchard
1 room, carpenter's workshop
1 covered passageway to corral with 1 room on each side
1 room without roof where soap is produced
1 shed where fat is rendered with 1 boiler
1 room where [illegible] are stored (dried meat and lard)
1 room where candles are made
1 room, storage for lime
1 room, storage for bran
1 unoccupied room
1 room occupied by 1 native
2 rooms that were used as chicken coops
1 shed that served as stable

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Source: Santa Barbara Mission Library-Archive, California Mission Documents

sionaries' residence but also workshop and food storage areas. The inventory of Santa Cruz prepared after the mission's secularization in 1834 lists all of the buildings in the quadrangle besides the church (see table 5.4).

The neophytes were surrounded not only by the church

but also the Spanish style of civilization and habitation (see figure 5.4). The quadrangle was where many neophytes worked, all worshiped, and most gathered every day for their meals. Young girls lived in the quadrangle in a dormitory-like building where they were closely supervised by the Franciscans, who tried to ensure that the girls would learn housekeeping skills and remain sexually pure until marriage. The Franciscans intended neophyte life to be regulated, routine, and filled with work and prayer. Edith Webb wrote one of the best descriptions of the neophytes' ideal routine:

...The Indians' day began at sunrise when the Angelus bell called them to prayers in the mission church. About an hour later another bell announced breakfast, whereupon each family sent to the community kitchen for its share of the food that had been prepared. After breakfast another ring of the bell sent all who were old enough and able to work to their appointed tasks.... In the forenoon and again in mid-afternoon, one of the Padres gathered together all children over five years of age and instructed them in the Doctrina. Following the morning period with the children, the Padre visited the fields and shops to see that no one was absent from work. Shortly after eleven o'clock the Padres had their noonday meal. From twelve until two o'clock the Indians ate their meal and enjoyed the inevitable siesta. Then back to work they went until about five o'clock, when it was time for prayers and devotions. At six o'clock came the ringing of the Angelus. Supper was then served. For the remainder of the evening until Poor Soul's Bell was rung at eight o'clock, the Indians were free to do as they wished within certain limitations, of course.

Thus it was that day after day, week after week, and year after year, the life of the mission community was regulated by the ringing of a bell. (Webb 1982:35)

Franciscans intended that by habit the neophytes would become Christian peasantry. They attempted to make the neophytes as dependent as possible upon the central quadrangle, its buildings, and its activities. The central quadrangle, however, could not contain all aspects of the neophytes' lives. The 1834 inventory at Mission Santa Cruz listed the following buildings outside the quadrangle proper: a house occupied by the keeper of the keys, a sewing room, a room where records were kept, two agricultural enclosures, an orchard with two rooms for storage and for lodging of the neophyte workers, a guardroom with a jail cell and stocks, a corral to enclose the cattle, and a house in the nearby village of Branciforte. Neophytes who worked and ate outside the quadrangle were specialist laborers such as orchard tenders, vineyardists, or cowboys.

The missionaries strove to make the Indians feel a part of an Hispanic community by constructing adobe houses for



**Figure 5.4** Franciscan and Native American in front of the Mission Santa Cruz church and quadrangle. Painting by Leon Trouset in 1853. Courtesy of the Santa Barbara Mission Archive-Library

them. The inventory listed fifty-two “rooms where the Natives lived.” These rows of houses, built with neophyte labor, were designed to be models of an orderly peasant community. In none of the missions were there enough adobe houses for all of the neophytes. Many neophytes apparently lived near these adobe communities in traditional tule huts. The neophytes selected to live inside adobe houses may have been those who had been at the mission for the longest time or those who showed the most promise in adopting Hispanic and Catholic ideas and traditions (Farris 1992b).

#### CONSTRUCTION AND APPEARANCE OF THE MISSION ADOBE

**I**mplicit in the structure of the Mission Adobe (figure 3.3) is a large amount of neophyte labor. The construction of the Mission Adobe can be visualized from the archaeological and architectural report by David L. Felton (1987:47–89). Before the construction of the adobe, neophyte workers had to select the site and perhaps contour the grade on which the building would sit. They then laid out and excavated trenches for the foundations. Next, workers constructed the footings, foundation walls, and interior walls. They used soil removed from the trenches to raise the level of the interior floors. The floor was hard-packed. To finish the exterior corridor, soil removed from the trenches was

used as fill. The corridor surface was tamped and made to slope away from the building to keep rainwater runoff away from the structure.

The use of substantial stone foundations for adobe buildings during the Mission period (1769–1834) was common in California. Mudstone (a soft sedimentary rock) and river cobbles were often used. At Mission San Antonio, archaeologists have noted different types of foundations. The mission church, neophyte residences, vineyardist’s adobe, and shop wing just east of the church have foundations of river cobble set into a shallow trench. Builders also occasionally used mudstone for foundations. Excavations at Mission San Antonio during the summer of 1994 revealed a garden wall east of the mission quadrangle with foundations of river cobbles on top of mudstone (Hoover 1994). Archaeologists have noted foundations of river cobble at Mission Santa Inés (Costello 1989) and sandstone rocks at Mission San Juan Bautista (Farris 1991a).

The main advantage of a stone foundation is that raising adobe blocks above the surrounding grade prevents moisture from wicking up the wall and melting adobe blocks at their base. Adobe is a porous material of soil and ground or organic materials. One of the greatest threats to the stability of adobe walls is rising damp, weakening the internal structure (Felton 1987:52). Elevating adobe blocks from the

ground on a non-water-absorbing platform increases the durability and strength of the adobe walls.

At the Mission Adobe, neophytes constructed outer walls that averaged almost 3 feet thick. At the bottom of the walls were footings of mudstone rubble, placed in deep trenches. Above the rubble were well-dressed foundation walls of mudstone that rose from 3 to 3<sup>3</sup>/<sub>4</sub> feet above the footings and grade. Adobe mortar made of local soil was used to bond the stones of the foundation. These mudstone foundation walls were higher than in most adobe buildings of the period in California, perhaps because of the especially porous nature of the mudstone and the need to keep moisture well away from the adobe blocks. The Franciscans may have been reacting to the collapse of the earlier neophyte residence, the Angled Adobe. This building had mudstone rubble footings, although no archaeological evidence was found to indicate the height of the walls. High foundation walls were common to later adobes in the Monterey Bay area with mudstone footings, as they helped isolate the adobe from ground-water and rising damp. The fathers, it seems, were not taking chances with the later Mission Adobe and oversaw the construction of a stone foundation wall high enough to help prevent water absorption into the adobe block walls.

Adobe blocks used to construct the Mission Adobe are also unusual. The most common size of adobe blocks elsewhere in Alta California is  $\frac{1}{3} \times \frac{2}{3}$  vara (approximately 11 x 22 inches). Archaeologists have documented the use of this block size during the Mission period at Mission San Juan Bautista (Farris 1991a), Mission Santa Inés (Costello 1989), and Mission La Purísima (Whitehead 1980). In his description of adobe blocks in California, J.N. Bowman noted 22 x 11 x 4 inches as the most common size (quoted in Egenhoff 1952:185). At Mission Santa Cruz, the adobe blocks are  $\frac{1}{4} \times \frac{1}{2} \times \frac{1}{10}$  vara (approximately 8 x 17 x 3 inches). The reason for this size differentiation is unknown. The Santa Cruz fathers may have preferred a smaller block, which may have been easier to handle (Felton 1987:53). In any case, neophytes used the adobe blocks to construct exterior walls that were 2.9 feet (about one vara) thick, and interior partition walls of 1.5 feet (half vara) thickness.

The Mission Adobe is represented by seven surviving rooms of a structure that was seventeen rooms long. The rooms were generally the same size (see figure 3.3), ranging from 19<sup>3</sup>/<sub>4</sub> to 20<sup>1</sup>/<sub>4</sub> feet in length and 16 to 16<sup>1</sup>/<sub>2</sub> feet in width. Each room had a single door through the north wall, offset slightly to the west of the center of each wall. Doorway heights averaged 5<sup>1</sup>/<sub>2</sub> feet. Workers set wood frames into the doorways and closed them with wooden doors.

Windows were set into the south wall, slightly offset to the west, although not as much as the doors. Windows too were small, averaging 27 inches square, and had wooden shut-

ters that opened into the interior of the rooms. Room 3 did not seem to have a window; instead, it had a small built-in cabinet. Half-lofts above the rooms provided most of the interior storage space. These lofts, which took up approximately the eastern two-thirds of the ceiling of each room, may have also served as sleeping areas.

Adobe blocks set into the earth made up the floor. The roof of the building was constructed with wood timbers and topped with terra-cotta roof tiles. The use of tejas for roofing is generally associated with the Mission period. Manufacture of tejas was labor intensive. The tile roof extended over corridors that neophytes constructed on either side of the Mission Adobe.

Traces of a brown mud plaster similar to the adobe mud mortar were found on the interior walls of the rooms. Fingerprints of workers who did the plaster work were also found. Although many mission structures were whitewashed, no evidence of Mission period whitewash was found inside the Mission Adobe. Only plain brown plaster adorned the building's exterior walls, making them appear similar to the interior walls.

The 1834 inventory lists all of the books found in the missionaries' library. No books or pamphlets on architecture or adobe construction techniques were listed, although many such sources existed in California at other missions (Schuetz-Miller 1994:40–41). Most missionaries learned about the construction of adobe buildings through trial and error. Artisans and engineers populated the Hispanic community, but as the case of the engineer who constructed the henhouse at Mission Santa Cruz demonstrated, their help was infrequent and often not useful. Adobe has a longstanding history in Spanish communities. Missionaries used it in California because the building materials necessary, primarily earth and straw, were easily obtainable and plentiful. When properly constructed and protected, adobe has the added advantage of longevity. The missionaries were not always successful in their first attempts, as the Angled Adobe proved, but other buildings, like the Mission Adobe, are still standing.

Neophytes within the mission system learned about adobe as the missionaries or sometimes Hispanic artisans showed them the construction techniques. They were also learning how to live in these new buildings that were so dissimilar from their native houses. The primary difference was the permanence of the dwellings. When a native house became too damp, dirty, or insect-infested, its inhabitants simply burnt it down and built another dwelling elsewhere. This was not possible with adobe dwellings. Hugo Reid, a Scottish ranchero who lived near Los Angeles, noted that the local Gabrielino neophytes were not accustomed to adobe houses even after years of residence:

Living in houses, however, did not suit their tastes; they were always vexed and annoyed with them, and debarred the satisfaction of burning them up according to usage, when their observances demanded it. (Reid 1968:78)

The size and shape of the adobe rooms meant that new uses of space were imposed. In some ways, neophytes lived within the adobe buildings the same as they had in their native houses. A good example is the use of the fire pit. Within the Mission Adobe, neophytes put fire pits in the center of the room as they had in their native huts. These fire pits provided a source of heat, a cooking hearth, and areas to heat-treat raw materials before manufacturing (see chapter 7). They also provided some lighting, although neophytes probably also used tallow candles. Smoke from the fire pits collected on the walls and ceilings until they were stained almost black in some areas.

Archaeological and documentary evidence suggests that neophytes furnished their rooms sparsely, at least by Hispanic standards (Kimbrow 1988; see also figure 4.2). Tule mats and/or cowhides probably made up the bedding. Most slept on the floor, but some may also have used crude wooden sleeping platforms (Kimbrow 1988:7). The half-loft may have been planked with wooden boards and used for storage of food, providing an area mostly safe from foraging rodents. Wall space and ceilings were also used for storage, with meat and dried vegetables hanging from hooks (Kimbrow 1988:10) such as those still present in the ceiling joists of room 3.

Few furnishings were placed on the floor besides the tule or reed mats and cowhides used as bedding. Some rooms may have had small wooden benches (Kimbrow 1988:12). Also resting on the floor were food preparation and cooking tools such as manos, metates, and possibly *comales*, iron or ceramic griddles used for cooking tortillas (chapter 6 further describes the uses and presence of cooking utensils). Ceramic cooking and storage vessels such as ollas, bowls, and pitchers were also present in the room. Other furnishings might include a trunk for clothing and other personal items. Tools such as bows and arrows, fishing equipment, and smaller cooking implements were also scattered throughout each neophyte room (chapters 6 and 7 further describe these tools and personal items).

The rooms of the neophytes and their furnishings were a combination of Hispanic and native traditions. The missionaries probably anticipated some activities that would take place inside neophyte living quarters: sleeping, food storage, cooking, and some craft activities such as shoemaking (archaeological evidence for this activity was found in mission room 4). Other activities, such as the processing and consumption of native foods (see chapter 6), the manufacture of chipped-stone tools and *Olivella* beads, and gambling (see chapter 7) were probably not expected nor appreciated.

The activities of the neophytes took place within an environment largely bound by missionary dictates, but native value systems and ways of using space endured.

#### ALTERNATIVE VIEWS OF THE LANDSCAPE

Some aspects of the indigenous environment remained that the missionaries, their plants, or their animals could not influence or alter, such as the ocean. In contrast, much of the physical landscape around Mission Santa Cruz became rapidly unrecognizable. Because of these changes, the natives would have had to look at the surrounding landscape in new ways. Past ways of interacting with the resources and landscape would no longer function. Imported plants and animals redefined the land surrounding the mission. Landscape uses also changed. Agriculture replaced hunting and gathering as a means of supporting the population. Control and manipulation of the environment was no longer in native hands. Missionaries and soldiers in large part decided the terms of interaction with the landscape.

The Spanish were aware of this control and consciously tried to reshape the physical landscape. They did not recognize or often simply misunderstood native uses of their physical surroundings. A prime example is the use of fire by native Californians. The appearance of California lands greatly impressed the Europeans at the time of their arrival. They thought they were seeing a wild, natural landscape untouched by human intervention. In fact, what they saw was a landscape subtly transformed by the native inhabitants. Fire was the primary tool used to reshape the landscape and native vegetation. Native Americans used it to stimulate new plant growth, control insect infestations, and alter plant growth characteristics to make the plants more usable for gathering. Regulated fires also prevented the spread of wild fires that fed off dense growth and dead underbrush. Native Californians used other methods as well to reshape the local vegetation, including sowing seeds, transplanting shrubs, pruning, weeding, and in some areas, irrigating (Blackburn and Anderson 1993:19).

Spanish and later Mexican government officials and missionaries saw the native predilection for fire as childish at best and dangerous and uncontrolled at worst. As early as 1793, the Spanish governor of Alta California issued the first fire control regulations. Governor José Joaquín de Arrillaga banned all fires set by both native neophytes and gentiles. The Governor was especially concerned about fires set by "the old women." He did not recognize that the women, traditionally the gatherers of seeds and basketry materials, used fire to promote growth and reseeding of areas in which they gathered plants. Instead, the Governor and the missionaries saw fires as creating only "widespread damage" and declared that the actions by Indians "whose childishness has been unduly tolerated" must be stopped (quoted in Timbrook

et al. 1993:129–132). Two days after he received Arrillaga's proclamation, Father President Lasuén forwarded the order to Mission Santa Cruz and expressed his thanks to Arrillaga that the government would enforce the proclamation (Timbrook et al. 1993:132). This proclamation heralded the transformation of the physical environment from one filled with native plants and animals that could be hunted and gathered to an environment filled and controlled by agriculture and domestic animals.

George Hendry's (1931) pioneering study of adobe bricks listed only three European plants in California in 1769: sow thistle, curly dock, and red-stemmed filaree. By 1824, in the area around Santa Cruz there were at least eight types of European weeds and twelve varieties of introduced domesticated plants. The Franciscans were products of a culture built upon agriculture and the successful domestication and herding of animals. It could be expected that they would attempt to recreate that world in their missionary colonies. The fact that California had an ideal climate to introduce European agriculture aided their goals. Irrigation further enhanced their agricultural endeavors (Archibald 1978). The success of Spanish and Mexican domination of Alta California lands was partially based on the rapid transformation of the environment into one that was advantageous for a

European society based on agriculture.

Alfred Crosby (1986) has described the overwhelming of native New World plants with their Old World counterparts as "ecological imperialism," the making-over of a hunting-gathering landscape into an agricultural one. One primary reason that the Franciscan missions could operate, survive, and eventually thrive in Alta California was that their livestock adapted to the California environment as readily as their crops. A Mediterranean climate significantly sped up the spread of introduced plants. In Central Mexico the transformation of the landscape had taken more than 300 years; in California, it was accomplished in just over 70.

Neophytes at Mission Santa Cruz faced an environment in transition. Change was everywhere evident and to survive, neophytes had to learn to adapt to the changes of vegetal foods available in the mission landscape and the uses of the environment. Old ways by themselves would no longer work. Adoption of many Hispanic traditions was necessary to survive in a place that had been quickly transformed from a familiar to an alien environment. One aspect of neophyte life that clearly demonstrates changes that occurred in the overall environment are alterations in their diet. Despite these changes and pressures, however, some native food patterns persisted well into the Mission period.

# Neophyte Diet and Work Patterns

*The Indians at the Mission Santa Cruz, after prayers in the morning at church, received their orders as to their labors, at the church door; then they went to breakfast, and had their meal altogether of boiled barley, which was served out to them from two large caldrons by means of a copper ladle. This full was the ration to each in a cora (a small kind of basket), from which they ate with a shell or the fingers. Some had small gourds into which they received their rations. Boiled barley was all they had in the mornings. The labors were in the field mostly. All of the land where Santa Cruz is was cultivated, also the meadow near Kron's tanyard. At eleven o'clock A.M. the bell was rung to call them together—the same bell that was on the church a few years ago. The dinner consisted of cooked horse beans and peas. At the end of an hour the bell was rung again, and all went to work until about sunset, when each received his rations of boiled corn. Such of the Indians as had families were given meat also. A beef was killed every eight days.*

—Ex-neophyte Lorenzo Asisara,  
quoted in Harrison (1892:47)

*It may be said that the Indian eats but one meal a day for even when he is at work he is eating. His food consists of beef which is given him in abundance, venison, rabbit, quails, cranes, geese, ducks, and as many of the land animals and reptiles as nature provides them. Here ordinarily, they also eat salmon and lamprey of which many are caught in the river that flows nearby the mission. Since the ocean is so close at hand which at points is hardly a league away the Indians fish there also and eat various fish such as codfish. Nor do they consider the seal or whale disgusting to eat when they become stranded on shore which is quite an ordinary event. Besides the ration of meat, wheat, Indian corn or beans which is distributed to them every week they are given three meals a day and in such abundance that what is left over alone the pigeons the missions raises can be fed. Doubtless the cost of a meal for each Indian amounts to over one real without taking into account what the Indians grow in their own cornfields.*

—Fathers Marquínez and Escudé,  
answering a Spanish government questionnaire  
in 1814, quoted in Geiger and Meighan (1976:87–88)

**E**VIDENCE OF NEOPHYTE DIET at Mission Santa Cruz comes from both documentary and archaeological sources. According to most documents, beef, mutton, corn, and wheat can be expected in the neophyte's diet. Documentary evidence also suggests that neophytes ate primarily communal regimens of meals provided by the missionaries. This food was prepared in traditional Hispanic ways, including adoption of Hispanic butchering methods. Some documents such as the missionaries' reply to the questionnaire suggest neophytes at Mission Santa Cruz continued to gather and prepare some of their food in their native ways. The archaeological record adds further dimension and variety to the regimen (see chapter 4 for a discussion of stratigraphy, volume of excavated soil, and criteria used for inclusion of artifacts in the following discussions). Wild animals such as deer, birds, and waterfowl and large quantities of many species of fish and shellfish appear in the archaeological record. Also found were native plants gathered and prepared in traditional ways.

## CONSUMPTION OF ANIMALS

**A**t the request of David L. Felton of DPR, Cherie Walth and Gail Muston identified and partially analyzed faunal remains from several features and strata. David Huelsbeck also identified some faunal remains from the Angled Adobe as part of the Cabrillo College studies. The following summaries include only faunal remains from identifiable Mission-period strata or features. Walth's description of the faunal remains included identification of species and further analyzed the assemblage by elements and animal side and portions. Walth also identified evidence of epiphyseal fusion of bones whenever possible as a tool for identifying the age of the animal and noted butchering marks, evidence of heat alteration, and effects of weathering.

#### Feature 44

The first faunal assemblage examined by Walth (1990) was from feature 44, a large trash pit dating to the Early Mission period. Located at the west end of room 7 (see figure 4.1), the pit predated the construction of the Mission Adobe. From this pit, Walth identified a minimum number of thirteen cows (*Bos taurus*). Gail Muston (1990) identified the rest of the animals, including a minimum number of four sheep (*Ovis aries*), one deer (*Odocoileus* sp.), one turtle, one bird, one fish, and one rodent. The sample showed that beef and sheep were the predominant food source. Hind-limb elements of cattle and sheep were more common than fore-limb parts.

Walth (1990) further analyzed the cow bones to determine age, sex, and approximate weight. Following the assumption that cattle lived in a range environment that would cause stress delaying the fusion of the epiphyses (see Gust 1982), Walth determined the probable age of the animals. Of the thirteen cattle, one appeared to be less than a year old, two were between the ages of one and two years, and one was between the ages of four and five years. Nine cows were between the ages of two and four years at the time of their slaughtering, indicating a preference for slaughtering cattle at a young age. Postcranial remains helped determine the sex of the cattle. The assemblage was roughly divided between females and steers. Postcranial remains (especially the astragalus and metatarsals) were also used to approximate the weight of the animals. Walth suggested an average weight of 500 pounds, which is less than the average weight of 600–700 pounds from other mission deposits (following Gust 1982). Range animals were generally smaller and leaner. The lesser weight may also be attributed to the predominance of females and steers in the assemblage.

Muston (1990) performed preliminary analysis concerning the age of the sheep and looked for evidence of butchering. Of the four sheep, one specimen was very young (less than ten months). Two were between the ages of two and three years, and one animal was quite aged. The sample was not large enough to make any statements about the preference of age at butchering.

Metal tools, either knife or ax, made all butchering marks on the cattle remains from feature 44 (Walth 1990:14). Knife marks appeared as scores, while ax marks were identified either as scores or cuts-to-break. Gail Muston (1990) also noted some butchering marks on the sheep bones from feature 44. The marks were not extensive, and most appeared on the proximal end of femurs. Muston suggested that the low frequency of butcher marks was owing to the smaller size of the animals. Depending on the skill of the butcher, sheep can be easily cut apart with a large knife, leaving few marks.

Most of the bone from this pit had been heat-altered or blackened, although the burning did not appear to be the result of cooking but of purposeful burning of the trash de-

posit. The bones were thrown into the pit and burned to make more room. No evidence appeared of carnivore teeth marks or other damage. This, along with a uniform pattern of only minimal weathering, suggests that neophytes discarded the bones soon after butchering the animals.

#### Faunal Remains from the Angled Adobe

David Huelsbeck (N.D.) performed basic identification of faunal remains recovered from the Angled Adobe by Cabrillo College field classes conducted at the site from 1981 to 1984. Huelsbeck identified only the bone by size and class. He separated the mammal remains into two rough categories of domestic livestock—large mammals (402 cow-sized bones) and medium mammals (212 sheep-sized bones)—and also included a third category of small mammals (409 smaller-than-sheep bones). Butchering marks and general information concerning the condition of the bone were also noted. Huelsbeck and his students counted more than 31,000 bone fragments, although most were considered unidentifiable mammal remains. The following discussion includes only the faunal materials from at least 1 foot below the surface, probably remains from deposits of Early Mission period. Also included in the sample were more than 9400 unidentifiable faunal elements.

Although identification was minimal, general trends can be noted from this assemblage. Limb and rib bones were the most common among the large mammal bones (most likely cattle), although all body parts were noted. Breaks in the bones occurred mostly on long bones. Huelsbeck also noted many vertebrae breaks at weak points in the joints. Ribs were highly fragmented. The few butchering marks found on the large bones suggested butchering patterns that stripped meat from the bone. Occasional long bones of large mammals had teeth marks, probably from carnivores such as dogs, suggesting that some bones were not immediately buried after the animals were butchered. Remains from medium-sized mammals probably represent sheep, deer, pig, and possibly goat. All elements of medium-sized mammals occurred in the sample, although limb and rib bones predominated. As with the large mammal bones, Huelsbeck noted few butchering marks. Small mammal remains mostly included rat-sized rodents, although the partial remains of one dog were also present. Only a preliminary analysis was done on the bird remains. Identified species include chicken, geese, duck, quail, and cormorant. The turtle species identified was a Western pond turtle (*Clemmys marmorata*).

#### Additional Studies

Cherie Walth (N.D.) made some preliminary identifications and observations on deposits from the Angled Adobe and the South Corridor of the Mission Adobe. Most of the faunal sample was from contexts of the Early Mission period,

**Table 6.1 Faunal remains from selected archaeological contexts of the Early Mission and Late Mission periods**

	Early Mission Period			Late Mission Period
	Room B	Room C	South Corridor, East end	South Corridor, West end
Cow ( <i>Bos taurus</i> )	35 (1035 g)	7 (151 g)	125 (2923 g)	23 (474 g)
Sheep ( <i>Ovis aries</i> )	4 (17 g)	3 (17 g)	10 (146 g)	0
Deer ( <i>Odocoileus</i> sp.)	1 (23 g)	0	0	0
Pig ( <i>Sus scrofa</i> )	1 (<1 g)	0	0	0
Medium artiodactyl	23 (57 g)	4 (4 g)	12 (26 g)	7 (5.2 g)
Unidentified mammal	306 (252 g)	77 (56.2 g)	355 (328 g)	82 (87.9 g)
Sea mammal	1 (8 g)	1 (2 g)	0	0
Bird	8 (5 g)	4 (2 g)	3 (1.2 g)	0
Turtle	0	0	12 (10 g)	1 (1 g)

Source: Adapted from Walth (n.d.)

that is, areas of the Angled Adobe excavated by DPR. A small sample was identified from Late Mission period deposit from the east end of the south corridor of the Mission Adobe. Walth identified the species (whenever possible) and counted and weighed the bone (table 6.1), as well as making notes concerning patterns of butchering marks.

The resulting data are similar to the earlier studies. Most of the bone was from mammals, although determining the species of many fragments was impossible. Of the faunal remains Walth could identify, the majority were from domestic livestock. Cattle and sheep dominated the identified bone. The medium-sized artiodactyls may represent either sheep or goat, but possibly deer or antelope. Only one fragment of a pig foot bone occurred in the sample. Pig remains did not occur in any of the other faunal assemblages. The annual reports of Mission Santa Cruz list swine only in small numbers (see table 5.3), suggesting pigs were not important to the neophyte diet. A few wild animals occurred in the sample, including deer, sea mammals (probably sea otter, *Enhydra lutris*), turtle, and birds. Walth found these only in small numbers, suggesting that their value to the overall diet was limited. Butchering marks, knife scores, and ax marks appeared on faunal remains of both cattle and sheep. Metal tools seem to have made all butchering marks.

### Summary

The faunal assemblage studies from Mission Santa Cruz are only a sample of the faunal material recovered from the site. This sample is biased toward the Angled Adobe and the Early Mission period; however, it is possible to discern general trends and patterns. Livestock (especially cattle) dominated the faunal materials, suggesting a heavy reliance in the neophyte diet on domestic animals. Documentary evidence supports this observation. When missionaries and travelers mention neophyte diet, they often note the distribution of meat (for example, Lasuen 1965b:203; La Pérouse in Margolin 1989:89). In the quotation at the beginning of this

chapter, Lorenzo Asisara noted the numbers of livestock killed for neophyte consumption.

Gust (1981) describes the pattern of butchering typical during the Mexican period in California. Butchers used axes to divide the carcass, then used knives to cut through tendons, freeing muscle from bone. The faunal assemblage from Mission Santa Cruz shows that long bones were generally broken with an ax either above and below joints or at the middle of the shaft. Butchers shattered vertebrae at weak points, such as the dorsal spine or neural arch. Ribs were struck several times and were generally highly fragmented and shattered. Walth noted few knife marks on the bones. This pattern is similar to that noted from faunal remains from feature 44 and Cabrillo College excavations of the Angled Adobe. It also resembles an assemblage of faunal remains from Mission Santa Inés (Walker and Davidson 1989), from a living area inhabited by missionaries. Neophytes apparently adopted Hispanic methods of butchering domestic animals.

Research at other missions has also shown a pattern of a heavy reliance on domestic animals, especially cattle and sheep. Walker and Davidson (1989) noted a preponderance of cow and sheep bone at Mission Santa Inés, although the faunal assemblage they studied was from an area probably inhabited by missionaries rather than neophytes. At Mission San Buenaventura, researchers estimated the importance of beef to the meat diet of neophytes at 80 to 90%, based on the overall weight of the bone in comparison with the rest of the faunal assemblage (Romani and Toren 1975). The same large percentage of cattle remains in neophyte-associated trash areas was found at Mission San Antonio (Langenwaller and McKee 1985). Also noted in the faunal assemblage were lesser amounts of sheep, and then dog, horse, deer, pig, and rabbit remains. The expected predominance of cattle remains was also found at Mission San Juan Bautista (Farris 1991a), although excavations there also produced many pig bones, a pattern not noted elsewhere.



