Continuity in Stone Tool Use during the Historic Period in San Diego County, California

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Abstract

Lithic artifact assemblages from post-1769 sites within San Diego County reveal a well-developed pattern of manufacture and use of traditional aboriginal tool types by Indian people. Artifacts made from locally available lithic materials continued to play a key role for Native Americans in everyday food procurement, food processing, and tool maintenance tasks. Explanations for sustained employment of traditional tools into the historic period include the high functionality of stone implements, the desire to preserve cultural traditions and cultural ties, the maintenance of self-esteem, the maintenance of social boundaries, the expression of group unity, the lower costs of traditional tools, a lack of access to introduced tools, and resistance to introduced lifeways. However, certain changes in traditional lithic technology and patterns of stone tool use occurred from contact (AD 1769) into historic times. Explanations for these observed changes consist of the termination of traditional exchange networks, impeded access to traditional stone quarry locations, greater assimilation into a new economy, adoption of certain newly introduced tool types, the greater efficiency of metal over stone for specific tasks, and loss of traditional knowledge of stone tool making through time.

Introduction

Stone tool use among Indian people in the historic era is well documented within California and other parts of the United States (e.g., Nelson 1916; Walker 1947; Hohenthal 1950; Greenwood 1976:11-14; Fox 1979; Carrico 1983; Whittaker and Fratt 1984; Hoover and Costello 1985; Kyle 1987; Bamforth 1990; Bartel 1991:19-21; Arkush 1995; Allen 1998:63-64, 77-83; Johnson 2003; Nassaney and Volmar 2003; Silliman 2003, 2004; Allen and Burns 2008). Researchers have offered many hypotheses about the reasons stone tool use was sustained into the historic period and about the social meanings the presence of such tools reflect. The continuity of stone tool use is viewed as part of traditional practice, highly functional, and an accommodation to changed conditions in historic times, and stone had been more accessible than introduced tools. Researchers hypothesize, too, that stone tools held more intangible values for post-contact Indian people, for example, by maintaining a tie to pre-contact cultural traditions or by representing a resistance to new, introduced ways of life.

Indian people in San Diego County continued to make and use stone tools throughout the historic period that began at the time of Spanish contact. Contact is identified for this study as AD 1769, when the San Diego Presidio and Mission San Diego de Alcala were founded on Presidio Hill overlooking present-day Old Town San Diego. The archaeological record of San Diego County is well-suited for an analysis of historic period stone tool continuity, as numerous archaeological sites have yielded sizable stone tool assemblages dating from the historic period. The stone artifact assemblage from Block 408 in Old Town San Diego that the author examined and analyzed is noteworthy for the abundant evidence of stone tool manufacture and the large number and the variety of tool types. This stone tool manufacture occurred at a time when Indian people in Old Town San Diego had already been affected by colonization and new settlements for over 60 years. Other sites in San Diego County also have strong evidence of continued stone tool
use during the historic period, such as those situated in the Cuyamaca Mountains in the central portion of the county. The types of stone artifacts identified in historic period contexts within San Diego County sites will be described, with an emphasis on the Old Town assemblage. I will examine reasons for the particular composition of the assemblage. These data will be compared with other San Diego County sites in an attempt to bolster our understanding of the conditions under which traditional practices continued during historic times. Differences in lithic technology and use patterns in late prehistoric times and the historic era are examined and contrasted.

**Background: Contact Era Stone Tool Use**

Indian people in California and elsewhere employed stone tools in historic times—whether their residence was at Spanish missions, on Mexican period ranchos and pueblos, or at traditional villages occupied long into historic times (e.g., Nelson 1916; Walker 1947; Hohenthal 1950; Greenwood 1976:11-14; Fox 1979; Carrico 1983; Whittaker and Fratt 1984; Hoover and Costello 1985; Kyle 1987; Bamforth 1990; Bartel 1991:19-21; Arkush 1995; Allen 1998:63-64, 77-83; Cobb 2003; Nassaney and Volmar 2003; Silliman 2003, 2004; Allen and Burns 2008). Excavations at San Buenaventura Mission in Ventura, California, during the early 1970s showed a significant component of flaked stone artifacts, including numerous stone projectile points, bifaces, knives, and flake tools made from a variety of lithic raw materials (Greenwood 1976:11-14). Hoover and Costello (1985:83-92) reported that excavations at San Antonio Mission in central California yielded numerous flaked stone artifacts, including projectile points, cores, debitage, and abundant flake tools, as well as ground stone tools. Rebecca Allen (1998:77-83), working within the neophyte housing site of Santa Cruz Mission in central California, noted that flaked stone artifacts were manufactured and used throughout the mission era. Expedient flake tools, that is, unmodified flakes employed temporarily and then discarded, were the predominant stone implements, while formal, purposefully manufactured flaked stone tools declined in numbers relative to assemblages in local late prehistoric sites. The manufacture of flaked stone artifacts primarily took place within neophyte living areas (Allen 1998:82). Ground stone tools were present at Mission Santa Cruz but not in large numbers (Allen 1998:63-64). The San Diego Royal Presidio yielded a sizable component of lithic artifacts dating to the early nineteenth century (Bartel 1991:19-21; Williams 2005).

Milliken (1995:4, 222-225) reported that indigenous people of the San Francisco Bay region experienced “immediate and profound” changes in their everyday lives upon entering the Spanish missions. These changes included a cessation in the use of stone implements, the bow and arrow, baskets, and other traditional items. Hoover and Costello (1985:3-4), based upon work at Mission San Antonio in central California, found evidence, however, that changes to aboriginal ways of life were “neither complete nor uniform.” Some aspects of traditional culture disappeared, while other cultural patterns continued. Traditional tools continued to be made, but introduced raw materials were sometimes employed in their manufacture, e.g., bottle glass to make projectile points. At Santa Cruz Mission neophytes went through “cultural modification” where specific introduced ideals and material culture were incorporated into their daily lives but without wholesale assimilation into Spanish culture (Allen 1998:90-97). Deetz (1963:172) noted a “blending of aboriginal and introduced elements” by Chumash Indian neophytes at La Purisima Mission in performing mission work. Deetz (1963:186-189) found that male-oriented tools (e.g., flaked stone artifacts), were far fewer in numbers than traditional female implements, such as manos and metates. At Spanish missions, male work roles underwent greater changes than female work roles, according to Deetz (1963). Gamble (2008:150, 187-189, 211) reported that the Chumash who resided in Native settlements...
near Spanish missions and close to the Santa Barbara Presidio continued to maintain their pre-contact way of life, including residing in traditional houses and making and using traditional stone tools. Metal tools replaced stone tools soon after contact for particular tasks among the mainland Chumash, such as woodworking, although stone tools continued in use for a variety of other common functions (Bamforth 1990:10-30, 10-40; Gamble 2008:210-211, 215).

