Journal of California and Great Basin Anthropology | Vol. 38, No. 2 (2018) | pp. 207–234

# Persistence in the Indian *Ranchería* at Mission Santa Clara de Asís

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*Multiple investigations on the Santa Clara University campus have revealed important archaeological finds dating from the Spanish and Mexican colonial periods. From early May 2012 through August 2015, the University's Cultural Resources Management program and Albion Environmental, Inc. investigated the site of the Edward M. Dowd Art and Art History Building and Parking Structure. Through this mitigation process, archaeologists stratigraphically excavated 61 significant features associated with the Indian* ranchería *(CA-SCL-30/H), occupied between 1781 and 1840. The archaeological record confirms that members of the diverse indigenous population continued to incorporate traditional forms of material culture into their daily practices. However, differences exist in the ways in which these objects were made, traded, and used during colonial times. These changes enhance our understanding of how a diverse group of indigenous peoples living within the mission negotiated not only cultural or ethnic identity, but also other aspects of their social identity, aspects tied to status and gender.*

Recent archaeological investigations at Mission Santa Clara de Asís (CA-SCL-30/H), located at Santa Clara University, have brought to light a large array of artifacts, ecofacts, and archaeological features that provide insight into the lifeways of the Native American people resident within the mission *ranchería*. At Santa Clara, and at other California missions, archaeologists have recovered artifacts considered "traditional" in Native Californian culture, such as flaked stone tools, shell beads and pendants, ground stone, and bone artifacts

(e.g., Allen 1998; Allen et al. 2010; Bernard 2008; Costello 1989; Deetz 1991 [1963]; Farnsworth 1987; Hoover and Costello 1985; Lightfoot 2005; Panich 2010; Panich et al. 2014; Skowronek 1998). These artifacts challenge the notion that "traditional" activities, practices, and native identities diminished to extinction over the course of the Mission Era, or that some traditional practices merged with or were subsumed into new colonial forms to become unrecognizable. Commonly, the interpretation of these traditional artifacts found within colonial contexts is one of static maintenance of indigenous cultural (i.e., ethnic) knowledge, identity, and practices (e.g., Hoover 1989). However, more recent scholarship emphasizes that California Indian identity was not statically recreated in colonial settings; instead, it was transformed and adjusted in new ways, but derived from existing cultural frameworks (Lightfoot 2005; Panich 2010, 2014; Panich et al. 2013; Peelo 2010, 2011; Peelo et al. 2018; Schneider 2015). This revised idea of "persistence" is based in constructivist notions of culture, and allows for the co-existence of change and continuity, as ethnic identity intersects with age, gender, and status (Ferris 2009; Panich et al. 2013; Silliman 2009). Many scholars have insightfully investigated the idea of persistence by identifying how colonial objects (i.e., metal, glass, and ceramics) were used in traditional ways, emphasizing the "change" part in "changing continuity" (DiPaolo Loren 2010; Panich 2014, 2017; Peelo 2011; Silliman 1997, 2009, 2010). We have been less successful at complicating the "continuity" part of that phrase, and investigating the changes that occurred in the production, exchange, and use of traditional forms of material culture.

Through our excavations, we recovered a large collection of traditional artifacts clearly found in association with architectural and refuse features of the Indian *ranchería*, which was occupied from 1781 to 1840. The inventory reflects the activities of a diverse indigenous population that during colonial times created an assemblage of 6,147 flaked stone artifacts, 224 groundstone artifacts, 623 bone artifacts, and 7,093 shell beads and pendants. During several population spikes, more than 1,400 Native Americans lived in the Indian *ranchería* at Mission Santa Clara. Mission Santa Clara's historical documents indicate an early influx of Ohlone peoples, followed by a later domination by Northern Valley Yokuts and Miwok populations (Milliken 2002). The *ranchería* is best viewed as a growing and changing amalgam of indigenous peoples drawn at first from the San Francisco Bay region, and later from as far away as the San Joaquin Valley and the foothills of the Sierra Nevada. This highly variable population represented dozens of formerly autonomous tribelets of no more than a few hundred people, some closely related culturally and linguistically, and others from vastly different traditions. Not only did people at Mission Santa Clara speak different languages, they spoke variable dialects of the same language, had assorted cultural traditions, came from homeland groups both near to and far from the mission, and were of different ages, genders, and social standings.

The archaeological record confirms that this diverse population of neophytes, or Christianized Indians, continued to incorporate traditional forms of material culture into their daily practices. However, there were differences in the ways in which these objects were made, traded, and used during colonial times. These changes inform our understanding of how a diverse group of indigenous peoples living within the mission negotiated their social identities through daily practice. The "changing continuities" we observe in the production, exchange, and use of traditional material objects may be related to the negotiation of not only cultural or ethnic identity, but also of other aspects of social identity, aspects tied to status and gender.

## NATIVE PERSISTENCE IN COLONIAL CALIFORNIA

A dominant, scholarly view of Indian identity-formation in the Spanish colonies is reflected in Field's statement:

> Throughout the empire…the mass of Native peoples found their lives and persons reimagined as indios: a laboring class marked as racially inferior whose work in mines, plantations, ranches, and farms provided sustenance for the colonial population and wealth for the crown and its minions [Field 1999:196].

The words "found" and "reimagined" suggest that indigenous lives were created by others, by the Spanish and supporters of the Crown, which they were; but also, that native peoples passively accepted and embodied a colonially defined "Indianness." Essentialist views of social identity have a long history in California Indian ethnography. Terms like *Indios*, neophytes, and *gente*

*sin razón* (people without reason) were all names colonists supporting the Spanish Crown used to identify the native peoples living in the California missions. *Indios* were characterized as a laboring, peasantry class of people, below the European missionaries and mixed-blood soldiers. As a part of the Spanish colonial system, they dressed in clothing made in the mission or purchased through trade, attended church and participated in Catholic ceremonies, learned the language of the colonizing force, and had a "transformed world view" (Jackson and Castillo 1995:19). In addition, it is important to recognize other historical identities created by the colonists, such as *Clareño*, which from a colonial perspective described "good Christians" living at a particular mission.

While it may be true that, for the colonists, it was advantageous and necessary to set themselves apart from the indigenous peoples living in their Spanish colonies, it should not be assumed that local peoples saw the construction of their identity from the same colonial perspective. Despite finding themselves living under colonial control, native peoples still had the power to construct their own identities from their own cultural perspective. While it is true that they did so as they worked through the political and social conditions that circumscribed their lives, it is important to study not only how outsiders labeled indigenous peoples, but also how they labeled themselves.

California scholars have interpreted how colonial entanglements affected identity construction among native peoples in the Spanish California missions in disparate ways. For example, historian Lisbeth Haas (2011, 2014) argues that people maintained their original tribal identities within the multi-ethnic mission communities, in addition to taking on such colonial identities as *indio* and *Luiseño*. Haas (2011) supports her argument for multifaceted identity construction at Mission San Luis Rey with native sources, such as the written work of one of its neophytes, Pablo Tac. In his writings, Tac defined the Christian population at this mission simultaneously as *indio*, *Luiseño*, and *Quechnajuichom*, the territorial community located at the site of the mission. While Tac was born in the mission community in 1822, 24 years after it had been established, his direct ancestors had lived in the village community upon which the mission was built. Haas (2011) argues that the native peoples of this mission felt the need to "move between the realities established by Spanish dominion and the knowledge and group identities simultaneously alive."

Archaeologist Kent Lightfoot (2005), on the other hand, argues that a new social identity emerged within the missions which blended the diverse practices of multiple tribal communities. Lightfoot (2005:198) believes that because of the fragmentation of traditional native polities, local peoples reorganized their social systems, and renegotiated their social identities so that they were "no longer tied to individual polities but more to a specific Mission community." This creation of mission-specific social identities among diverse native populations may be viewed as the reproduction of Indian sensibilities that structure identity around place (Peelo 2010, 2011).