These assemblages of the Mission period are also similar to those from later Mexican period sites inhabited by Hispanic families. At the Cooper-Diaz Adobe in Monterey, Gust (1981) described a faunal assemblage made up of more than 80% cattle remains, followed by sheep and pig bones, with evidence of deer, antelope, dog, cat, and squirrel remains. Deposit areas from the Mission Adobe at Santa Cruz shows a similar pattern for the Post-Mission period. Walth (ND) noted many cattle and sheep. Faunal remains of goat, deer, pig, sea otter, unidentified sea mammals, turtle, bird, opossum, and cat were also found.

The large amount of domestic meat in trash deposits associated with neophytes at Mission Santa Cruz follows a Hispanic tradition of food consumption. Neophytes seem to have had regular access to sources of domestic meat. In spite of the apparent adequacy of cattle and sheep as a protein source, neophytes hunted to a limited degree wild animals and birds. Although few, the faunal assemblages also contained the remains of deer, sea mammals, and birds such as geese, quail, and duck; this is true for several Hispanic assemblages. By itself then, the faunal material does not make up a diet that can be differentiated from Hispanic traditions.

### CONSUMPTION OF SHELLFISH

*My father's tribe was Jlli, and he belonged to the tribe that lived up the coast. They lived upon shellfish, which they took from the seacoast, and carried them to the hills, where were their rancherias. The remains of the shells are there now, and can be seen in numerous places. — Mission Santa Cruz ex-neophyte Lorenzo Asisara (quoted in Harrison 1892:47)*

The large quantity and variety of shellfish excavated at Mission Santa Cruz is testimony to the importance of this resource to the neophyte diet (Allen 1992). Shellfish occurred in large numbers in archaeological deposits from both the Early and Late Mission periods (table 6.2). Assemblages from the two periods were remarkably similar, suggesting the early and sustained value of this food source. Mussel (*Mytilus californianus*) was the most numerous species found in both the Angled and Mission Adobes. Several species of clams were also found in abundance: the Pacific Littleneck (*Protothaca staminea*), the Pacific Gaper (*Tresus nuttallii*), the Pismo clam (*Tivela stultorum*), and the Washington clam (*Saxidomus nuttalli*). Abalone (*Haliotis* sp.), small snails (gastropods), and various species of limpets were found in limited quantities. Varying sizes of shellfish suggest that gatherers indiscriminately collected all sizes of each species, without any sorting before bringing them back to the mission. The presence of small gastropods and barnacles, attached to the shells of the larger species or perhaps brought in on seaweed gathered with the shellfish, also suggests that finds were not sorted before return to the mission. Seaweed

was a common prehistoric source of food, although its presence is difficult to detect archaeologically because of the lack of preservation. Smaller gastropods carried in with harvests of kelp and seaweed may provide the best evidence (Swiden 1989:103). Excavations of prehistoric sites in Ohlone territory show the same trend of heavy reliance on mussel and lesser use of other species (Gifford and Marshall 1984:36–37, Swiden 1989:97). The pattern of heavy use of mussel followed by varieties of clam is repeated at Mission San Buenaventura (McIntyre 1976:273).

Shellfish habitats were nearby and readily accessible to neophytes. Most of the shellfish caught by neophytes were probably from the shoreline and estuaries of nearby Monterey Bay. Mussels were available on rocky shores and offshore waters. Pacific Littleneck, Pismo, and Washington clams could be found in sandy mudflats. Shellfish was sometimes eaten raw but was more frequently cooked on fire-heated rocks. Occasionally shellfish meat was dried for later use (Gifford and Marshall 1984:17). Many shells from both the Angled and Mission Adobes showed signs of burning, especially mussel shells.

Seafood was common in the Hispanic diet, but whether the missionaries consumed shellfish gathered by neophytes at Mission Santa Cruz is unknown. Beginning with the 1769 Portolá expedition, natives gave shellfish to the explorers, along with other foods, in exchange for glass beads. Excavations of convento areas at Santa Inés, which were inhabited by Spanish friars, uncovered shellfish remains. Mussels made up the bulk, and abalone and limpets were recorded as well. Walker and Davidson (1989:250–254) postulated that the shellfish were brought inland to Santa Inés either by foreign travelers or by neophytes on fishing and hunting expeditions. Soldiers who married Indian women probably ate shellfish collected by their wives.

### CONSUMPTION OF FISH

*The Indians say there are salmon now; the first ones they bring in I will send to you.*

—Fr. Manuel Fernandez to Governor Don Diego de Borica, 13 December 1797 (letter at the SBMA archives, translated by R.H. Jackson)

*I'm sending you garlic, chiles, onions, some little apples and two salmons caught yesterday afternoon. Enjoy it all. —Fr. Luis Gil to Joseph Maria Herrera, 8 February 1826 (San Francisco Archdiocese Chancery Archives, letter 1866)*

Fish were a common element in the native diet of both the Ohlone and Northern Valley Yokuts Indians. The Ohlone used both freshwater and marine resources, while the Yokuts, an inland group, fished for freshwater and anadromous varieties. Both groups appear to have continued their fishing practices while living in the mission, although their

Table 6.2 Shellfish from assemblages of the Mission period

Species	Early Mission		Late Mission	
	MNI	%	MNI	%
Abalone ( <i>Haliotis</i> sp.)	3	15.9	7	18.6
Barnacle ( <i>Balanus</i> sp.)	12	< 0.05	35	< 0.05
Chiton (sp. unid.)	1	< 0.05	2	< 0.05
Clam (sp. unid.)	9	6.5	3	3.1
Limpets (various sp.)	3	< 0.05	42	< 0.05
Gastropods (various sp.)	12	< 0.05	14	< 0.05
Giant Pacific cockle ( <i>Trachycardium quadrigenerarium</i> )	1	1.2	1	1.8
Giant rock scallop ( <i>Hinnites giganteus</i> )	0	0	1	< 0.05
Leaf barnacle ( <i>Pollicipes polymerus</i> )	1	< 0.05	2	< 0.05
Mussel ( <i>Mytilus californianus</i> )	153	53.4	344	54
Nuttall's cockle ( <i>Clinocardium nuttalli</i> )	0	0	2	2.1
Oyster ( <i>Ostrea lurida</i> )	1	< 0.05	2	< 0.05
Pacific Littleneck ( <i>Protothaca staminea</i> )	17	3	9	2.7
Pacific Gaper ( <i>Tresus nuttalli</i> )	5	1.7	1	2
Piddock ( <i>Penitella penita</i> )	4	< 0.05	3	< 0.05
Pismo clam ( <i>Tivela stultorum</i> )	2	3	5	4
Purple sea urchin ( <i>Strongylocentrotus purpuratus</i> )	2	< 0.05	5	< 0.05
Washington clam ( <i>Saxidomus nuttalli</i> )	2	14.1	7	9.2
Unidentified shell	1	< 0.05	1	< 0.05
TOTAL weight in grams		3094.1		4163.6

MNI = minimum number of species. Determined by number of left and right hingers for bivalves and internal spirals for gastropods.

% = of total weight

Abalone species: *Haliotis cracherodii*, *Haliotis rufescens*, and *Haliotis* sp.

Barnacle species: *Balanus amphitrite* and *Balanus nubilis*

Gastropod species: *Littorina keanae*, *Margarites succinctus*, *Nucella emarginata*, *Tegula funebris*, and *Gastropoda* sp. unid.

Limpet species: *Acmaea mitra*, *Collisella* sp., *Lottia gigantea*, and *Megathura crenulata*

patterns of fishing changed. Excavations uncovered evidence of twenty-three species of fish and unidentified species from three fish families (table 6.3).

Samples of fish remains from archeological contexts with good integrity were selected from the Mission and Angled Adobe assemblages. Peter Schulz, DPR senior archaeologist, identified all of the sampled fish remains, including their species or family, side, and element. In total, Schulz (ND) identified fish remains from fifty-five separate proveniences. He included in the sample fish remains from ten proveniences from the Central area and twenty-eight proveniences from the southwest end of the Angled Adobe. These were deposits from the Early Mission period. Also included deposits from the Early Mission period were five proveniences from yard areas immediately west of the Angled Adobe. All of the fish remains identified from the Mission Adobe were recovered from twelve separate provenience lots from room 4. Although they are from mixed deposits, their similarities to the Angled Adobe sample suggest that they are indicative of the fish remains from the Late Mission period.

From Elkhorn Slough, a midden site in the drainage area of the Pajaro and Salinas Rivers near the center of the

Monterey Bay shoreline, archaeologists recovered primarily freshwater species, but also euryhaline and marine species (Gobaler 1990). Minnows and suckers (Cyprinidae or Catostomidae) dominated the assemblage, along with other freshwater species such as Sacramento perch (*Archoplites interruptus*) and hitch (*Lavinia exilicauda*). The fish remains indicate a pattern of intensive local fish exploitation. As noted, other coastal archaeological sites without nearby freshwater sources heavily emphasize marine species (Gobaler 1990).

The most common species found at Mission Santa Cruz was the plainfin midshipman (*Porichthys notatus*), which is commonly found in bays and estuaries. Other commonly occurring species included rockfish (*Sebastes* spp.), white croaker (*Genyonemus lineatus*), and fish from the surfperch family (Embiotocidae). Ninety-nine percent of all of the fish remains found in both adobes were marine species. The only freshwater fish recovered were unidentified minnow species (Cyprinidae), Sacramento squawfish (*Ptychocheilus grandis*), and Sacramento sucker (*Catostomus occidentalis*). These figures indicate that neophytes focused on bays and estuaries for fishing and commonly fished in shallow rocky shore ar-

Table 6.3 Sample of fish remains found in archaeological contexts of the Mission period

Common/scientific name	Habitat	Angled Adobe*	Mission Adobe*
Barred surfperch ( <i>Amphistichus argenteus</i> )	Beaches, offshore	3	1
Cabezon ( <i>Scorpaenichthys marmoratus</i> )	Bays and estuaries	0	1
Hexagramid (Hexagramidae family)	Saltwater	23	2
Jack mackerel ( <i>Trachurus symmetricus</i> )	Rocky shore, offshore waters	1	0
Kelp greenling ( <i>Hexagrammus decagrammos</i> )	Rocky shore, bays, and estuaries	3	0
Lingcod ( <i>Ophiodon elongatus</i> )	Bays and estuaries	5	0
Minnnow family (Cyprinidae)	Freshwater	3	0
Monkey face eel ( <i>Cebidichthys violaceus</i> )	Rocky shore	1	0
Northern anchovy ( <i>Engraulis mordax</i> )	Bays and estuaries, off shore	27	0
Pacific barracuda ( <i>Sphyræna argentea</i> )	Rocky shore	0	2
Pacific mackerel ( <i>Scomber japonicus</i> )	Offshore waters	1	1
Pile perch ( <i>Rhacocheilus vacca</i> )	Reef, kelp bed	11	33
Plainfin midshipman ( <i>Porichthys notatus</i> )	Bays and estuaries	411	69
Redtail surfperch ( <i>Amphistichus rhodoterus</i> )	Beaches, offshore	1	0
Rockfish ( <i>Sebastes</i> spp.)	Rocky shore	243	37
Rubberlip seaperch ( <i>Rhacocheilus toxotes</i> )	Rocky shore, bays, and estuaries	0	1
Sacramento squawfish ( <i>Ptychocheilus grandis</i> )	Freshwater: lower elevation rivers	0	1
Sacramento sucker ( <i>Catostomus occidentalis</i> )	Freshwater: lower elevation rivers	3	1
Seaperch ( <i>Phanerodon</i> sp.)	Deep reef, kelp bed	1	0
Surfperch family (Embiotocidae)	Rocky shore, bays and estuaries	101	26
Steelhead ( <i>Oncorhynchus mykiss</i> )	Rocky shore	1	3
Stickleback ( <i>Gasterosteus aculeatus</i> )	Freshwater: small streams	1	0
Striped seaperch ( <i>Embiotoca lateralis</i> )	Rocky shore, bays, and estuaries	1	0
Surfperch ( <i>Amphistichus</i> sp.)	Beaches, offshore	2	0
Topsmelt ( <i>Atherinops affinis</i> )	Bays and estuaries	3	0
White croaker ( <i>Genyonemus lineatus</i> )	Rocky shore, sandy kelp	175	51
Unidentified	n/a	465	169

\* count

Source: Identified by Schulz (n.d.)

eas and kelp beds. Occasionally fish species known to inhabit much deeper waters were found in deposits from the Early Mission period, although they were not common.

These patterns suggest a heavy use of marine resources with almost no emphasis on freshwater species. In contrast to Father Gil's statement, evidence of salmon (probably indicating steelhead, once designated *Salmo gairdner* but recently renamed *Oncorhynchus mykiss*) is limited (Schulz 1997). Although the San Lorenzo River, a potential resource for freshwater species, was near the mission (see figure 2.2), this habitat seems to have been underutilized by the neophytes. More restrictions may have been placed on inland resources by the missionaries or marine resources were more productive. Mission Santa Cruz is less than a mile from the ocean. Neophytes may have had easier and freer access to the ocean and its resources, as indicated by the presence of marine fish species as well as the abundance of shellfish. Neophytes also used marine resources for making traditional native ornaments such as shell-disk beads (see chapter 7). Missionaries may also have claimed or traded for some freshwater species such as *Oncorhynchus mykiss* for their use.

In his study of a fish assemblage from Mission Soledad, Roy Salls (1989) hypothesized that Hispanic technology and techniques influenced neophyte fishing practices. He suggested that neophytes fished for deepwater marine species, mostly rockfish, that did not appear in prehistoric sites near Soledad. Fish remains studied by Salls were recovered from a trash pit in a kitchen disposal area behind the fathers' living quarters. The fish remains may be more indicative of the dietary habits of the missionaries rather than the neophytes. In any case, a similar alteration of fishing practices does not appear to have occurred at Mission Santa Cruz, where few deepwater species were recovered. An apparent preference for shallow water marine species over freshwater fishes existed.

Mission Santa Inés showed similar heavy utilization of shallow water marine species. Archaeologists identified fish remains from a trash deposit associated with the mission convento. Identified species included the barracuda (*Sphyræna argentea*), rockfish (*Sebastes* sp.), and mackerel (*Scomber japonicus*). All are marine species that could have been caught from a pier or shore using a hook and line (Walker and Davidson 1989:169). Faunal ana-

lysts also identified rockfish (*Sebastes* sp.) in archaeological deposits from neophyte quarters at Mission San Antonio (Langenwalter and McKee 1985:98), although their frequency was not high.

At Mission San Buenaventura, Fitch (1975:459) hypothesized a lessening importance of fish to the neophyte diet. He noted few fish remains in a trash pit assemblage from a neophyte living area. Fitch postulated that as the neophytes became more dependent on mission-produced foods such as cattle and wheat and other agricultural products, their fishing dropped significantly. Neophytes at Buenaventura seem to have become more selective in their fishing practices and emphasized white seabass, a species known for its meat quality, because it was a desirable trade item (Fitch 1975:459).

A similar situation may have occurred at Mission Santa Cruz, explaining the decrease of fish remains in the Mission Adobe as compared with Angled Adobe assemblages. Neophytes may have become more dependent on domestic mammals as a source of protein and fished less. They did not appear to have decreased in shellfish collecting, perhaps partially because of the sexual division of labor. Men were generally fishers, while women and children collected shellfish.

### CONSUMPTION OF VEGETAL FOODS

As with faunal materials, vegetal remains from Mission Santa Cruz show a diet heavily influenced by Hispanic traditions and foodways but with some native food sources remaining. Chapter 5 recounted the domination of introduced species in the vegetal remains found in archaeological contexts from both the Mission and Angled Adobes. Wheat and corn, introduced species that are major sources of carbohydrates, dominated the archaeological assemblage, constituting 65% of the total vegetal materials recovered. Flour from both these grains is an important ingredient in the pozole and atole described in the quotations at the opening of this chapter.

Other vegetal foods that occurred in quantity in the archaeological record included hazelnuts, peaches, beans, watermelon, fava beans, squash or pumpkins, bottle gourds, and barley. Hazelnut represents a native species of food used also during the prehistoric period in California. Other native plants used as prehistoric food resources including catclaw pods and grapes were also found but only in small numbers. The berries of the California bay laurel were used as food and the leaves sometimes as medicine (Heizer and Elsasser 1980:241–252).

### FOOD PROCUREMENT

*The Indian men are often permitted to hunt and fish for their own benefit, and upon their return they generally make a present to the missionaries of a part of their fish or game. But they proportion the quantity to what is strictly necessary for their consumption, taking care to increase it when they know that their superiors have any visitors or guests.* —Notes from a visit to Mission San Carlos in 1786 by French traveler Jean François de La Pérouse (quoted in Margolin 1989:90)

*It appears that the pagans love their wives and children. Doubtless this is in the nature of things. They give their children no other education than to teach them how to hunt and fish if there is a river in the vicinity. They hunt with the bow and arrow. They fish with nets and other means. With regard to the Christian Indians they esteem their wives and love their children but these latter receive their education from the missionary father.*

—Fathers Marquinez and Escudé, answering a Spanish government questionnaire in 1814 (quoted in Geiger and Meighan 1976:26)

In native society the hunting of wild game and birds was exclusively the duty of men (E. Wallace 1978:683). According to documentary and ethnographic accounts, native men were extremely skilled at hunting. La Pérouse, for example, greatly admired both their patience and industry (Margolin 1989:58). Besides the faunal remains of wild animals and birds, there is little evidence of native hunting in the archaeological record, partly because organic objects such as arrow shafts have little chance of survival in the archaeological record. At Mission Santa Cruz, archaeologists recovered a total of six projectile points from several different areas of the site, made of chalcedony, Monterey chert, Franciscan chert, obsidian, and porcelain. Neophytes probably made most of the points at the site, showing a continuation of chipped stone technology. This technology is further discussed in chapter 7.

Levy (1978:492) notes that the Ohlone used seines in rivers to catch freshwater and anadromous species of fish. Some Ohlone groups also used dip nets and basketry fishnets. Other methods included luring fish to shore with bonfires and then spearing them and putting poison in the waters, and then scooping up the dead fish as they floated to the top. Kroeber (1925:529–530) notes that Yokuts used basketry traps, nets, poison, and spears to catch fish. The use of the hook and line was a common method of catching fish (Salls 1989:261), most effective in quieter waters such as bays and estuaries. Yokuts women used baskets to fish in shallow waters.

Archaeological evidence of fishing technology at Mission Santa Cruz includes net weights and fishhooks (figure 6.1). Abalone (*Haliotis* sp.) hooks had long been part of the native technology of California. From archaeological contexts, it is known that the first abalone hooks appear as early

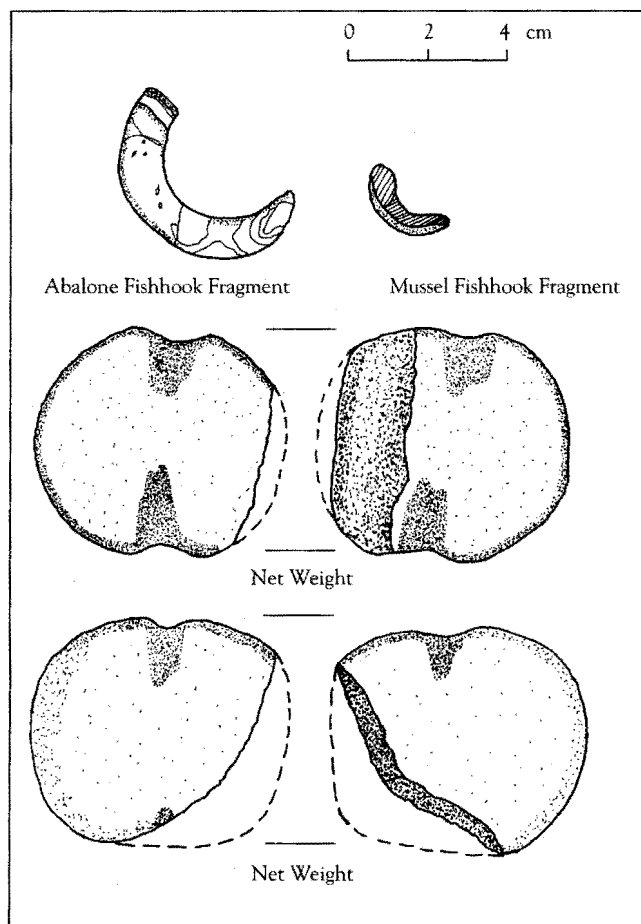


Figure 6.1 Net weights and fishhooks

as 2000 BC (Heizer and Elsasser 1980:168). The use of these hooks, with minor technological changes, continued well into the historic period. Archaeologists recovered one whole and one partial abalone hook from Mission Santa Cruz. A partial hook made of mussel (*Mytilus californianus*) was also found. All three hooks were recovered from mixed deposits in the Mission Adobe from rooms 1, 4, and 6. Fishhooks were chipped out of roughly oval disk blanks and finished by grinding. Two disk blanks from Santa Cruz may be of the right size and shape for manufacturing fishhooks (Bennyhoff, 1992). Native Californians attached small weights to carry the fish nets to the bottom of shallow waters before hauling in both the fish and the net. Archaeologists recovered fragmentary net weights from the central area of the Angled Adobe. The two weights are approximately the same size. Both are made of locally occurring materials but it is not known whether neophytes actively manufactured net weights at the Mission.

Shellfish gathering was a task done predominantly by women and children in most native societies (E. Wallace 1978:683, Heizer and Elsasser 1980:129). It is likely this sexual division of labor was maintained during the Mission period. The mission environment in many ways restricted women's

movement and actions, especially young unmarried women, who were housed separately in the mission and given tasks that kept them apart from the rest of the community. However, Mission Santa Cruz is less than a mile from the ocean, and access does not seem to have been constrained. Using a digging stick or their bare hands, women dug shellfish out of the sand or pried them off rocks. Collected in a large basket, the shellfish were then carried back to the mission.

Gathering wild plants was mostly the task of women, although men occasionally helped (E. Wallace 1978:683). Women's restriction to lands near the Mission may in part explain the curtailment of the use of native plants in the neophyte diet. Many could be found only in distant areas. Besides the vegetal remains themselves, pestles and mortars give archaeological evidence of native plant use. Baskets were the primary tools used in gathering native plants and foods but generally do not survive in the archaeological record.

Even though a food supply was provided by the mission, documentary and archaeological records show that neophytes supplemented their diet with native foodstuffs. The quotation at the beginning of the chapter suggests that missionaries thought little of the native knowledge of how to find local foods, yet documentary evidence suggests that neophytes taught their children skills to continue native food ways. Evidence of these foodways in the archaeological record as food remains or technology supports the idea of the continuation of neophyte education in native food patterns. Archaeological evidence also demonstrates, however, that neophyte use of some native food sources was curtailed. While shellfish and fish continue to abound in the archaeological record, for example, the presence of wild animals, birds, and native vegetal materials was diminished.

Definitions of men's and women's roles were necessarily part of the native education of their children. As described above, native gender roles often defined the acquisition of different kinds of foods. The mission system challenged and redefined these roles. The primary alteration was in the role of men and women in providing vegetal foods. Gathering wild foods, and to a limited degree management of plants by methods such as burning, was considered a woman's task. In the mission environment, the change to agriculture changed these ideas. The growing, tending, and harvesting of domestic plants was shared by men and women. Men, primarily the missionaries but also the male overseers (majordomos), organized and supervised these tasks.

In the Santa Barbara Mission Archive-Library, a fragment of a document written by Father Luís Gil lists the occupation of the neophytes at Mission Santa Cruz (California Mission Document 2840, 31 December 1825). Of the 429 neophytes at the Mission, Gil considered 277 (176 men and 101 women) able to contribute to the labor of the missions. The missionaries assigned many neophytes tasks that directly

related to agricultural endeavors of the mission, both herding and farming. Father Gil listed 73 neophytes directly involved with the care of the domestic animals. The mission employed 18 men and 8 women as shepherds (*pastores del ganado ovejuno*), 30 men as cowherds (*gañanes*), and 16 men and 1 woman as cowboys, including those who watched over the cattle, *vaqueros*, *inclusos los pastores del vacuno*. The mission used 25 other neophytes in the growing and care of domestic plants. Father Gil listed 4 *hortelanos* (gardeners) (two men and two women) and 21 corn field tenders (*milperos*) (14 men and 7 women). Probably all able-bodied neophytes participated in the harvest of grain crops.

Responsibilities required of the neophyte men at the mission left them little time for hunting, traditionally a time-intensive activity. Lack of time was compounded by a lack of nearby game. Environmental niches inhabited by wild animals were seriously curtailed by the proliferation of domestic animals (see chapter 5). Hunters were forced to go farther afield for their game, a practice that missionaries actively discouraged. The availability of native vegetal plants near the mission was also greatly diminished, as they were overrun and displaced by imported plant species.

In contrast, the environment of the nearby bay and estuaries where neophytes could obtain both fish and shellfish was little altered by changes brought on by the mission system. Shellfish gathering and fishing were usually less time consuming than either hunting or gathering. They were also tasks shared by men and women, although men probably did more of the fishing. Perhaps it is not surprising, then, that the neophytes continued to use these traditional food resources, while curtailing the use of others.

## FOOD PREPARATION

*The women have no other employment than their household affairs, the care of their children, and the roasting and grinding of corn. This last operation is both tedious and laborious, because they have no other method of breaking the grain than with a roller upon a stone....*

*The whole art of this cookery consists in roasting the grain before it is reduced to meal. As the Indian women have no clay or metallic vessels for this operation, they perform it in baskets of bark by using small burning wood coals. They turn these vessels with such dexterity and rapidity that they succeed in causing the grain to swell and burst without burning the basket, though made of combustible material.*

—Notes from a visit to Mission San Carlos in 1786 by French traveler Jean François de La Pérouse (quoted in Margolin 1989:86–88)

**I**n the prehistoric Native American household in California, women were generally responsible for the prepara-

tion of food for their families (E. Wallace 1978:683). They ground and pounded seeds, cooked meat, and oversaw the complicated process of leaching acorns. According to the statement by La Pérouse, once inside the mission women continued to play a dominant role in food preparation. As the mission system redefined gender roles in the procurement of food, so too it altered roles in food preparation.

Among other occupations listed by Father Gil in the 1825 document were three male butchers, two male pozole makers (*pozoleros*), and possibly a male cook (*comiero*). Generally, the cook who prepared the meals for the missionaries was male. Gil also described eighteen neophyte women as “those who fill the atole” (*pinoleras para los atoles*) or, more simply, grinders of the meal used to make the atole. Grinding meal continued to be a female occupation, and cooking of at least the mission communal food became a male occupation. The involvement of men in cooking was known to Native American in California. Northern Valley Yokuts men were known to cook meat dishes as well as vegetal dishes when the women were away from their homes (Gayton 1948:177). However, putting a male in charge of preparing and cooking meals was a major shift in role definitions.

Women may have cooked individually for their families, a continuation of more traditional native patterns. Material evidence from both the Angled and Mission Adobe suggests that besides the communal meals, the preparation of food occurred within the neophytes’ rooms. This evidence includes the presence of fire hearths, fire-cracked rocks, faunal and vegetal assemblages, ground-stone tools, and metal tools and containers.

Ground stone found in the adobe buildings (table 6.4) gives evidence of both the continuation of native technology and food preparation and the introduction of more traditionally Mexican methods. The use of bowl mortars and pestles was common to all California native groups (Heizer and Elsasser 1980:116), including both the Ohlone and Yokuts peoples. Native American women used these ground-stone tools to process vegetal foods. The tools were commonly made out of locally occurring materials. At Mission Santa Cruz, of fourteen pestles twelve were basalt, one granite, and one sandstone. Several pestles showed signs of battering on their ends, indicating their possible use as hammerstones as well. With one exception, all bowl mortars recovered were fragmentary. One basalt bowl mortar is small (8.3 cm high x 8.2 cm wide) and similar to one recovered from Elkhorn Slough, a prehistoric site in Ohlone territory (Dietz et al. 1988:193). This small mortar may have been used to grind vegetal materials for medicines rather than food, or even pigments for painting. The rest of the bowl mortar fragments were made of sandstone or granite.

Manos and metates were also common ground-stone items found inside the adobe buildings at Santa Cruz. The metate

**Table 6.4 Ground stone related to food preparation from archaeological contexts from the Mission period (artifact counts)**

	Early Mission	Late Mission	Mixed dep.
Mano fragment	2	4	3
Mano, whole	1	0	1
Metate fragment	3	3	4
Bowl mortar fragment	1	2	1
Small bowl mortar, whole	0	0	1
Pestle fragment	2	2	7
Pestle, whole	0	1	2
Unidentified	21	24	125

fragments were of vesicular basalt, a material that is not common to the area but that had to be imported, perhaps from Mexico. Several leg fragments were from rectangular tripod grinding slabs with rimmed edges that are common to Mexican assemblages. Two whole manos and nine mano fragments were recovered from the site. These manos were presumably used with the metates. Most of the manos were made of sandstone, a common local material, although at least one fragment was made of imported vesicular basalt. Both wheat and corn were ground using the metate. Women may have used these tools to grind native plants as well. Several mano fragments also show battering on their ends, suggesting their occasional use as hammerstones.

Under the floor of room 7 in the Mission Adobe, archaeologists recovered several fragments of a cast iron pot, similar to fragments found at Mission San Juan Bautista (Farris 1991a:29). Other metal tools associated with food preparation or consumption were some fragments of a twisted handle of an iron spoon and a ladle handle, which were found under the floor of rooms in the west side of the Mission Adobe.