Stone tool use by neophytes during the mission period was not unique to California. Fox (1979) described stone tool assemblages found at four Spanish mission sites in the San Antonio, Texas, area. His study sample consisted primarily of flaked stone artifacts manufactured within the mission sites from locally available cherts; a smaller number of gunflints and “strike-outers” were also identified. Fox (1979:37) concluded that flake tools were the desired end-products of the stone artifact manufacturing observed in his study sample; no use of ground stone implements was reported. Whittaker and Fratt (1984) found that the use of stone tools continued long after the introduction of European tools at mission sites in Arizona. Of course, the relatively isolated, frontier nature of these locations in the late eighteenth century and early nineteenth century made metal tools and other European goods scarce commodities.

The village site for Indian workers on Rancho Petaluma, a Mexican period agricultural enterprise located just north of San Francisco Bay, yielded abundant evidence of stone tool use (Silliman 2003:134-149, 2004:102-115). Mortars and pestles, manos and metates, and over 3,000 flaked stone items were recovered during UC Berkeley excavations conducted there between 1996 and 2001. Obsidian and chert represented 83 percent of the raw materials employed to make flaked stone artifacts (Silliman 2004:Table 5.1, 107); the obsidian artifacts originated from 10 separate geologic sources (Silliman 2003:145). Projectile point styles common in pre-contact times continued to be manufactured at the Indian workers’ village on Rancho Petaluma (Silliman 2003:Figure 9.3). Silliman (2003:147-149) noted that the Indian workers used metal tools at work around Petaluma Rancho but chose to continue using stone tools while at their residences.

The Mono Basin Paiute of east-central California continued to reside in traditional, aboriginal-style houses and engage in traditional activities throughout the nineteenth century and into the early decades of the twentieth century. The Paiute people worked on local farms and ranches and made considerable use of modern consumer goods, but they established fall and winter residential camps in more traditional locations each year. Life in these camps involved the use of flaked stone and ground stone tools (Arkush 1995:44-48, 51). The flaked stone items of this post-contact era were simpler and more poorly made than stone tools from sites that predated Spanish contact, and only locally available sources of lithic raw materials were used at this time (Arkush 1995:60). The bow and arrow continued to be made and used by the Mono Basin Paiute as late as 1920 (Arkush 1987:180).

Edwin Walker (1947) excavated a historic Yokuts Indian cemetery near Buena Vista Lake in the southern San Joaquin Valley in 1935. Dating of the burials based upon grave goods indicated they ranged from late eighteenth century up to ca. 1860. Among the artifacts recovered from the burials were numerous late prehistoric style triangular projectile points made from chalcedony and obsidian, as well as stone knives and scrapers, arrowshaft straighteners, ground stone tools, steatite objects, glass beads, historic ceramic and glassware, buttons, metal tools, and other artifacts (Walker 1947:6-14). This site showed a blending of traditional tools with nineteenth century consumer items and tools.

Sites CA-KER-229 and CA-KER-230 in the Tehachapi Mountains of central Kern County show
abundant evidence of early historic use, as indicated by data from the study of shell beads, glass beads, faunal remains, and radiocarbon and obsidian hydration dating (Allen and Burns 2008). Stone tool use showed no apparent decline from the prehistoric era into post-contact times. Indeed, the flaked stone tool and ground stone tool assemblages and debitage are exceptionally abundant and diverse at the two sites. No introduced raw materials were employed in tool making activities (Allen and Burns 2008:13-14). The material evidence here indicates strong cultural identity among historic Kawaiisu people and limited or no direct contact with Spanish and Mexican settlements.

Katukto (SDM-W-569 and SDM-W-571 [San Diego Museum of Man designations]), a village site in north San Diego County occupied by Luiseño Indians who left settlements associated with Mission San Luis Rey after secularization in 1834, yielded an array of stone tools and other traditional aboriginal items (Carrico 1983:69-89). Stone tools recovered here included manos and metates, flake tools used in cutting and scraping tasks, chopping and pounding tools, and debitage. This site showed retention of making and using traditional stone tools into the late 1860s among the Indian people who had previously been assimilated into the Spanish mission system.

Thus, previous research suggests stone tools both symbolized the maintenance of cultural traditions and represented a practical solution for an everyday chore. Stone tools took on new social meanings for the users within these new living situations of post-contact times. Stone artifacts reflected a cultural adaptation and a resistance to changing societal conditions and norms. Some researchers have hypothesized that stone tools may have even increased in value to their Indian users in a post-contact world where traditional values were challenged. Research provided evidence that particular traditional cultural traits were more likely to change in the face of the post-contact society than others. In other cases stone tools were employed by Indian people simply because no comparable tool was available for specific tasks needed in everyday living (cf., Hoover 1989:402-404; Hudson 1993:269, 271-274; Arkush 1995:14-16, 44-51; Allen 1998:7, 77-83; Bamforth 2003; Nassaney and Volmar 2003:84, 89-90; Silliman 2003:128-130, 147-150, 2004:102, 152).

The Ethnographic Background for the San Diego County Study Sample

The San Diego County sites in my study sample are located within the traditional territory of the Kumeyaay. The Kumeyaay have been identified by a variety of names, including Diegueño, Tipai-Ipai, and Kamia. Luomala (1978) used the terms Tipai and Ipai as an equivalent to Kumeyaay. Tipai and Ipai are names meaning “people” (Spier 1923:298; Kroeber 1970:710; Luomala 1978:592). According to Shipek (1982:296), the terms “Ipai” and “Tipai” are now used to specify “Indian” in contrast to non-Indians. Ipai were identified living in the northern portion of Kumeyaay territory, including present-day San Pasqual, Ramona, Santa Ysabel, and Julian. The Tipai area includes the remainder of Kumeyaay territory, including San Diego, northern Baja California, Pine Valley, Cuyamaca Rancho State Park, and the nearby Colorado Desert (Spier 1923:297-298; Luomala 1978:Figure 1). Modern-day Indian people of the mountain areas prefer to identify the pre-contact residents of the mountains as Kwaaymii, according to Carmen Lucas (personal communication 2004), whose ancestors resided in what is now Cuyamaca Rancho State Park, the adjoining Laguna Mountains, and the Colorado Desert (see also Cline 1984). The tribal name “Kumeyaay” is being used here as it is more widely recognized. Kumeyaay traditional territory includes a significant portion of present-day San Diego County up to Agua Hedionda Lagoon and inland along San Felipe Creek just south of Borrego Springs (Luomala 1978:593).
The language of the Kumeyaay people, called Diegueño, belongs to the Yuman linguistic family. Yuman languages are a division of the Hokan stock (Luomala 1978:592-593; Shipley 1978:86-87). Shipley (1978:81) noted that the Hokan stock represents the oldest language group in California. Indian people who bordered the Kumeyaay in northern Baja California and those living to the east in present-day Arizona also spoke Yuman family languages (Kroeber 1970:709-711; Luomala 1978:592-593).