Lightfoot (2005), Skowronek (1998), and Allen (1998) also suggest that neophytes expressed multiple (ethnic) identities depending on the audience. Unlike Haas, who feels that people created colonial identities and simultaneously maintained tribal identities, these authors argue that California Indians in the Spanish missions constructed two different *colonial* identities, and expressed them situationally. They argue that in the mission plazas and fields, while under the watchful eye of the priests and soldiers, indigenous peoples presented a colonial *indio* identity; they acted in ways that were appropriate from a colonial perspective. They attended Catholic services, sang and prayed in Spanish the songs and prayers they were taught, worked in the fields using metal tools, wore the appropriate clothing, and acted like Spanish peasants. However, these archaeologists argue that in the privacy of their own homes, diverse native peoples created a shared social identity that combined elements of their different cultures. The "at home" identity was distinctly indigenous; people cooked and ate wild foods in their houses with their families, manufactured stone tools and shell beads, and danced in the "secluded spaces between rows of houses" (Librado 1979:25–33). These at-home practices did not go unnoticed by the padres, such as those at Mission San Antonio who remarked:

> The neophytes in their houses have plenty of fresh and dried meat. In addition, in their homes they have quantities of acorns, chia and other seeds, fruits, edible plants and other nutritious plants which they do not forget and of which they are very fond. They also eat fish, mussels, ducks, wild geese, cranes, quail,

> hares, squirrels, rats, and other animals which exist in abundance [padres at Mission San Buenaventura, in Geiger and Meighan 1976:86].
>
> But in private, in their own houses they prepare their seeds which are of good quality and in abundance such as acorns, sage, chia, pine nuts and others [Geiger and Meighan 1976:87].

What these studies appear to assume, however, is that indigenous identity is marked by "indigenous things" such as stone tools and shell beads. Paradoxically, many studies have pushed the boundaries of how we interpret the adoption of "foreign" material culture by emphasizing the translation of foreign cultural practices through an indigenous mindset, such as seen in the use of foreign goods in traditional ways (Lightfoot 2005; Silliman 2009; Voss 2008). Scholars investigate how native peoples incorporated colonial cultural materials and practices into their new lives, through their own eyes. For example, many cultural contact scholars have noted how native peoples in many different colonial contexts appropriated the symbols and meanings of Christianity, recombined elements with those from their own belief systems, and translated colonial religion through their own worldview (e.g., Brown 1996; Burkhart 1989; Comaroff and Comaroff 1986, 1991; Furniss 1995; Graham 1998; McEwen 2001). However, these same principles have been only slowly applied to "traditional" forms of material culture.

We argue that shell beads and flaked stones are not "ethnic markers" of a pan-Indian identity created in the mission communities. "Ethnic marker" approaches are common in the archaeological literature (e.g., Deagan 1995; Ferguson 1992, 1999). For example, the archaeological search for "Africanisms" assumes a pure, homogeneous "Africanness" exists (e.g., Ferguson 1992, 1999). Rather than static reflections of culture, material objects are the medium for the active construction of identities in historical moments (Gosselain 1992, 2000; Habicht-Mauche et al. 2006; Lechtman 1977; Lemonnier 1986; Pauketat 2001, 2003; Stahl 2001; Stark 1998a). By examining the meaningful actions used to produce, exchange, and use "indigenous things," rather than just focusing on the things themselves, we can reconstruct how these objects were used by individuals to produce and reproduce multiscalar identities in this colonial world (Bourdieu 1977; Dietler and Herbich 1998; Gosselain 2000; Jones 1997; Lechtman 1977; Lemonnier 1986; Leroi-Gourhan 1945; Loren 2008; Ortner 1999; Stark 1998b; Wegner 1999).

We also emphasize that ethnic or cultural identity was not the only mode of personhood negotiated through daily practices. Notions of status and gender, for example, were also reproduced from indigenous mindsets within the colonial setting of the *ranchería* (e.g., Voss 2008). At Mission Santa Clara, Panich et al. (2018a) have investigated how material culture (such as vaquero gear) informs our understanding of native people's engagement with status, labor, and gender roles. Peelo (2011) argues that variable techniques used to construct ceramic vessels in the Indian village may reflect negotiations of gender identity. Indian men may have restricted access to wheel technologies, while women may have been participating in female-centered communities of practice where hand-modeling techniques were the tradition. Notions of ethnicity, gender, class, and age are not mutually exclusive and they are often enmeshed; it is important to investigate how they intersect at specific social and historical moments (Jones 1997:85).

## THE INDIAN *RANCHERÍA* AT MISSION SANTA CLARA DE ASÍS

### *The Franklin Block 448 Project*

The Edward M. Dowd Art and Art History Building and Parking Structure project (also known as the Franklin Block 448 Project) was planned and constructed under the authority of the University's Final Environmental Impact Report (FEIR), issued in 2003, which addressed the University's Ten-Year Capital Plan for campus modifications and improvements. The University, as part of the planning process, prepared an overarching Cultural Resources Treatment Plan, completed in 2004 (Allen et al. 2004). This was followed by project-specific treatment plans for the two-building project (Allen et al. 2011).

The mitigation team, involving the University's Cultural Resources Management program and Albion Environmental, Inc. (Albion), investigated the project site from early May 2012 through August 2015 (Fig. 1). The data recovery focused on understanding the archaeological deposit's structure, including the stratification of soils, horizontal/vertical extent, and the nature and quantity

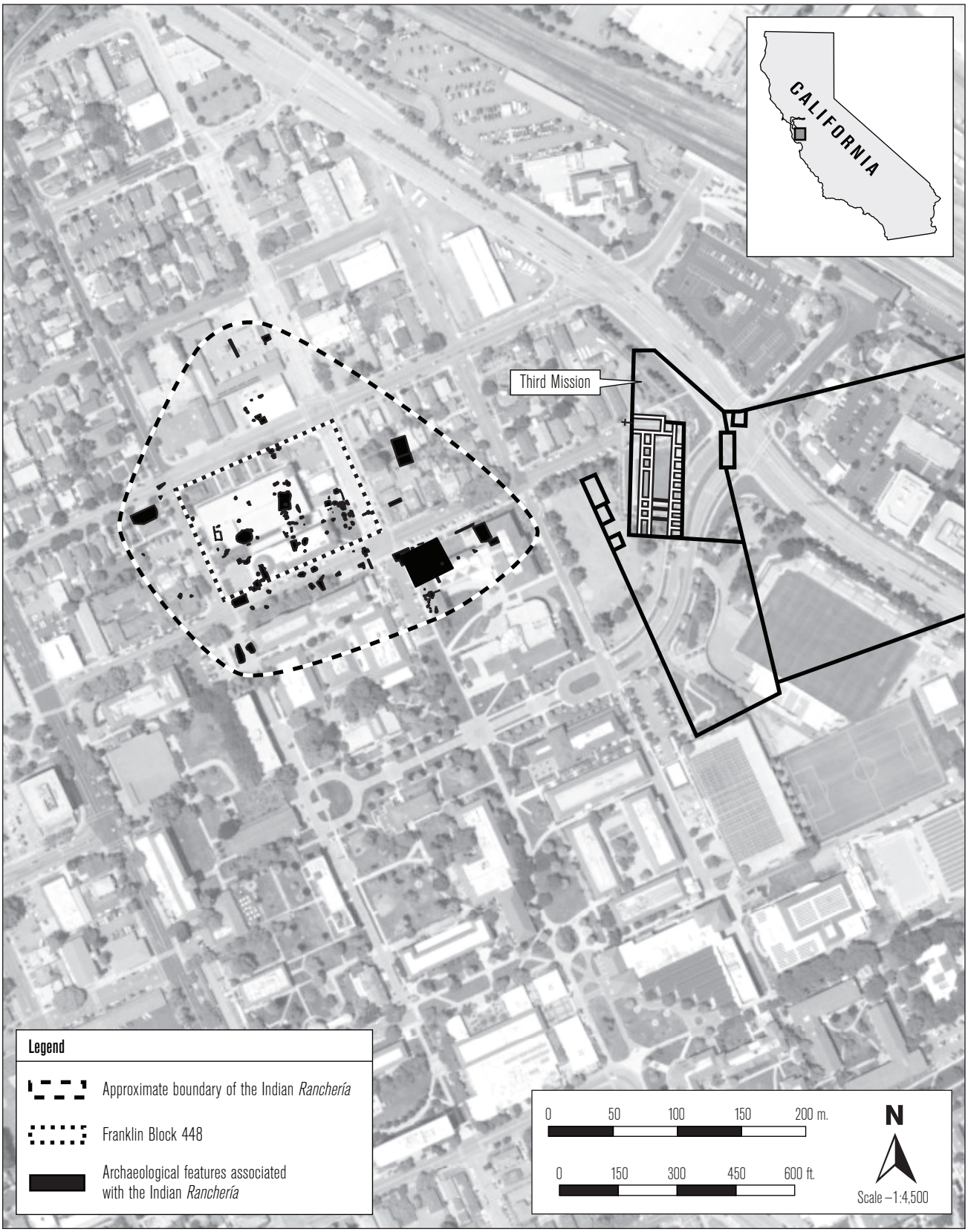


**Figure 1. Project location map.**

**Table 1**

**FLAKED STONE (COUNT) RECOVERED FROM THE INDIAN *RANCHERÍA*, FRANKLIN BLOCK 448**

| | Debitage | Core | Biface | Drill | Formed Flake Tool | Simple Flake Tool | Projectile Point | TOTAL |
|---|---|---|---|---|---|---|---|---|
| Porcelain | 5 | – | – | – | – | – | 2 | 7 |
| Monterey Chert | 1,350 | 19 | 8 | 5 | 3 | 12 | 5 | 1,402 |
| Franciscan Chert | 364 | 10 | 4 | – | 5 | 6 | 8 | 397 |
| Glass | 661 | 1 | – | 1 | 13 | 21 | 27 | 724 |
| Obsidian | 2,985 | 5 | 5 | 6 | 7 | 7 | 55 | 3,070 |
| Other | 539 | 2 | – | 1 | 2 | 2 | 1 | 547 |
| **TOTAL** | **5,904** | **37** | **17** | **13** | **30** | **48** | **98** | **6,147** |

of artifacts. In the course of this mitigation process, archaeologists stratigraphically excavated 61 significant Mission period features, including the foundations for eight distinct rows of adobe structures. Within the "open" spaces between these adobe rows, archaeologists encountered subterranean communal and household refuse pits of various forms and (presumably) functions, plus *hornos* and a possible sudatory.