Native ground-stone tools Mexican mano and metates are common to most assemblages of the Mission period. This combination of native and imported technology is reported at Missions San Buenaventura (Greenwood 1976:15–17), San Antonio (Hoover and Costello 1985:77–80), San Juan Bautista (Farris 1991a:29), and La Purísima (Deetz 1963). The use of metal tools and implements for cooking is also common to all excavated mission sites.

#### PATTERNS OF FOOD CONSUMPTION

Documentary evidence suggests that the neophytes ate communally, supported in the archaeological record by the presence of large trash pits such as feature 44 showing mass slaughtering and consumption of beef, mutton, and other meats. Archaeological evidence expands this view and suggests that neophytes also prepared and ate meals inside their adobe rooms. The presence of faunal and vegetal remains in fire pits, along with cooking tools, suggests that much food consumption occurred within the walls of both adobe buildings at Mission Santa Cruz. Neophytes probably

also used the corridor area of the Mission Adobe as a space to cook and eat food. This pattern of cooking and eating both inside and in the area directly around the neophyte quarters was also found at Mission San Antonio (Hoover and Costello 1985:41). The distribution of ceramics at Mission Santa Cruz, used in both the preparation and eating of meals, strengthens evidence for neophyte consumption of meals in private areas.

#### Ceramic Assemblage

The ceramic assemblage studied is weighted more heavily toward the Early Mission period than the Late Mission period (see tables 6.5 and 6.6), partially because the Angled Adobe is predominantly a single component site. Later occupations of the Mission Adobe resulted in considerable mixing of the archaeological evidence. The ceramic assemblage from the Mission Adobe can be considered representative of the kinds of ceramics available to the neophytes in the Late Mission period. In the Angled Adobe, a little more than half of the ceramic sherds were recovered from interior areas of the Early Mission period. The remainder of the sherds were found in yard areas nearby. Approximately 65% of ceramic sherds from the Mission Adobe came from interior rooms.

Varieties of English-produced ceramics dominate both assemblages. The most common type of ceramic found in both assemblages was white improved earthenware, which is a hard-bodied white earthenware that the English had been improving upon since the early eighteenth century. Fragments could represent either plain wares or a plain fragment of decorated wares such painted earthenware. Also commonly found was Mexican lead-glaze ware, a mass-produced pottery tradition. The most common type is characterized by a color that is usually orange but ranges from brown to buff and is sometime decorated with black designs. English-produced transfer ware is also common in the ceramic assemblages. First manufactured in 1753, this became a popular style, especially the blue-on-white patterns. Chinese blue-on-white export porcelain was also popular. American-manufactured wares were found only in small numbers, including some modern earthenware that is intrusive to the archaeological deposits. Except for Mission pottery, all varieties of ceramics had to be imported into the mission. It is likely that the Mission pottery was produced in California although there is no evidence, documentary or archaeological, for a kiln at Mission Santa Cruz. This pottery was probably traded in from another mission. Mission San Carlos, for example, had artisan potters for a time (Schuetz-Miller 1994:19). A study (Gritton and Tran N.D.) utilizing chemical analysis of sherds shows similarities between ceramics at Mission San Juan Bautista, San Antonio, and Santa Cruz, indicating trade between the three missions.

Table 6.5 Ceramic assemblage from deposits of the Early Mission period

Description	Angled Adobe		Yard		TOTAL*	Minimum number of vessels			TOTAL
	NE end	Central area	SW end	Var. locs.		Flatware	Hollowware	Servingware	
<b>Chinese wares</b>									
Chinese export porcelain		2 base 3 body	1 body	2 base 3 body	11		1	6	7
<b>Euro-American wares</b>									
Annular ware		3 body	1 body 2 rim	5 body 1 rim	12		8		8
Cream ware	2 body	2 base 1 body		2 rim 1 body	8	3	3		6
Edge decorated ware		1 rim	2 body		3	2			2
Painted earthenware	2 body 1 rim	2 base 2 body 1 rim	1 body	1 body 3 rim	13	4	6	1	11
Transfer print earthenware	3 body	15 body 1 rim	1 body	6 body 2 rim	28	15	6		21
Red earthenware		1 body		1 body	2		2		2
Sponge earthenware		2 rim			2		2		1
Rockingham earthenware	1 body				1		1		1
Yellow ware		2 body	1 body	2 body	5	1	3		4
Yellow annular ware			1 body		1		1		1
White improved earthenware (plain or unidentified)	2 base 10 body 4 rim	6 base 33 body 6 rim	1 base 9 body	7 base 21 body 1 handle 5 rim	105	30	16	1	47
<b>Mexican wares</b>									
Tumacacori polychrome		2 body	1 body	1 base 4 body 2 rim	10		8		8
Majolica (white or unidentified)		1 base 1 body			2		1		1
Mexican lead-glaze	4 body 1 rim			3 base 30 body 6 rim	44			7	7
<b>Local wares</b>									
Mission pottery	3 body	2 body 1 rim	3 body	18 body 2 rim	29			16	16
<b>TOTAL</b>	<b>33</b>	<b>90</b>	<b>24</b>	<b>129</b>	<b>276</b>	<b>55</b>	<b>57</b>	<b>31</b>	<b>143</b>

\* Number of sherds

Mean ceramic date for Early Mission deposits: 1817

Derived from dates of pottery manufacture listed by Julia Costello (1990) and George Miller (N.D.).

Flatware = plates, platters, saucers

Hollowware = bowls, cups

Servingware = large utilitarian vessels

The variety of ceramics available to neophytes at Mission Santa Cruz is typical of other assemblages of the Mission period. Although the sample is small, English wares dominated the ceramic assemblage of neophyte quarters at Mission San Juan Bautista (Farris 1991a:51), followed by Mexican and Chinese wares, with few American and local mission wares. Ceramics from the La Purísima neophyte quarters were not quantified (Deetz 1963), but English wares again seemed to predominate. At Mission San Antonio, neophytes

had access mostly to local mission wares but also used imported European, Mexican, and Chinese ceramics (Hoover and Costello 1985:33). This reliance upon local wares is explained by the presence of a ceramic industry at Mission San Antonio. All missions had more access to imported Euro-American ceramics than Mexican-produced wares after about 1822 (Hoover and Costello 1985:41).

In general, English and Chinese wares served as plates or saucers (flatware) and cups or bowls (hollowware). Most of



Table 6.6 Ceramic assemblage Late Mission period deposits

Description	Mission Adobe				Yard	Total No. of Sherds	Minimum number of vessels			TOTAL
	Room 1	Room 5	Room 6	Room 7	West side		Flat ware	Hollow ware	Serving ware	
<b>Chinese wares</b>										
Chinese export porcelain	2 body	1 rim		2 body	4 body 1 rim	10	7	1		8
<b>Euro-American wares</b>										
Annular ware	6 body 1 rim				1 body 1 rim	9	3			3
Cream ware	1 base 1 handle 1 rim		1 base	1 rim	1 rim	6	3	3		6
Edge decorated ware				1 rim	1 rim	2	2			2
Painted earthenware	1 body			1 rim	1 body	3	1	2		3
Transfer print earthenware	1 base 3 body 3 rim	1 body 1 rim	1 body	1 base 2 body 1 rim	6 body 1 rim	21	15	4		19
Yellow ware					1 body	1	1			1
Yellow annular ware				1 body		1		1		1
White improved earthenware (plain or unidentified)	1 base 3 body	1 base 5 body	1 body	2 base 2 body 1 rim	4 base 2 body 2 rim	24	8	4		12
<b>Mexican wares</b>										
San Elizario majolica				2 body		2		1		1
Tumacacori polychrome	1 body			1 body	1 body	3		3		3
Majolica (white or unidentified)	1 base				1 base 1 body 1 rim	4		3		3
Mexican lead-glaze	1 body	1 body	1 body 2 rim	4 body 3 rim	1 body	13		1	7	8
<b>Local wares</b>										
Mission pottery	2 body				4 body 2 rim	8			4	4
<b>TOTAL</b>	<b>29</b>	<b>10</b>	<b>6</b>	<b>25</b>	<b>37</b>	<b>107</b>	<b>40</b>	<b>23</b>	<b>11</b>	<b>74</b>

Mean ceramic date for Late Mission deposits: 1824

Derived from pottery manufacture dates listed by Julia Costello (1990) and George Miller (n.d.).

Flat ware = plates, platters, saucers

Hollow ware = bowls, cups

Serving ware = large utilitarian vessels

the earthenware sherds were from plates, with occasional bowl or cup sherds. The same is true of Chinese export porcelain. In contrast, neophytes used most Mexican wares and all locally manufactured mission pottery as cooking and serving dishes. Some Mexican wares served as hollowwares. American manufactured ceramics were mostly hollowwares, with occasional yellow flatwares. In the overall ceramic assemblage, flatwares predominate (see tables 6.5 and 6.6). This is somewhat surprising since, according to documentary evidence, the most common meals neophytes consumed were

soups and stew-like dishes, and hollowware (bowls) would have been much better suited to this type of food. Availability can perhaps explain the predominance of flatware. Neophytes were heavily dependent on the missionaries for access to imported goods. In turn, the missionaries depended on foreign traders and the available market (Costello 1990). Alternatively, baskets not present in the archaeological record that Lorenzo Asisara mentions in the quotation at the beginning of the chapter may have been used primarily as bowls for the pozole.

**Table 6.7 Glass fragments recovered from Early and Late Mission deposit contexts**

Artifact Fragments	Early Mission	Late Mission	Total
Unidentified bottle	70 MNV	53 MNV	123 MNV
Liquor bottle	2 MNV	1 MNV	3 MNV
Medicine bottle	1 MNV	8 MNV	9 MNV
Tableware	1 MNV	6 MNV	7 MNV
Unidentified	74 sherds	100 sherds	174 sherds
Window glass (intrusive)	156 sherds	55 sherds	211 sherds

MNV = minimum number of vessels

Minimum vessel counts can be used to interpret how many vessels the sherds represent, but no entirely reconstructible vessels could be assembled from the ceramics found in contexts of the Early and Late Mission periods. Neophytes sometimes manufactured other items from ceramics. For example, a porcelain projectile point and possible gaming pieces were found (see chapter 7 for further discussion). Neophytes may have viewed ceramics as a source of raw material in addition to use as serving vessels and containers.

### **Glass and Bottle Assemblage**

Fragmented bottle glass appears in the assemblages from both the Mission and Angled Adobe (table 6.7). Bottle glass is common but does not usually appear in large quantities in neophyte living areas of California missions. Archaeologists recovered only fifty-eight glass sherds, all green, from Mission San Antonio (Hoover and Costello 1985:63). In addition, nineteen sherds of window glass were recovered, supposed by the archaeologists to be a result of stratigraphic disturbance by rodents. Glass was similarly sparse at Mission San Juan Bautista (Farris 1991a) and Mission La Purísima (Deetz 1963). From excavations at Mission Santa Cruz more than four hundred sherds of glass containers were found in a variety of colors and shapes. Bottle glass was distributed throughout the site, but only as fragments. The assemblage from the Mission Adobe contained more glass, possibly a result of the continued occupation of the building into later periods and the downward migration of glass into earlier occupation periods. For example, intrusive window glass was found in Late Mission strata of the Mission Adobe. Colorless and various shades of green glass sherds were the most common in both assemblages. Most sherds were from unidentified vessels, but some wine and medicine bottles were identifiable. Few vessels could be reconstructed from the fragments. Overall, it appears that the neophytes at Mission Santa Cruz had few glass containers. Neophytes may have reused some containers for liquid storage after their original contents were gone, probably especially wine bottles. Neophytes also used glass sherds for other

purposes. Flaked glass tools are illustrated and further discussed in chapter 7.

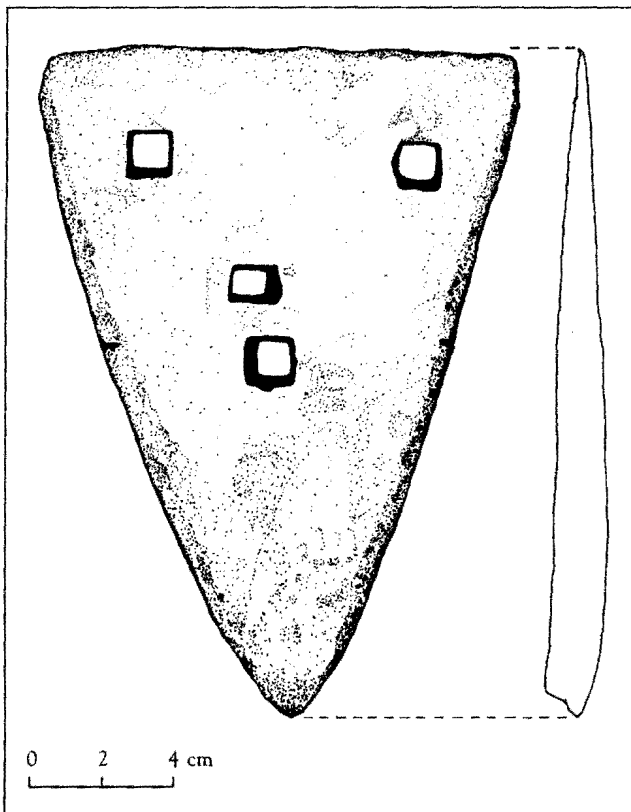
### **Basketry**

Neophytes also used baskets for cooking and consuming their food. The use of basketry is well recorded ethnographically, and both Ohlone and Northern Valley Yokuts had long traditions of basketry manufacture and use (James 1909, Levy 1978). Lorenzo Asisara mentions that neophytes received their rations in a little basket that he called a *cora*. Due to its organic and fragile nature, basketry rarely survives in the archaeological record; so, it is not surprising that no evidence was found at Mission Santa Cruz.

### **ADAPTATION OF NATIVE PATTERNS**

The missionaries' answer to the questionnaire sent by the Spanish government, quoted at the beginning of this chapter, implies two trends that can be verified archaeologically. First, neophytes relied heavily on the mission system to give them staples for their diet: wheat, corn, beef, and mutton. Perhaps the artifact that best illustrates the neophytes' reliance on the mission for food is an iron plow tip (figure 6.2) that archaeologists discovered in the south corridor area of the Mission Adobe. Farming technology the Spanish brought with them to the Americas was relatively simple (Foster 1960:52). Plows used at the mission consisted of a heavy wooden bottom piece ending in an iron share used to dig into the earth and a wooden pole by which the plow was attached to the oxen (Tays 1941:300). The presence of the plow tip attests to the neophytes' participation in the agricultural system. Missionaries also stated that neophytes kept fields for their own use as well as tending the communal fields.

The second important trend displayed by the archaeological record is that neophytes exercised some degree of independence over their meals by supplementing the mission food. They did not simply rely on missionaries to provide but actively sought supplemental foods following native traditions, growing and gathering their own sources of food. Many discussions of neophytes supplementing their meals have focused on the necessity of adding food sources because of scarcity in the mission. Coombs and Plog (1974) suggest that missionaries at Mission Santa Barbara sent neophytes out seasonally on *paseos* (leaves of absence) to gather vegetal materials and hunt game to supplement their mission diet. Stodder (1986:28) suggests that the agricultural production at Mission Santa Cruz was inadequate to feed the neophytes and that they therefore suffered from nutritional deprivation. Franciscans founded Mission Santa Cruz at a time when the California mission system was no longer foundering, and annual reports attest to the success of agriculture at the mission. The archaeological assemblages con-



**Figure 6.2** Iron plow tip found in the South Corridor area of the Mission Adobe. *Illustration by Karen Hildebrand*

firm the adequacy of the neophyte diet; yet neophytes continued to supplement their mission diet with such native foods as fish, shellfish, game, and vegetal products.

The mission system affected the eating and work patterns of the neophytes as well. The combination of documentary and archaeological evidence suggests two patterns of behavior, one dictated by Franciscan ideals and the other a con-

tinuation of native traditions. Documentary descriptions of neophyte meals in the mission system emphasize their communal nature. Most detail neophytes gathering at the sound of the bells to receive their portion of mission ration. Archaeological evidence points to more individualistic and family meals, with neophytes consuming their meals inside and just outside their individual residences. Similarly, mission requirements and dictates redefined gender roles in the production and procurement of food. Men were responsible for raising vegetal products, domestic animals, and cooking, activities they had participated in only marginally before missionization. Women's roles were reduced in several ways and in the mission system focused primarily on the grinding of meal. Requirements of the mission labor system restricted neophyte access to hunting, fishing, and gathering. Alterations of the landscape caused by the introduction of imported plants and animals compounded these restrictions. In spite of these changes, many native patterns continued. Women gathered shellfish and limited amounts of native vegetal products, and men continued to hunt and fish. These traditional work patterns are evidenced in the artifacts and food remains recovered from neophyte residences.

The continuing use of native sources of food and the growing of imported foods for their personal use is more likely attributable to neophyte choice than necessity. Part of the expected transformation of the neophyte population into a Hispanic community was their reliance on agricultural foods and products. Missionaries were not able to exert complete control over what, when, or where neophytes consumed their meals. Neophytes continued to make choices concerning their diet and work, perhaps in the process helping to subvert the success of the mission as an institution of acculturation.

# Material Culture

**B**ESIDES EVIDENCE concerning the physical environment surrounding Mission Santa Cruz, the architecture, and the neophyte diet, many artifacts were recovered from activities that filled the neophytes' daily lives. Artifacts found represent actions both within and outside mission buildings. Some activities such as smoking or gaming may have taken place outside, but the artifacts that represent those activities were brought back to the residence for storage. Other activities are probably underrepresented or not represented at all in the archaeological assemblage. Male and female roles are discernible to some extent. Adopting a technique used to describe Northern Plains culture (Rogers 1993:83), table 7.1 lists activities that probably took place in and around the mission and Angled Adobes at Santa Cruz.

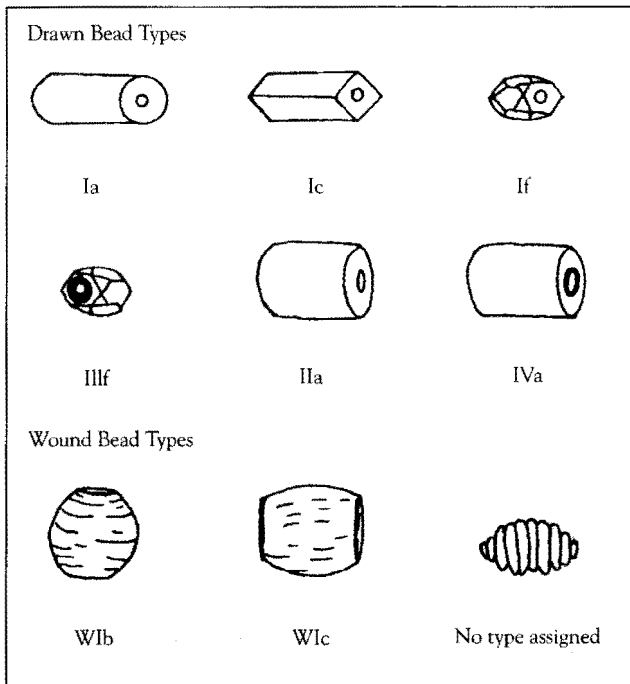
Many activities that would reflect outward acceptance of Hispanic values and cultural systems occurred outside the neophyte residence. For example, agricultural activities, construction, herding, communal cooking, communal grinding, washing, and attendance at religious ceremonies all occurred outside under the purview of the Franciscans. These activities are represented in the archaeological assemblage by artifacts such as the iron plow tip and the religious medal and rosary. Other artifacts point to retention of native culture. Artifacts fall into several general categories including ornamentation, lithics, clothing related artifacts, and miscellaneous artifacts such as gaming pieces, bone items, smoking paraphernalia, mudstone disks, metal items, and artifacts that are not readily grouped. Descriptions of material culture reflect both native and imported technologies. This chapter focuses on describing the artifacts that were archaeologically recovered, how these items were used, and their distribution across the site. Chapter 4 summarized criteria for inclusion of artifacts in the present study (see especially table 4.3).

## ORNAMENTATION AND BEAD MANUFACTURE

**E**xcavations at Mission Santa Cruz produced three categories of beads: glass, shell, and bone. All shell and bone beads including those found in mixed deposits are assumed to be associated with neophyte occupancy of the adobe buildings. Glass beads are known to date from both Mission and Post Mission periods. This study includes only those glass beads found in the strata from the Mission period. At Mission Santa Clara (Hylkema 1995), distribution of glass and shell beads was assumed to include the active participation of missionaries. While missionaries and soldiers no doubt used glass beads as a means of paying for neophyte labor, to attribute their distribution solely to mission-

Table 7.1 Activity sets defined on the basis of recovered artifacts

Abrading	Grinding
Adornment	Hammering
Bead manufacture	Hunting
Chopping	Incising
Cooking	Knapping
Cutting	Perforating
Decorating	Pounding
Drilling	Religious activities? (bone whistles and tubes, religious medal and rosary)
Eating	Scraping
Farming	Sewing
Fastening	Shoemaking
Filing	Shellfish gathering
Fishing	Smoking
Food serving	Straighening
Food storage	Trading
Gaming	Vegetal food gathering



**Figure 7.1** Types of glass beads. After Karklins (1982) and Motz and Schulz (1980)

ary activity seems limited at best. Glass beads, as well as shell beads, held different values for Hispanic and neophyte communities. Native Americans in California had long established traditions of trade (Davis 1974). The implication that they would give up this mechanism and rely solely on missionaries for bead distribution seems to limit neophyte resourcefulness and active participation in their daily life. Evidence from Santa Cruz suggests that neophytes were manufacturing shell beads and ornaments and using them as trade goods. Neophytes actively traded glass and bone beads as well.

### Glass Beads

Archaeologists recovered more than eleven hundred glass beads from Mission Santa Cruz excavations. Over three-quarters of the beads were found in the interior rooms of the Mission Adobe. Glass beads also appeared in the rooms of the Angled Adobe and in surrounding yard areas. Most of the glass beads were from mixed deposits, but 205 beads could be associated with deposits from the Early and Late Mission periods. All glass beads were classified with the assistance of Lee Motz and Lester Ross. Classifications follow those devised by Kidd and Kidd (1970), with updates and expansions by Karklins (1982, 1985) and further modifications in the classification system suggested by Ross (1990). Several authors have described manufacturing methods in more detail, especially Sprague (1985) and Karklins (1982, 1985).

Tables 7.2 and 7.3 summarize information on recovered drawn and wound beads. Specifically, the tables list the Kidd

and Kidd-Karklins type, number of specimens found, bead color and diaphaneity, shape, and range of sizes. Color was determined by using the *Munsell Books of Color* (1966). Beads were first moistened and their color read under a 60-watt incandescent bulb because lighting source was found to give the most consistent readings. Diaphaneity is a measure of the ability of beads to permit light through their diameter: transparent, translucent, or opaque. Drawn beads are, by definition, cylinder-shaped; wound beads are generally more spherical. Each term is qualified as short (diameter wider than length) or long (longer than wide). The maximum length and smallest diameter of every bead was measured to the nearest tenth of a millimeter. For each bead type, the range of a maximum length and smallest diameter is noted. If only two beads of the variety are found, the measurements are separated by commas.

Drawn beads are named for their manufacturing process, as they are initially long hollow canes drawn from a molten gather of glass. The canes are then chopped into small segments and left with rough ends, or are subsequently tumbled for finishing (figure 7.1). Six types of drawn beads were found in deposits from Mission Santa Cruz (refer to tables 7.2 and 7.3). Type IVa, a polychrome tubular bead with tumbled finished ends, was the most common glass bead, especially in Late Mission deposits. These beads are generally red with green or white interiors. Beads with white exterior and interior were also common, indicating popularity or availability. Also common was Type IIa, similar in shape to IVa but monochrome. Blue, green, black, red, white, amber, and colorless beads were all found. Faceted beads, such as type If and the polychrome IIIf were frequently recovered, but not all could be definitely attributed to the Mission period. Other types of drawn beads recovered include type Ia and Ic (figure 7.1).

Wound beads are made by winding molten glass around a mandrel, such as a wire or rod, which is rotated continuously. The mandrel is sometimes coated with clay to ease removal of beads. More complex wound beads can be made with faceting or molding or applied contrasting color strips. Three types of wound beads were found at Mission Santa Cruz (figure 7.1). The third most common bead found at Mission Santa Cruz was type WIb, including colors of blue, green, pink, and white. Two red type W1c beads (monochrome barrel-shaped beads) were found in deposits from the Late Mission period. One wound bead, which could not be assigned to a type, is opaque gold with an elongated biconically shape, raised spirals, and a straight, even perforation (shown as the last bead type in figure 7.1).

Inside the Mission Adobe, one blown bead was also found in a deposit from the Late Mission period. Blown beads were generally made in molds (Karklins 1982:98). These beads date to the later part of the nineteenth century. Since no

Table 7.2 Glass beads from deposits from the Early Mission period

**Drawn beads**

Type	No.	Color (Munsell reading)	Shape	Size (length; diameter)
Ia	1	Burgundy black, translucent (2.5R 2/4)	Cylinder, long	2.5 mm; 2.1 mm
Ic	1	Black, opaque (N 1/0)	Hexagonal cylinder, short	2.7 mm; 0.8 mm
Ic	7	Colorless, transparent	Hexagonal cylinder, short to long	3.8–6.3 mm; 4.3–5.5 mm
Ic	2	Burgundy black, translucent (2.5R 2/4)	Hexagonal cylinder, short to long	1.9, 2.5 mm; 2.4 mm
III f	1	Colorless, transparent exterior. White (N 9/0) translucent interior.	Cylinder, short	5.8 mm; 5.7 mm
Ila	1	Blue, translucent (7.5B 6/6)	Cylinder, short	2.9 mm; 2.9 mm
Ila	1	Blue-green, translucent (10BG 5/8)	Cylinder, short	3.2 mm; 3.2 mm
Ila	4	Blue-green, translucent (7.5BG 6/6)	Cylinder, short to long	2.7–3.6 mm; 2.4–3.2 mm
Ila	7	Blue-green, translucent (7.5BG 5/8)	Cylinder, short	2.1–3.8 mm; 2.7–4.7 mm
Ila	6	Black, opaque (N 1/0)	Cylinder, short to long	2.5–6.6 mm; 3.4–6.1 mm
Ila	2	Colorless, transparent	Cylinder, short to long	2.3, 3.7 mm; 3.9, 3.2 mm
Ila	1	Green, translucent (10G 6/6)	Cylinder, short	3.2 mm; 2.7 mm
Ila	3	Green, translucent (2.5G 5/10)	Cylinder, short	2.1–2.4 mm; 3.0–3.3 mm
Ila	1	Dark Green, translucent (2.5G 3/10)	Cylinder, short	2.8 mm; 3.3 mm
Ila	4	Purple-blue, translucent (7.5PB 4/8–4/10)	Cylinder, short	3.2–3.6 mm; 4.5–5.2 mm
Ila	7	Blue-purple, translucent to opaque (5PB 5/8)	Cylinder, short to long	2.6–4.1 mm; 3.3–4.2 mm
Ila	1	Burgundy black, translucent (2.5R 2/4)	Cylinder, short	2.5 mm; 3.5 mm
Ila	1	White, opaque (N 9/0)	Cylinder, short	3.1 mm; 3.7 mm
Ila	2	Amber, translucent (10YR 6/8 - 7/8)	Cylinder, short	1.8, 2.4 mm; 3.4, 4.4 mm
IVa	3	Red (7.5R 3/12) opaque exterior. Green-yellow (10GY 6/6) translucent interior.	Cylinder, short to long	2.7–3.9 mm; 3.4–3.7 mm
IVa	25	White opaque exterior and interior (N 9/0)	Cylinder, short	2.4–3.8 mm; 2.8–4.1 mm

**Wound beads**

Type	No.	Color (Munsell reading)	Shape	Size (length, diameter)
W1b	1	Green-blue, opaque (5BG 4/8)	Sphere, short	4.7 mm; 6.9 mm
W1b	1	Purple-blue, translucent (7.5PB 2/10)	Sphere, short	4.4 mm; 5.4 mm
W1b	1	Blue-purple, transparent (5PB 4/10–4/12)	Sphere, short	4.2 mm; 6.5 mm
W1b	2	Pink, translucent (2.5R 5/12)	Sphere, short	4.1, 4.9 mm; 5.3 mm
W1b	1	Glossy white, translucent (N 9.5/0)	Sphere, short	5.3 mm; 6.7 mm

other blown beads have been found in Mission period deposits in California, it is likely that this bead is intrusive.

Glass beads of types Ila and IVa have been documented at several other missions in California. Lester Ross has noted Ila and IVa beads at Missions Santa Inés (1989), Santa Clara (1988), and La Purísima Vieja (1992). Thad Van Bueren (1995:81–84) refers to these types as DIIa and DIVa at Mission Santa Clara and describes their colors as green, olive green, light blue, blue, navy blue, deep rose purple, red, and opaque white. Both types have also been reported as “cane beads” at Mission San Buenaventura (Gibson 1976) and Santa Barbara Presidio (King 1988). At Mission San Antonio, these types of beads were called “seed beads” (Meighan 1985). This author has also noted types Ila and IVa at Mission San Juan Bautista (excavated by DPR) and at a third neophyte residence at Santa Cruz Mission (excavated by

Cabrillo College). Overall, these two types are not reliable time markers, as they also frequently appear well into the Post-Mission period in California. Van Bueren (1995) has proposed some chronological markers for certain colors, although this has not been verified elsewhere.