According to Shipek (1982:297), “The Kumeyaay were organized into territorial bands.” The band territory consisted of a section of a major drainage and its tributaries. “Each band had a central primary village and a number of outlier homesteads located at small water sources, springs, or at the mouths of secondary creeks” (Shipek 1982:297). A sib form of kinship structure crosscut these territorial bands in which five to 15 sibs (shiimull) might hold lineage affiliation within a band. Each sib was represented by bands from a variety of environmental zones. Kumeyaay social structure allowed movements between bands. The possibility among the Kumeyaay to move in with sib relatives living in distant areas provided a potential to exploit a wide range of environmental zones (Shipek 1981:297). Kumeyaay society was patrilocal and patrilineal (Spier 1923:299; Kroeber 1970:719-720; Luomala 1978:592, 602; Cline 1984:xiv).

Bands were the primary landownership unit among the Kumeyaay. The Kumeyaay also recognized certain lands as open to all use. Some examples of aboriginal ownership concepts are provided by Shipek (1982:301):

Certain sections of the Laguna and Cuyama-ca Mountains were tribal gathering areas for acorns and various ‘wild’ products…Major portions of the desert and desert foothills were tribal gathering areas to which any

Kumeyaay from any part of Kumeyaay territory might come for ‘wild’ foods.

Some level of overriding organization, leadership crossing over all Kumeyaay, did exist. Kumeyaay worked together for various causes, such as resistance to the Spanish (Shipek 1982:300; Castillo 1989:384-387). The Kumeyaay recognized a Kuuchult kwataay who managed interactions with other groups, for example, the Quechan and Cahuilla. The Kuuchult kwataay along with the Kwaaypaay maintained knowledge of tribal and band territories.

The Kumeyaay shamans (kwasiyai or kuseyaay) served critical roles in the group. Spier’s (1923:311) informant observed that the Southern Diegueño had curing shamans and rattlesnake shamans. Techniques of curing used by Kumeyaay shamans included “…sucking blood or the disease object, either with the mouth or through a pipe; by kneading and pressing; and by blowing tobacco smoke” (Kroeber 1970:718). The shaman was responsible for the production of most rock art.

Religious rituals played a significant role in the everyday lives of Southern California Indians. Some of the more important rituals performed by the Kumeyaay and other Californian groups were the annual mourning ceremony, eagle ceremony, rites of passage (e.g., male and female initiation), rituals designed to control the environment, and ceremonies to honor the deceased (Bean 1985:40). According to Bean (1985:40), rituals for the dead “…articulated economic, political, and social affairs and served to ritually and dramatically demonstrate the primary religious-philosophical tenets of the societies.” Among the Kumeyaay, the keruk, or image ceremony, which lasted from four to eight days, represented the principal ritual for commemorating those who died and served to guide the deceased onto the afterworld (Luomala 1978:603; Cline 1984:80-84).
San Diego County Archaeological Evidence

The author reviewed the appropriate literature, studied museum collections and archaeological site reports of relevant age from San Diego County, and conducted an extensive analysis of a large stone artifact assemblage from Old Town San Diego in order to evaluate traditional stone tool use during historic times. These analyses also examined the validity of previous hypotheses and arguments on the cultural significance of stone tool use during the post-contact era.

For the purposes of this research, the historic period in San Diego County is taken to begin with the establishment of Mission San Diego and Presidio in 1769. Mission San Luis Rey was established in 1798. The presence of these two Spanish missions disrupted the lives of Indian people. However, the aboriginal economy was not fully altered, as Indian people did not live year-round at the two missions (Van Wormer 1986:41-42; Shipek 1987:20; Carrico 2008:42). After secularization of the missions in 1834, Indian people living on or near mission lands largely did not gain back their ancestral lands. Many became laborers on Mexican ranchos (Rawls 1986:70-80; Shipek 1987:21-22, 28-34). In the following decades, Indian people affected by new settlement became the labor force for agricultural activities, domestic work, mining, and fishing, but they faced bigotry (Shipek 1987:33, 1991:24-25; Carrico 2008:77-85, 135-136). Traditional life of people residing in the mountains and desert lands of San Diego County and other isolated areas of the county was not disrupted during the Spanish era and was disrupted only to a minor degree during the Mexican era in Alta California (Woodward 1981:50-54; Van Wormer 1986:50-51; Shipek 1987:23-25, 34).

However, the late 1860s brought an influx of many new settlers to the backcountry areas of San Diego County (Carrico 2008:135-136). Specific aspects of traditional residential and subsistence patterns continued among Indian people residing in the urban areas of western San Diego County during the nineteenth century (Carrico 1986:31-32; Shipek 1987:37) and even into the early decades of the twentieth century (Shipek 1991:9-11, 23-25). Occupation of their traditional homeland, retention of their ceremonies and language, gathering of plants for food and medicine, and use of traditional tools (e.g., basketry, pottery vessels, and stone implements) continued into the twentieth century in the backcountry mountain and desert areas of the county (Luomala 1978:595-596, 597, Figures 2, 4, 9, 10, 11; Van Wormer 1986:50-51; Carrico 2008:152, 153, 158, 168). Indian people of the county in historic times incorporated new cultural elements into their everyday lives; in particular, new tools or materials made their labors easier or otherwise bettered their lives (Shipek 1987:153-154), but they always maintained their cultural identities (Cline 1984; Van Wormer 1986:40, 65-68). Carmen Lucas (personal communication 2008), a Kwaaymii elder, pointedly remarked to me, “If they [Indian people living in historic times] found something that made their life easier, they adopted it.” The archaeological record of San Diego County is well-suited for an analysis of historic period, stone tool continuity as numerous archaeological sites have yielded sizable stone tool assemblages and components that persisted long into the historic period.