The team is nearing completion of the analysis of spatial organization, primary and secondary uses of features, and the archaeological assemblages they contain (Peelo et al. in press). The artifacts we discuss here were recovered from the 61 discrete, significant features impacted by this project. The traditional artifacts discussed all date to the Mission period, and we can state with confidence that they do not involve an intermixing of materials from a pre-mission context. They were all found in association with colonial refuse and architectural features; they were recovered from soils within adobe buildings and mission refuse pits. In addition, these traditional objects were found side-by-side with objects of clear colonial origin, such as the faunal remains of cattle and imported objects made of ceramics, metal, and glass. Our results and interpretations (presented below) derive from data and theories presented in the forthcoming, comprehensive project mitigation report, as well as from numerous discussions among the authors (Blount in press; Ellison in press; Garlinghouse and Berge in press; Hylkema and Maher in press; McKenzie in press).

*Traditional Material Culture in the Indian* Ranchería

*Flaked Tools.* We recovered a number of flaked tools and manufacturing debris (n=6,147) at the project site (Table 1) (Ellison in press; Hylkema and Maher in press). The assemblage includes 98 projectile points (including complete points and point fragments), 13 drills, 17 bifaces, 48 simple flake tools, and 30 formed flake tools. Lithic waste debris included 37 cores and 5,904 debitage flakes.

The use of flaked stone by California's indigenous peoples has an ancient history, dating to the Early Holocene Millingstone Period (8,000–3,500 B.C.). By the Late Period, after circa A.D. 1100, large biface production, which dominated into the Middle Period (500 B.C.–A.D. 1050), was eclipsed by a more expedient manufacturing trajectory focused on core-flake tool production. In the San Francisco Bay area, at the time of Spanish contact, the flaked-stone tool kit included a suite of flake-based tools, including informal (expedient) flake tools, and small, gracile point types (i.e., arrow points) such as Stockton Serrated and Desert Side-notched (King 1978:67; Milliken et al. 2007:117). The larger, more robust point forms, such as the contracting-stem form, did not disappear from Late Period contexts, but were far less common, and appear to have been used as hafted knives. Many of these implements were manufactured from obsidian, and they may have served to accomplish tasks not suitable for the more specialized arrow point technology (Bellifemine 1997:124–136; Brady et al. 2011; Hylkema 2002:250). Locally available Franciscan chert dominates debitage assemblages of Middle and Late Holocene-aged archaeological sites in the Santa Clara Valley, though Monterey chert and obsidian are also present in smaller quantities (Hylkema and Leventhal 2007). Importantly, during the Late Period, obsidian was traded into the Santa Clara Valley in the form of finished or nearly complete tools, as part of a trade network possibly

managed by social elites (Bellifemine 1997; Cartier et al. 1993:134; Clark and Reynolds 2003; Hylkema 2002; Jackson 1989; Jackson and Erickson 1994:408).

Unlike the creators of precolonial assemblages, the residents of the *ranchería* produced a flaked-tool assemblage using primarily non-local materials (Ellison in press; Hylkema and Maher in press; Panich 2016). They manufactured projectile points, for example, using mostly extra-local materials, including obsidian (55%) and Monterey chert (6%), and they made only 8% from locally-occurring Franciscan chert. Interestingly, they created a large portion of the assemblage from non-lithic materials, including glass (28%) and porcelain (2%). Extra-local lithic material also dominates other tool classes, including bifaces (77%) and drills (100%). The assemblage of cores and debitage also illustrates a reliance on non-local materials, emphasizing the use of extra-local Monterey chert and obsidian. The emphasis on non-local stone, when combined with an expedient (and somewhat wasteful) core/flake production technique, suggests tool makers here enjoyed continued and dependable access to raw material sources well outside the *ranchería* (Panich and Schneider 2014, 2015).

In most contexts, the technological reduction sequence common in the precolonial Late Period persists in the *ranchería* (Ellison in press). Toolmakers continued to use the core/flake strategy to produce a range of expedient tools, such as cores, drills, and formed and simple flake tools. Excluding projectile points, 88% of the 145 tools derive from the core/flake sequence. Only 17 bifaces and 1 drill represent tools created through biface reduction. Furthermore, 6 bifaces show evidence of percussive flaking followed by pressure flaking for tool maintenance or finishing. This mixed strategy indicates the bifaces were at one time finished, requiring only biface thinning flakes or pressure flakes for continual use. The more recent percussive flake scars suggest these bifaces were not produced on-site, but were either scavenged from nearby precolonial sites or traded in, and then re-used as cores. The results of the debitage analysis support the lack of on-site biface production, with less than 2% of identifiable flakes placed into the bifacial reduction category. The projectile point analysis further supports this interpretation, with all but 5 of the 67 identifiable projectile points derived from the core/flake strategy. The dominance of pressure flaking debris (84%) indicates that


**Figure 2. Projectile point types (a) Stockton Serrated, (b) Mission Santa Clara Serrated, (c) Rattlesnake Corner-notched, (d) Desert Side-notched, (e) Wide Side Corner-notched, (f) Contracting Stem, (g) Single-notched Triangular, (h) Cottonwood Triangular.**

there was a strong emphasis on finishing tools within the *ranchería*, as was done (though in much higher numbers and smaller sizes) in Late Period contexts. However, paired with a high representation of decortication flakes (11%), it is clear that obsidian arrived unmodified (retaining cortex) into the *ranchería*.

Using the core/flake reduction strategy, the indigenous population at Mission Santa Clara formed primarily exotic raw materials into a variety of tool types. While we collected many projectile point fragments unidentifiable to type (n=31), Hylkema and Maher (in press) classified 67 of the projectile points into 8 basic types and forms (Fig.2, Table 2). Many of these point types, such as the Stockton Serrate and Desert Side-notched, are also found in precolonial archaeological assemblages of Late Period Phase I and 2 in the San Francisco Bay area, South Coast, Sacramento Delta, and Sonoma County cultural taxonomies (Bellifemine 1997; Hughes 1994; Hylkema 2002, 2007; Hylkema and Leventhal 2007; Jones and Hayes 1989; Jones et al. 2007; Leventhal 1993; Milliken