Type W1b beads have also been recorded at several mission sites, including Santa Clara (Ross 1988), La Purísima Vieja (Ross 1992), Santa Inés (Ross 1989), San Buenaventura (noted as “wire wound” by Gibson 1976), and Mission San Antonio (also called “wire wound” by Meighan 1985). The author has also noted this type in collections from Mission San Juan Bautista and a third neophyte residence at Santa Cruz Mission. Rounded “wire wound” beads were also recorded at Santa Barbara Presidio (King 1988). Like their drawn counterparts, these beads do not generally make useful temporal markers. A type similar to the untyped spiral

Table 7.3 Glass beads from deposits from the Late Mission period

*Drawn beads*

Type	#	Color (Munsell reading)	Shape	Length	Diameter
Ic	1	Black, opaque (N 1/0)	Cylinder, short	2.4 mm	2.1 mm
If	4	Green, transparent (2.5G 3/6)	Cylinder, short	4.2–4.7 mm	4.8–5.5 mm
If	1	Burgundy black, translucent (2.5R 2/4)	Cylinder, long	11.6 mm	2.4 mm
IIIIf	1	Colorless, transparent exterior. White (N 9/0) translucent interior.	Cylinder, short	5.0 mm	5.7 mm
Ila	4	Blue, translucent (7.5B 6/6)	Cylinder, short	1.4–1.7 mm	2.4–2.8 mm
Ila	2	Blue-green, translucent (10BG 5/8)	Cylinder, short	1.6, 2.0 mm	2.5, 2.9 mm
Ila	4	Blue-green, translucent (7.5BG 6/6)	Cylinder, short to long		1.7–2.0, 5.2 mm
2.3–3.2, 4.6 mm					
Ila	2	Blue-green, translucent (7.5BG 5/8)	Cylinder, short	1.8–2.5 mm	2.5–3.0 mm
Ila	1	Blue-green, translucent (5BG 6/2)	Cylinder, short	1.4 mm	2.5 mm
Ila	6	Black, opaque (N 1/0)	Cylinder, short	2.2–2.9 mm	3.4–4.2 mm
Ila	1	Colorless, transparent	Cylinder, long	3.2 mm	3.0 mm
Ila	1	Green, translucent (10G 6/6)	Cylinder, short	2.2 mm	2.5 mm
Ila	3	Green, translucent (2.5G 5/10)	Cylinder, short	1.9–3.4 mm	3.2–4.0 mm
Ila	1	Dark green, translucent (2.5G 3/10)	Cylinder, short	2.6 mm	3.4 mm
Ila	5	Purple-blue, translucent (7.5PB 4/8-4/10)	Cylinder, short	1.6–2.2 mm	2.6–3.5 mm
Ila	1	Blue-purple, translucent (5PB 5/8)	Cylinder, short	3.5 mm	2.7 mm
Ila	1	Red, opaque (10R 5/8)	Cylinder, short	1.1 mm	1.7 mm
Ila	6	Burgundy black, translucent (2.5R 2/4)	Cylinder, short	2.1–3.5 mm	2.8–4.6 mm
Ila	1	Red-purple, translucent (10RP 4/6)	Cylinder, short	3.1 mm	4.6 mm
Ila	1	White, opaque (N 9/0)	Cylinder, short	2.5 mm	2.5 mm
Ila	1	Yellow, opaque (5Y 8.5/8)	Cylinder, short	2.4 mm	3.1 mm
Ila	1	Amber, translucent (10YR 6/8-7/8)	Cylinder, short	2.2 mm	3.5 mm
IVa	1	Red (7.5R 3/12) opaque exterior. Green-yellow (10GY 6/6) translucent interior.	Cylinder, short	2.9 mm	3.6 mm
IVa	2	Red (7.5R 3/12) translucent interior. White (N 9/0) opaque exterior.	Cylinder, short	1.4, 1.8 mm	2.4, 2.6 mm
IVa	82	White (N 9/0) opaque exterior. White (N 9/0) opaque interior.	Cylinder, short to long		8–4.2 mm
1.4–5.0 mm					

*Wound beads*

Type	#	Color (Munsell reading)	Shape	Length,	Diameter
W1b	1	Black, opaque (N 1/0)	Sphere, short	4.5 mm	6.7 mm
W1b	2	Colorless, transparent	Sphere, short	5.5 mm	frag.
W1b	1	Green-yellow, transparent (7.5GY 6/6)	Sphere, short	4.3 mm	6.7 mm
W1b	1	Purple, translucent (10P 3/6-4/6)	Sphere, short	4.9 mm	6.5 mm
W1b	1	Blue-purple, transparent (5 PB 4/10-4/12)	Sphere, short	5.1 mm	5.9 mm
W1b	1	Pink, translucent (2.5R 5/12)	Sphere, short	3.6 mm	5.4 mm
W1b	1	Dark purple-red, translucent (10RP 2/2)	Sphere, short	1.7 mm	2.2 mm
W1b	2	Yellow, opaque glossy (5Y 8/10)	Sphere, short	3.8, 3.5 mm	4.5, 4.8 mm
W1b	5	Amber, transparent (10YR 7/8-7/10)	Sphere, short	4.9–6.0 mm	6.7–7.2 mm
W1b	3	Dark amber, transparent (2.5YR 4/10-5/10)	Sphere, short	3.5, 5.2 mm	4.4, 7.5 mm
W1c	2	Red, translucent (7.5R 4/12-4/14)	Barrel, long	4.5, 5.7 mm	4.0, 3.5 mm
Unassigned	1	Gold, opaque (10YR 8/14)	Biconical, long	5.0 mm	5.5 mm

wound bead found at Mission Santa Cruz was noted at Fort Ross (Motz 1993). This type has not been reported at other missions and may date to a later period or its presence may be related to the regular trade between the Russians and Mission Santa Cruz (see Khlebnikov 1990).

Neophytes used glass beads as parts of necklaces, earrings, or bracelets. They may also have used them to sew onto baskets and clothing. Some glass beads may have come from rosaries. Glass beads associated with the earlier Angled Adobe occur in the following numerical frequency: white, blue (including green-blue and purple-blue), colorless, black (including deep burgundy), red, green, and amber. In the Mission Adobe, beads, in descending numerical frequency of colors are white, blue (including blue-green and purple-blue), black (including deep burgundy), amber, green (including green-yellow), red, purple, and yellow. Two segments of glass beads were found fused together, in a white-blue-white sequence. White is by far the most common color. Its resemblance to shell beads may account for its popularity. These frequencies may reflect preferences, availability or more likely, a combination of these two factors.

### Shell Beads and Ornaments

Besides a food source, neophytes made other uses of collected shellfish (see figures 7.2 and 7.3). Abalone shells were put to many uses—as small dishes or bowls or for fishhooks and ornaments. Most shell beads recovered at Mission Santa Cruz were manufactured from the Purple Dwarf Olive shell (*Olivella biplicata*), although some were made of abalone or clam shell. Mussel, although heavily used as a food source, does not seem to have held any decorative value. *Olivella* shells are plentiful along the coast of Monterey Bay. The species lives in the sand from low-tide areas out to water 150 feet deep. These shells often wash up on shore after the animal has died and can easily be found all along the shoreline, especially in rocky intertidal areas. Neophytes at Santa Cruz had access to a variety of *Olivella* shells.

For thousands of years, Native Californians used shell beads as decorative objects. Neophytes living in the mission and Angled Adobes were following native traditions when they continued to make and use these beads. The decorative use of appliqué disk beads is demonstrated by traces of asphaltum which was used to attach beads to objects such as basketry or clothing. Shell beads were also strung to make necklaces, bracelets, or earrings. Disk beads made from the outer wall of the *Olivella* were not directly used as money but instead were indications of wealth (King 1978:60). When the Spanish began to explore and settle Alta California, they quickly discovered the value of beads to the natives and offered them glass beads as gifts, bribes, rewards, and payment for services rendered. Glass beads rapidly circulated in native society but did not entirely re-

place beads made from shell.

The archaeological assemblage from Santa Cruz shows clear evidence of *Olivella* bead manufacture (Bennyhoff 1992), although in smaller numbers than have been noted in prehistoric sites. Spire-lopped beads, classified as A1 by Bennyhoff and Hughes (1987:116–118) are the most common beads at Santa Cruz. These beads are classified by the size of the shell's diameter: A1a is less than 6.5 mm, A1b ranges from 6.5 to 9.5 mm, and A1c is larger than 9.5 mm. One hundred and twenty-five spire-lopped beads of all three sizes were found in Santa Cruz deposits, but most were made of larger-sized *Olivella* (figure 7.2). Spire-lopped shells are the easiest to manufacture. The spire is simply chipped, broken, or ground off. *Olivella* shells found on the beach often have had their spires removed by natural causes. Almost no modification is needed to use the shell. To simplify stringing, the outer lip is often broken away, usually in a parallel break, with minimal damage to the shell (Bennyhoff and Hughes 1987:117). Most of the spire-lopped beads at Santa Cruz were modified in this way. A1 series *Olivella* beads were also recovered from Mission Santa Clara (Hylkema 1995:75). At that mission, medium-sized spire-lopped beads (A1b) were the most common, followed closely by large-size beads (A1a). Few small (A1c) beads were recovered.

All the *Olivella* disk beads from Mission Santa Cruz belong to the Class H Disk (Bennyhoff 1992, Bennyhoff and Hughes 1987:135–136). Archaeologists recovered more than sixty *Olivella* disk beads of four varieties: H1a (ground disk), H1b (semi ground disk), H2 (rough disk), and B5 (spire bead), illustrated in figure 7.2. The general trend of *Olivella* disk bead manufacture found in historic or mission sites is that over time the wall beads produced were larger, and their edges less refined (King 1978, Gibson 1976:124, Bennyhoff and Hughes 1987:135). Disk beads at Santa Cruz match this generalization. Their average diameter is 6.0 mm, well within the range noted by Gibson (1976:157) as predominant from 1805 to 1834, which fits in well with the known dates of the Santa Cruz collections. All of the *Olivella* disk beads have small perforations compared with prehistoric beads. The perforations average 1.4 mm and were made by using a metal needle (Bennyhoff 1992). The relative value of *Olivella* beads was determined by the time expended in drilling the central holes and smoothing the circumference edges (King 1978:62). Disks found at Mission Santa Cruz have lesser value as indicated by their rough edges.

More than three hundred pieces of *Olivella* detritus associated with bead manufacture were found at Mission Santa Cruz. Although only small amounts of detritus were recovered (see table 7.4), the kinds found suggest definite evidence of bead manufacture (Bennyhoff 1992). Only at Mission San Buenaventura (Gibson 1976) have larger quantities of detritus been recovered from historic Native Ameri-



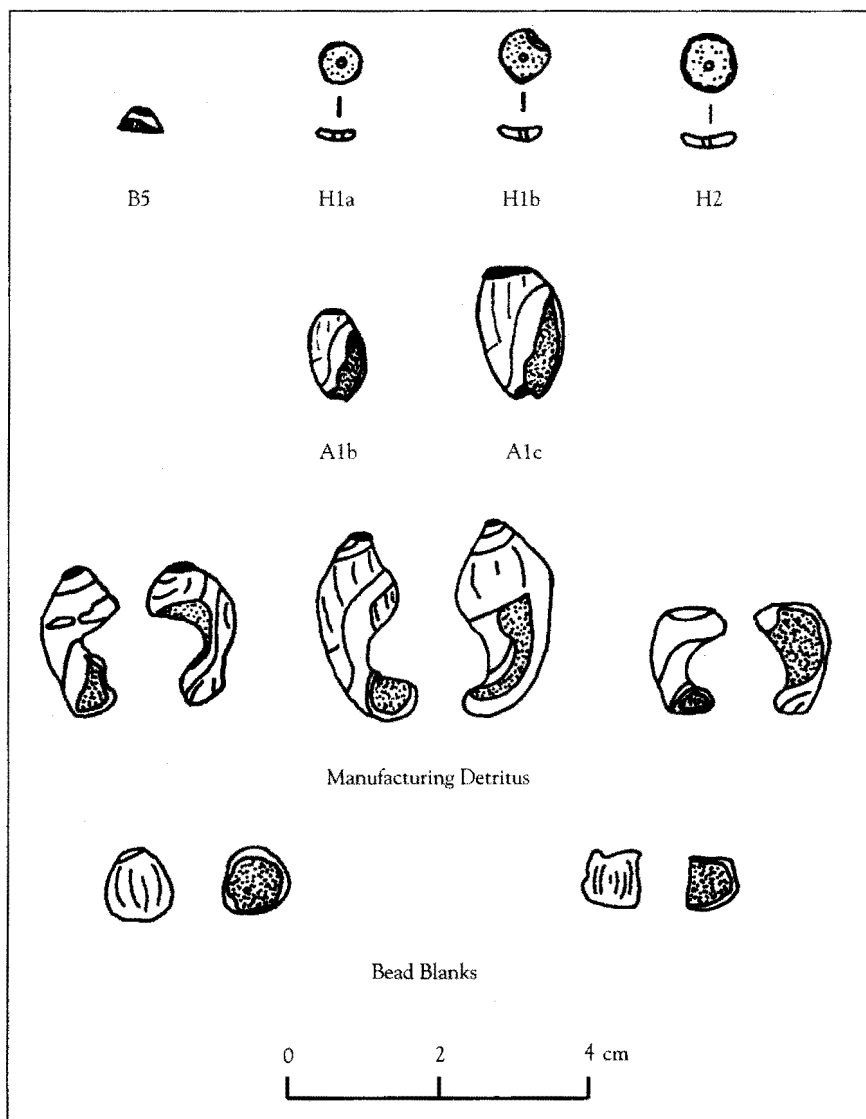


Figure 7.2 *Olivella* shell beads and manufacturing debris

can mission site. Knowledge of manufacturing techniques for *Olivella* disk beads comes from both ethnographic sources and modern replication studies (see Allen 1992 for a more detailed description of shell-bead manufacture). *Olivella* disk beads from Santa Cruz have relatively flat cross sections and were manufactured from the area of the outer lip or from the back wall. Nearly a quarter of the detritus fragments from Santa Cruz have the outer lip cut away, suggesting that was the preferred area for manufacturing. When viewed under the microscope, these fragments show cut marks. The portion of the *Olivella* least used in the manufacture of beads is the callus, a hard area at the aperture of the shell. Traditionally used in the manufacture of so-called money beads in Southern California, these types of beads were more difficult to manufacture because of the hardness of the callus. Of all the detritus found at Santa Cruz, almost 75% is the callus or contains some portion of the callus (see figure 7.2). Neophytes at Santa Cruz were not using or making callus beads. Gibson (1976:98) also noted large numbers of callus

fragments in the *Olivella* detritus at Mission San Buenaventura.

Of the sixty *Olivella* disk beads recovered from mission Santa Cruz from mission and mixed deposits, fifty-seven came from the Mission Adobe (see table 7.4). Only three beads were found in the Angled Adobe. Spire-lopped beads were also more frequent during the later period of the Mission Adobe. Seventy-two spire-lopped beads were excavated from the interior of the Mission Adobe rooms, while only twenty-seven were recovered from the Angled Adobe. Similarly, most detritus was recovered from interior areas of the Mission Adobe, suggesting manufacture occurred inside this building. Neophytes continue to have access to *Olivella* beads well into the Late Mission period and their manufacture was active at Santa Cruz, perhaps even increasing over time.

From cemetery excavations at Mission Santa Clara, archaeologists recovered over twelve hundred *Olivella* H1a beads, indicating their importance as grave goods. Hylkema (1995:77) states that the temporal range of these beads is

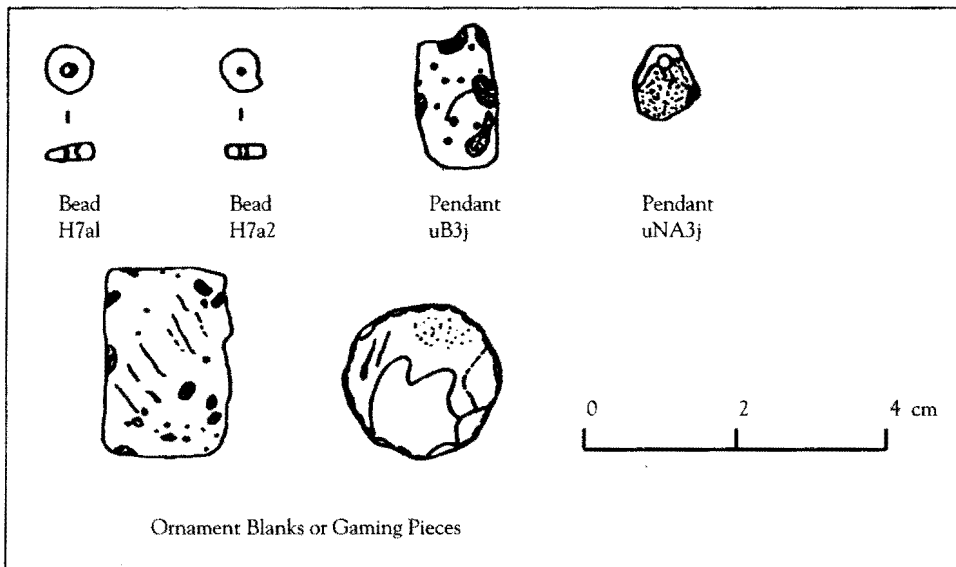


Figure 7.3 Abalone beads and ornaments

approximately 1770 to 1800, given their archaeological context. H1a beads have also been noted at Mission San Antonio (Hoover and Costello 1985:74), and San Buenaventura (Gibson 1976). Beads recovered at Mission San Jose (Dietz 1983) were designated as H1b. The use of *Olivella* beads was widespread among missionized neophytes in California and extends at least until secularization.

Abalone shells (*Haliotis* sp.) were also a favored material for making ornaments at Santa Cruz. Two abalone disk beads were excavated from the Angled Adobe and six beads from the Mission Adobe (see table 7.4). These beads were made in a way similar to *Olivella* disks, although neophytes used both stone drills and metal needles to make the perforations. Bennyhoff (1992) classifies beads with a biconical perforation made with a stone drill as H7a1 and those with a straight perforation as H7a2 (figure 7.3). The H7a2 beads had an average diameter of 5.7 mm, 1.8 mm thickness, and 1.1 mm perforation. Biconically drilled disk beads had larger diameters (average 6.0 mm), were thicker (2.3 mm), and had a larger perforation (average 1.5 mm), than their counterparts drilled with a metal needle. Other abalone ornaments were recovered as well: one badly exfoliated thin flat disk type H5 and two pendants, one a pentagonal type uNA3j and the other oval type uB3j (figure 7.3). Similar abalone pendants were recovered from Mission Santa Clara (Hylkema 1995:71).

Nearby Monterey Bay provided an ample source of abalone, and as with the *Olivella*, neophytes were wasteful in their use of abalone to manufacture beads and ornaments. Much of the abalone refuse recovered at Santa Cruz can be attributed to its consumption at the site. Parts of the rim, the area not used in ornament manufacture in Northern California, are among the most common forms of abalone refuse. With the ornament blanks recovered, the evidence for abalone manufacture seems

certain (Bennyhoff 1992). The ornament blanks (figure 7.3) were probably intended to be perforated later, for use as pendants or other jewelry. Two of the disks, meticulously finished but lacking a perforation, may have been used as gaming pieces in gambling activities. Abalone fishhooks were also probably manufactured at Mission Santa Cruz (see figure 6.1).

Eight disk beads from Santa Cruz were made of Washington clam (*Saxidomus nuttalli*), all excavated from interior rooms of the Mission Adobe (table 7.4). Four beads made of Pacific Gaper clams (*Tresus nuttalli*) were found, two from the Mission Adobe and two from inside the Angled Adobe. Both varieties are classified by Bennyhoff (1992) as A1. Like the *Olivella* beads, clam disks became larger and less refined as the Mission period progressed. Their average diameter is 6.7 mm and average thickness 2.8 mm. Four clam cylinders (type AV2b) made of Pismo clams (*Tivela stultorum*) were also recovered, including one badly eroded partial cylinder from room 4 of the Mission Adobe. Two white *Tivela* cylinders from room 7 are unusually shaped—small, almost square—and at first glance appear to be white drawn beads.

All three species of clams used to make the beads from Santa Cruz were available locally and were also used as sources of food. No direct evidence exists of their active manufacture at this mission in the archaeological or documentary record. Ethnographically, Bodega Bay is the known source for manufacture and trade of clam beads. If the neophytes at Santa Cruz did not make them, it is likely they traded for them with the Coast Miwok (Bennyhoff 1992). From excavations at Mission Santa Clara more than 300 clam disk beads of *Saxidomus* sp. manufacture were recovered in a neophyte cemetery context dating to the Early Mission period (Hylkema 1995:75), attesting to their popularity among neophytes.

Table 7.4 Shell artifacts from all deposits

	Early Mission	Late Mission	Mixed deposits	Total
<b>Shell beads</b>				
A1, clam disk	3	2	7	12
AV2b, clam cylinder		1	4	5
B5, <i>Olivella</i> spire bead			1	1
H1a, <i>Olivella</i> ground disk		3	11	14
H1b, <i>Olivella</i> semi ground disk	2	4	26	32
H2, <i>Olivella</i> rough disk		3	10	13
H5b, abalone disk			1	1
H7a1, abalone disk			4	4
H7a2, abalone disk	2		2	4
<b><i>Olivella</i> manufacture detritus</b>				
Detritus with callus	63	17	177	257
Detritus without callus	11	6	62	79
<b>Miscellaneous abalone</b>				
cSA1j, ornament blank			1	1
rCA1j, ornament blank			2	2
uB1j, ornament blank			1	1
uBA3j, pendant		1		1
uCA1j, ornament blank			2	2
uNA3j, pendant			1	1
uS1j, ornament blank			1	1
Disk blank, gaming pieces?	2		2	4
Fishhook			2	2
Ornament manufacture refuse	2	1	4	7
Raw material			2	2
Mussel fishhook			1	1
<b>TOTAL</b>	<b>85</b>	<b>38</b>	<b>324</b>	<b>447</b>

### Bone Beads

Thirty-three small bird-bone beads were recovered from Mission Adobe rooms 1 and 4 (figure 7.4). Twenty-nine of these beads found together, in one unit and stratum of room 4. The bone beads are either ivory-colored (natural) or black (burned). In one case, a black bone bead was found nestled inside an ivory-colored bead, suggesting that the two bead types were used together. Bone ornaments manufactured from deer phalanges with small perforations at one end were also excavated from the same area in room 4 of the Mission Adobe as the beads (see figure 7.4). One ornament had a black bead inside the perforation of the deer phalange, showing that they were used together. Bone beads have a long tradition in the native prehistory of California, and their presence at this site represents a continuation of native technologies and ornaments.

### Religious Medal and Rosary

A religious medal that probably dates to the Mission period at Santa Cruz was recovered from the overburden of a trash

pit that dated to the occupation of the Mission Adobe during the Mexican period. The medal is relatively small (figure 7.5) and stamped with saints on either side. One side reads "S•FID•" (*semper fidelis*) and "M•CA•"; the other side is stamped "S•FE•C" (*Santa Fe Católica*). A small hole is hand-punched through the loop where a chain would pass through. Although the medal was found in a mixed deposit, its content and form suggest the Mission period. It maybe an heirloom of the Mexican-American inhabitants of the Mission Adobe, but it may date to the neophyte occupation. A fragmentary copper chainlink rosary was recovered from below the adobe floor of room 7 is a deposit from the Later Mission period. Franciscans were known to give both religious medals and rosaries to Native Americans as rewards for their labor or attendance at mass. Neophytes may have used these items as the Franciscans intended or as simple ornamentation. Whether or not the neophytes imbued these religious items with the same ideology as the Franciscans is unknown but their usefulness as ornaments is clear.

Table 7.5 Chipped-stone assemblage from all deposits

Artifact type	Early Mission	Late Mission	Mixed deposit	Post Mission	Total
Biface or biface fragment			2		2
Biface roughout	2		6		8
Cobble tool			1		1
Core	14	9	39		62
Drill			1		1
Flake tool	1	2	13	1	17
Flakes					
Cortical flake	415	125	1365	38	1943
Interior flake	228	79	819	13	1139
Thinning flake	476	105	1055	19	1655
Shatter	50	19	188	2	259
Gunflint			1		1
Knife?			1		1
Projectile point	1	1	3		5
TOTAL	1187	340	3494	73	5094

## CHIPPED STONE ARTIFACTS

Neophytes at Mission Santa Cruz maintained the active manufacture and use of stone tools. Flaked stone artifacts recovered include the following categories: biface, cobble tool, core, drill, flake, flake tool, gunflint, knife, and projectile point. Although European metal tools were available they were not necessarily better than their stone counterparts for all tasks (Bamforth 1993:50). Archaeologists recovered more than five thousand pieces of lithic material from excavated areas at Mission Santa Cruz. Most of the lithic assemblage is comprised of manufacturing debris, but several informal and formal tools were also recovered (see tables 7.5 and 7.6). Monterey chert, an easily obtainable local material, was most often used to manufacture stone tools but several other materials from more distant sources were used as well (table 7.7).

Artifacts were grouped into typological and functional categories. They include tool types and debitage created from the manufacture of lithics. Lithic terminology used here is adapted from Crabtree (1972), Dietz et al. (1988), and Whittaker (1994). The term *flake* is further broken down into four subcategories, reflecting archaeological evidence of primary and secondary reduction techniques.

### Biface

Bifaces are worked on both faces along at least a single edge (lateral margin). Biface roughouts are fragments that represent the intermediate stages of bifacial tool manufacture.

### Cobble tool

The cobble tool is a cobble with large flakes removed to create either a unifacial or bifacial working edge. Cobble tools were used in the manufacture of chipped stone, but

probably for other tasks as well, such as chopping, hammering, and processing of vegetal foods.

### Core

A core is a piece of stone from which flakes have been removed. Characteristics of a core are flake scars and platform remnants reflecting the detachment of flakes.

### Drill

A drill is a specialized biface, with a pointed end, generally used for puncturing or drilling. Examples of drill uses are for perforating leather and drilling perforations in beads.

### Flake

A flake is the portion of stone removed from a "parent" core. Size and flake shape depends on the method of detachment and size of the parent material. Flakes can be unutilized or used for a task once or twice and then discarded. In the latter case, it is likely that the flake will exhibit only minimal if any edge wear. The primary characteristic of a flake is a bulb of force (a rounded protuberance on the ventral side of a flake, the result of the force that struck the flake off from the core). Flakes are subdivided into four types:

**Cortical flake.** This is a flake with part of the original nodule surface (cortex) present. The presence of flakes with cortex reflects the primary stages of lithic manufacture.

**Interior flake.** These are flakes that have no cortex but are not thinning flakes (see below). Size will vary. Interior flakes usually represent a secondary or intermediary stage of manufacture.