La Rinconada de Jamo (CA-SDI-5017)

La Rinconada de Jamo, recorded as CA-SDI-5017, but also as SDM-W-150 (San Diego Museum of Man designation), is a Kumeyaay village site located at the mouth of Rose Canyon where its drainage empties into Mission Bay (Figure 1). The first Spanish expedition in Alta California encountered a large Kumeyaay settlement here on July 14, 1769 (Brown 2001:261), and subsequently the villagers of La Rinconada de Jamo had extensive contacts with the Spanish (Carrico 2008:36-37; see also Shipek 1987:20). The site was occupied by Kumeyaay people from ca. 2500
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years ago into the 1890s (Carter 1957:293-294; Winterrowd and Cardenas 1987:53-59; Garcia-Herbst 2007). The San Diego Museum of Man has collections from La Rinconada de Jamo gathered from the surface of the site in the early 1900s and from excavations conducted by Malcolm Rogers.

The author examined the collection which contains a diversity of stone artifacts, shell artifacts, and potsherds, including numerous points, bifaces, steatite shaft straighteners, punched scallop shells, bone tools, core-based hammer tools, and grooved stone net sinkers. Rogers’ notes for W-150 (on file at the San Diego Museum of Man) stated that “thousands of manos” and “hundreds of metates” were present on the site at the time of his fieldwork, and he also observed “many cobble hearths.” Numerous late prehistoric style projectile points are present in the collections, with the Cottonwood triangular type being the most abundant (Figure 2). The collection also has a large number of thin, leaf-shaped bifaces ranging from 4 to 7 cm in length, primarily made from a dark gray volcanic material. The Museum of Man collection for SDI-5017 has a conspicuously large number of finely made steatite shaft straighteners, many with etched surfaces. The relatively greater abundance of punched scallop shells in the SDM-W-150 collection (69) when compared to other local sites may be evidence of their use as a medium of exchange (Figure 3). The collection contains a large number of artifacts made from materials from outside coastal San Diego (e.g., obsidian, desert cherts, and steatite). The pronounced battering on many of the cobble hammering tools provides evidence of considerable on-site ground stone tool maintenance. This collection even has a 27 cm (10.5 inch) iron spear point and a 16.5 cm-long (6.5 inch) carved walrus tusk with a single hole drilled into it. The exact function of the spear point remains unclear,
although New Bedford Whaling Museum Senior Curator Dr. Stuart Frank (electronic communication 2009) stated that it is not a whaling harpoon. The SDI-5017 collection contains little evidence of the use of non-traditional implements or of raw materials, such as glass or metal being made into traditional tools. Even with a long period of contact with the Spanish and later historic settlers, the Kumeyaay who occupied the site maintained use of their traditional tools during the late eighteenth and nineteenth centuries.

Robinson-Rose Site (CA-SDI-11824H)

The Robinson-Rose Site (CA-SDI-11824H), situated at the west end of the plaza in Old Town San Diego (Figure 1), was occupied during the Mexican Republic era and subsequently from 1853 to 1884. Excavations at this site in 1982-1983 yielded 349 stone artifacts, primarily flakes of local lithic raw materials, as well as two flaked glass items and one chalcedony gunflint in a purely historic period context (Schulz et al. 1985:38,
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39-41). The significant presence of indigenous Tizon Brown sherds provided additional evidence of Indian occupation at the Robinson-Rose site during the nineteenth century (Schulz et al. 1985:22).

**Village of Neti (CA-SDI-4638)**

The Kumeyaay village of Neti (CA-SDI-4638), located in an interior valley east of the city of San Diego (Figure 1), was occupied at the time of Spanish colonization up to 1863 (Jordan 2006:13-15; Carrico 2008:12, 34). The flaked stone artifact assemblage is extensive, with local lithic raw materials, such as volcanics, quartzite, and quartz, being the most commonly employed in tool manufacture (Gamble 2005; Jordan 2006:20-25). The Neti collection, for example, has 1643 projectile points and point fragments, of which the most common are Cottonwood triangular points. Introduced raw materials, such as glass or porcelain, were not employed for the manufacture of tools with the exception of one broken glass point. The projectile points, bifaces, core hammers, manos and metates, arrowshaft straighteners (Figure 4), and other items give an appearance of a typical pre-contact stone tool assemblage, based upon an examination of the collection and data in Gamble (2005). While there is a late prehistoric component at Neti, lithic technology clearly continues into post-contact times and remains important. There is no evidence of significant replacement of traditional tools in daily life.

**Village in Westwood Valley (CA-SDI-5938)**

Archaeological site CA-SDI-5938, located in Westwood Valley in the modern-day community of Rancho Bernardo (Figure 1), was occupied well into the nineteenth century and likely was a central village for Indian people living in this valley after 1845 (Kyle 1988:32). Indian people living at this large site in the nineteenth century worked on local ranches yet lived in a residential site that looked like any pre-contact village. Archaeological investigations in the 1980s turned up sizable flaked stone and ground stone tool assemblages (Kyle 1987, 1988:Table 1, 34, 61). The site showed a diversity of stone tool types resembling the tools commonly recovered at late prehistoric sites in the same area. Almost 94 percent of the artifact total is flaked stone tool manufacturing debris, while cores and flakes are of local lithic materials, such as porphyritic and volcanic rock, quartzite, and quartz; ground stone items represent 2.3 percent of the site collection. The stone tools found at SDI-5938

![Figure 4. Shaft straightener from Neti.](image)
consisted of manos, hammerstones, projectile points, bifaces, metates, flake tools, and core tools. The types of flakes recovered indicate that tool manufacture and tool rejuvenation were important on-site activities. Introduced raw materials, such as metal, glass, or ceramics, made into traditional tool forms are conspicuously lacking in the Westwood Valley stone tool assemblages. Indian people who lived in Westwood Valley and participated in the nineteenth century ranching economy as workers continued traditional stone tool use long into the 1800s and well after settlement by the Spanish, Mexicans, and other historic period settlers.

**Village Sites in Cuyamaca Rancho State Park**

Ample evidence of late prehistoric and historic period occupations by Indian people is found at archaeological sites in Cuyamaca Rancho State Park in the mountains of central San Diego County (Figure 1). The Indian village sites of Pisclim (CA-SDI-901), Pilcha (CA-SDI-913), Ah-ha-Kwe-a-Mac (CA-SDI-9538), and Jamatyume or Samataguma (CA-SDI-860) all have impressive late prehistoric and post-contact stone tool assemblages. The evidence of post-contact use includes nineteenth century historic accounts, ethnographic accounts, shell beads of an early historic type with holes made by metal tools, glass beads, and metal and glass items made into traditional artifact forms (Woodward 1934; Rensch 1950; True 1970:6-11, 44; Gross and Sampson 1990:143; Wade et al. 2006; Hector 2007:55-56; notes and collections at the San Diego Museum of Man). Introduced raw materials played a minor role in the Indian economy at these mountain sites. According to True (1970:44), historic artifacts are often found with cremations in Kumeyaay sites. Archaeological sites representing Indian villages in present-day Cuyamaca Rancho State Park and on nearby lands were active Indian residential locations until the 1850s when ranching settlements increased in Green Valley and neighboring locations. Some locations within the park, for example, the village of Ah-ha-Kwe-a-Mac, were occupied regularly as late as the 1870s until mining in the nearby Julian District made traditional uses of the area much more difficult and untenable (Rensch 1950:10-12, 23, 25; Woodward 1981:52-63; Cline 1984:123-130; Hector 2007; Carrico 2008:93). Prior to this time, Indian communities residing in the mountains had been relatively unaffected by historical events and, in fact, locally resisted activities by the Spanish and Californios during the early decades of the 1800s (Woodward 1981:50-54).