**Table 2**

**PROJECTILE POINT TYPES AND SOURCES (COUNT)**

| | Stockton Serrate | Desert Side-notched | Cottonwood Triangular | Rattlesnake Corner-notched | Wide Side-notched/ Corner-notched | Contracting Stem | Single-notched Triangular | Mission Santa Clara Serrate |
|---|---|---|---|---|---|---|---|---|
| Obsidian | | | | | | | | |
| Napa Glass Mountain (NGM) | 8 | 3 | 5 | 1 | – | – | 1 | 5 |
| Annadel | 1 | – | – | 3 | – | – | – | – |
| Casa Diablo | – | 1 | 1 | – | – | – | – | – |
| Bodie Hills | – | – | – | – | – | – | – | 3 |
| Unsourced | – | – | – | – | – | – | – | 4 |
| Chalcedony | – | – | – | – | 1 | – | – | – |
| Porcelain | – | 1 | – | – | – | – | – | – |
| Glass | – | 7 | 2 | – | – | – | 2 | 6 |
| Franciscan Chert | – | 4 | 1 | – | – | 2 | 1 | – |
| Monterey Chert | – | 2 | – | – | 2 | – | – | – |

et al. 2007; Schenck and Dawson 1929). Stockton Serrated forms were always made from Coast Range obsidian sources, mostly from the Napa Valley obsidian flow (Frederickson 1968; Hylkema 2002; Jones and Hayes 1989; Schenck and Dawson 1929). Archaeologists have also recovered Stockton Serrated points in nearby historical contexts; those from Mission San Jose are made from Napa Valley obsidian (Panich et al. 2018b; Schenck and Dawson 1929). Other point types, such as the Cottonwood Triangular (also known as Canaliño) and Rattlesnake Corner-notched, are not present in precolonial sites in the Santa Clara Valley, but are present in precolonial times in other regions of California (Breschini and Haversat 1995:93; Cuthrell et al. 2013:258–259; Hartzell 1992; Hylkema and Cuthrell 2013:225–245; Justice 2002:367–378; King 1978:67; Rogers 1929; White et al. 2002). Within historical contexts, archaeologists have recovered Annadel obsidian Rattlesnake Corner-notched points at the Petaluma Adobe, in association with residential structures occupied by native laborers (Silliman 2004:107–109). In addition, the indigenous population at Mission Santa Clara produced new point types that are not observed in precolonial assemblages. The Single-notched Triangular-shaped points (n=4) and the Mission Santa Clara Serrated (MSCLS) points (n=18) do not have comparative precolonial forms. However, archaeologists have recovered MSCLS points from other nearby historical sites (Panich et al. 2018b; Schenck and Dawson 1929).

Residents of the Mission *ranchería* used flaked stone tools in subsistence, but also for social and political purposes. Projectile points, fastened to arrows and propelled using bows, were tools used in hunting and warfare. The faunal assemblage from the *ranchería* includes a broad variety of remains from "wild taxa" (Garlinghouse and Boone in press). These include non-domestic mammals, birds, fishes, reptiles, and amphibians whose exploitation likely occurred through traditional methods outside the immediate boundaries of the mission grounds (Panich and Schneider 2014, 2015). Many historical accounts also note that native residents of the missions used bows and arrows during military excursions that sought to bring other tribal peoples into the missions or punish them for various infractions (Castillo 1978:105; Farris et al. 2004; Gough 1972:175; Gray 1993; Hackel 2005; Jackson 1952:63; Milliken 2008; Morra-Tores 2005). Indians may have created or recreated their social standing within the *ranchería* by being part of these auxiliary groups, and participating in "recruitment" efforts (Hackel 2005; Hylkema and Maher in press; Milliken 1995). Evidence also suggests that arrows were used by indigenous peoples who resisted colonial institutions. In 1824, indigenous rebels at Mission La Purisima fought Spanish troops using muskets, a cannon, and arrows (Haas 2014:122). After numerous casualties, the rebels surrendered, and the troops seized "two cannons, sixteen muskets, 150 lances, six machetes, and an incalculable number of bows and arrows" (Haas 2014:122).

**Table 3**

**GROUND STONE (COUNT) RECOVERED FROM THE INDIAN *RANCHERÍA*, FRANKLIN BLOCK 448**

| | Handstones (manos) | Milling stones (metates) | Pestles | Mortars | Cobble Tools (battered cobbles) | Incised Stone Fragment (grooved stone) | Modified Stone | Stone Bead | Stone Pendant | Charmstone | Misc. Ground Stone |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Basalt | 9 | 4 | – | – | 1 | – | 1 | – | – | – | 1 |
| Gabbro | – | – | 1 | – | 3 | – | – | – | – | – | 6 |
| Granite | – | – | – | – | 1 | – | – | – | – | – | 1 |
| Greywacke | 1 | 3 | – | – | 6 | – | – | – | – | – | 8 |
| Igneous | 4 | 2 | 15 | – | 1 | – | 1 | 4 | 3 | 1 | 23 |
| Metavolcanic | – | 1 | – | – | – | – | – | – | – | – | – |
| Quartz | – | – | – | – | – | – | – | 1 | – | – | – |
| Sandstone | 12 | 9 | 5 | 3 | 13 | – | – | 1 | – | – | 36 |
| Sedimentary | 1 | – | – | – | 1 | 1 | – | – | – | – | 1 |
| Vesicular Basalt | 9 | 10 | – | – | – | – | – | – | – | – | 1 |
| UID | – | – | 2 | – | 5 | – | 1 | 3 | – | – | 8 |
| **TOTAL** | **36** | **29** | **23** | **3** | **31** | **1** | **3** | **9** | **3** | **1** | **85** |

*Ground Stone*. The ground stone assemblage included 224 artifacts (Table 3). We identified mortars (n=3) and pestles (n=23), as well as hand stones (n=36) and milling stones (n=29). Also present were cobble tools (n=31), incised stone (n=1), modified stone (n=3), and miscellaneous ground stone (n=85). In addition, we recovered personal ground stone artifacts, including stone beads (n=9), pendants (n=3), and a charmstone (n=1; Garlinghouse and Berge in press).

Ground stone use among Native Californians has a long history, and unlike flaked stone, the stone was derived primarily from local sources. Ground stone was used for all manner of purposes during the precolonial era, such as grinding, battering, and crushing foods. Mortars and pestles are thought to have been used primarily to process acorns, while hand stones and milling slabs are thought to be have been used primarily to process hard seeds and similar vegetal resources (Basgall 1987; Kroeber 1925:411–412). Ground stone was also used in the production of flaked stone, primarily in the form of "hammerstones" to detach flakes from tool stone or shaped formal tools. These utilitarian artifacts are often found in Bay Area assemblages (Hylkema 2002, 2007; Milliken et al. 2007). Stone beads and pendants are also found in precolonial contexts (Eddy 2013); they principally functioned as a medium of exchange and even as a form of currency (Lightfoot 2005:41). Beads were also important for the many intangible qualities they expressed and the potential social, political, and symbolic information they communicated regarding status and social identity (Eddy 2013). Charmstones have been found in precolonial archaeological sites throughout California, but are especially prevalent in the San Francisco Bay area, the Delta, and the San Joaquin Valley (Sharp n.d.:233). Their function has been debated, though most archaeologists suggest charmstones were symbolic in nature, playing a role in religious, ceremonial, ritual, or similar activities (Elsasser and Rhode 1996:39; Sharp n.d.:237).

The majority of the *ranchería* ground stone assemblage was produced from local sources; however, we also identified ground stone artifacts produced from non-local materials (Garlinghouse and Berge in press). Local stone, which is defined as stone acquired from local sources, includes igneous, sandstone, sedimentary, gabbro, granite, greywacke, and metavolcanic rocks. Imported stone, by contrast, involves basalt and vesicular basalt. This latter category is stone imported from Mexico. Imported materials were represented among some of the ground stone artifact types, but not all. We identified non-local materials among the hand stones, milling stones, modified stones, and miscellaneous ground stone. However, the pestles, mortars, cobble tools, incised stone, charmstone, beads, and pendants were all constructed exclusively of local stone.

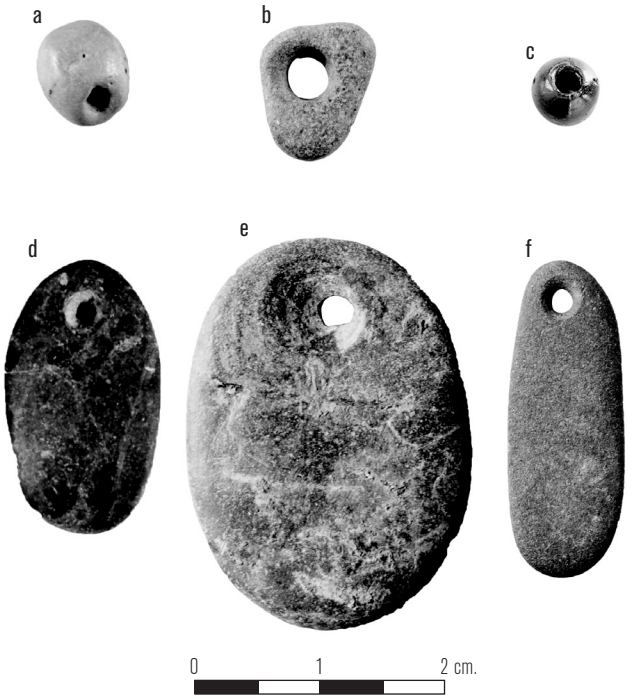


**Figure 3. Stone beads and pendants.
Beads: (a) F91.5133.3, (b) F91G.5162.12, (c) F119.5342.8.
Pendants: (d) F120.5335.3, (e) F91A.5162.7,
(f) F150.5474.3.**