**Shatter.** Irregularly shaped, often angular pieces of stone, Shatter is created in various stages of chipped-stone manufacture, although most often in the primary stages. No evi-

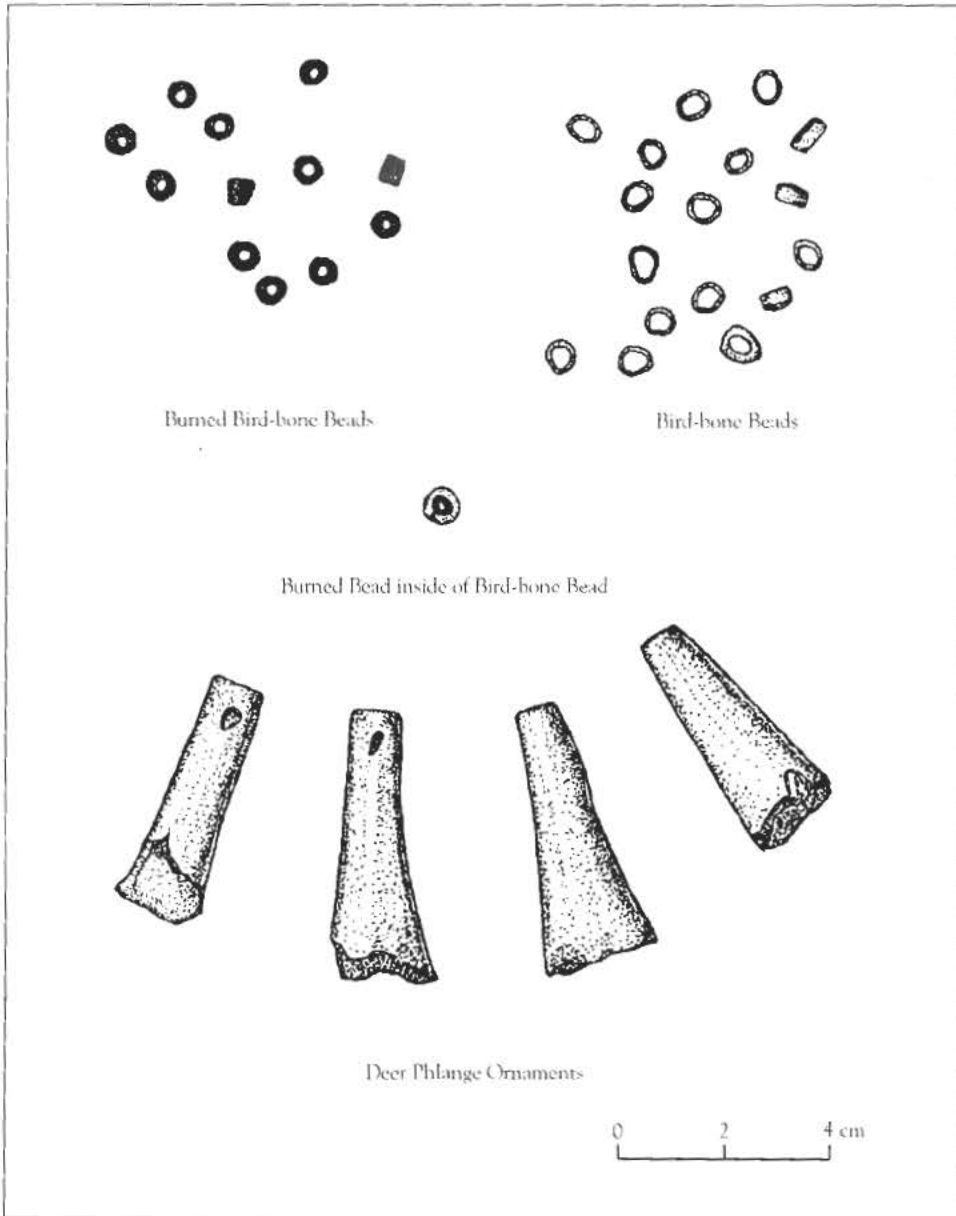


Figure 7.4 Small bird-bone beads and deer phlange ornaments. Illustration by Karen Hildebrand

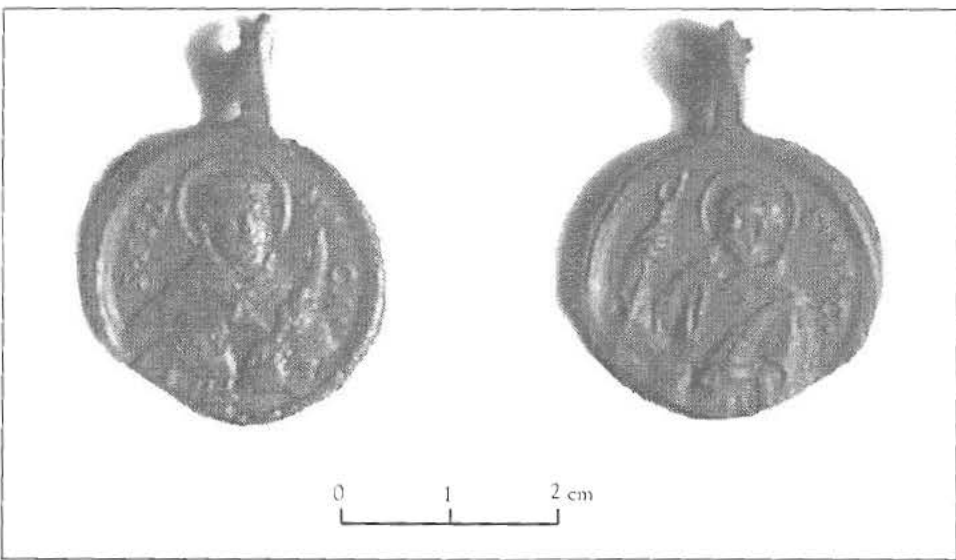


Figure 7.5 Religious medal that probably dates from Mission period

Table 7.6 Stone tools recovered from Mission Santa Cruz

Object	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (grams)	Comments
Biface tip (P627-215-7)	Obsidian	23.1	11	7.3	1.8	Used to exhaustion; resharpened margin
Drill * (P506-56-1)	Obsidian	26.2	17.8	7.0	2.8	Tapered point; snapped base
Knife? (P627-344-4)	Obsidian	27	18	8.5	4.8	Fragmentary
Projectile point (P627-320-2)	Franciscan chert	20.7	16.4	5.4	4.2	San Joaquin- Pinoche; reworked?
Projectile point* (P627-379-1)	Chalcedony	26.9	16.2	6.2	2.0	
Projectile point * (P627-426-20)	Monterey chert	16.6	10.7	3.5	.4	
Projectile point (P627-551-5)*	Monterey chert	13.2	10.3	3.3	.4	Heat treated; surface crazed
Projectile point * (P627-562-1)	Porcelain	20.7	16.3	3.4	1	Bluish white; one face chipped

\*Illustrated in figure 7.6 or 7.8.

Table 7.7 Materials used in the manufacture of chipped stone

Material	Early Mission deposits	Late Mission deposits	Mixed deposit	Post Mission deposits	TOTAL
Basalt	6	2	17	1	26
Blond flint			1		1
Chalcedony	1				1
Conglomerate	1		3		4
Franciscan chert	5	2	16		23
Glass			2		1
Granite		1	1		2
Mica			6		6
Monterey chert	1138	326	3336	67	4867
Obsidian	3	3	23	1	30
Porcelain		1			1
Quartz	2		7		9
Quartzite	26	4	53	2	86
Rhyolite	2	1	11		14
Shale			5		5
Siltstone	3		13	2	18
TOTAL	1187	340	3494	73	5094

dence of a bulb of force is found on shatter because of its angular and irregular shape.

**Thinning flake.** Small, thin, curved, short flakes associated with the later stages of biface manufacture, thinning flakes will often have flake scars on their dorsal surface, where previous flakes have been removed.

### Flake Tool

An **informal tool**, flake tools are defined by one or more edges, or part of an edge that have been modified by deliberate shaping or as a byproduct of use. Visible use-wear on the

edges of flake tools is created through continual use. Characteristics of a flake tool are a bulb of force and a modified edge (or part of an edge).

### Gunflint

A gunflint is typically produced by removing a long, parallel sided blade from a prepared core. Gunflints were manufactured in France or England.

### Knife

A knife is a specialized biface with a finely flaked cutting edge.

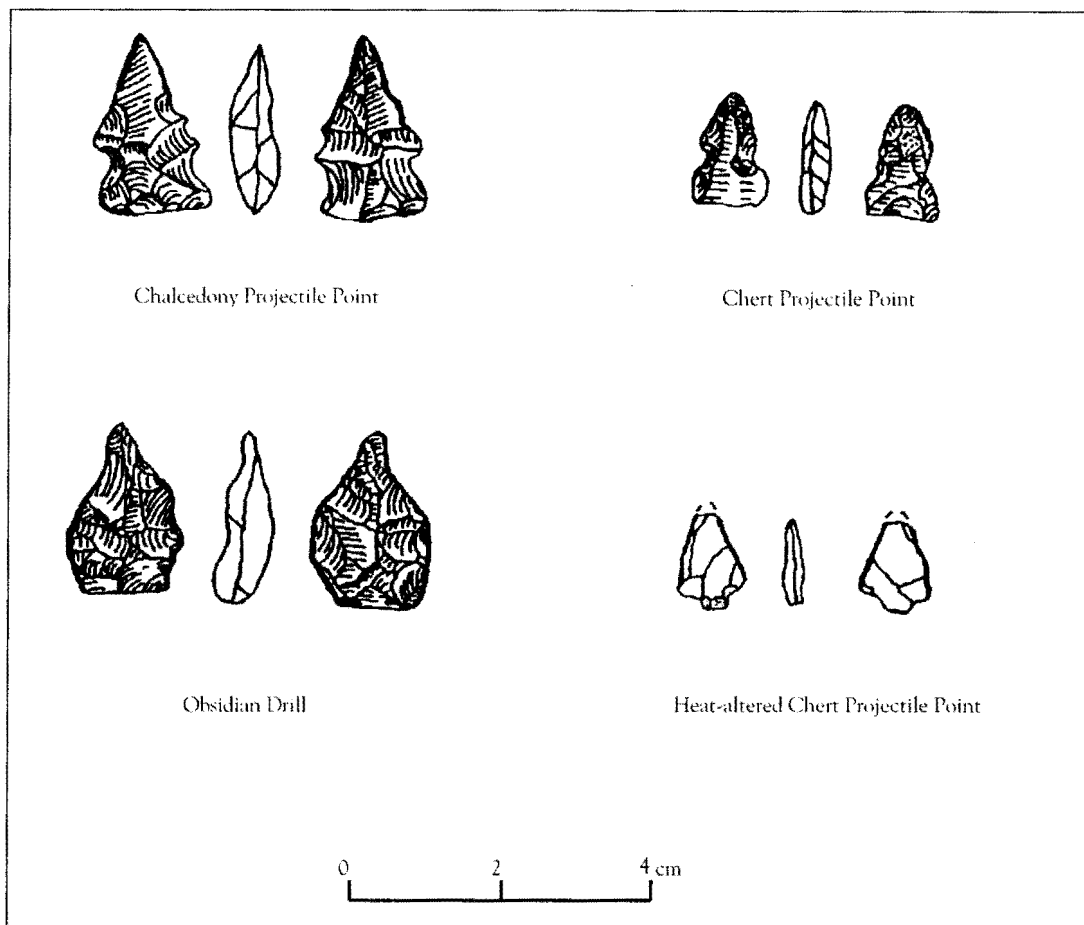


Figure 7.6 Projectile points and obsidian drill

### Projectile Point

A specialized biface, generally symmetrical, with a sharp tip, the projectile point is hafted onto a spear or arrow and used in hunting.

The lithic technology used to create these artifacts has generally been described as percussion flaking (Crabtree 1972). Evidence for percussion flaking is the large number of common byproducts of this technology such as cortical flakes, shatter, and interior flakes. The presence of cores and raw material provides further evidence. Most of the chipped stone recovered from Mission Santa Cruz can be attributed to primary stages of reduction.

Formal tools were few (figure 7.6). Two bifaces, a drill, a gunflint, a knife, and five projectile points were recovered (table 7.6). More common were less formal artifacts such as a cobble or flake tool (figure 7.7). Several biface roughout fragments, produced by mistakes in the intermediate stages of tool manufacture, were also found in the assemblage. Neophytes could also have used many of these flakes for casual and short-term tasks, though few specimens showed signs of patterned use-wear. Only through repetitive use does the edge of a durable chert tool show signs of such wear. Generally, use of a flake for a specific task only once or twice before it is discarded will not greatly affect the edge of a

flake. Whittaker describes this type of use: "Many stone tools, even most in some cultures, were simple unretouched flakes, made as needed, used once, and discarded with the same disregard that smokers show toward their matches" (1994:248).

A significant reason for the casual attitude toward the use of chipped stone was the easy availability of local raw material used in tool manufacture. Monterey chert is abundant in the cliffs facing the ocean and along the shoreline of the San Lorenzo River. While Monterey chert is a relatively homogenous material suitable for fracturing (Crabtree 1972, Whittaker 1994), it is not easily flaked. The amount of chert debitage bearing cortex and the number of unmodified chert cobbles found in the assemblage suggests that raw material was brought back to neophyte living areas for testing. Much of the shatter and cores can be attributed to testing the local chert for suitability of manufacture. Treating chert by exposure to heat improves its knapping suitability. According to one source, archaeological evidence of the heat treatment of chert in prehistoric sites is commonplace (Hylkema 1991:77). The large amount of chert raw material and flakes from the initial stages of tool manufacture suggests that neophytes were manufacturing tools inside and near the Angled and Mission Adobes. The relatively small number of tools

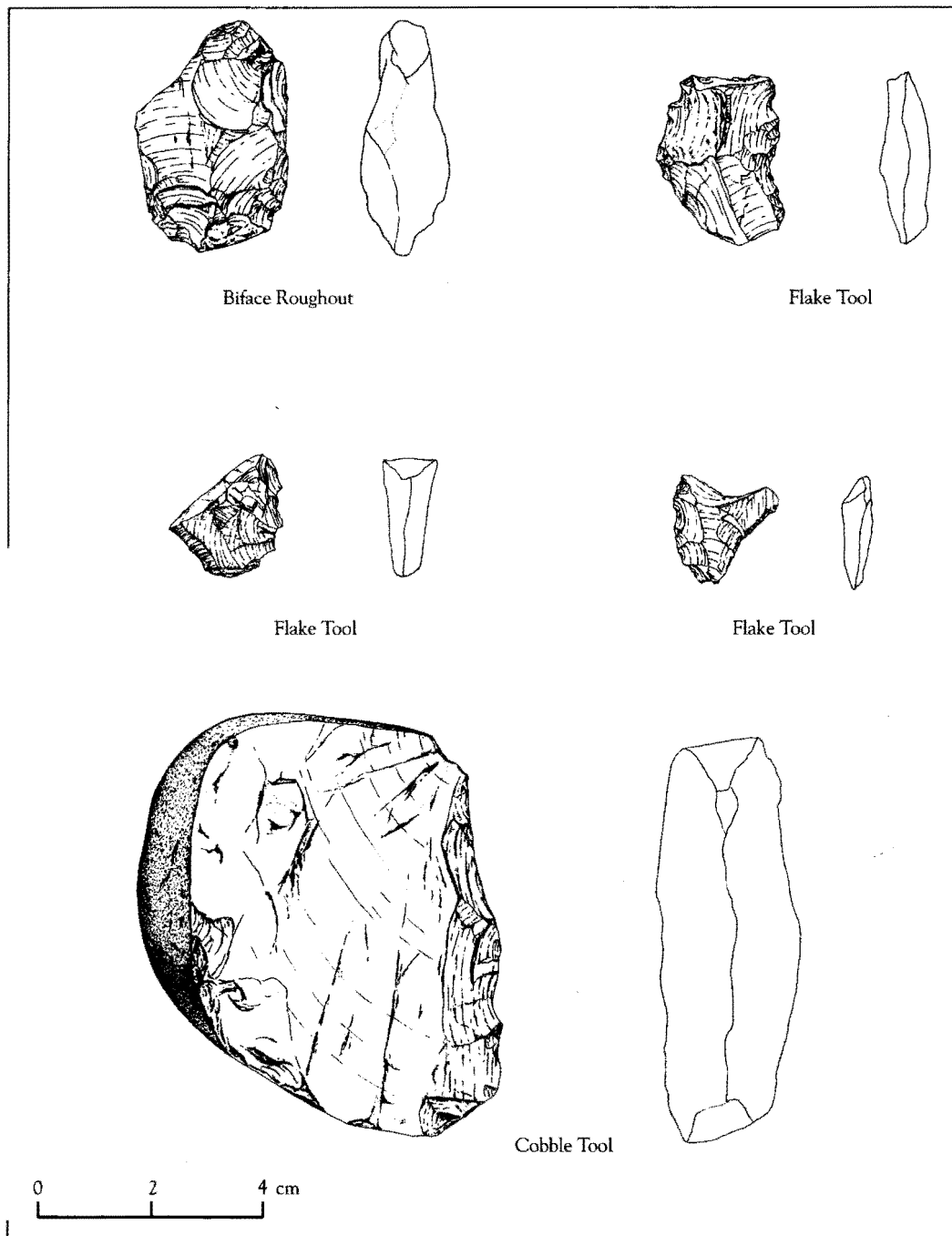


Figure 7.7  
Miscellaneous lithic  
artifacts. Illustration by  
Gina Zanelli

recovered suggests that while neophytes were manufacturing tools in the village area, they were performing tasks with these tools elsewhere and discarding them there. For example, most projectile points may have been lost or broken during hunting.

Neophytes occasionally used other locally available materials besides Monterey chert, including basalt, chalcedony, Franciscan chert, quartzite, and other materials (see table 7.7). Neophytes also manufactured traditional tools out of materials introduced by the Spanish. One projectile point recovered from Mission Santa Cruz is made of porcelain. At least three pieces of broken bottle glass were flaked and used

as flake tools (see figure 7.8). More exotic materials, such as blond gunflint and obsidian, were traded in. The origin of the gunflint is European, probably French (compare with those illustrated in Kenmotsu 1990:96). Farris (1991a:36) reported a spent English gunflint at Mission San Juan Bautista.

Twenty-nine artifacts were made of obsidian. Three are formal tools: a drill, a projectile point, and a knife. One obsidian flake tool was also found. The rest of the obsidian artifacts were mostly thinning flakes and two interior flakes. An obsidian core was also found, suggesting that neophytes at Santa Cruz may have manufactured tools from this greatly valued and scarce raw material. It is also likely that the for-



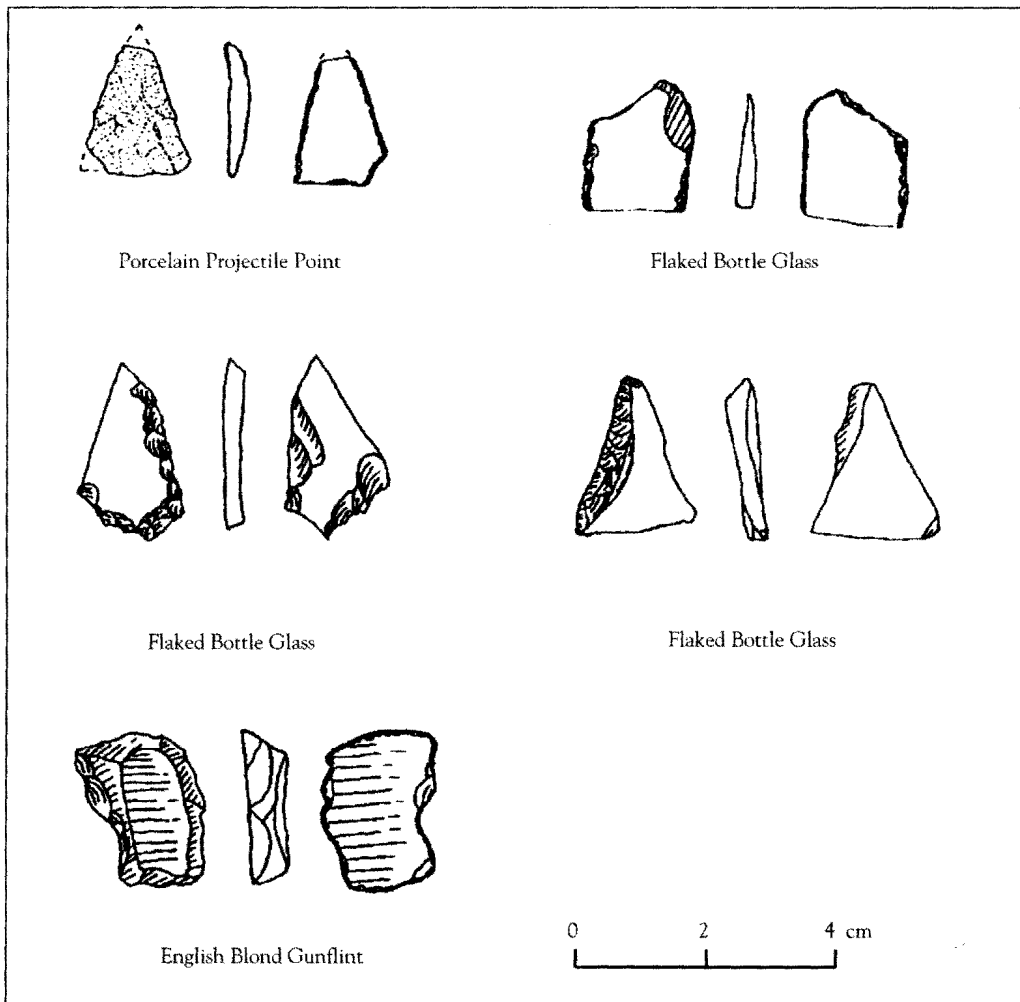


Figure 7.8 Lithics made of introduced materials

mal tools were traded into the mission rather than being manufactured there. Seventeen obsidian pieces were submitted for geological source determinations, of which thirteen were large enough for analysis (Hughes 1987). Seven are Napa Valley obsidian and one is Annadel obsidian from sources in the northern Coast Ranges. Three are Bodie Hills obsidian and two are Casa Diablo obsidian. Both sources are located on the eastern side of the Sierra Nevada. Ohlone and Yokuts peoples were known ethnographically and prehistorically to have traded for obsidian (Davis 1974).

Actual numbers of chipped-stone artifacts seem to suggest that use and manufacture of lithics declined from the Early Mission to the Late Mission period (table 7.5). This could be attributed to the greater mixing of deposits inside the Mission Adobe. The bulk of the material sampled in any of the interior rooms consisted of mixed deposits. Allowing for this, the quantities of chipped stone recovered from the Angled Adobe and from the Mission Adobe are comparable; 45% was recovered Early Mission and mixed deposits from the Angled Adobe, while 47% was from Late Mission and mixed deposits from inside the Mission Adobe and the South Corridor of the building. The remaining

chipped-stone artifacts (8%) were from general yard areas near both buildings. Neophyte use of chipped-stone technology continued unabated throughout the Mission period. Most of the manufacture of stone tools at Mission Santa Cruz seems to have taken place inside neophyte quarters. This apparent trend could also be attributed to the focus on these areas rather than in yard areas in the archaeological investigations or to the accidental importation of chipped stone in the dirt used to make the adobe walls and floors.

Neophytes used chipped-stone tools for many greatly varied tasks. These tasks included but were not limited to cutting of a variety of materials such as vegetal matter or leather, scraping, chopping, and slicing. Most of the chipped-stone artifacts recovered were probably multifunctional tools. Ethnographic and archaeological literature generally describes men as the manufacturers and users of stone tools (E. Wallace 1978). Women were probably using these tools for cutting and chopping materials such as vegetal fibers and foods and may have manufactured flake tools for their own uses.

Comparison of the lithic assemblage from Mission Santa Cruz with that of Elkhorn Slough is useful. Elkhorn Slough, a Middle period site along the California Coast in Monterey

County, had a lithic assemblage of more than 4500 artifacts. The majority of its occupational history extends from 500 BP to the period of contact (Dietz et al. 1988:351). Exhibiting many trends seen at Mission Santa Cruz, the chipped stone assemblage was dominated by locally available Monterey chert. Other materials included Franciscan chert, quartzite, sandstone, obsidian, basalt, and rhyolite. The most common tools were informal, mostly made of chert. Flakes accounted for most of the recovered artifacts. Many of these flakes, like those at Mission Santa Cruz, were probably used on a short-term basis and then discarded. The few formal tools recovered from the site included bifaces, projectile points, and drills. Cobble tools, cores, and a few obsidian pieces were also recovered. The obsidian flakes suggests that while some retouching of the artifacts occurred at the site, no obsidian tools were manufactured there. When compared to Elkhorn Slough, the assemblage from Mission Santa Cruz seems typical for a site with a local source of raw material.

The quality of the formal tools differentiates the assemblage from that at Mission Santa Cruz is Elkhorn Slough. Those found at Mission Santa Cruz were not as carefully made as their prehistoric counterparts and could be considered degenerative forms of lithic tools (Bennyhoff 1992). Although neophytes continued to make stone tools regularly, knowledge of the manufacturing techniques apparently was in decline, perhaps because of the influx of metal tools. Stone tools, suited for such expedient tasks as cutting continued to be made or used, but use of formal tools like projectile points declined, perhaps because of a simultaneous decline in activities associated with those tools. For example, the low number of wild animals in the faunal assemblage suggests that hunting was not a common occurrence within the mission system. Formal tools may also have been replaced with introduced materials and tools. Perforations in the *Olivella* disk beads show that neophytes used metal-tipped drills rather than stone drills.

All other archaeological investigations at California missions have found that flakes and informal tools dominate the chipped-stone assemblages. Missions Santa Inés, La Purísima, San Antonio, Soledad, and San Juan Bautista all illustrate this trend (Costello 1989, Deetz 1963, Hoover and Costello 1985, Farnsworth 1987, and Farris 1991a).

### CLOTHING-RELATED ARTIFACTS

More than forty buttons were recovered from deposits from the Early Mission and Late Mission periods (table 7.8 lists miscellaneous artifacts recovered from Mission-period deposits). Button materials include abalone shell, plastic, wood, and metal. Several buttons were intrusive to the Mission-period deposits, perhaps a result of rodent activity. Buttons were generally small, and likely to be downwardly displaced. The abalone shell

buttons probably date to a later period, as shell buttons were introduced into the United States after 1855 (Fontana and Greenleaf 1962:98). No shell buttons have been recorded at other neophyte-related deposits of the Mission period in California. Similarly, plastic, glass, and wood buttons postdate the Mission period and have not been recorded elsewhere. It also is likely that the brass snaps, brass eyelets, copper rivets, and copper sequins found by archaeologists in Mission-period strata were intrusive. Cornelia Hopcroft, the last resident of the Mission Adobe, was a seamstress for many years (Felton 1992).

Two flat metal buttons from deposits from the Early Mission period were found along with ten metal shank buttons. One-piece metal buttons generally date to after 1800 (IMACS 1992:475). The shank buttons were made of both copper and brass. One button from a deposit of the Late Mission period had a blue glass inlay with a cross design. Two of the buttons, also from Late Mission period deposits in room 7, are Phoenix buttons. These buttons are common to California mission sites and have been found at Missions San Juan Bautista (Farris 1991a:37), Santa Inés (Furnis 1989:144), San Antonio (Hoover and Costello 1985:70), and Soledad (Farnsworth 1987:412). Plain metal buttons are common to Mission-period sites as well.

Eight fragments of cloth were found in Mission-period strata: two fragments of a light tan cloth and four fragments of striped red, tan, and black cloth from room 1 of the Mission Adobe and fragment of black cloth and a fragment of red, tan, and black cloth from the northeast end of the Angled Adobe. It is unknown whether these fragments were intrusive. Given the poor preservation of other organic materials in Mission-period strata, especially in the Angled Adobe, it seems likely that they date to a later period.

Six leather fragments were recovered from the Mission Adobe in Late Mission period strata. Several additional fragments were found in mixed deposits within the Mission Adobe. Several square holes, which resemble marks left by a shoe last (see chapter 4), were found in the floor of room 4, suggesting that neophytes manufactured shoes. Leather will often preserve in the archaeological record, and many recovered fragments are probably from the Late Mission period. No leather was found in strata of the Early Mission period.

### MISCELLANEOUS ARTIFACTS

Additional artifacts recovered from the Mission Adobe, Angled Adobe, and yard areas had native or introduced origins (see table 7.8). These items sometimes combine the materials and technologies of both

Table 7.8 Miscellaneous artifacts

Artifact type	Early Mission deposits	Late Mission deposits	Mixed deposits	Total
<b>Clothing-related artifacts</b>				
Button	9	8	n/a	17
Cloth fragment	4	6	n/a	10
Copper sequin (prob. intrusive)	3	2	n/a	5
Hook	1		n/a	1
Leather		6	n/a	6
<b>Bone artifacts</b>				
Bead (small round)		1	32	33
Bead (phlange)			4	
Disk			4	4
Gaming piece?		2		2
Tube		2		2
Whistle		4	2	6
Unidentified cultural artifacts	1	1	12	14
<b>Metal</b>				
Axe head fragment	1		n/a	1
Cast iron pot (MNV)		1	n/a	1
Coin		1	n/a	1
Copper tube	1		n/a	1
Copper vessel fragment	1		n/a	1
File		1	n/a	1
Iron blade		1	n/a	1
Iron fragment	1	14	n/a	15
Medallion		1	n/a	1
Rosary		1	n/a	1
Scissors		2	n/a	2
Slug	1		n/a	1
Straight pin	3		n/a	3
Thimble		1	n/a	1
Unidentified metal		22	n/a	22
<b>Miscellaneous artifacts</b>				
Ceramic gaming disk		2	n/a	2
Mudstone disk	2		n/a	2
Steatite pipe		1	n/a	1

cultures and include gaming pieces, bone artifacts, smoking paraphernalia, mudstone disks, miscellaneous items, and unidentified objects.

### Gaming Pieces

Gaming was a common activity among both Ohlone and Yokuts Indians. Kroeber (1925:470) reported that Ohlone in Monterey played a guessing game using bone or shell markers. He reported a similar game among the Yokuts (Kroeber 1925:539), played primarily with wooden markers, but sometimes with bone pieces. According to Kroeber, this game was not as popular among the Yokuts as with the more northern groups. Stephen Powers reported a dice game, using pieces of abalone and walnut shells, among the Yokuts (Culin

1907:140). Several artifacts recovered from Mission Santa Cruz could possibly be gaming pieces. The artifacts are made of bone and shell, traditionally utilized materials. Neophytes may also have shaped fragments of roof tile into gaming pieces (figure 7.9, top row).