Jamatyume, the Dripping Springs site (SDI-860), located on East Mesa in Cuyamaca Rancho State Park (Figure 1), was the subject of archaeological excavation under the direction of D. L. True in 1961 and 1962. The 1960s fieldwork produced sizable assemblages of flaked stone and ground stone tools, consisting of late prehistoric style projectile points, flake tools, hammerstones and pounding tools, manos, and soapstone objects (True 1970:20-38). A total of 32,700 aboriginal ceramic potsherds were also recovered from SDI-860 (True 1970:41-43, Table 14), indicative of an active on-site ceramic technology tradition. True (1970) defined a cultural manifestation for the region, called the “Cuyamaca Complex,” largely on the basis of his 1960s work at SDI-860.

My own research on the 1961-1962 SDI-860 collection (UCLA Accession #360) indicates this site also contained a variety of historic period items. The introduced materials included ceramic projectile points (Figure 5), four glass points, three glass beads, a Phoenix button, metal objects, a metal item made into a traditionally shaped awl (Figure 6), an aboriginal ceramic pipe fragment with punctate marks made with a metal tool, historic ceramics with a few flakes removed, and unmodified pieces of historic ceramics and bottle glass. The historic objects were recovered from the surface and the upper three six-inch levels.
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during the early 1960s excavations led by D. L. True. The specific site contexts of the historic objects otherwise resemble any other late pre-contact mountain site in terms of Indian artifact types based on my review of the catalog sheets for SDI-860 stored at UCLA (see also, True 1970:44, Table 15). The surface collections and items recovered in the upper three levels from SDI-860 in 1961 and 1962 are dominated by a variety of stone tools, such as projectile points, scrapers, and hammerstones (Figure 7), potsherds of aboriginal ceramic wares, and soapstone shaft straighteners (Figure 8). For example, a total of 105 artifacts were collected from the surface and only four are of introduced raw materials (three pieces of historic ceramics and a broken projectile point made of porcelain). In my opinion, the SDI-860 collection shows no concerted effort by the nineteenth century occupants of this mountain village site to replace traditional tool forms or materials with introduced (historic) tools and raw materials.
The Old Town San Diego Block 408 Stone Artifact Assemblage

Cultural Background

The Kumeyaay village site of Cosoy, or Kosoi, (CA-SDI-41, also SDM-W-291) has been identified as within or close to Old Town San Diego (Bancroft 1886:137; Engelhardt 1920:89; Carrico 1993:Figure V-1, V-16; Schaefer et al. 1993:Figure 6; Felton 2006:2). Ezell and Ezell (1987) proposed that the nearby Charles H. Brown Site (CA-SDI-4675) lying east of Interstate 5 is the village of Cosoy; they hypothesized that this ethnographic village did not extend into present-day Old Town San Diego. Ezell and Ezell (1987) employed data from Spanish accounts, archaeological data, and the logic that Indian people would not have settled on flood-prone landscapes, all to argue their case that Cosoy had not been in Old Town. Their hypothesis does not necessarily preclude...
the possibility that the inhabitants of Cosoy visited the Old Town area during gathering forays or even lived in Old Town short term on a seasonal basis. Often, an identified ethnographic village location in Native California actually represents multiple living areas and resource procurement locations that were used by a lineage group or tribelet in prehistory (see Kroeber 1932:257-259).

Old Town San Diego was initially settled by soldiers who retired from service at the San Diego Presidio (Farris 2006:2-4; Felton 2006:3). The first residence in Old Town was reported to have been constructed in 1821 and occupied by Joaquin Carrillo and his family (Pourade 1963:11-12; Felton and Farris 1997:14; Farris 2006:4). This house stood within Block 408 and adjoined our study area. The Mexican Californio soldiers and their families, some of Spanish descent, built residences in the flat land below the hill on which the Presidio stood (now known as Old Town San Diego), and these domiciles became the foundation of the Pueblo of San Diego. Some of the prominent Californio families living in Old Town included the Alvarados, Arguellos, Bandinis, Estudillos, Osunas, Pedrorenas, and Picos (Pourade 1963:11-12; Helmich and Clark 1991; Davis 1992:22-31). Over the next few decades, Old Town San Diego grew in population, stimulated by its increased importance as a trading center. American merchants, such as Henry Delano Fitch and Joseph Snook, were drawn to Old Town to take advantage of the burgeoning commerce. This included the hide and tallow trade and trade with other countries in the Pacific Rim (Pourade 1963:11-18, 69-70; 169-171; Felton and Farris 1997:25; Farris 2006; Felton 2006). With the end of the Mexican-American War in 1848, Alta California, including Old Town San Diego and all of present-day San Diego County, became part of the United States.

Block 408 in Old Town San Diego (Figure 9) included five residences by the 1830s, and two other houses were constructed on the block during the early American period in the 1850s and 1860s. The owners of those parcels included Aguilar-Serrano, Fitch, Osuna, Snook, Silvas, and, later, Ames and McCoy (Davis 1992:22-31; Felton and Farris 1997:14-15). Most of the Old Town San Diego stone tool assemblage was recovered from the parcel owned by Eugenia Silvas; this parcel was subsequently sold to Jesse Wilbur Ames. By 1866 James McCoy had purchased all the parcels in Block 408 (Davis 1992:24). An adobe dating to the 1830s sat on this parcel when Silvas owned it, but in 1869 McCoy built a large, two-story home on the Silvas parcel and the Snook parcel (Davis 1992:25-26, 29-30). Later the McCoy family home in Block 408 was enlarged and embellished with contemporary Victorian architectural ornamentations (Helmich and Clark 1991; Davis 1992:25, 30). The McCoy house and its gardens were demolished in 1927, and an auto court was built at this location (Davis 1992:28-29, 31). Block 408 became a parking lot with no standing buildings in 1963 (Davis 1992:29, 31).