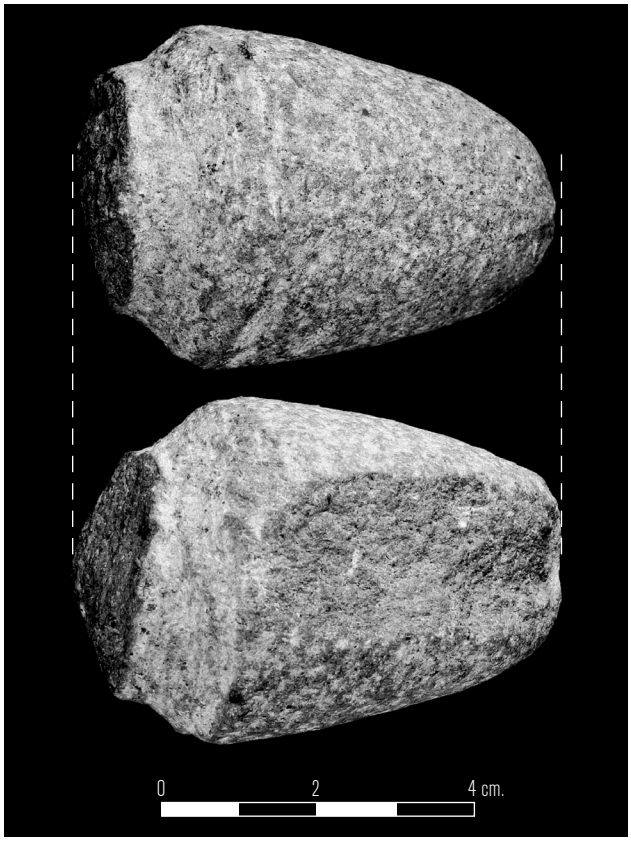


**Figure 4. Charmstone: F118.5402.3.**


**Figure 5. Mortar: F189A.5863.13.**

The ground stone assemblage consists primarily of "traditional" styles of artifacts, but—as in the case of the flaked stone—new forms are also present. The stone beads and pendants, charmstone, mortars, and pestles best illustrate the reproduction of traditional ground stone forms within a colonial context (Figs. 3–8). The charmstone, for example, with its phallic shape, is an artifact type especially prevalent in the San Francisco Bay area (Elsasser and Rhode 1996:39). While many of the hand stones and milling stones also reflect precolonial forms, we also identified new, introduced forms resembling items of Mexican material culture (Garlinghouse and Berge in press). These introduced forms, such as the *metate*, were likely produced in Mexico and transported to the mission. Mission *informes* indicate that 32 *metates* were received at Mission Santa Clara in 1821 from San Blas (Skowronek et al. 2006:238).

Use-wear analysis of the ground stone tools reveals that the artifacts were used for grinding (hand stones and milling stones) and pounding (pestles and mortars), likely in foodstuff preparation. Evidence of the rejuvenation of the working surfaces of these objects used in food

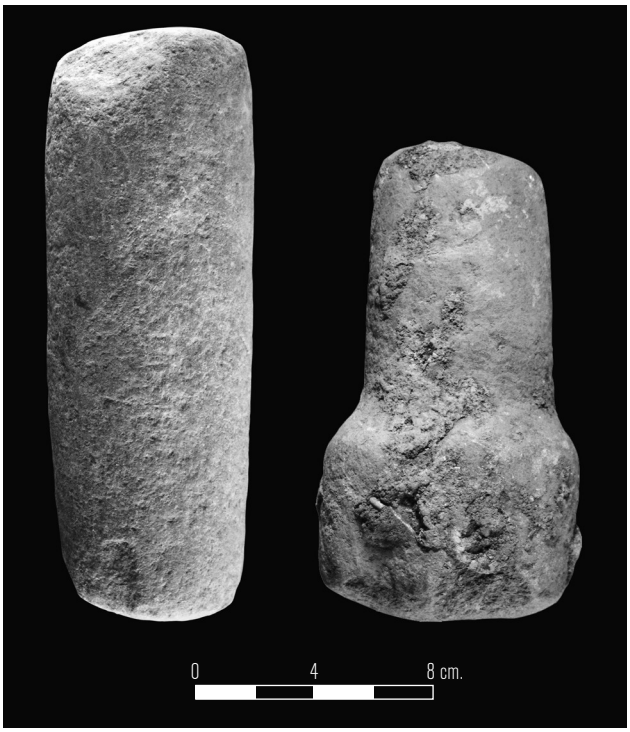


**Figure 6. Pestles.**
**Pestle: F975.5042.10. Maul: F116.5240.1.**


**Figure 7. Millingstone, local: F91B/C.5146.3.**

preparation also suggests that ground stone items were used repeatedly and were curated. In addition, some artifacts were used to batter or shatter hard objects, as in working bone or in flaked stone production (hand stones, cobble tools). The function of the single incised stone is not apparent, but it may have been used as a sharpening

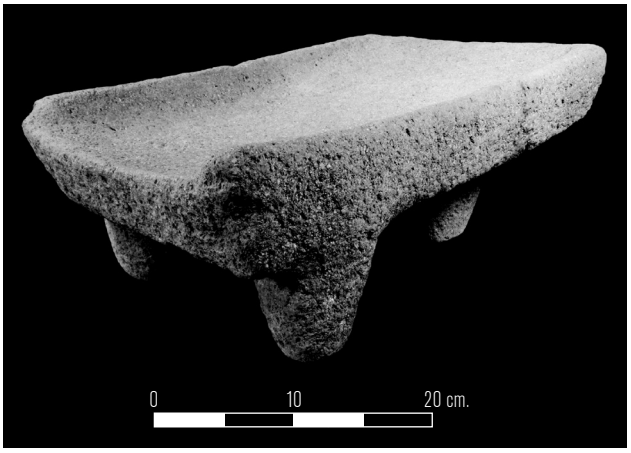


**Figure 8. Millingstone, non-local: F155.5679.7.**

**Table 4**
**BONE ARTIFACTS RECOVERED FROM THE INDIAN *RANCHERÍA*, FRANKLIN BLOCK 448**

| TYPE | COUNT |
|---|---|
| Awls | 35 |
| Serrated Bone | 5 |
| Battens | 13 |
| Incised Bone Tubes | 5 |
| Polished Bone Tubes | 91 |
| Undecorated Bone Tubes | 23 |
| Flutes & Whistles | 3 |
| Hand Gaming Tubes | 25 |
| Strigils | 8 |
| Tattoo Device | 1 |
| Astragalus Dice | 2 |
| Incised Bone Fragments | 27 |
| Batten Detritus | 212 |
| Handholds | 11 |
| Other Modified Debris | 149 |
| Bone Beads | 11 |
| Bone Pendants | 2 |
| **TOTAL** | **623** |

stone or an arrow-shaft straightener. Finally, we argue that the stone beads, pendants, and the charmstone had a personal function, and were used as personal adornment, decoration, or for some other non-utilitarian purpose.

*Bone Artifacts.* Highly skilled craftspeople living in the *ranchería* constructed a number of diverse artifacts out of bone. We recovered 623 bone artifacts from the site, including awls (n=37), polished bone tubes (n=91), beads (n=11), and battens (n=13) (see Table 4 for a complete list; Blount in press).