Three unidentified mammal-bone artifacts from the Mission Adobe could be gaming pieces. Two came from a fire pit in room 1 and from under the adobe floors in one room of the Mission Adobe. The third is from a mixed deposit. All three are similar to gaming pieces illustrated by Culin (1907:283). Only one is whole and has deliberately rounded edges. Short incisions probably made with a metal file (Bennyhoff 1992) mark the side of the artifact. Another bone artifact is also rounded on its ends but is poorly finished and

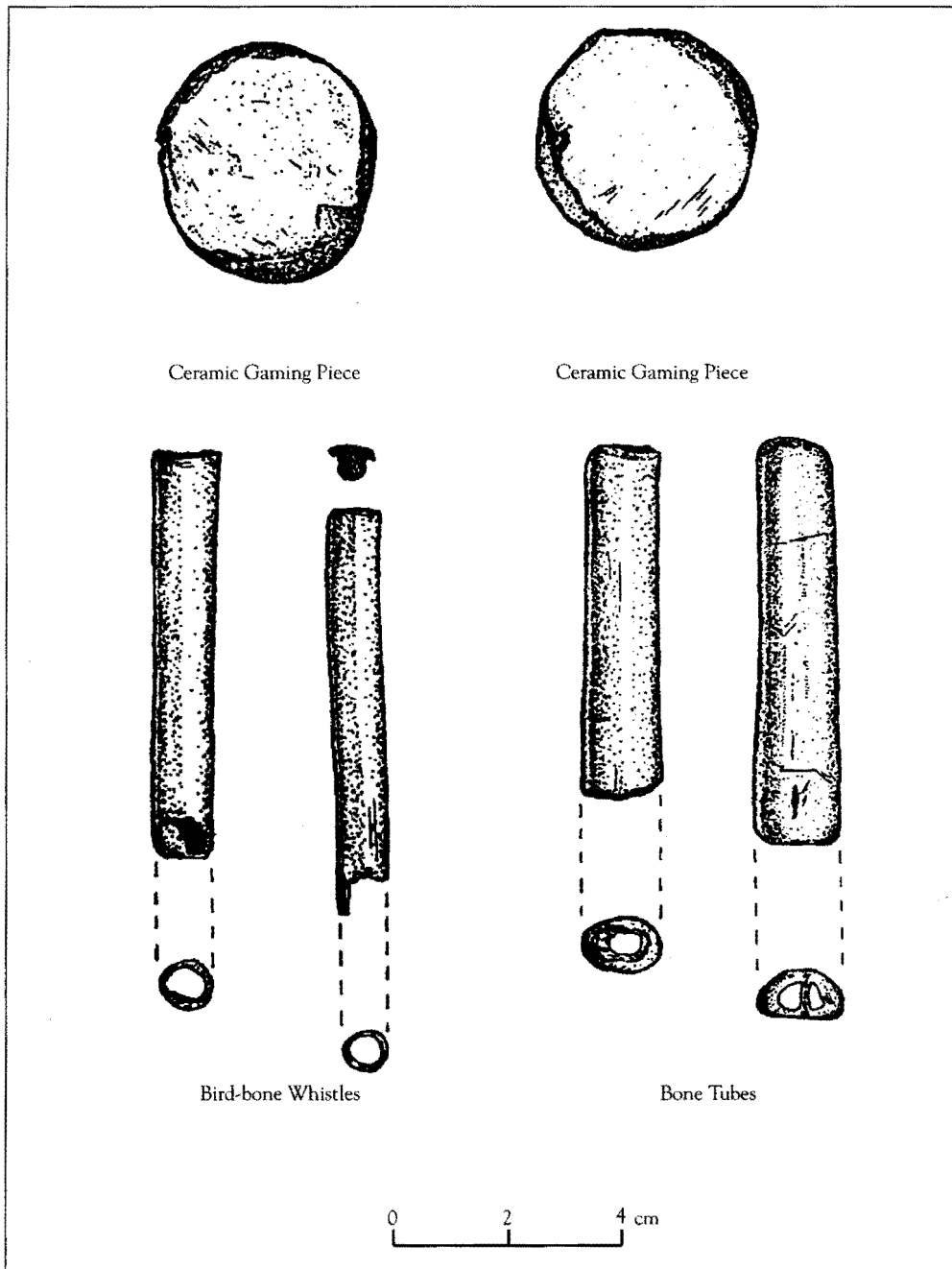


Figure 7.9 Ceramic gaming pieces, bird-bone whistles, and bone tubes. Illustration by Karen Hildebrand

fractured. The artifact is also well polished, indicative of heavy use-wear. The third possible bone gaming piece is badly fragmented and burned.

Three disks of unidentified bone may also have been used as gaming pieces. The pieces are roughly circular, thin (approximately 1–2 mm), polished artifacts. Two are fragmentary, one is whole. All are from mixed deposits, one from the central area of the Angled Adobe and the other two from rooms 1 and 4 of the Mission Adobe. Two are approximately 3 cm in diameter and the third is smaller, approximately 1.6 cm in diameter. In addition, archaeologists found a roughly circular piece of turtle carapace from a mixed deposit in room 1. This disk may be natural rather than cul-

tural. Several rounded abalone pieces could possibly be gaming pieces or ornament blanks (figure 7.3). They are similar in size to the bone disks. Their edges are well polished, suggesting their possible use as gaming pieces. Polished edges may suggest that the item was finished (Bennyhoff 1992).

Fragments of roof tiles may have been shaped into gaming pieces. The six artifacts are approximately circular, with diameters ranging from 3.5 to 4.5 cm (figure 7.9 illustrates two of the pieces). Five of the disks were recovered from mixed deposits (one from the central area of the Angled Adobe central area, two from the rooms 4 and 7 of the Mission Adobe, and two from the South Corridor area). The sixth was from a Late Mission period deposit in room 7. The

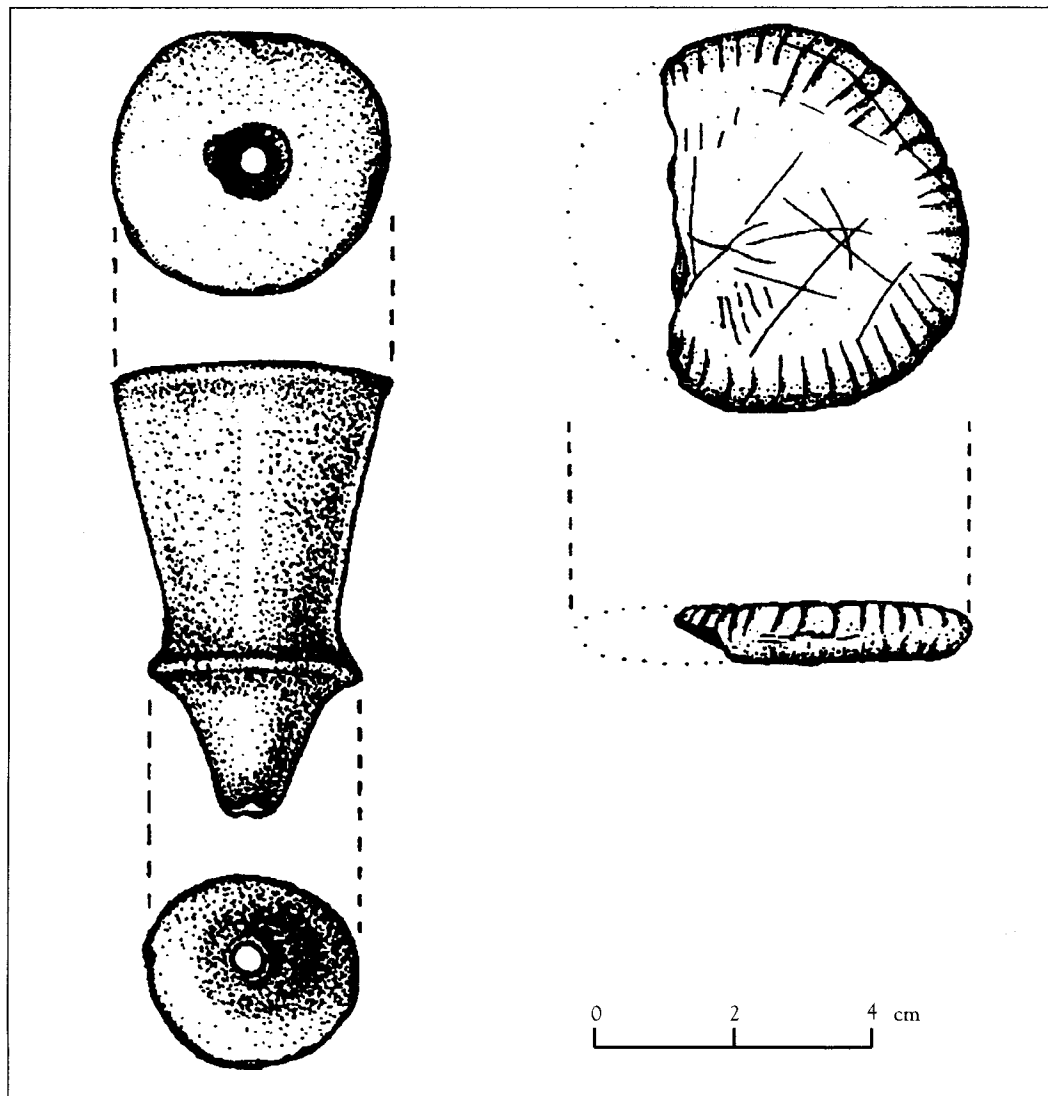


Figure 7.10 Steatite pipe and incised mudstone disk. Illustration by Karen Hildebrand

disks are not well finished and have roughly shaped edges. Similarly shaped roof tiles have been found at other missions, although these are generally larger. At Mission San Juan Bautista, Farris (1991a:34) suggested that such disks may have been used as jar lids or drainpipe plugs, although he stated that the smallest disk found may have been a gaming piece. At Mission Soledad, Farnsworth (1987:409, 416) labeled the larger roof tile disks pot or jar lids and the smaller disks gaming pieces.

#### Miscellaneous Bone

Other bone artifacts found that were most likely Native American in origin include whistles, tubes, and artifacts with unidentified uses. Five fragmentary whistles made of bird leg bones were recovered. (Figure 7.9 illustrates two). All were from the Mission Adobe, three from mixed deposits in room 1, and two from Late Mission period deposits from under the adobe floor level. Three of the whistles had asphaltum plugs blocking the whistle stops. One whistle appeared to have a ground mouthpiece and another whistle

showed signs of chipping on its end. Both were probably made using stone tools (Bennyhoff, 1992). A similar bone whistle was found at Mission San Antonio (Hoover and Costello 1985:92), although that whistle was made of mammal bone. Common musical instruments throughout native California, whistles were often used in native religious ceremonies (Heizer and Elsasser 1980:120).

Two bone tubes from Late Mission period deposits inside the Mission Adobe were also found, from rooms 1 and 5 (figure 7.9). One was a bird bone, 81.7 mm long with two parallel incised marks at each end. In poor condition, it was recovered in nine pieces. The other tube was whole, 62.1 mm in length and 14.9 mm in diameter. This tube was roughly shaped and polished, with possible incised marks. Bennyhoff (1992) suggested that neophytes may have used these tubes as elongated beads or as sucking tubes for curing ceremonies.

Thirteen other bone items may be cultural, although their exact function is unknown. Most of these artifacts were found in mixed deposits from different areas of the Angled and



Figure 7.11 Perforated mudstone disk. Illustration by Karen Hildebrand

Mission Adobes. Three items have deliberate perforations, probably drilled with a metal tip rather than with a stone drill. Two others have parallel marks that appear to have been made with a metal file.

#### Smoking Paraphernalia

Kroeber (1925:538) reported that Yokuts Indians smoked tobacco and used both wooden and stone pipes. Ohlone mixed tobacco with lime and ate it (Heizer and Elsasser 1980:143), as did the Yokuts. Archaeologists found a steatite pipe (figure 7.10) in a Late Mission period deposit in the Mission Adobe's floor area. The pipe is 71.5 mm in length

and bell or phallic shaped. The widest part of the mouth has a diameter of 42.7 mm. Bennyhoff (1992) identified the pipe as an aboriginal San Joaquin Valley form. Smaller than expected, the pipe may have been reworked.

Early Mission period deposits inside and in the yard areas of the Angled Adobe contained six ceramic pipe stems. In addition, a mixed deposit from room 1 contained a ceramic pipe bowl. Similar pipe stems and bowls were recovered at Mission Soledad. As pipe smoking was not generally associated with Hispanic material culture and native pipe smoking used very different forms, Farnsworth (1987:420) suggested that ceramic pipes were evidence of foreign visitors, especially those of English or American background. This may be the case at Mission Santa Cruz as well, or neophytes may have adopted or experimented with this method of smoking tobacco. The pipe stems may have been kept as possible raw materials or are simply intrusive into the archaeological deposits.

#### Mudstone Disks

Archaeologists found two whole and three fragmentary disks made of local mudstone scattered across the site. Mudstone, such as that used for the foundation walls of the Mission Adobe, is a soft, easily shaped material. One roughly circular whole large disk, recovered from a mixed deposit in the South Corridor area of the Mission Adobe, had a diameter of approximately 87 mm and a thickness of 19 mm. Both its faces and edges were smoothed, and it had a biconically drilled central perforation (figure 7.11). A similar disk recovered from a Post-Mission period deposit in the central yard area was larger (97 mm in diameter) and might be unfinished. The disk was roughly shaped with many incised marks at its edges but did not have a perforation. Two other disks were fragmentary and were recovered from a Post-Mission period deposit in a central yard area and in an Early Mission period deposit of the Angled Adobe. The fifth disk was also found in an Early Mission period context. It too was roughly shaped and had incised lines around its edges (figure 7.10). Scratches are present on both flat surfaces, perhaps as a design. The perforated mudstone disk (figure 7.11) may have been used as a spindle whorl or a pump drill weight (Bennyhoff 1992). Its light weight, slightly off-center perforation, and unbalanced feel make either use problematical. The use of the unperforated disk with incised marks is unknown.

#### Miscellaneous Metal

Archaeologists found three coins dating to the Mission period. Two coins were from mixed deposits within the Mission Adobe and one was from below the adobe floor of room 7, a Late Mission period deposit. The two coins from mixed deposits are silver Mexican *reales* (eight reales equal one

peso) with inscriptions that are difficult to read. One is dated 1777, the other 1762. The third coin, which badly oxidized, is copper and may be Hispanic in origin.

Many miscellaneous metal artifacts can be categorized as building materials. Several of these artifacts likely date to the Mission period, but many are probably intrusive, such as smaller artifacts like screws and washers that are easily moved by rodent activity. Possible building materials found in Early Mission period deposits include cut nails and a ferrous door hinge found in the central yard area. The door hinge was not found in direct association with the Angled Adobe. Building materials found in Late Mission period deposits include many nails, large spikes, a hinge, and an ornate door escutcheon. The latter two items suggest that the Mission Adobe may have had formal doors and window shutters, as is also indicated by pieces of door and window frames found during architectural investigations (Felton 1987). Intrusive items into Mission period deposits include an iron hook, a light fuse, screw, a rod with a spring, a possible survey marker, an eye bolt, and a part of a late nineteenth-century oil lamp.

Several items recovered from Mission-period deposits were likely associated with sewing activities. A small copper thimble 18.1 mm long, and 16.1 mm in diameter was found in a Late Mission period deposit of Mission Adobe room 7. Archaeologists also found thimbles at Mission San Juan Bautista (Farris 1991a:35) although they were made of brass. Four ferrous straight pins were found in Mission period deposits at Santa Cruz, possibly used in sewing. Excavations in the Mission Adobe also recovered a pair of scissors and a fragment of scissors handles from Late Mission period deposits in room 1. The presence of scissors in neophyte quarters has been reported at Missions San Juan Bautista (Farris 1991a:35), San Antonio (Hoover and Costello 1985:65), and La Purísima (Deetz 1963:184).

Other metal items of interest include a fragmentary iron razor blade with no handle and a possible knife blade found inside the Mission Adobe in a deposit from the Late Mission period. Also recovered from a deposit from the Late Mission period were two fragmentary and corroded ferrous spurs. A metal file was found at the adobe floor level of the Mission Adobe. The file was fragmentary, square at the top, and triangular in section. File marks on several artifacts, especially of shell and bone, are further indications of neophyte use of metal files. A triangular ferrous axe head with a half-circle notch was recovered from the Angled Adobe. Several unidentified metal fragments, some of them possibly from cooking vessels, were also found.

#### **Intrusive Items**

Items that are probably intrusive to Mission period deposits are marbles, a metal toy jack, bits of plastic, slate fragments, and pencils. One ceramic and one glass marble were found,

both dating to the latter half of the nineteenth century (Carskaden and Gartley 1989). The metal jack, a child's toy, is also probably from the late nineteenth century as are the fragments of slate. Plastic fragments date to the twentieth century. Rodent activity and later renovations and construction within the Mission Adobe likely explain the presence of these items.

Some items found in Mission period deposits are probably cultural, but their exact function is unknown. Besides the ground stone described in chapter 6, ten unidentified ground-stone artifacts were found. Some possible chipped stone could not be confirmed as cultural in origin and may be naturally occurring.

Fragments of ceramic roof tiles (*tejas*) and fire-cracked rock were abundantly found in all deposits. These materials were described and weighed during the initial cataloging process and then discarded. The roof tiles provide evidence that both buildings were tile-roofed during their neophyte occupancy. No evidence of tile floors was found. The presence of fire-cracked rock can perhaps be attributed to cooking activities inside the rooms, a hypothesis supported by the evidence of fire hearths and the large quantities of faunal and vegetal remains of meals.

#### **ARTIFACT PATTERNS**

Artifacts of native origin outnumber those of introduced origin in deposits of both the Early and Late Mission periods. In the Early Mission period, the difference between the numbers of introduced and native materials is more pronounced, with native items making up approximately 74% of the overall archaeological assemblage. By the Late Mission period, the numbers of native and introduced items are about equal.

The division of materials into native and imported items is of course simplistic and complicated by several factors. Both Hoover (1992) and Farnsworth (1992) have noted that the cultural division of artifacts is colored by the blending and mixing of forms, techniques, and materials. A traditionally native form such as a projectile point can, for example, be made of imported materials like porcelain and glass. Another complicating factor is use. An item can be of European material, manufacture, and form and yet can be used in ways that are not at all European, such as the use of metal needles to drill holes in shell beads. Probably the most complicating factor is that a large percentage of organic material culture such as baskets and clothing never enters the archaeological record. Often what the archaeological record represents are artifacts that were left behind or lost rather than the whole of a culture's material goods.

Quantifying kinds of materials into categories of native, introduced, and stages between has its uses but also presents some problems and basic assumptions that may or may not

be true. Nonnative items and forms are often assumed to indicate culture change and acculturation. The assumption here is that a larger number of indigenous materials implies that a group is more native in character. Following the same reasoning, a larger number of introduced items implies that a group is taking on more aspects of the dominant group and is therefore more acculturated. Praetzelis et al. (1987:39) have dubbed this approach the "200-sherds-of-culture-change-per-year" method. The most inherent problem with this approach is that it treats the value, meaning, and use of artifacts as constants. Artifacts have been shown to have different meanings depending upon the social situation in which they are used (Praetzelis et al. 1987).

In practice, artifact value varies. Is it possible to directly compare a flake tool with an earthenware sherd and assign the same weight to them? Uses of an artifact type can also vary widely between the cultural groups that use them. For example, Hispanics used ceramics and glass as food serving, storage, and preparation items. Neophytes of Mission Santa Cruz may have utilized jars, plates, and bowls in the same manner although no completely reconstructible vessels were found within Early and Late Mission period deposits. Neophytes may have viewed ceramics and glass only as a raw material to be used in making other items such as chipped tools and gaming pieces, decidedly non-European uses.

Further complicating a strictly quantitative approach is the fact that many items in the archaeological record are unique. Numerically speaking, these items may be so few as to be almost statistically invisible, and yet may be among

the most illustrative of the dynamic cultural processes taking place. Examples are the bone tube shaped with a metal file and the religious medal. The process of archaeological excavation itself also affects the numbers and kinds of artifacts recovered (see chapter 4). Still, quantitative correlations and comparisons are important. They allow for an initial basis of comparison and aid in the reconstruction of the kinds and types of material goods available to a group at a specific time. Besides asking how many native and introduced materials neophytes possessed, uses and meanings of artifacts must also be addressed whenever possible.

What emerges from consideration of the artifact assemblage is a picture of neophytes' daily lives filled with a material culture that had many similarities to assemblages found in prehistoric California. Taken by itself, the archaeological assemblage largely indicates retention of native culture although it also reflects the influence of the Hispanic community in California. Native material culture retained a fundamental importance to neophyte life. When the study of artifacts and the activities they imply is combined with the historical and ethnohistorical record, a more complex picture of cultural change emerges that expands the possibilities of behavior beyond simple acceptance or rejection of introduced ideas and material culture. The whole of the assemblage including both introduced and native artifacts represents a culture with ties to both native and Hispanic worlds but does not neatly fit into either category. It seems representative of a culture that was undergoing many changes, constantly being introduced to new ideas and materials.



# Cultural Adaptation and Modification

**D**OCUMENTARY AND ARCHAEOLOGICAL EVIDENCE points both to the acceptance and the rejection of Hispanic material culture and social values by the neophytes at Mission Santa Cruz. Neither acculturation nor assimilation seems adequate to describe what occurred. Native Americans do not appear to have merged their culture with that of the Franciscan missionaries or Hispanic soldiers and settlers with whom they came into contact. Not adopting a completely Hispanic way of life, they instead modified their own culture in the new cultural environment of the mission. Neophytes adopted certain Hispanic materials, technologies, and ideas as they learned to survive in and make use of the mission environment. Their native culture was not absolutely transformed or destroyed.

Two factors in particular shaped the contact situation at Mission Santa Cruz: the redefinition of power that occurred as a byproduct of Hispanic colonization and the devastating effect of introduced diseases. Traditionally, neophyte reaction to these factors has been discussed as a matter of either acceptance or resistance to the mission system (for example, see Cook 1976). Cultural modification—deliberate adaptation of cultural ideals and material culture in response to changing conditions—more accurately describes the role of the neophytes in the transformation of their culture. The native population maintained their own cultural identity as a group apart from the Franciscan missionaries. What emerged at Santa Cruz was a culture that was not the same as pre-contact society but neither was it Hispanic. It was the culture of a people who reacted and adapted as best they could to a new set of surroundings and circumstances. William Simmons has summarized the often gray nature of the contact situation: “The differences between resistance, compliance, and self-destruction can be subtle, and all may appear simultaneously in the same event” (1988:8).

## REDEFINING POWER AND SOCIAL VALUES

**T**he spiritual life of the native peoples encountered by the Spanish was complicated and intricate. Based largely on the natural world, native beliefs were alien and unintelligible to the colonizers. From what scholars have discerned from ethnographic informants and documents written by the colonizers, the concept of power was central to native beliefs. The following is a generalized discussion, but many concepts can be applied to natives missionized by the Franciscans.

Native Californians conceived of power as something created by both male and female forces. Like the social world in which they lived, power was hierarchically structured with an upper world inhabited by supernatural beings; a middle world inhabited by humans, animals, and spiritual beings; and a lower world inhabited by malevolent beings (Bean 1975:25). All living beings had the potential for power. Humans were aware of this power but were always uncertain of its extent and capabilities, making the world around them a frequently dangerous place. Native beliefs endowed supernatural beings with human-like characteristics. They perceived them as impulsive and often unpredictable, acting both for the well-being and to the detriment of humans. Through ritual, humans could tap into the power sources of supernatural beings, and some individuals had more access than others. Just as supernatural beings were hierarchically arranged with varying access to power, so too were human beings. Some individuals by nature had access to more power. Others could gain power through ritual, rites, and the cooperation and benevolence of the supernaturals (Bean 1975:30). Rituals helped to maintain social interactions and institutions. They reaffirmed social hierarchies and the economic distribution of foods and goods within a village. Further, rituals helped to organize people and often increased access to

foods and material goods (Bean and Lawton 1973:53).

The ability to access power could diminish or expand depending upon the equilibrium of the universe. Power had to be used and properly accessed with care and deliberation or the equilibrium was upset and humans could lose their abilities. When humans perceived power to be diminishing, new rituals and customs could sometimes be devised to renew access to the source of the supernatural beings (Bean 1975:26). The division of power, and the ability of power to increase or dwindle, created a basic philosophical assumption that alterations in both the physical and spiritual world were not only possible but were also likely to occur (Bean 1975:33). Power, and rituals that controlled power, could not only be used to maintain the equilibrium of a community but could also be used to introduce change.

With the arrival of the Spanish, native Californians would be forced to recognize a new source and kind of power and to redefine their own definition of the concept and its role in the world around them. Colonization also affected native perceptions of the ability to alter sources of power and the use of ritual to control those changes. Power in native society was individual. In Hispanic society, power could be individual but was also directly tied to larger cohesive sources such as the church and the military

Spanish and Mexican military might alone was enough to upset the equilibrium of native power in a drastic way. Both neophytes and Hispanics recognized this:

A handful of these soldiers is enough to cause troops of gentile Indians to disintegrate when they come to invade the missions, or when it is decided to punish them for having committed one treachery or other grave offense. (Diarist of 1792 expedition, quoted in Cutter 1990:124)

Neophytes probably saw changes in the landscape caused by Hispanic settlers as evidence of this foreign power. Missionaries introduced animals and plants to California that transformed the native landscape in a relatively short period of time. Many traditional hunting and gathering territories were permanently lost. These alterations would have been noticeable within a single lifetime.

Access to an entirely new set of material goods was also seen as a source of power. Franciscans understood that these new goods had the potential to awe their new converts. Much money was spent on furnishings for the church. Every year, the annual reports list the vestments and ritual accoutrements added to the church's inventory. These material items in effect became symbolic of the power of the new religion.

The imposition of the mission system also had a tremendous effect on the social relations of the neophytes. Pre-contact society was in some ways socially stratified (see chapter 3). Within the mission, natives of lower pre-contact sta-

tus would have had the opportunity to achieve a higher ranking (Hoover 1989:397), especially if they were willing to cooperate with the Franciscans. Conversely, those with higher status in native society may have been attracted to the mission as a means of access to this new foreign source of power, reaffirming their higher status. This appears to have been the case at Mission Santa Cruz, where a local chief and his daughters were among the first converts. Religious specialists such as shamans lost status within the mission system. From the native perspective, sources of power had been usurped from the shamans. Mission fathers in general displayed an unwillingness to compromise with these former religious leaders. In all cases, neophytes within the mission system remained at a disadvantage.

Neophytes were not completely passive participants in the mission system. Franciscans and the Spanish and later Mexican government could not have established as many missions as they did without some cooperation from the local Native Americans (Weber 1992:115). Native actions and reactions were limited by the imbalance of power and the policy of Franciscans insisting that all neophytes had to remain within the mission system (Milliken 1995a). Once within the mission system, neophytes were not entirely powerless. They made choices concerning their social relations with the Franciscans and among themselves, determined their system of values, and made decisions concerning alterations in their worldview.

## DISEASE, DEATH, AND THE TOLL ON THE NEOPHYTE COMMUNITY

*The Mission now resembles a House of the Dead but after all I was born alone and must die alone.*

—Letter of Father Gil to Joseph Maria Herrera, 29 September 1825 (San Francisco Archdiocese Chancery Archives, document 1768)

One of the most limiting factors of neophytes in their ability to make choices within the mission system was their susceptibility to European diseases. Throughout the New World, Native Americans were exposed to viruses inadvertently introduced by Europeans. Forms of illness and disease quickly adapted and flourished to this virgin territory. Bacteria colonized and reproduced with a rapidity that was catastrophic (Ramenofsky 1987). Living conditions within the adobe buildings probably contributed to the rapid spread of illness. In addition to an almost commonplace occurrence of death from disease, Mission Santa Cruz experienced a number of epidemics.

Perhaps the most devastating effect of disease was its impact on the transmission of culture. A rapid decimation within any given population would necessarily interrupt the flow of knowledge of cultural values and ideas from one gen-

eration to the next, especially in a society dependent on oral transmission of its history and traditions. This disruption of in the transfer of knowledge was probably especially critical among the women, whose numbers dwindled at almost twice the rate of men, perhaps owing to the dangers of pregnancy and childbirth and also to the crowded and sometimes unsanitary living conditions in the monjerio that fostered the spread of disease.

The last annual report of Mission Santa Cruz in 1833 lists the number of neophyte baptisms that had taken place at the mission since its founding as 2192. Franciscans recorded 1888 Indian deaths at the mission. Neophytes registered and still able to take Christian instruction numbered 236 (159 males and 77 females). In 1833 alone, the missionary recorded 31 deaths, more than 10% of the remaining neophyte population. Continued devastation of the native peoples, and the implied loss of cultural knowledge, makes the retention of native ideals and technological skills even more impressive and indicative of the neophytes' determination to retain aspects of their own culture.

Disease must also have affected the native perception of power. The apparent resistance of the Hispanic community to diseases that ravaged the neophyte population was indicative of their greater power. Native shamans' powers were in effect useless against these diseases. Although neither the missionaries or other Hispanic settlers were successful in curing neophyte diseases, they must have been considered more powerful than the traditional shamans. Most Hispanic settlers did not die from disease and certainly not at the same rate as the neophytes.