Indian people, too, resided in nineteenth century Old Town San Diego; their numbers grew in Old Town with the secularization of the Spanish missions in 1834-1835. The Indian people worked as servants for the many Californio families living in Old Town (Pourade 1963:32-34; Walsh 2004:6; Farris 2006:7). A census of the pueblo taken in 1836 listed at least 26 Indian servants working in Old Town San Diego (Farris 2006:7-9). They and their families would have resided in and adjacent to Old Town San Diego (see also Carrico 1986).

Analysis Results: Block 408 Assemblage

California State Parks archaeological investigations in Block 408 of Old Town San Diego State Historic Park (Figure 9) from 1995-2000 yielded a total of 8,171 stone artifacts in contexts dating from the 1830s to the 1850s. The excavations encompassed four recorded archaeological sites: CA-SDI-14294, CA-SDI-14296, CA-SDI-14297, and CA-SDI-14298, each
Figure 9. Location of Block 408, Old Town San Diego State Historic Park.
designating a parcel owned in the nineteenth century. As noted above, this area of Old Town was occupied by both Californio families and Americans who were local businessmen and politicians (Farris 2006; Felton 2006). Kumeyaay people would have been present here, in particular, as house servants; the evidence of stone tool use in the project area can be attributed to them. The Eugenia Silvas/James McCoy parcel (CA-SDI-14298H), Locus D of the Block 408 study area, had 5,922 stone artifacts or 72.47 percent of the total artifacts recovered in Block 408. The Silvas/McCoy House Site, where the majority of the 1990s State Parks excavations took place, would be expected to show larger numbers of artifacts. Of the Block 408 total, flakes numbered 7,495, or almost 92 percent of the lithic artifact count in Block 408. The counts for other stone artifacts recovered within Block 408 include 157 miscellaneous and fragmentary ground stone items, 94 flake tools, 91 cores, 51 core tools, 28 manos, 9 projectile points, 4 pieces of soapstone or steatite, one soapstone bead, 3 pieces of a “Mexican” type of metate made from non-local stone, 2 metates of local material, 2 gunflints (one chert, one chalcedony), and 8 flaked glass items. The 1995-2000 excavations also recovered 273 fire-affected rocks.

Three projectile points from the assemblage were manufactured from glass rather than stone (Figure 10); all the glass points were recovered from the Silvas/McCoy parcel. The flakes in the assemblage give evidence of all stages of the manufacturing process from primary decortication flakes and shatter to late-stage (interior free of cortex flakes) and pressure flakes. A significant number of flakes terminated irregularly due to flaws in the rock, as could be expected when flintknapping with coarse-grained material, such as Poway Conglomerates. The Old Town assemblage contains many unmodified volcanic or quartzite cobbles and core hammers, each with directed or focused battering use-wear (Figure 11). Such implements were expedient (i.e., not specifically modified for tool use), yet practical and effective percussive implements.

The local geologic sources of stone employed as tools in the Old Town San Diego area would have been the Late Eocene conglomerates on Presidio Hill, the stream bed of the San Diego River, the conglomerate formations on Point Loma, and perhaps, local beaches (see Kennedy 1975:15-20 for more geologic details).

Thirty-two “battered tools,” a distinctive type of core tool that shows purposeful shaping as well as pronounced and well directed battering use-wear, were identified in the Block 408 assemblage (Figure 12). Local volcanics were the materials of choice for many of the Old Town San Diego battered tools, with lesser numbers of quartzite and granitic cobbles used. One such quartzite battered tool, for example, was roundish in shape and heavily battered on its entire margin or perimeter and measured 76.4 mm x 69.6 mm x 36.5 mm. It had been flaked to purposefully shape it. Previous research on battered tools indicates they were primarily employed to produce metates, manos and other ground stone implements and to sustain or “re-sharpen” the working surfaces of ground stone tools (Dodd 1979; Flenniken et al. 1993). Many of the same battered tools likely served as percussive implements (hammerstones) in flintknapping. The number of well-used battered tools further demonstrates that ground stone tools continued to play a role for Indian people residing in Old Town San Diego.

The Block 408 assemblage contains 94 flake tools (Figure 13) showing cutting, scraping, planing, and woodworking use-wear patterns, based upon microscopic analyses. A binocular microscope with magnifications ranging from 10x to 40x was utilized. Tool users in nineteenth century Old Town employed simple flakes of quartzite or volcanics without modification for the tasks of planing and woodworking. Some working edges of these flake tools were resharpened by unifacial flaking. Flake tools with unmodified working edges represented an effective implement for a variety of everyday tasks and were easily made; unmodified flakes represented a functional tool capable
Figure 10. Glass projectile points from Block 408.

Figure 11. Cobble hammer from Block 408

Figure 12. Battered tool from Block 408. Note the pronounced use-wear.
of serving a necessary role in everyday life (e.g., Gould et al. 1971:163; White and Thomas 1972:278-279; Miller 1979; Allen 1998:82-83). Some cores with a few flakes removed to create a functional edge were employed in tasks similar to the latter flake tools. For example, a porphyritic volcanic core with three flakes removed was used in cutting and chopping tasks, and a quartzite cobble core with three flakes removed had been used as a cutting implement.

One of the more distinctive artifacts in the Block 408 collection is a relatively large, triangular-shaped obsidian projectile point showing further modification by unifacial retouch along its basal portion (Figure 14). This specimen measures 47 mm x 30 mm x 14 mm and weighs 14.6 g. Two flakes were unifacially removed at its base, which left a drill-like point in the middle of the base. The later flaking cut across the bifacial flaking of the blade element, and therefore, it was performed later in time. The blade element of the obsidian specimen may have been placed in some sort of haft, and its base used as a drill; however use-wear analysis was inconclusive on specific function.

Figure 13. An example of a flake tool from Block 408.

Figure 14. Obsidian projectile point recovered from Block 408.
The raw materials considered to be local to the Old Town area, volcanics (60.0 percent) and quartzites (34.4 percent), represent 94.4 percent of the stone artifacts in the Block 408 assemblage (Figure 15). Cherts and chalcedonies (2.9 percent) are the next highest raw material; the other lithic raw materials are represented in the collection as minor components. The few pieces of soapstone seem unlike the soapstone obtainable from a quarry in the Cuyamaca Mountains to the east of Old Town, and they may have come from Catalina Island or another source. Items made of quartz (n=76), obsidian (n=11), and the cherts and chalcedonies, all of which do not naturally occur in or next to Old Town San Diego, show relatively low numbers in the Block 408 lithic artifact assemblage (Figure 15). Late pre-contact archaeological sites throughout San Diego County show high quantities of quartz and higher percentages of cherts, chalcedony, and obsidian than seen in the Old Town assemblage (cf., True 1970:Table 3; Carrico and Taylor 1983; Hector 1985; Schaefer 1988; Schroth and Gallegos 1991). Traditional trading networks broke down in historic times in the Old Town San Diego area, leaving the prospective stone worker living in nineteenth century Old Town to rely almost exclusively upon nearby geologic sources. The traditional sources of non-local raw materials had apparently become unavailable. The incentive and opportunity to seek out raw materials from places distant to Old Town were probably negligible in the new social and economic circumstances of the nineteenth century.