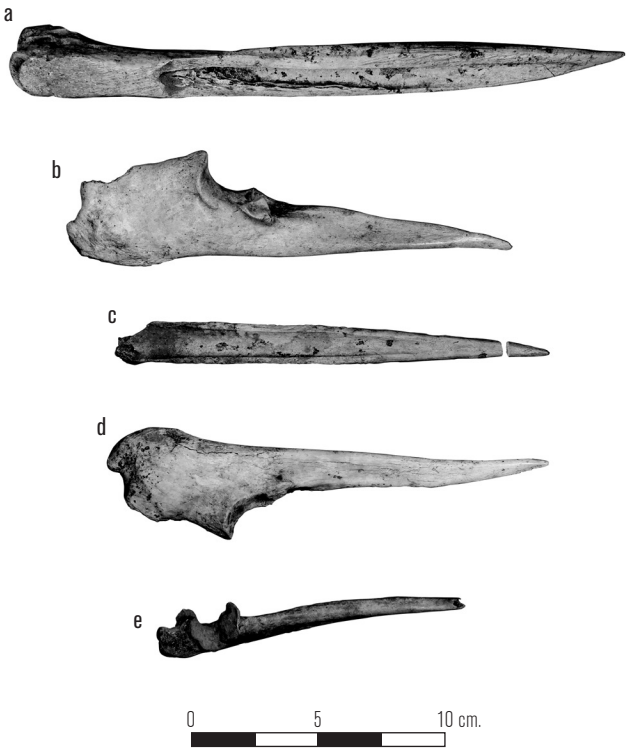


**Figure 9. Bone awls: (a) 118.5402.0. (b) 118.5382.2, (c) 118.5384.2, (d) 135E.5283.6, (e) 121.5314.4.**

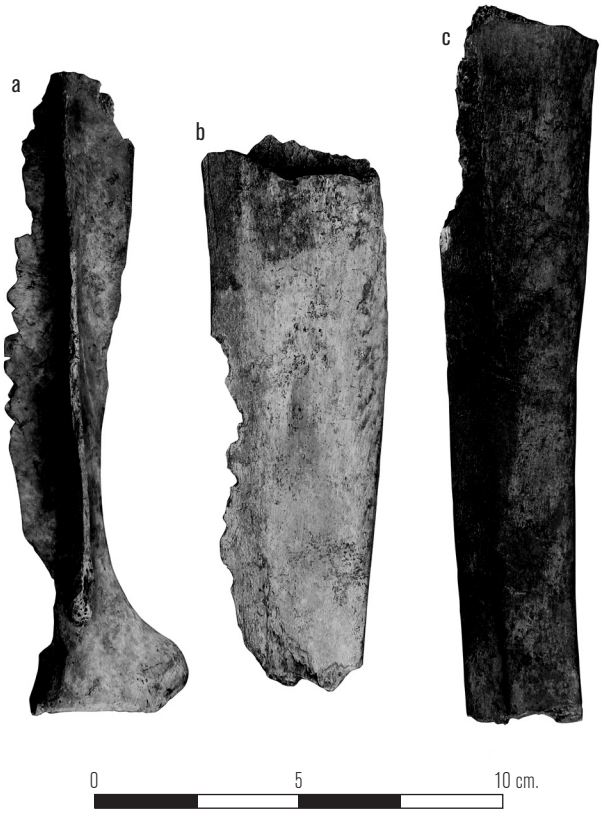


**Figure 10. Serrated bone tools. Serrated ribs and scapula: (a) 624.6407.07.24, (b) 174.5772.2, (c) 174.5772.12**

Artifacts constructed of bone are prevalent throughout precolonial California. Pre-mission peoples drew from a number of sources of animal bone—primarily large mammals (e.g., deer, antelope, elk) and birds—for the manufacture of bone tools (Barrett 1908, 1952a, 1952b; Barrett and Gifford 1933; Breschini and Haversat 2000; Gifford 1940; Hudson and Bates 2015; Hudson and Blackburn 1986; Loeb 1926). Bone tubes of all shapes, sizes, and origins (either mammal or bird) abound in the archaeological record, as do hammers, saws, pries, daggers, scrapers, pendants, and ear pieces, among many other artifacts. Bone artifacts, however, have not been subjected to the analytical rigor afforded items made from other materials—such as flaked stone or shell artifacts—by California archaeologists. Furthermore, the Ohlonean peoples were, for a number of reasons, not included in the so-called "memory culture" studies of the early twentieth century. We are therefore at a loss to place many of these artifacts in temporal, regional, or ethnic context, but while we admittedly interpolate from assemblages to the north and south, we feel we are on solid ground, particularly when discussing artifact functions.

When possible, we determined the species and the element from which the bone artifacts were cut, shaped, ground, incised, smoothed, and polished (Blount in press). Specialists produced bone awls from the ulna and metatarsal bones of mule deer and cow, and one that interestingly was fashioned from the arthritic ulna of a bobcat (Fig. 9). The serrated artifacts were created from artiodactyl scapula and cow rib bones (Fig. 10). *Rancheria* residents constructed bone tubes, classified into a number of sub-categories (incised, polished mammal bone, undecorated bird bone, whistles, and hand game pieces) from the long bones of birds and mammals (Figs. 11–13). Artifacts classified as "hand holds" were the distal or proximal ends of artiodactyl (probably deer) long bones, that were likely discarded after the long bone shafts were shaped and polished (Fig. 14; Lightfoot et al. 1997:268). Bone "dice" were fashioned from a cow's astragalus, and a possible tattooing device from a mammal long bone or rib (Fig. 15) with an inset iron spike. The ribs of mammals, likely all cows, were formed into strigils.


**Figure 11. Incised bone tubes: (a) 152.5745.5, (b) 185EE/6055.5, (c) 118.5402.8, (d) 185AA.6058.1, (e) 75.5044.4, (f) 155D.5582.13, (g) 155C.5585.6.**


**Figure 13. Hand game bones. Gaming Pieces: (a) 182NW. 5861.2, (b) 182D.5900.4, (c) 73.5039.5, (d) 73.5039.4, (e) 155M.5580.4, (f) 155E.5605.6.**


**Figure 12. Polished mammal bone tubes and flutes. Polished Bone Tubes: (a) 99.5174.16, (b) 99.5174.15. Flutes: (c) 185AA/6054.19, (d) 91CU8.5195.11.**

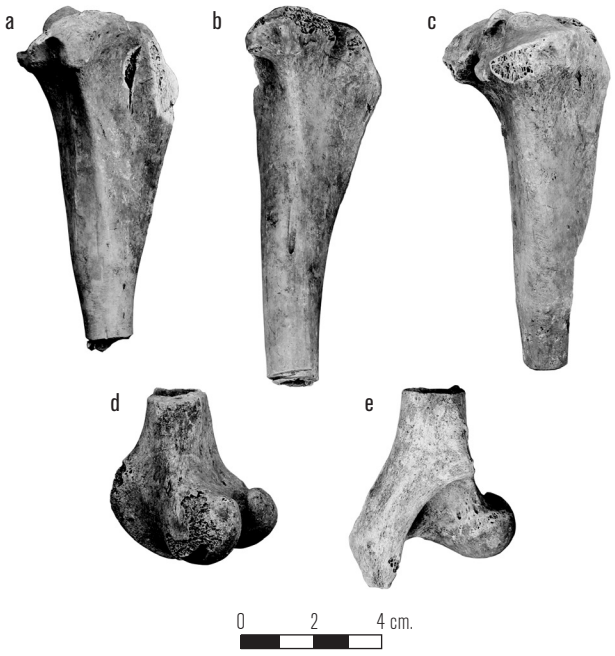


**Figure 14. Handholds. Mammal Bone Handholds: (a) 155C.5638.10, (b) 152. 5736.1, (c) 155C. 5581.8, (d) 111.5230. 14, (e). 79F.5083.10.**

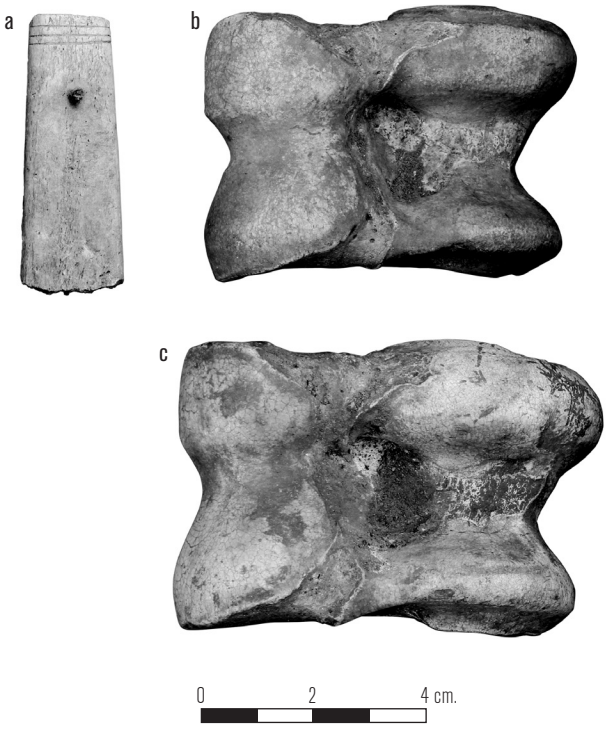


**Figure 15. Astragalus dice and possible tattoo device. Possible Tattoo Tool: (a) 182NW.5861.2. Astragalus Dice: (b) 73.5039.4, (c) 155M.5580.4.**

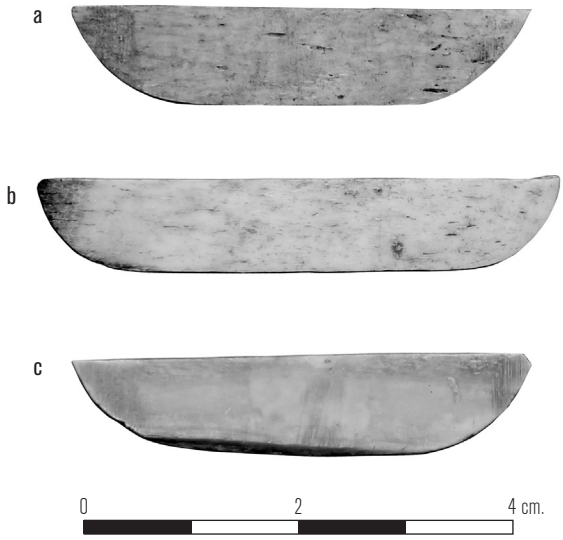


**Figure 16. Battens: (a) 79.5067.6, (b) 183.6019.1, (c) 176.5791.2**

All of these species were represented in the faunal assemblage from this site, and therefore we assume all bone tools were locally produced (Garlinghouse and Boone in press).