## EVIDENCE OF RESISTANCE

*My dear Sr: the utter negligence and disregard you have displayed and still display toward the garrison of the Escolta of this mission are the reasons for what has just taken place here. At 8 o'clock last night two Indians came back from the Villa where they had gone because they were out of candles. The candle woman told [them] there were many Soldiers in the Villa come to take them prisoner and they should all flee. The two above mentioned gave the notice to the Indian population and in absolute silence they left, men, women and the sick, leaving no one at the mission but I Vaquero, the two Indians who notified the Majordomo, two who stayed because they had just arrived from Santa Clara and were tired and my two pages.*

*I am notifying you so you may take the measures you deem appropriate and I warn you that I do not dare say Mass, not knowing what intentions the Villagers or the Indians might have and that I am sending a copy of this official letter to the Governor.—Father Olbés to Captain Don Luis Argüello, February 24, 1819 (San Francisco Archdiocese Chancery Archives, letter 922)*

**T**hose left alive were faced with adapting to life within the mission system. It is likely that most individuals

displayed both acceptance and resistance at some time during their life within the mission. One of the most obvious ways to express displeasure with the mission system was simply to leave. Santa Cruz missionaries were often forced to deal with fugitivism. It was a constant problem, one which the missionaries never entirely solved. In 1798, there were more than 138 fugitives from Santa Cruz (Cook 1976:60), more than a quarter (27%) of the entire neophyte population. Eighty of the fugitives were adults, which seriously disrupted the labor pool at the mission and made agricultural endeavors difficult for the overseeing missionary. By 1816, the number of fugitives listed by missionaries dropped to 40, 11% of the total population. Missionaries later reported that these fugitives had voluntarily returned. In 1825, the number of fugitives was even lower, only 27 (Cook 1976:60), but still enough to put a strain on the labor pool.

Some military expeditions were sent out to recapture neophytes who fled from the mission. More often than not, the military and missionaries made use of their gentile Indian neighbors to turn in neophytes. When neophytes fled the missions, often there was simply nowhere for them to go. Most of their village were already inside the missions. Indians outside of the mission system were frequently considered their enemies. Gentile Indians were not likely to harbor Christian Indians because they had no relations with the neophytes and because they feared reprisals from soldiers (Cook 1960).

Revolt was another obvious way of expressing displeasure with the mission system. Throughout the history of the missions in California there were neophyte rebellions. Some were small, isolated incidents. For example, in 1794, three years after the founding of Mission Santa Cruz, local Ohlone became fractious after the converted wife of a gentile Indian chief was taken away from him and sent to San Francisco Presidio (Hurtado 1992:379). The neophyte wife had apparently left the mission to rejoin her husband. She perhaps was not aware that missionaries intended for all neophytes to reside at the mission and that leaving the mission was not permitted. In the attack on the mission guard, two soldiers were wounded and the lamb corral and guard house were burned (Lasuén 1965a:299). A military expedition was sent out from Monterey. Soldiers arrested five neophytes and an unspecified number of gentiles.

Perhaps the most forceful expression of neophyte displeasure at Mission Santa Cruz was the murder of Father Andrés Quintana in 1812. According to Lorenzo Asisara, the Santa Cruz ex-neophyte interviewed in the late nineteenth century, Father Quintana was aggressive in his use of the whip on the neophytes. In revenge, small group of neophytes murdered Quintana in a particularly gruesome way (Savage 1877).

The murder was not discovered until later, and it weighed heavily in the minds of the missionaries. Four years later there was still a military guardian for the missionaries, placed there specifically as a result of Quintana's death (Fr. Jayme Escudé to Governor Vicente Pablo de Solá, 25 June 1816, San Francisco Archdiocese Chancery Archives, letter 402).

Other rebellions were larger and more organized. In 1828, a neophyte named Estanislao from Mission San José led a group of natives from the mission during what the fathers termed the *paseo* (walk about), a time after the harvest in autumn when neophytes visited family and gathered important native foods in the local landscape. At the prescribed time, they refused to return to Mission San José and were soon joined by neophytes from nearby Mission San Juan Bautista and Santa Cruz. After several forays the military put down the rebellion by Estanislao and his band. Seeking sanctuary at Mission San José, Estanislao himself died ten years later during a smallpox epidemic. The rest of his followers drifted back to the missions (Holterman 1970).

Another sign of protest on the part of the neophytes against the mission system was to balk or make the going slow so as to frustrate the missionaries. Antagonize the missionaries it did. According to Father Luís Gil, "...the Indians are destitute and disgusted and do nothing without a flogging which causes me great anguish" (letter addressed to Father Prefect Mariano Payeras, 24 November 1821, San Francisco Archdiocese Chancery Archives, letter 1253).

Often at a loss to understand neophyte resentment and hostilities, the missionaries believed they were bringing civilization and true religion to a people who they expected to be grateful. That neophytes did not always share this perspective both perplexed and saddened the missionaries (Cook 1976:67–68). They often blamed neophyte resistance and fugitivism on the imperfect moral character of the Indians. Fathers Carranza and González believed that neophytes ran away because of their uncontrollable sexual urges: "For most of them the motive behind their flight is the same as the above mentioned, the inordinate desire for other men's wives" (no date on letter, probably late 1799, Santa Barbara Mission Archive-Library, translated by R.H. Jackson). They offer no explanation for women leaving the mission. Father Marquínez noted the influence of the gentile Indians:

Until all the Christians, men, women and children, are separated from the Gentiles... you cannot hope for peace or that the Christians will stay in the missions permanently as long as there's a single old woman remaining on their lands. (Letter to Governor Pablo Vicente de Solá, 25 May 1816, San Francisco Archdiocese Chancery Archives, letter 387–2)

Perhaps the best indicator that neophytes were not particularly happy within the mission system was their desire

to leave after the Mexican government secularized the missions. The majority of the neophytes made no effort to ally themselves with missions after secularization took place. As Phillips points out, "...contrary to established opinion, most [neophytes] were not forced to leave, but withdrew willingly. ...the withdrawal taking place after secularization represents an intensification of a process [fugitivism] that had been going on throughout the entire mission period" (1979:268). Even when ex-neophytes were given title to property near the mission, as occurred at Santa Cruz, they soon sold the property and moved away. Unhappy within the mission system, ex-neophytes simply left.

## EVIDENCE OF ACCEPTANCE

*The Indians of this mission, both men and women, possess in a heroic degree, in eminent fashion, only the virtue of obedience.*

*They practice it with that blindness which the Patriarch of the Poor, our seraphic Father Saint Francis, commends to his sons.*

*They cease to operate by themselves as if they were a corpse, neither more nor less. It is certain that a gardener, though he knew his business very well, would plant a vegetable in the ground upside down if the father commanded him.*

—Marquínez and Escudé, 1814, quoted in Geiger and Meighan (1976:44-45)

*... Much to our satisfaction, we noticed several young Indians who served in the temple with decorum and respect, comparing their happy lot with the status of companions wandering through the forest without enlightenment, without religion, given over to the impulse of their passions and the misery of savage life. We also saw with pleasure the great attention with which the Indians care for the religious. They prepare their meals and serve at the table...—Diarist of a Spanish scientific expedition in 1792, quoted in Cutter (1990:132)*

Many of the neophytes within the mission system accepted their new role. Franciscans gave some neophytes positions of authority. Among the neophyte occupations listed by Father Gil in 1825 were five men who served as *alcaldes* (mayors), *regidores* (alderman), and *Fiscal de Iglesia* (prosecutor of the church). Father Gil was dependent upon these managers for help in the organization and day-to-day running of the mission (Santa Barbara Mission Archive-Library, California Mission Document 2840).

Neophyte labor was the foundation of the economic success of the missions. Franciscans made use of neophyte labor in the agricultural fields. They also apprenticed Indians to Hispanic artisans, creating a skilled labor force. Artisans generally traveling from one mission to another trained neophytes in a variety of occupations (Schuetz-Miller 1994). Skilled jobs listed by Father Luís Gil in 1825 included carpenter and apprentices, skimmers, shoemakers and apprentices, soapmakers, brickmason, charcoal makers, muleteers, loom workers, and a sacristan and altar boy (Santa Barbara Mission Archive-Library, California Mission Documents,

letter 2840). Neophyte skills were valued not only by the mission fathers but also by the presidio officers, who often requested skilled neophyte laborers.

Occasionally neophytes were rewarded for their skills. On 23 April 1823, Father Sarría wrote to Father President José Señán protesting the emancipation of two neophytes by Captain Argüello of the Presidio of San Francisco. Both had skills that Captain Argüello thought would be useful, but Sarría was upset because the freeing of the neophytes was done without his consent:

Also the Jefe Superior Argüello has emancipated first Paulino and his family and recently Maximiano Page, who was with Your Reverence, also with two step-sons of his and his wife who is pregnant. This without any previous notice about it whatever until he sent us his Decree of Emancipation. . . . As far as I know not a thing had been done beforehand relative to that emancipation which I opposed. They put Paulino to work as a Carpenter in Monterey and Maximiano as a Barber and Blood-letter in San Francisco, that is, in its Presidio and almost nothing was told to us; we were not even asked for a recommendation of their conduct. (Santa Barbara Mission Archive-Library, California Mission document 2418)

Paulino and Maximiano were the exceptions rather than the rule. Most neophytes remained within the mission system. Their status, in Hispanic society at least, was dependent in large part upon the Franciscans.

Neophytes living in the Mission Adobe may have been rewarded by the Franciscans for their skilled labors and cooperation. Of those who lived inside the Mission Adobe rooms, several had skilled occupations. Census records listed José Victoriano as a horsebreaker and shoemaker, Isidro as an overseer, and Rustico as a drover (Kimbrow et al. 1985:137–154). It may have been partially their skills or status that were being rewarded when the neophytes were given title to their rooms in the Mission Adobe. Not all neophytes received property after secularization. Those who did perhaps at least outwardly displayed the most signs of cooperation and acceptance of Hispanic cultural values.

Yet the role of those who accepted Hispanic culture and who were given positions of authority remained limited. Neophytes rarely became fully integrated into the dominant culture (Phillips 1979:265). Further, acceptance of Hispanic cultural values and material goods did not necessarily engender a complete transformation of the neophyte culture. To a large degree, neophytes selectively chose elements of the introduced culture that they wished to adopt. Some of these elements may have made life easier within the mission system. Some may have practiced outward acceptance of some beliefs, such as religion, while simultaneously main-

taining native religious values. This adoption of cultural elements useful to the survival of the individual and the group was a pattern established long before the arrival of Hispanic colonizers but their presence accelerated the number of and need for choices.

### A NEOPHYTE SYSTEM OF VALUE

*We know of no Indian who is well off. All their riches consist in having and acquiring a great amount of colored beads.*

—Fathers Marquínez and Escudé, 1814  
(quoted in Geiger and Meighan 1976:122)

*Friend Vinals, in the memoria I asked you for quite a lot of cotton cloth. . . . Don't cancel all the cotton cloth, send us four pieces of the striped kind to buy Otter pelts from the Indians. . . .*

—Father Domingo Carranza to Father Procurator Vinals, 28 January 1808 (Santa Barbara Mission Archive-Library, translated by R. H. Jackson)

When California mission economies are discussed, topics focus upon the agricultural crops and livestock controlled by the missionaries (Archibald 1978, Costello 1990, Farnsworth 1987, Hoover 1992, and Hornbeck 1983). Authors highlight the role of Alta California in the expansion of the capitalist world economy, noting especially the change in trading patterns that occurred during the Mexican period when California was allowed to trade with foreign vessels. The kinds of material goods that missionaries most often purchased from traders were practical, utilitarian items necessary for the operation of the missions. They also purchased English cloth and ceramic tablewares, as well as some personal items (Costello 1992).

Missionaries trained neophytes to become the producers of economic goods within the mission. Indians were the agricultural laborers who planted and harvested crops and tended the large herds of cattle, sheep, and horses. Under the supervision of the missionaries, neophytes constructed the mission buildings and made the cloth, shoes, saddles, candles, and soap manufactured at each mission. Neophytes participated in the overall mission economies essentially as subsistence laborers. Documents tell—and archaeological evidence confirms—of the food, clothing, and shelter that the neophytes received in return for their work.

Franciscans in Alta California continually complained about the lack of necessary items and the inefficiency of the official supply route. But to the local native population, Franciscans and others of the Hispanic population must have seemed to control an abundance of material goods. Neophytes redefined their idea of what constituted wealth on the basis of their perception of Hispanic riches and power. Some of the more useful and novel material goods, such as glass beads, were immediately adopted by the neophytes. Missionaries and soldiers portioned out material goods according to their own standards of reward and payment, of-

ten ignoring or unaware of native systems of distribution. New sources of material wealth became available to individuals who had less abundance of material culture in native society, and those who had controlled more wealth of goods were challenged.

Neophytes did not absolutely alter their ideas about wealth to conform to Hispanic ideals. Instead, they assimilated some new ideas while retaining their own native systems of value. The Franciscans were sometimes mystified by the neophytes' attraction to some material goods while they eschewed others. For example, the missionaries regarded glass beads as valuable only for their use in attracting neophytes to the mission, but to the neophytes beads constituted material wealth. Missionaries did not understand why neophytes valued the beads and other items that Hispanic society considered to be mere baubles. In effect, there were two economic systems of value in operation at each mission—the economy introduced and controlled by the missionaries, and a native system of values maintained solely by the neophytes. Native Americans preserved values that gave them a negotiable currency outside of the larger Hispanic system and allowed them to establish status and wealth amongst themselves that were not necessarily affected by actions of the Hispanic outsiders.

Neophytes continued to value material items from their own culture, even though more easily obtained substitutes were available from the Spanish. For example, archaeologists recovered 242 glass beads from Early and Late Mission period deposits at Mission Santa Cruz, compared to only 21 shell beads. An important part of traditional dress, shell ornaments were highly valued in native trade. They also played a central role in gambling, an important way of redistributing goods in pre-contact society. Gambling continued during the Mission period. Kotzebue, a Russian captain, saw neophytes at San Francisco gambling, where "little white shells" served as the stakes (Webb 1982:268).

Only if they valued shell for its cultural significance would missionized Indians continue to manufacture *Olivella* and abalone ornaments and make necklaces, bracelets, and earrings of shell. Glass beads affected the native aesthetic and preference for bead shape to some degree, as clam beads shaped like tubular glass beads suggest. Neophytes also retained their own idea of how beads should appear. Shell beads were a basic factor in several cultural practices. Continued manufacture of these beads shows a desire on the part of the neophytes to preserve some of the traditions by which they may have defined themselves as a group.

Similarly, although mission documents attest to the many new kinds of food available to the neophytes in abundance, they continued to make use of shellfish and fish. Earlier missions in Alta California had to rely on the ability of neo-

phytes to supplement their diet during times of scarcity, but Mission Santa Cruz was established during a time of relative prosperity. Any food shortages would have been overcome by gifts from sister missions. Faunal remains of introduced animals such as cattle and sheep greatly outweigh the shellfish and fish remains at Santa Cruz (see chapter 6). Traditional practices of fishing and gathering shellfish continued not from necessity but from custom and by choice.

The presence of fish and shellfish are not the only examples of the retention of native material culture. Other native sources of food in evidence are the remains of birds, wild mammals, and plants traditionally used by the Ohlone and Yokuts. Bone whistles, tubes, gaming pieces, and beads, chipped-stone tools, stone mortars and pestles, and other ground-stone artifacts also appear in the archaeological record. All these items had worth within the native system of values.

Neophytes utilized these goods themselves but also made use of them as trade items. The small numbers of *Olivella* and abalone beads excavated at Santa Cruz cannot account for all the manufacturing detritus found. While it is true that not all shell beads would enter the archaeological record, the disparity still seems notable, and the amount of detritus suggests that Mission Santa Cruz was the location of neophyte workshops for shell-bead manufacture. Many ornaments made at Santa Cruz were probably used as trade goods, intended for other mission Indians and for export to groups of natives not yet missionized. In the pre-contact era shellfish meat was also an important trade item (Davis 1974:19), and it may have retained its value during the historic period. Clam beads found at Santa Cruz were likely imported from the Coastal Miwok of Bodega Bay (Bennyhoff, personal communication 1992). Obsidian was not locally available. Tools found at Santa Cruz have been traced to obsidian sources in Napa Valley, Casa Diablo, Annadel, and Bodie Hills (Hughes 1987), suggesting the continuation of pre-historic trade routes. It is unlikely that Franciscans completely regulated trading between native groups.

To some extent Santa Cruz missionaries were aware that neophytes placed different values on material items and in some cases used this knowledge to their own benefit. The trade value of otter pelts from the missionaries' perspective was much higher than the bolts of cotton cloth the missionaries traded to the neophytes for their efforts. Lorenzo Asisara, the Santa Cruz ex-neophyte interviewed in the late nineteenth century, tells an anecdote about an exchange in the mission that may or may not be true but is indicative of the general values held. According to Lorenzo, Father Luis Gil would play the gambling game of *peón* with the neophytes. The father

...used to sit disguised for an hour or two watching the game. He used to put up glass beads instead of money and they [the neophytes] laid their bets to him in silver. (quoted in Savage 1877:54)

Lorenzo does not say where the neophytes got the silver. Glass beads were relatively inexpensive in the Spanish economic system, as was cotton cloth. Missionaries exchanged these items for Indian labor and used them as lures to encourage gentile Indians to join the mission community, and to reward good behavior within the mission. In effect, the missionaries were paying the neophytes in a currency that had little value in Hispanic society but had real economic value among the neophytes.

Although the situation varied somewhat from mission to mission, neophytes were at the bottom of the distribution system for European manufactured goods. Even during the Mexican period when the missionaries expanded their access to European goods by trading with foreign vessels, not all imported goods were made available to neophytes. Part of the reason for the lack of neophyte access to imported goods was probably a simple lack of supply. The missionaries had trouble enough getting the supplies they needed for themselves and for the church. They also wanted to create in the California missions a Spanish culture without all of the faults of the original (Foster 1960). The Franciscans envisioned a purer society without all of the material trappings that plagued Hispanic culture. Consequently, neophytes could not achieve equal economic status with the missionaries, the soldiers who guarded the mission, or the Hispanic settlers of the nearby pueblo of Branciforte.

Missionaries anticipated that the neophytes would eventually adopt a worldview that was essentially Hispanic in nature and that neophytes would become part of a traditional Hispanic Catholic society. Missionaries also understood that in large part the neophytes would always be a separate caste, making up the lowest part of the Hispanic social structure, although some mixing of neophyte and Hispanic settlers was bound to occur. This system was familiar; an already well defined caste system was in place in much of New Spain. Ironically, by using goods such as glass beads or even religious ornaments to pay for labor and reward good behavior, the missionaries only fostered a sense of separateness among the neophytes. Having access to a relatively steady supply of materials that signified wealth in native terms fit into existing neophyte ideas of value. This allowed for the maintenance of a separate value system and ensured that neophytes would not become wholly integrated into the greater Hispanic community.

In contrast to this model, George Phillips (1980) describes the economic integration of Native Americans into the Pueblo of Los Angeles, and their subsequent social disinte-

gration. Phillips details the town beginnings and discusses the Hispanic settlers' reliance on Indian labor. Indians attracted to Los Angeles were those who did not join nearby Mission San Gabriel. Hispanics termed these Native Americans "gentiles." In the beginning, the gentile Indians worked for the townspeople only when it suited them and when they were not busy gathering or hunting during their traditional seasonal rounds. As a result, Los Angeles residents occasionally demanded the help of neophyte labor from Missions San Gabriel, San Luis Rey, and San Juan Capistrano. Villagers mostly depended upon gentile labor, a trend that disturbed the missionaries as they felt it was encouraging the gentiles not to join the surrounding mission communities. Missionaries also thought the villagers provided poor role models of behavior. After secularization, both ex-neophytes and gentiles worked in the Pueblo. Although relations were not always peaceful, Los Angeles relied on this labor source. The most important industry in Los Angeles was the vineyards, and Native American labor was crucial. They tended the vineyards, excavated irrigation ditches, and harvested and processed the grapes. Phillips postulates that "...Indians underwent social disintegration precisely because they had become tightly integrated into the pueblo's economic structure" (1980:428). This relationship lasted into the 1870s, although after secularization it was one of more economic exploitation than integration as there was a surplus of native labor. During the American period in California, the newly arrived Euro-American communities viewed Indians as a cheap commodity that would probably not last. The social disintegration of the Native Americans proved not to be beneficial to either the Native American or Euro-American communities.

In order for a group to be fully incorporated into an imposed social structure in a Colonial situation, they must be integrated into all aspects of the new society, including its economic systems of exchange. In Los Angeles, this interdependent relationship initially flourished in Hispanic society but did not thrive because of social and cultural prejudices brought by later Anglo-European settlers. Although Franciscans focused on the spiritual and social transformation of the neophytes, they did not effectively provide for their economic integration as consumers into the Colonial or mission economy. Missionaries relied on neophytes as the labor base of the missions but did not provide them with regular and sufficient access to the material goods and wealth necessary to make them truly Hispanic citizens. Neophytes retained their traditional uses of many forms of native material culture and incorporated nonnative forms into this existing system. Many trading mechanisms and routes of the pre-Hispanic world also continued. Native Americans preserved a sense of their separate identity apart from the Hispanic settlers because they were able to maintain native

cultural patterns. This sense of a separate cultural and economic identity is only visible through the archaeological record, taken with evidence from documents.

### CULTURAL MODIFICATION AT MISSION SANTA CRUZ

In any given culture there are three constituent factors at work: environment, material culture, and ideology. Usually, one of these factors is posited as primary, with the other factors derived from it. In every culture all three factors are in play in a reciprocal but dynamic relationship. A change in any one factor inevitably affects the other two, leading to changes and reciprocal effects on the others. In cultures that are relatively stable, the relationship between the factors has reached a condition of general equilibrium that will be maintained as long as the environment, material culture, and ideology all remain unchanged. Any significant change in any of these factors will disrupt the equilibrium and make the relationship dynamic again.

The Ohlone and Northern Valley Yokuts were hunter-gatherers who lived in relatively small groups and migrated seasonally within a specific area. Their means of living evolved to suit local environments. Their culture was sometimes static but frequently allowed for alteration in order to exploit new resources or to react to ideas and behaviors of neighboring groups. Franciscans did not introduce the idea of change, but the Hispanic presence in Alta California substantially increased the rate and kind of change. Some changes had begun even before the arrival of the Franciscans. The presence of Europeans in the New World almost immediately began to affect native cultures everywhere: "It is unlikely that any European ever met a Native American who was free of European influence. This influence started coming in long before the first Europeans arrived, as cultural changes, as well as new germ strains resulting in population decimation, were introduced to indigenous peoples" (Deetz 1991:6). Since the neophytes were removed from their traditional environment and contained within a world dominated by the Spanish and later the Mexican bureaucracies, significant alterations of native culture had to occur.

Mission Santa Cruz was an unstable environment because of high death rates, constant influx of new groups of Indians replacing those who had died, and a rapid replacement rate of the fathers. Neophytes at Santa Cruz could model their behavior after either Ohlone, Yokuts, or Hispanic cultural habits, all of which were in competition, creating a confusing array of choices. By practicing a familiar activity such as manufacturing shell beads, neophytes retained a concrete connection with traditional activities during a period of great instability. Neophytes used their manufactured goods in a

separate economic system of value controlled only by them and outside the realm of the missionaries—providing a means for the neophytes to maintain some control over their environment and to preserve a sense of cultural identity.

Missionaries, soldiers, and settlers imported Hispanic material culture, technology, and ideology (including religion and language), with which they wished to conquer the land and native people. They could not directly create a Spanish or Mexican environment. Instead they attempted to modify the California landscape to suit their purposes, using the tools of Hispanic material culture and ideology. Employing these same agents, the missionaries tried to alter the behavior and attitudes of the neophytes completely and make them wholly Hispanic in cultural outlook.

The neophytes, on the other hand, retained much of their native culture and seem to have selectively chosen material items to incorporate into their everyday lives. Neophytes maintained a separate system of value from that of the Franciscans, soldiers, or nearby villagers. It was a value system based on prehistoric patterns but incorporating some introduced material culture, although they used it in traditional ways. Their lack of economic integration into the mission and lack of control over goods produced by their labor made their social inclusion into Hispanic society even less likely. Neophytes may have used this separate economy, along with its material representations, as a mechanism for maintaining a separate cultural identity apart from the Hispanic colonizers. Determining how much this identity reflected pre-contact village cultures is problematical. In many ways, the cultural identity of the Ohlone and Yokuts neophytes seems to have merged.

Alta California was the last frontier of the Hispanic missionary experiment. With the advent of secularization and later the Euro-American occupation, forced missionization of Native Americans in California ended. The experiment was not repeated in what is today the United States in this exact form, although some later Christian reservations resembled the Hispanic missions in some ways. The end result of the missionization was a neophyte population decimated in numbers but that maintained many of the cultural ties to pre-contact California with some Hispanic influences. With the advent of the American period, the culture that had emerged among the neophytes at Mission Santa Cruz continued to change. The terms of interaction with the dominant group were no longer the same. In many ways, interaction with Euro-Americans brought more hardships. If Hispanics offered neophytes a social position at the bottom of society, Anglo-Europeans offered them no place at all. Economic isolation continued, and so did the recognition of a separate, Native American culture.



# Bibliography

## PRIMARY SOURCES

The majority of Franciscan letters cited in this work were collected by Edna Kimbro and translated by Starr Gurke. Exceptions are those translated by Robert H. Jackson as part of his research for an historic report on Mission Santa Cruz (Kimbro et al. 1985). Document numbers are not always available for letters translated by Jackson. A report authored by Father Luís Gil y Taboada dated December 31, 1825 was translated by the author. Table B.1 is a list of all available letters.

Original annual reports are housed at the Santa Barbara Mission Archive-Library. Annual reports are available for the following years: 1791 to 1798, 1806, and 1809 to 1833. An 1834 inventory is also at Santa Barbara. In addition, brief census records exist for the years 1797 to 1810.

Repositories of these documents include: the Santa Barbara Mission Archive-Library, the San Francisco Archdio-

cese Chancery Archives, the Bancroft Library at the University of California, Berkeley, and the Huntington Library in Los Angeles. All cited documents, with the exception of the letter translated by the author, have been copied by Edna Kimbro and placed in the McHenry Library at the University of Santa Cruz, and the Cultural Heritage Section of the Department of Parks and Recreation in Sacramento. These copies include the original Spanish and translated versions.