The stone artifact assemblage from Block 408 in Old Town, examined and analyzed by the author, is noteworthy for the abundance and variety of tool types as well as the inferred number of uses and evidence of stone tool manufacture. Accumulation of stone tool assemblages occurred when Indians in Old Town San Diego had already been affected by colonization and

Figure 15. Raw material counts for Block 408, Locus D.

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new settlements for over 60 years. The proportionally large number of flakes, the battered tools and hammerstones, the variety of functions reflected in the flake tools, and the lithic technology are consistent with the lithic components of local late prehistoric archaeological sites. Thus, the Old Town San Diego Block 408 stone artifact assemblage reflects a strong continuity in lithic technology into historic times. Significantly, the Block 408 collections also show strong evidence of sustained use of traditional aboriginal ceramic vessels in historic Old Town (Felton 2006:6-8); this finding nicely complements the stone artifact evidence.

Projectile points and other bifacially flaked tools are relatively few in number within the Block 408 assemblage, except for those made from glass. The low number of non-local lithic raw materials in the Old Town San Diego assemblage, such as quartz, cherts, and obsidian, which were commonly used to make projectile points, can help account for the relative scarcity of bifacially flaked items. Indian people likely had a greatly reduced need for arrow points, a hunting or warring implement, or bifacially flaked knives while working or living in Old Town. The Block 408 stone artifact assemblage shows a conspicuous lack of plano-convex, or so-called “domed,” type core tools and scrapers, a common implement in pre-contact San Diego County sites. True (1970:53-54, Table 18) identified “domed scrapers” as characteristic of the Cuyamaca Complex, a cultural expression of the late prehistoric people in San Diego County. Metates and stone bowls of local materials were similarly not observed in the study sample. Soapstone artifacts, such as pendants and beads, are relatively lacking in the assemblages, although a source for soapstone was available in the local mountains. True (1970:53-54) identified a steatite industry as characteristic of the Cuyamaca Complex, and therefore, we could expect to recover some soapstone items in a pre-contact context. There is no evidence for such an industry in the nineteenth century Block 408 assemblage.

Stone toolmakers in Old Town San Diego recognized the economic need and practicality of continuing to use stone implements. I hypothesize that cultural factors, including a need to maintain one’s traditional values and customs, played an important role in sustaining stone tool use through time. These same cultural factors are hypothesized to have been a factor in stone tool use observed at other sites (e.g., Hudson 1993:271-274; Rogers 1993:75; Allen 1998:55-68; Cobb 2003:9-11; Silliman 2004). Similar to the Old Town San Diego situation for the Kumeyaay, Praetzel-lis et al. (1987:41-47) argued that artifacts, clothing, and other cultural practices employed by the Chinese in nineteenth century Sacramento served as “extrinsic symbols for group boundary maintenance” in a period when the city was transitioning to a fully urban character. Hodder’s (1979:447-450) research among African groups similarly indicated that artifacts can serve to symbolize and support internal social relations and group cohesion, in particular, when relations between groups are under stress. According to Weissner (1983:256-257, 267-269), artifact style “transmits information about identity,” and so artifacts can project social identity. Continuity in stone tool use can thus be viewed as the symbolic outward boundary that aided Indian people living in historic Old Town and other areas during historic times in maintaining their aboriginal values and customs. There is no historical evidence that Indian people participated fully or equally in the Old Town society and its economic affairs; they were at the bottom of the social scale. Therefore, the maintenance of traditional practices could provide self-esteem and identity for individuals as well as for the people. There is also ample historical evidence that Kumeyaay people resisted Spanish and Mexican colonization and through historic times actively sought to sustain their cultural practices (Rogers 1936; Carter 1957:293-294; Luomala 1978; Cline 1984; Van Wormer 1986; Shipek 1991; Carrico 2008:19-40). Indian people, too, simply may not have been offered full access to many types of modern-day consumer goods available in nineteenth century Old
Town San Diego, given the ample historical evidence that local Indian people faced harsh, bigoted treatment (Carrico 2008:51-87).

The changed social conditions of this nineteenth-century Mexican and American community reduced the availability of certain lithic raw materials. Traditional trade networks for raw materials, such as obsidian, chert, quartz, and soapstone, apparently were no longer operative for people living in the Old Town San Diego area. The shortage of particular raw materials caused a decrease in the use of certain common traditional stone tool types, such as projectile points, scraping implements, objects of soapstone, and particular kinds of ground stone tools. Certain types of stone tools were no longer viable or necessary in Old Town, which can account for the low number of hunting items and warring weapons and lack of hide scraping implements in the Block 408 lithic assemblage.

Conclusions

A stone tool user, whether in prehistoric or historic times, employed stone with or without modification for a variety of tasks. Complex cultural factors and the motivations of tool users influenced the manufacture and use of stone implements (White and Thomas 1972; Gould 1978:831-833; Bamforth 1993; Silliman 2004:184-188, 197-198). I have argued here that stone tool use in historic times represents a manifestation of the strong desire of Indian people in California to maintain cultural practices and traditions. The continued use of traditional artifacts, albeit made from introduced materials rather than traditional stone, reveals everyday life in historic times for Indian people and may be an example of a coping mechanism.

The continuity of stone tool use evidenced in the Old Town San Diego data as well as other San Diego County sites represented a practical solution for everyday chores. Stone implements were part of traditional practice, highly functional, low in cost, and more accessible than introduced tools. I am also arguing that stone tools held ideological or social value for post-contact Indian people in Old Town San Diego, for example, by providing a specific identity for the tool user, by maintaining a tie to pre-contact cultural traditions, and by potentially forming a source of self-esteem for the individual. The historic accounts of Kumeyaay people actively resisting the Spanish colonists and the twentieth-century ethnographic accounts of ongoing cultural practices clearly demonstrate that the Kumeyaay identified strongly with their traditional culture (Rogers 1936; Carter 1957:293-294; Luomala 1978; Cline 1984; Shipke 1991; Carrico 2008:19-40). Researchers at other historic period Indian settlements discussed above have identified a cultural value to stone tool use. For example, Silliman (2004:184) viewed the use of stone tools in a colonial setting by Indian people as a choice that is “both a political and a functional one.” Research on other material aspects of human behavior has demonstrated that artifacts can serve as powerful symbols of group identity and unity (e.g., Gould 1978:831-833; Hodder 1979; Weissner 1983:256-257, 267-269, 271; Praetzellis et al. 1987; Anderson 2005:188-189).