*Ranchería* residents used these bone artifacts in everyday domestic activities, in personal adornment, in ceremonial and medicinal practices, and in gambling. The bone awls were an important and probably a protected part of a basket-makers' tool kit, and were used to create intricate coiled baskets. Bone awls may also have served to pierce and sew hides, create beaded and feathered belts, pierce children's ears, or prick the skin during facial tattooing. The serrated bone artifacts may have been used as cutting tools or fleshers, or to shred bark, make awls, arrow shafts, or "musical rasps" (Gifford 1940:172, 213). Objects we classify here as battens may be a very small form of the common weaving tool used to tamp down weft fibers between warp fibers (Fig. 16), and likely represent the introduction of loom weaving technology. Bone tubes served a number of utilitarian, ceremonial, medicinal, recreational, or personal functions. Incised bone tubes may have functioned as personal adornments, in the form of ear and nose rods (Barrett 1952a:299–301; Hudson and Bates 2015:147–151; Loeb 1926). Highly polished bone tubes showing evidence of heating may have been sucking tubes used in ritual doctoring (Barrett 1952a; Freeland 1923; Hudson and Blackburn 1986:285-288; Loeb 1926; Silliman 2004:142). Bone whistles served as an important part of such ceremonial observances as dancing and doctoring (Barrett 1952a:322–323; Loeb 1926:188–190). Other bone tubes, often found in pairs, each pair having one marked and one "naked" bone, appear to be "hand game" or "grass game" pieces (Barrett 1952b:336–41; Loeb 1926:212–15). Bone "handholds" may have been the manufacturing debris discarded in the course of making these bone tubes, after serving "as an underworked extension, providing purchase, of a piece of bone being worked into a tool" (Lightfoot et al. 1997:268). Another type of artifact, astragalus dice, also indicates gambling activities (Barrett 1952a:230–231, 1952b:344–346; Hudson and Blackburn 1986:403; Loeb 1926:215). A single object, with three parallel incised lines and a small metal spike, presumably iron, set into the bone approximately 1.7 cm. from the end, may have functioned as a tattooing device (Fig. 15). This object may originally have been a bone utensil handle. Artifacts identified as strigils may have been used, primarily by men, to scrape sweat from the body during sweats in sweathouses or sudatories (Gifford 1940:172; Hudson and Blackburn 1986:107–109; Loeb 1926:158–161).

*Shell Beads and Pendants.* Shell ornaments were also recovered in great numbers within the architectural and refuse features of the *ranchería* at Mission Santa Clara. We collected 152 modified *Haliotis* sp. (abalone) artifacts, and 7,053 shell beads of various types, constructed from a number of different shell species (Hylkema and Maher in press; McKenzie in press) (Table 5).

**Table 5**

**SHELL ARTIFACTS RECOVERED FROM THE INDIAN *RANCHERÍA*, FRANKLIN BLOCK 448**

| TYPE | COUNT |
|---|---|
| Pendant | 40 |
| Pendant Blank | 64 |
| Modified Shell | 48 |
| Bead | 7,053 |

The exploitation of marine shell is a 10,000-year-old tradition in California (Fitzgerald et al. 2005). Throughout the Holocene, native peoples of California used abalones all along the central and southern coasts (Breschini and Haversat 2008; Colligan et al. 2015; Erlandson et al. 2007; Glassow 2008; Joslin 2010; Rick et al. 2001; Whitaker and Byrd 2012). Abalone shell is rarer in precolonial coastal sites in the northern portion of the Monterey Bay and San Mateo coasts and on north (Colligan et al. 2015; Hylkema 1991; Whitaker and Byrd 2012). Archaeologists have recovered shells from a variety of abalone species, including *Haliotis rufescens* (red abalone), *Haliotis cracherodii* (black abalone), *Haliotis corrugate* (pink abalone), and *Haliotis fulgens* (green abalone) from coastal archaeological sites, with red and black species being the most prevalent in central California (Colligan et al. 2015). Archaeologists have long recognized that variations in shell bead assemblages occurred during different temporal phases in central California prehistory and that beads retained a remarkable level of homogeneity in their forms, with changes in style serving as temporal markers that have defined archaeologically-constructed cultural taxonomies (e.g., Bennyhoff and Hughes 1987; Groza 2002; King 1982; Milliken and Schwitalla 2012). Archaeological investigations throughout the San Francisco Bay area have found that the distributions of Olive snail (*Olivella biplicata*) and clam disk beads (*Saxidomus* sp. and *Tivela* sp.) from mostly funerary associations became increasingly important over time among the many socially "complex" societies of the region (Hylkema 2007; Leventhal 1993; Milliken et al. 2007). Although initially used as a subsistence item, native peoples began modifying abalone shells into a variety of artifacts during the Early Holocene. The manufacturing of abalone beads, ornaments, and pendants continued through the Late Holocene.

Indigenous peoples of California used a myriad of marine gastropod and bivalve shells as trade items, ranging from the coast to the Great Basin, and showing up (for example) in mortuary assemblages in the Sacramento and San Joaquin valleys between approximately 5,550 and 550 B.C. (Bennyhoff and Hughes 1987; Hughes and Milliken 2007; Rosenthal et al. 2007). Shell beads and abalone pendants were valued as tokens of wealth and status (Patterson 2014). Worn as stringed necklaces, woven into fiber hairnets or belts, or appliquéd on baskets and clothing, they served both as a mode of economic transaction and as visible symbols of the identity of those who displayed them in life, and used them in death as funerary regalia. This perspective is further enhanced by ethnographic studies that describe how shell beads functioned as ornaments, currency, and also as symbols of membership and rank within a variety of exclusive sodalities present among widely distributed populations (e.g., Hudson and Blackburn 1986; Kroeber 1932). Modern Wiyot and other North Coast indigenous groups tell "Abalone Women" stories that highlight important cultural information pertaining to gender, social organization, and the creation of the natural world (Field 2008).

Evidence suggests that the raw materials from which the Franklin Block 448 marine-shell artifacts were constructed were acquired through travel to the source or through trade. *Ranchería* residents may have traveled to the coast on *paseos* to collect such shells as *Olivella,* clam, mussel, limpet, and black abalone from the intertidal zone, or used boats to dive for red abalone offshore (Whitaker and Byrd 2012). Raw *Olivella* shell was plentiful on the coast just west of Mission Santa Clara (Hylkema and Cuthrell 2013). The majority of the assemblage involved *Olivella biplicata* beads (n=5,273), *Saxidomus* or *Trivela* clam beads (n=1,063), and abalone shell artifacts (n=297). Mussel and limpet were identified in very small quantities, with each species represented by just one bead, and a small number of beads were unidentifiable to genus (n=29). Preferences for clam and *Olivella* shell species for beads appear to have existed between tribes of the San Francisco Bay area and those in the North Bay and further east. For example, tribes of the Clear Lake area and those of the Sacramento River Delta acquired large numbers of

clam disk beads (Hughes and Milliken 2007:269), while those of the Santa Clara Valley, Peninsula, and East Bay preferred beads made from *Olivella biplicata*.

While many (n=109) of the abalone artifacts were not identifiable to species, we did identify the presence of *Haliotis cracherodii* (black abalone; n=10), *Haliotis rufescens* (red abalone; modified shell, pendant blanks, and pendants: n=5; shell beads: n=145), and *Haliotis rufescens/corrugate* (red/pink abalone; n=29). While the specimens classified as red/pink abalone were very small and the level of abrasion precluded exact species identification, it is likely that these artifacts were made of red abalone as we did not identify any pink abalone in the assemblage and this species is rarely recovered from regional archaeological sites. Assuming this is the case, approximately 95% (n=174) of the identifiable abalone artifacts were made using red abalone. Hackel (2005) documents the fact that native contract laborers from Mission Santa Clara were paid in beads but were also allowed to collect abalone shells while working in Monterey. Such crews were reported to have collected so many red abalone shells during their work trips to Monterey that they had to use two mules to transport them home (Hackel 2005:317).