Original repositories of information are indicated with the following abbreviations:

BL	Bancroft Library
DLG	De La Guerra papers
HL	Huntington Library
RJ Trans	Translated by Robert H. Jackson
SBMA	Santa Barbara Mission Archive-Library
SFAC	San Francisco Archdiocese Chancery Archives

Table B.1

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SBMA	RJ Trans	29 Sep 1791	Fr. Isidoro Alonzo Salazar and Baldomero López	Sr. Don José Antonio de Romeu	Telling of founding of mission, purpose of mission
SBMA	221, 198	24 Jan 1794	Fermin Lasuén	Tómas Pangua	Do not have letter, regarding revolt of Indians at Santa Cruz, state of missions
SBMA	RJ Trans	19 Dec 1794	Fr. Baldomero López	Sr. Gov. Don Diego de Borica	Instructions concerning foreign vessels received
SBMA	296, 322	2 May 1797	Governor Borica	Santa Cruz Missionaries	Do not have letter, regarding founding of Branciforte
SBMA	RJ Trans	13 Dec 1797	Fr. Manuel Fernández	Sr. Gov.	Regarding male and female alcades, will send salmon caught by Indians
SBMA	RJ Trans	27 Jan 1798	Fr. Manuel Fernández	Sr. Gov. Don Diego de Borica	Fugitives and Indians at mission, problems at mission, despair
SBMA	RJ Trans	29 Apr 1798	Fr. Manuel Fernández	My dear and esteemed Senor (Governor?)	Return of fugitives, arrival of gentiles
SBMA	RJ Trans	19 Sep 1798	Fr. Manuel Fernández	Sr. Gov.	Poor condition of livestock at mission
SBMA	RJ Trans	14 Jan 1799	Fr. Francisco González & Fr. Domingo Carranza	Sr. Governor Don Diego de Borica	Collapse of buildings at mission, bombproof henhouse
SBMA	RJ Trans	15 Jan 1799	Fr. Francisco González & Fr. Domingo Carranza	Sr. Governor	Election of alcades
SBMA	RJ Trans	9 May 1799	Fr. Francisco González & Domingo Carranza	Sr. Gov. Don Diego de Borica	Knavery of mayordomo Francisco Morales
SFAC	234	9 May 1799	Francisco Morales	Sr. Governor Don Diego de Borica	Conflict with missionaries
SFAC	236	9 May 1799	Pedro Peralta (commander of escolta)	[de Borica]	Conflict of Morales with missionaries
SFAC	236-2	[9 May 1799]	Fr. Francisco González & Fr. Domingo Carranza	[de Borica]	Record of the embezzlements of Francisco Morales
SBMA	RJ Trans	[1799]	Fr. Francisco González & Domingo de Carranza	Sr. Governor Don Diego de Borica	Sending incorrigible neophyte Andres, reason for neophyte flight
SBMA	RJ Trans	26 Feb 1806	Fr. Domingo de Carranza	Reverend Father Fr. Thomas de la Pena	Receiving of memoria, accounting
SBMA	RJ Trans	26 Feb 1807	Carranza	Friend Vinals	Sending memoria and accounting, fretful and finding no satisfaction
SBMA	RJ Trans	29 Mar 1807	Fr. Carranza	Friend Vinals	Cancel cloth, ordering bells, some cloth to buy pelts from Indians

*continued*

Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
BL		22 Jan 1808	Fr. Carranza	Esteemed Vinals	Sending memoria, mentions otter pelts and hemp
SBMA	RJ Trans	28 Jan 1808	Fr. Domingo de Carranza	Friend Vinals	Otter pelts and prices
SBMA	RJ Trans	23 Sep 1808	Fr. Francisco Uría	Friend Vinals	Arrived at Mission 8/13, "realize my fate"
BL		31 Jan 1809	Fr. Andrés Quintana	Father Fr. José Vinals	Habits for other priests, thinking of ordering altar piece
SBMA	795	10 Feb 1809	Fr. Estevan Tapis	Governor...José Joaquin de Arrillaga	Decree of Monarch that he be recognized king and lord of dominion
SBMA	RJ Trans	28 Feb 1809	Fr. Estevan Tapis & Fr. Andrés Quintana	Reverend Father Procurador, Fr. José Vinals	Giving 50 pesos to Governor as "donation"
SBMA	RJ Trans	24 May 1809	Fr. Estevan Tapis	My dear Governor	Regarding fugitives from mission
SBMA	RJ Trans	27 Jun 1809	Fr. Estevan Tapis	Sr. Gov. Don José Joaquin de Arrillaga	Asking for travel permission for Fr. Faura to retire
SBMA	7511658	28 Jan 1810	Fr. Estevan Tapis	President Fr. Mariano Payeras	Do not have, conditions at Santa Cruz after insurgent invasion
SBMA	RJ Trans	30 Mar 1810	Fr. Andrés Quintana	Fr. José Guilez	Shipment of otter pelts
HL	HL 6	15 Oct 1812	José Maria Estudillo	Fr. Marceliano Marquínez	Exhuming body of Quintana for examination
HL	HL 7	15 Oct 1812	Fr. Marceliano Marquínez	Sr. Don José Maria Estudillo	Deferring to exhumation
SBMA	RJ Trans	31 Mar 1814	Fr. Marceliano Marquínez	Fr. Francisco Santiago	Accounts and threat of insurgents
SBMA	RJ Trans	30 Sep 1814	Fr. Marceliano Marquínez	My Father Santiago	Outrage at freight costs
SBMA	DLG	28 Mar 1816	Pablo Vincente de Solá	Sr. Don José de la Guerra	Stay of Indians from SC, work them customary hours and not let escape
SFAC	387	25 May 1816	Ignacio Peralta	Sr. Governor Don Pablo Vicente de Solá	Escolta, runaway
SFAC	387-2	25 May 1816	Fr. Marceliano Marquínez	Paisano, Friend and Sr. Governor (de Solá)	Escolta, runaways, Chivero, Egidio, separating gentiles and neophytes
SBMA	6621145	2 Jun 1816	Governor Solá - manifiesto		Do not have letter, defending Quintana's character against Indian charge
SFAC	392	10 June 1816	Luis Argüello	Sr. Don Pablo Vicente de Solá	Escolta, runaways
SFAC	401	10 June 1816	Fr. Jayme Escudé	My Master and Friend, Sr. Governor (de Solá)	Runaways, Francisco Xavier, Chivero

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SFAC	490	18 June 1816	Fr. Jayme Escudé	My Master and Friend, Sr. Governor (de Solá)	Military expedition to get runaways, wants him to continue
SFAC	402	25 June 1816	Fr. Jayme Escudé	My esteemed Friend Sr. Governor (de Solá)	Vaqueros, Cordero (guardian to Fathers), escolta
SFAC	572	8 July 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Tobacco supply (de Sola wanted some)
SFAC	573	1 Sep 1816	Fr. Marceliano Marquínez	Sr. Governor Paisano (de Solá)	Fermin Cordero, official tailor, sacristy cloth, beans and corn
SFAC	573-2	9 Sep 1816	de Solá (unsigned)	My esteemed Paisano (Marquínez)	ship supplies, harvest, missing the Holy Cross fiesta (reply)
SFAC	574	18 Sep 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Holy Cross celebration, donation of tallow and flour, harvest
SFAC	574-3	20 Sep 1816	(de Solá) (unsigned copy)	My esteemed Paisano & Master (Marquínez)	ship supply, donation, chastising tone
SFAC	575	21 Sep 1816	Fr. Marceliano Marquínez	(de Solá) FIRST PAGE MISSING	Corn, donation, rebuke, harvest (women), mill (rastra)
SFAC	575-4	23 Sep 1816	Pablo Vicente de Solá	My esteemed Paisano & Friend (Marquínez)	Corn, flour, ship
SFAC	576	25 Sep 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Presidio does not want habas, tallow, rebuke
SFAC	774	11 Oct 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Missionary tableware (platters, saucers, knives)
SBMA	RJ Trans	30 Oct 1816	Fr. Marceliano Marquínez	Reverend Father Fr. Norberto Santiago	Part of shipment is damaged, settling of account
SBMA	RJ Trans	30 Nov 1816	Fr. Marceliano Marquínez	Reverend Father Administrator	Settling of accounts, mistakes in accounting
SFAC	578	13 Dec 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Return of 42 runaways, Rancherias Malime, Chaneh and Lucham
SFAC	577	30 Dec 1816	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Corn, payment
SFAC	756	25 Mar 1817	Fr. Jayme Escudé	My beloved Sr. Governor (de Solá)	Marquínez ill, request for surgeon, Don Manuel Quijano
SFAC	757	6 Apr 1817	Fr. Jayme Escudé	Esteemed Sr. Governor (de Solá)	Illness of Marquínez, keeping Don Manuel Quijano at mission
SFAC	658	17 Apr 1817	Fr. Jayme Escudé	Esteemed Sr. Governor (de Solá)	Marquínez to go to de Sola's house, beans to presidio, cattle
SFAC	759	20 Apr 1817	Fr. Jayme Escudé	My most beloved Sr. Governor (de Solá)	Marquínez ill

*continued*

Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SFAC	760	25 Apr 1817	Fr. Jayme Escudé	My beloved Sr. Governor (de Solá)	Marquínez better, Sgt. Pico, ship
SFAC	761	30 Apr 1817	Fr. Jayme Escudé	My beloved in Christ Sr. Governor (de Solá)	Marquínez, Pico, ship anchoring at Santa Cruz, supplies
SFAC	762	1 May 1817	Fr. Jayme Escudé	Dearest Sr. Governor (de Solá)	Marquínez sent in litter, wants mules
SFAC	772	7 May 1817	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	Asking for Governor's vehicle to help him travel
SFAC	673	9 May 1817	Fr. Jayme Escudé	Dear Sr. Governor (de Solá)	Ship anchored, wants to know if he can trade
SBMA	1425	9 May 1817	Fr. Jayme Escudé	Beloved Friend and Master, Sr. Governor (Solá)	Ship at Soquel, tacking, not anchoring, "ridiculous Russian"
SFAC	707	9 May 1817	Nasario Berreyeza	My venerable Sr. Governor (de Solá)	Ship at Soquel, seen off shore
SFAC	766	10 May 1817	Fr. Jayme Escudé	My beloved Friend and master Sr. Governor (de Solá)	Supplies for troops, threat of ship, = SBMA 1427
SFAC	765	25 May 1817	Fr. Jayme Escudé	Beloved Governor (de Solá)	Wheat ruined, planted corn for troops, beans good
SFAC	768	29 May 1817	Fr. Jayme Escudé	Beloved Sr. Governor (de Solá)	Cattle from Ano Nuevo, helping villa to build corrals, Salispuedes
SFAC	767	29 May 1817	Fr. Jayme Escudé	Beloved Sr. Governor (de Solá)	Cattle at Salispuedes, dispute with villa, want land
??	??	31 May 1817	Fr. Marceliano Marquínez and Fr. Jayme Escudé		Request for land for cattle, signed by Sola, agreement by villagers
SFAC	769	6 June 1817	Fr. Jayme Escudé	Beloved Sr. Governor (de Solá)	Received decree about cattle, mentions round-up
HL	HL 16	4 June 1817	Pablo Vicente de Solá	Fr. Marceliano Marquínez and Fr. Jayme Escudé	Granting permission for cattle - loan of land
SFAC	773	21 June 1817	Fr. Marceliano Marquínez	Sr. Governor (de Solá)	At San Miguel, going to assignment at San Juan Bautista, runaways
BL		29 Oct 1817	Fr. Jayme Escudé	Reverend Father Fr. Juan Norberto de Santiago	Have 12 settings with spoons, wants church objects, cancel news sub.
SFAC	887	16 Nov 1817	Fr. Jayme Escudé	Friend and Master, Sr. Governor (de Solá)	Sending crates of fruit
SBMA	1509	2 Dec 1817	Fr. Vincente Francisco Sarría	Sr. Governor Don Pablo Vicente de Solá	Conflict with escolta, wants to visit sick Tular in village, paisano

*continued*

Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SFAC	721	28 Dec 1817	Fr. Narisco Duran	My venerable Father and Sir (Father Prefect)	Arrival at SC, trouble with neophytes, poisoning
SFAC	886	29 Jan 1818	Fr. Jayme Escudé	Beloved Friend, Sr. Governor (de Solá)	Seal skins, fugitives, wants military to act
SBMA	DLG	29 Apr 1818	Fr. Estevan Tapis	Sr. Capt. Don José de la Guerra y Noriega	Alone serving at mission of "friar killers," not poison killed Quintana
SBMA	DLG	28 Jun 1818	Fr. Ramon Olbés	Sr. Don José de la Guerra y Noriega	Olbés arrives at mission, waiting for harvest, logs for S. Barbara
SBMA	DLG	27 Jul 1818	Fr. Ramon Olbés	Sr. Captain Don José de la Guerra	Logs on embarcadero of Monterey, payment, "mission is poor"
SBMA	DLG	5 Oct 1818	Fr. Ramon Olbés	Sr. Captain Don José Noriega	Order of beams, "the Russian"
SBMA	1583	16 Oct 1818	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Conflict with escolta over majordomo duties, esteemed paisano
SFAC	878	21 Oct 1818	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Sending corn and fruit, Sgt. Pico
SBMA	DLG	29 Oct 1818	Fr. Ramon Olbés	Sr. Captain Don José de la Guerra y Noriega	Order of wood, arrival of insurgents
SFAC	879	4 Nov 1818	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Awaiting ship, Martin Ortega wants to be leatherjacket
SFAC	876	10 Dec 1818	Fr. Narisco Duran	Sr. Governor Don Pablo Vicente de Solá	Liquor for troops, recent sudden assault (?)
SFAC	922	24 Feb 1819	Fr. Ramon Olbés	Sr. Captain Don Luís Argüello	Regligence towards escolta, fugitives
SFAC	922-2	24 Feb 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Wants protection, complains about abandonment of escolta
SFAC	927	2 Mar 1819	Fr. Ramon Olbés	Reverend Father President Fr. Mariano Payeras	Excesses of villagers, outrage with Arguello, wants escolta
SFAC	930 (?)	5 Mar 1819	Fr. Mariano	Sr. Governor Don Pablo Vicente de Solá	Asks for escolta at SC, states that SC does supply grain
SFAC	931 (?)	17 Mar 1819	José Joaquin de la Toree		List of items needed for the Paymaster's Office
SFAC	937	20 May 1819	Fr. Mariano Payeras		Details of donation to Monterey Presidio, SC 400 pesos (most \$)
SFAC	938	21 May 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Regarding dispute over land at Salispuedes, Sola's reply

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
HL	HL 1	22 May 1819	Pablo Vicente de Solá	Reverend Father Fr. Ramon Olbés	Branciforte and conflict over Salsipuedes for grazing land
SFAC	969	26 May 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Families at Branciforte
SFAC	970	31 May 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Return of effects to mission
SFAC	971	14 Jun 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Neophyte fugitives, misses their labor, Chato
SFAC	972	13 Jun 1819	Fr. Ramon Olbés	Reverend Father President Fr. Mariano Payeras	Order for boots, tools stolen, neophyte labors, reply from Payeras
SFAC	974	22 Jun 1819	Fr. Ramon Olbés	Reverend Father President Fr. Mariano Payeras	Can't do order for boots, giving money and tallow
SFAC	975	23 June 1819	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Neophytes at Presidio
SFAC	1117	7 Apr 1820	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Offering services of Feliciano Soberanes
SFAC	1113	27 Dec 1820	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Regarding donations and prisoners, references letter
SFAC	1114	27 Dec 1820	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Donation to Monterey Presidio, wheat delivered to Russians
SFAC	1275	14 Jan 1821	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Donation, Escolta Corporal wants to retire to villa, Robles left
SFAC	1288	14 Feb 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vicente de Solá	Thanks for Don Manual Quijana, Gil sick
SFAC	1276	21 Feb 1821	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	No to offer of Sola's house to recover, wants surgeon, Gil arrives
SFAC	1277	19 Mar 1821	Fr. Ramon Olbés	Sr. Don Pablo Vicente de Solá	Dispute in villa over houses, layout of houses
SFAC	1289	11 Apr 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vic. de Solá	Wants newspapers of Sola, wants to leave on ship
SFAC	1278	11 Apr 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vicente de Solá	Grateful for Quijano, sending letters from others
SFAC	290	13 May 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vic. de Solá	Thanking him for newspaper
SBMA	2166	23 Jun 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vicente de Solá	Infamous Clementina Montero, separation from her children

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SBMA	2194	22 Jul 1821	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Donation of house built by neophytes, Fr. Luís no longer retiring
SFAC	1279	3 Aug 1821	Fr. Ramon Olbés	Sr. Governor Don Pablo Vicente de Solá	Donation, excess barley, Gil doesn't like donations
SFAC	1292	30 Aug 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vic. de Solá	Thanks for newspapers, donation, barley and beans
SFAC	1287	5 Sep 1821	Fr. Luís Gil	Sr. Governor Don Pablo Vicente de Solá	Russian effects, disappointed at no cacao and sugar
SFAC	1253	24 Nov 1821	Fr. Luís Gil	Reverend Father Prefect Fr. Mariano Payeras	Neophytes do nothing without a flogging, donation, asks to retire
SFAC	1372	30 Apr 1822	Fr. Luís	My dear Aloysio (Don Luís Antonio Argüello)	Macedonio ill with syphilis, request to go to San Luís
SFAC	1373	4 May 1822	Fr. Luís Gil	My dear Luís (Argüello)	Again asking to transfer Macedonio (has wife)
SFAC	1399	16 Jun 1822	Fr. Luís	My beloved Luisito (Argüello)	Argüello wedding delay, leave for Macedonio, grains bad, Russians
SBMA	DLG	Jul 1822	[Luís Gil]	My beloved Noriega	"Matter of the foreigners" and trade - letter is vague
SFAC	1767	Nov 1822 (?)	Fr. Luís	Dear Luisito (Argüello)	Mentions affection for Arguello, donation
SBMA	2407	5 Apr 1823	Fr. Luís	My beloved Luisito (Argüello)	Grateful if mission suppressed, without lands no contribution
SBMA	2418	23 Apr 1823	Fr. Vincente Francisco Sarría	Reverend Father President Fr. José Senan	Upset, decree to "suppress" SC, mission supports presidio, freeing neophytes
SBMA	2425	6 May 1823	Fr. Luís	My dear Luisito (Argüello)	Indians heard attempt to take lands from them, are upset
SBMA	2549	1824 (n.d.)	Luís	My beloved namesake (Argüello)	Unable to deliver serapes, lack of dye and cloth
SFAC	1646	20 Jan 1824	Fr. Luís	My beloved Luís (Argüello)	Pay Bolcoff (regard him with passion)
SFAC	1647	1 Feb 1824	Fr. Luís Gil	Sr. Governor Don Luís Ant. Argüello	Sending books
SFAC	1648	2 Feb 1824	Fr. Luís Gil	Sr. Political Chief Don Luís Ant. Argüello	Wants payment from Don Antonio Castro and Feliciano Soberanes
SFAC	1649	2 Feb 1824	Fr. Luís	My dear Luisito (Argüello)	Wants response on Bolcoff

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SBMA	2581	28 Feb 1824	Fr. Luís	My beloved Luisito (Argüello)	Friar's bad opinion of Indians, watch Indians, Chumash revolt
SFAC	1650	5 Apr 1824	Fr. Luís	My beloved Luisito (Argüello)	Whites giving Indians liberal ideas, wants to retire, news of rebellion
SFAC	1652	11 Jul 1824	Fr. Luís	Sr. Governor Don Luís Ant. Argüello	Donation, wants supplies from ship, wants caramels
SFAC	1653	23 Aug 1824	Fr. Luís	My dear Ludovico (Argüello)	Wheat disappointing, Negro hurts neophyte, neophytes as vengeful
SFAC	1606	27 Aug 1824	Francisco González	Declaration of the Neophyte Juan José	Negro struck him
SFAC	1654	29 Aug 1824	Fr. Luís	My most beloved Luisito (Argüello)	Food for Arguello, patients with the itch, politics, stone cutters
SFAC	1655	8 Sep 1824	Fr. Luís	My most beloved Luisito	Fruit for Argüello, Junta (?)
SFAC	1651	16 May 1824	Fr. Luís	My beloved Luisito	Donation, wants newspapers
BL		19 Sep 1824	Fr. Luís	My beloved Don Willem (Hartnell?)	Sending food, wants supplies, learning English, "country of Anglos"
SFAC	1656	29 Sep 1824	Fr. Luís	My beloved Luisito	Asking for supplies, including sugar and panoche
SFAC	1657	8 Oct 1824	Fr. Luís	Most beloved Luís (Argüello)	Wheat delayed, breaking into 7 houses belonging to related people
SFAC	1658	2 Nov 1824	Fr. Luís Gil	Sr. Governor Don Luís Ant. Argüello	Ship that sailed from Canton
SFAC	1660	19 Nov 1824	Fr. Luís	My Luisito	Russians and otter pelts, demanding two more in escolta
SBMA	944	18 Dec 1824	Fr. Luís Gil	Sarría	Do not have letter, asking advice on Asperes ceremony on Saturdays
SFAC	1758	29 Jan 1825	Fr. Luís	My beloved Luisito	Transaction from schooner
SFAC	1759	6 May 1825	Fr. Luís Gil	Sr. Governor Don Luís Ant. Argüello	Ships, not able to donate food/seeds, not have Indians without food
SFAC	1760	25 May 1825	Fr. Luís	Sr. Governor Don Luís Ant. Argüello	Doesn't want Julian (neophyte?) to go on expedition
SBMA	2788	4 Jul 1825	María Clementina Montero	Reverend Father President	Request to marry child's father rather than his uncle who proposed
SBMA	2788-2	9 Jul 1825	Fr. Narisco Duran, Fr. José Viader	Reverend Father President	Verifying Clementina's statement of facts

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SFAC	1761	11 July 1825	Fr. Luís Gil	My most beloved name sake (Argüello)	Can't give donations, gossip about other people
SBMA	976	14 Jul 1825	Fr. Luís Gil	Duran	Do not have letter, regarding case of Clementina Montero
SFAC	1762	26 July 1825	Fr. Luís	My beloved Luís (Argüello)	ship with Spanish passengers
SBMA	2788-3	29 Jul 1825	Fr. Narisco Durán	Father President	Clementina hid information, her appeal should be denied
SFAC	1763	26 Aug 1825	Fr. L. Gil	My beloved Luisito (Argüello)	More or less gossip, Gil is ill
SFAC come	1764	8 Sep 1825	Fr. Luís	My beloved Luisito (Argüello)	horses and saddles for Luisito to
SFAC	1765	27 Sep 1825	Fr. Luís Gil	Sr. Don Joseph Maria Herrera	Friendly letter to paisano
SFAC	1768	29 Sep 1825	Fr. L. Gil	My beloved Paisano (Herrera)	The Mission now resembles a House of Dead
SFAC the	1769	16 Oct 1825	Fr. L. Gil	My most beloved Paisano (Herrera)	Ship, business transactions, I find country intolerable
SFAC	1766	20 Oct 1825	Fr. L. Gil	Most beloved Paisano (Herrera)	Payment order lost (crazy Maria deliverer)
SFAC	1770	24 Oct 1825	Fr. L. Gil	Most beloved Paisano (Herrera)	Owes Herrera cash, dislike of California
SFAC	1743	29 Dec 1825	Fr. Luís Gil	Estudillo (Commander of Troops of Monterey)	Order prohibiting trade with ships (sarcastic reply)
SBMA	987, 2840	31 Dec 1825	Fr. Luís Gil	[fragment] -RSA translation	Document on positions of workers at Santa Cruz
SFAC	1866	8 Feb 1826	Fr. L. Gil	My beloved Paisano and Sr. (Herrera)	Sending food and two salmon caught yesterday, fed up with Indians
SFAC	1867	6 Apr 1826	Fr. Luís Gil	My beloved Paisano and Sr. (Herrera)	Right to trade with ships, problem with villa, government
SFAC	1868	19 Apr 1826	Fr. Luís	My esteemed Paisano and Sr. (Herrera)	Boards waiting for shipment, government, money, dispute with Herrera
SFAC	1869	8 May 1826	Fr. L. Gil	My beloved Paisano being	Boards for Herrera's room, Herrera being "silent"

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SFAC	1870	20 May 1826	Fr. L	Little paisano	Hartnell's brig & ship Satchem, wants supplies
SFAC	1871	28 May 1826	Fr. L. Gil	My beloved Paisano (Herrera)	Boards not sent, other supplies, guitar
SFAC	1872	5 Jun 1826	Fr. L. Gil	Paisano & Sr. (Herrera)	Sending boards, bad American (?)
SFAC	1873	12 Jun 1826	Fr. L. Gil	Paisano & Sr.	Tanned hide sent, Gil is "overwhelmed by fatigue"
SFAC	1874	26 June 1826	Fr. Luís	Esteemed Paisano (Herrera)	Chamois skins being sent
SFAC	1875	7 Jul 1826	Fr. L. Gil	My most beloved Paisano (Herrera)	Gil refused to take oath
SFAC	1876	4 Sep 1826	Fr. L. Gil	Most beloved Paisano (Herrera)	Beans and payment
SFAC	1877	9 Sep 1826	Fr. Luís Gil	My beloved Paisano (Herrera)	Chiding Herrera for not writing, sending vaquero with horses
SFAC	1878	14 Sep 1826	Fr. Luís	My beloved Paisano (Herrera)	Thanks, sending gift, fiesta
SFAC	1879	21 Sep 1826	Fr. Luís	Most beloved Paisano (Herrera)	Sending corn, beans (frijol), lard for troops, wants him to come
SFAC	1880	3 Oct 1826	Fr. L. Gil	Little Paisano (Herrera)	Need sacks to transport wood (cedar?)
SFAC	1881	4 Oct 1826	Fr. Luís	Most beloved Paisano (Herrera)	Waiting for Herrera, delayed by rains
SFAC	1882	13 Oct 1826	Fr. L. Gil	Most beloved Paisano (Herrera)	Again asking for papers, order about Ross not carried out
SFAC	1883	26 Oct 1826	Fr. Luís	My most esteemed Paisano (Herrera)	Arrival of Bravo ship, wants papers, wants supplies from Bravo
SFAC	1884	5 Nov 1826	Fr. Luís	Most beloved Paisano (Herrera)	All the Indians are off on paseo
SFAC	1885	19 Dec 1826	Fr. Luís Gil	Most beloved Paisano	Chiding Herrera, gift, matter of dispute over shipment resolved
SFAC	1968	15 Jan 1827	Fr. Luís Gil	Most beloved Paisano (Herrera)	Accounts, duties of supplies of cloth, calico, pine table
SFAC	1968A	15 Jan 1827	Ignacio Martinez	Reverend Father Fr. Luís, Beloved Paisano & Sr.	Requesting iron tools, accounts to be clarified
SFAC	1970	14 May 1827	Fr. L. Gil	Most beloved Paisano (Herrera)	Sending salmon, Hartnell, tea

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Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
SBMA	3011	2 Feb 1827	José Antonio Robles	Sr. Governor, Political and military	Worried about making it to presidio with sick wife and daughter
SBMA	DLG	7 Feb 1827	Guillermo Eduardo Hartness	Sr. Don José de la Guerra y Noriega	At SC, wife and he sponsor Indian wedding, Father Luís
SFAC	1932	20 Feb 1827	José Antonio Robles	Lordship (Governor?)	Forced to leave Villa, mentions neophytes stealing for villagers
SFAC	1969	27 Mar 1827	Fr. L. Gil	Most beloved Paisano (Herrera)	Tomatoes, garlic, no onions, cucumber rotting, Duhaut de Cilly
SFAC	1972	23 Apr 1827	Fr. L. Gil	Most beloved Paisano (Herrera)	Tanned hides, ship, calls himself miserable, compares to a Creole
SBMA	3048	21 May 1827	Ignacio Martinez	Gov. José M. de Echeandia	Aware of nature of inconstant Indians, Anglos in area
SFAC	1971	8 Oct 1827	Fr. Luís	Most beloved Paisano (Herrera)	Storage of produce, flooring (mentioned earlier)
BL		31 Dec 1829	[Padre Luís] - not signed	My dear Cooper (English captain)	Doesn't like chinese cloth and "nuptial" bed, wants a single
SBMA	1204	[1833]	Fr. Gil	President of missions	Do not have letter, from San Luís Obispo - sometime before 1833
SFAC	2131	21 May 1833	Fr. Antonio Zuarez del Real	Right Reverend Father . . . Francisco Garcia Diego	Inventory, grain for payments and neophytes, supply other missions
SFAC	2166	2 Dec 1833	Fr. Antonio Real	Sr. Comandante General Don José Figueroa	Tithes, ship, grain
SFAC	2165	24 Dec 1833	Fr. Francisco Garcia Diego	Sr. General Don José Figueroa	Defending church, claims charges are false
SBMA	DLG	11 Mar 1834	Guillermo Eduardo Hartnell	Reverend Father Fr. Antonio Real	father-in-law de la Guerra, 50 pesos to mission, will send to Russian
SBMA	DLG	15 Mar 1834	Fr. Antonio Real	[reply to Hartnell]	Deliver 50 pesos to citizen Rafael Gomez, not to Russians
SFAC	2117	14 July 1834	Fr. Ant. Suares del Real	Sr. Comandante General Don José Figueroa	Secularization and neophytes, neophytes already freed make trouble
HL	HL 13	21 Aug 1834	José Rafael González	Sr. Don Ignacio del Valle	Supplies sent and maintaining Mission
HL	HL 11	12 Sep 1834	José Rafael González	Sr. Don Ignacio del Valle (in charge of sec.)	Wants grain sent to Monterey for colonizers
HL	HL 12	4 Oct 1834	José Rafael González	Citizen Ignacio del Valle (after secularization)	Shipments of grain and money donated

*continued*

Table B.1, *continued*

Archive	Doc. no.	Date	Author of letter	Letter addressed to	Contents of letter
HL	HL 8	31 Oct 1834	José Figueroa	Sr. Comisionado Don Ignacio del Valle	Approving Juan González as majordomo
HL	HL 9	27 Nov 1834	José Figueroa	Sr. Comisionado of Santa Cruz	Expecting contribution of 13 blankets
SFAC	2193	11 Apr 1835	José Maria de Hajar	First Constitutional Alcalde of Monterey	Establishing Curates for territory and Secretary for government
HL	HL 4	11 Dec 1835	José Castro	Sr. Administrator of Santa Cruz	300 pesos to Don Ignacio del Valle for secularization work
HL	HL 14	2 Mar 1836	Nicolas Gutierrez	Sr. Administrator of Santa Cruz	Musicians and singers of Santa Cruz no longer to be remunerated
SFAC	2228	12 Mar 1839	Fr. Antonio Real	Sr. Governor & Most Excellent Dep. Assembly	Debts of mission, wants nearby rancho and ex-mission orchard
HL	HL 5	9 July 1836	Mariano Chico	Sr. Administrator of Santa Cruz	Furnishing Father Real subsistence and repair work for mission
HL	HL 15	3 Oct 1839	Guillermo Eduardo Hartness	Sr. Administrator of Mission of Santa Cruz	Governor orders all tile not needed by mission to be brought
SFAC	2244	17 Mar 1840	Fr. Ant. Z. del Real	Most Excellent Sr. Governor Don Juan Figueroa	Wants buildings adjacent to church, request granted
SBMA	3893	7 Dec 1843	Antonio Real	...Vice Prefect Fr. Lorenzo Quijas	Lack of funds, "Russian" raiding mission, is tired, wants to retire
SFAC Ano	3898	4 Jan 1844	Fr. Antonio S. Real	Most Ex. Sr. Gov.	Inventory requested, asking for Nuevo for church, 90 Indians
HL	HL 10	16 Jun 1844	F. Francisco, Bishop of Californias	Episcopal Government of both Californias	Right of Santa Cruz ministers to administer communion for 10 years
SFAC	2319	9 Sep 1845	Fr. Ant. S. Real	Sr. Governor Don Pio Pico	Real granted leave to return to Mexico
SFAC	2342	7 Jun 1847	Ameste	Sr. Don José Bolcoff	States that he will not pay tithes
HL	HL 2	24 Sep 1847	The Father	Brother Don Juan Miguel Anzar	Supplies of wood and soap
HL	HL 3	29 Sep 1852	Fr. J.A. Anzar	Sr. Don Tomás Fallem	Receiving land of mission orchard

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