Local Kumeyaay people are responsible for the historic period, stone artifacts found in Old Town San Diego, and Kwaaymii people were the residents in the mountains of San Diego discussed above. The continuity of tradition reflected in the historic lithic economy of Old Town San Diego and the other San Diego County sites discussed parallels the stone artifact assemblages recovered in San Diego County prehistoric contexts. The numbers of stone tools and the variety of uses in nineteenth-century Old Town indicate that a strong reliance on stone tools continued among Indian people in spite of the effects of historic settlement on traditional aboriginal cultural patterns. In Old Town San Diego, the continuance of stone tool use demonstrates that the behavior of Indian people in the nineteenth century was influenced by other social and economic factors that transcended the impacts
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I found that specific attributes in late prehistoric lithic technology typical in San Diego County sites are either conspicuously reduced or missing entirely in the Old Town Block 408 stone tool assemblage. These elements, missing or of reduced abundance, consist of the following: (1) quartz, obsidian, and varieties of chert; (2) projectile points and other bifacially flaked tools; (3) plano-convex, or so-called “domed,” type core tools and scrapers; (4) metates and stone bowls of local materials; and (5) soapstone artifacts. The disruption of traditional trade networks with areas to the east in the mountains and desert regions for Indian people living in Old Town San Diego could account for the relatively small number of tools made from quartz, obsidian, and cherts. Other lithic raw materials that had been important prior to the historic period, such as volcanics and quartzites, continued to be available and are well represented in the Block 408 stone artifact assemblage. The lack of non-local raw materials may not have represented a particularly critical problem for nineteenth century Indian tool makers. In their roles as house servants in Old Town, the Kumeyaay apparently no longer performed certain everyday tasks that were common before historic times, for example, hide scraping, making wood implements (digging sticks, bows, war clubs, etc.) and other woodworking tasks, hunting with bow and arrow, and gathering plant foods.

As noted previously, aboriginal tool types, such as stone hide scrapers and projectile points, made of lithic materials were not employed in the Old Town San Diego Block 408 assemblage. Based on the evidence from other San Diego County sites in historic contexts, I would suggest those specific functions reflected in the missing tools and the relative lack of certain lithic materials did not represent a conscious choice by the Old Town Indian people. Rather, that pattern of stone tool use is better accounted for as an accommodation to changed social conditions in this new pueblo and by how daily lives had been changed.

At San Diego County Indian sites located outside nineteenth century European American settlements, such as those in Westwood Valley and what is now Cuyamaca Rancho State Park, aboriginal everyday tasks continued to be practiced. The full range of cultural features, aboriginal stone tools, ceramics, and other material culture is present in the historic period components of Westwood Valley and sites within Cuyamaca Rancho State Park. Indian people who lived in Westwood Valley and participated in the nineteenth century ranching economy as workers continued traditional stone tool use long into the 1800s and well after settlement by historic period settlers, and they employed traditional raw materials exclusively.

The Indian people residing at sites in the Cuyamaca Mountains, such as SDI-860 (the Dripping Springs site), were less affected by Spanish, Mexican, and later American settlements and experienced minor disruption of food gathering activities, trade and raw material procurement, ceremonies, and other important activities during much of the nineteenth century. Indian people living in the mountains during historic times intermittently made traditional tools from introduced raw materials, apparently when they were available. As evidenced by archaeological data from SDI-860, the village of Ah-haɁ ‘-Kwe-ah’-mac’, and other nearby sites, there was no concerted effort by the nineteenth century occupants of this mountain area to replace traditional tool forms or materials with introduced (historic) tools and raw materials.

Similarly, the SDM-W-150, or La Riconada de Jamo, collection from SDI-5017 and the collection from Neti (SDI-4638) contain little evidence of non-traditional implements or introduced materials, such as glass or...
metal, being made into traditional tools. While there are late prehistoric components at the two sites, the continuity and importance of lithic technology into historic times remain evident here, and there is a lack of evidence of significant replacement of traditional tools in daily life. Even with a long period of contact with the Spanish and later historic settlers, the Kumeyaay who occupied these sites maintained use of their traditional tools during the late eighteenth century and nineteenth century.

There is a marked difference in stone tool use in nineteenth century Old Town San Diego and other historic period sites in San Diego County from that reported for neophytes living in the Spanish mission. Allen (1998), Deetz (1963), Fox (1979), and Hoover and Costello (1985), for example, all reported that simple flake tools were the predominant stone tools found at the Spanish mission sites. They further observed that the range and numbers of aboriginal tools was greatly decreased after introduction of historic tools. The stone tool assemblages in San Diego County sites discussed here, except for Old Town San Diego, reflect a fuller range of stone tools and other objects than described for the Spanish missions. The Old Town San Diego Block 408 stone tool assemblage is large and varied, and this appears to be significantly different from the Spanish mission assemblages. However, certain tool types of specific raw materials are found in reduced numbers in historic times. The situation at Rancho Petaluma described by Silliman (2003, 2004) seems to parallel the Westwood Valley site complex situation discussed above. The latter two sites contrast with the Block 408 assemblages in that they show greater varieties of artifacts and the continued wide use of lithic raw materials (e.g., obsidian) that do not naturally occur in the areas around Rancho Petaluma and Westwood Valley.

Stone tool use faded from the indigenous peoples’ economy more rapidly in some areas than others. Greater numbers of new settlers moved into traditional territories in the later decades of the nineteenth century, and that stopped access to traditional stone sources and traditional village sites. Availability of materials, whether due to impeded access to traditional tool sources, cultural reasons, distance, territoriality, or other societal factors, had a direct influence on tool-making activities and tasks that could be completed (see also, Powell 1895:6-7; Crabtree 1967:8-9; Gould 1978:830-831). With time traditional tools largely faded from everyday use by Indian people as elder stone tool practitioners passed away and as Indian people became more assimilated into the dominant American society.

Archaeological remains, such as stone artifacts, help us fill in information about how Indian people lived and coped day-to-day in a historic society. Even when historical accounts are relatively silent concerning details of California Indian daily life, stone tools can serve as a highly tangible indication of continuing traditional practices of Indian people. Stone artifacts are a means of connecting to our collective past cultural heritage and can help us all form a better appreciation of that past.

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