While some of these objects may have been traded in as finished products, analysis suggests that shell artifacts were produced locally at Mission Santa Clara (Allen et al. 2010). Burns' (in press) pilot study analyzing the isotopic signature of 13 *Olivella* A and H series beads (0.4% of the assemblage) from the *ranchería* indicates that the H series beads derived from the south coast, and were likely acquired through trade. The single *Mytilus* shell and limpet are not common bead types within the San Francisco Bay area, and may have originated in the Santa Barbara region (Arnold and Graesch 2001:104–106; Bennyhoff 1988:27–42; Hudson and Blackburn 1985). However, we recovered *Olivella* and *Haliotis* shell artifacts in various stages of manufacturing, suggesting on-site production. For example, McKenzie (in press) established three categories of abalone artifacts in the artifact assemblage that correspond to stages in a generalized manufacturing sequence. Modified shell represents the early phase of manufacture, pendant blanks are representative of an intermediate phase, and perforated pendants represent a complete, finished product (Figs. 17 and 18). There is a relatively even distribution of these

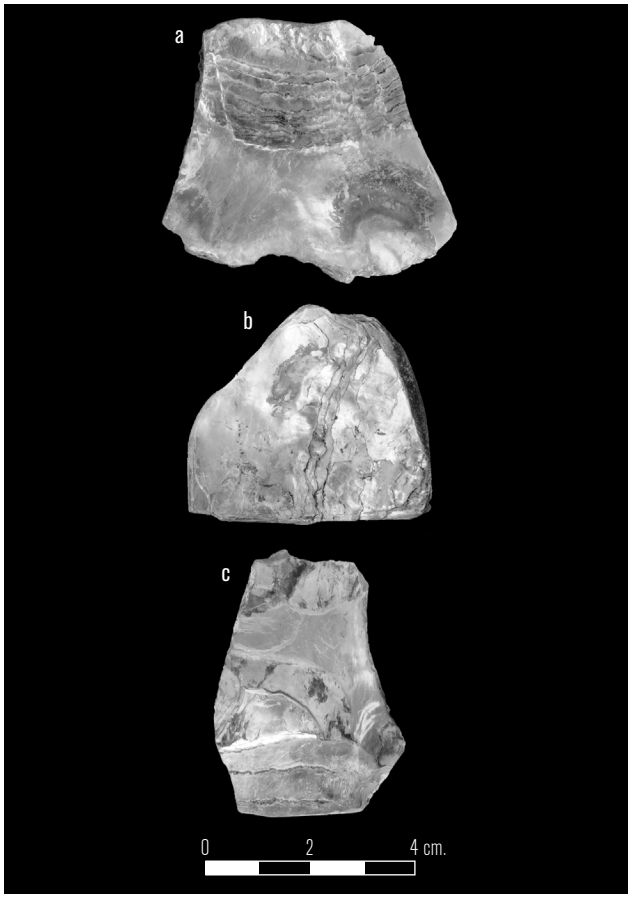


**Figure 17. Abalone pendant blanks: (a) 19.4243.12.1, (b) 119.4326.20.1, (c) 119.4243.13.1.**

categories across the site, suggesting that *ranchería* residents were producing, consuming, and discarding abalone ornamentation on site. We also have evidence that suggests that *Olivella* and *Haliotis* shell beads were produced locally at the *ranchería*. In contrast to the established sequence for *Olivella* H series bead degradation over time (Bennyhoff and Hughes 1987:135; Gibson 1976; King 1990), Hylkema and Maher (in press) argue that the staged sequence of *Olivella* H series needle-drilled wall beads at Mission Santa Clara is in fact part of a manufacturing trajectory in which the roughly-shaped H3 and H2 beads are in the early stages of production, and the H1b and H1a beads represent the completed forms (Hildebrandt et al. 1995; Hylkema and Maher in press; Fig.19). Like the abalone ornaments, all four H series *Olivella* bead types (mimicked within the *Haliotis* bead assemblage) are present across the site, even in the same features within the *ranchería*, suggesting their contemporaneity (Table 6). In addition, we recovered

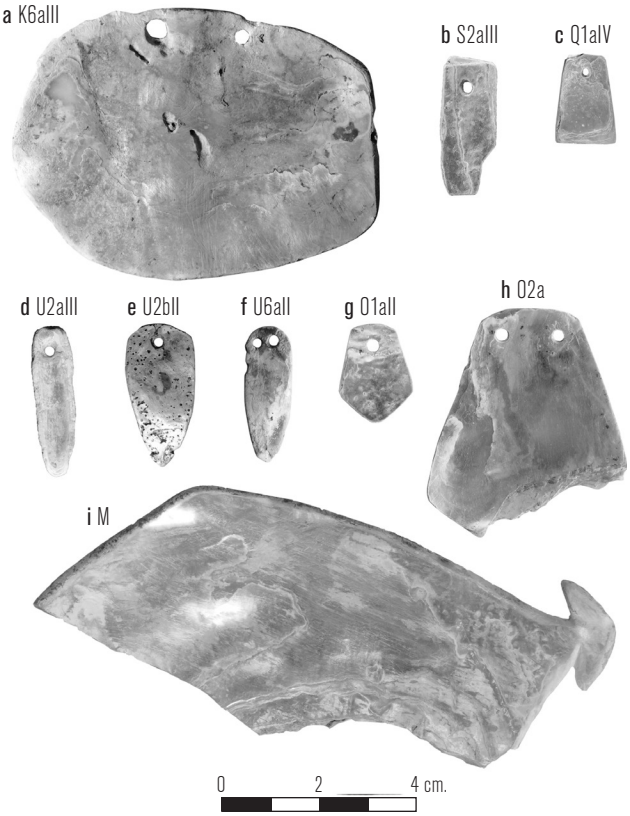


**Figure 18. Abalone pendants: (a) 115.5462.1, (b) 91.CU05-91.5.5195.2, (c) 185.6022.6.1, (d) 111.5231.4, (e) 118.5402.7.1, (f) 111.5234.3.1, (g) 194.5866.5.1, (h) 119.5313.5, (i) 196.5941.3.1.**

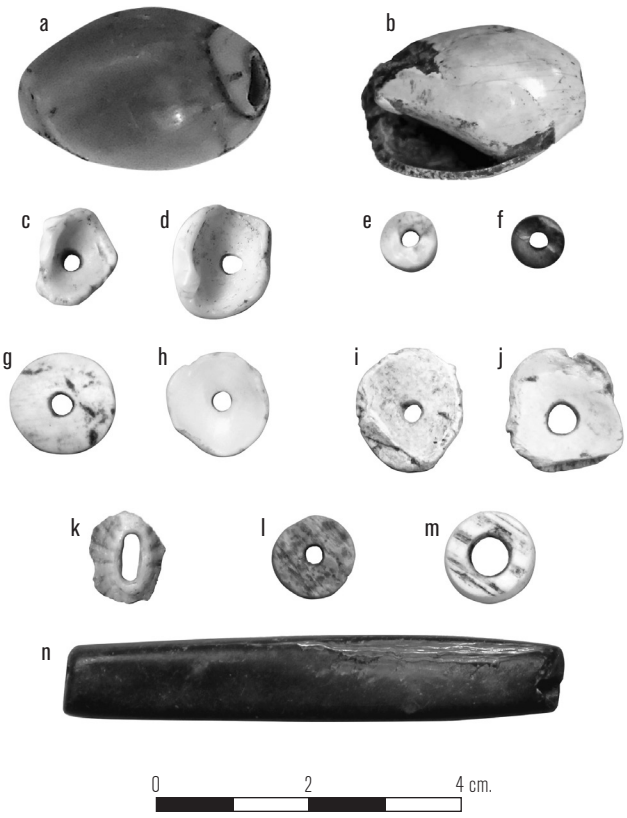


**Figure 19. Shell beads. Olivella Shell Beads: (a) A1, (b) B2, (c) E1a1, (d) E2e1, (e) G1 (unburned), (f) G1 (burned), (g) H1a, (h) H1b. Other Beads: (k) Limpet shell, (l) *Haliotis rufescens*, (m) *Saxidomus* sp., (n) *Mytilus calfornianus*.**

## Table 6

### FEATURES WITH COMPLETE SETS OF H SERIES BEADS (COUNT)

| Feature | H1a | H1b | H2 | H3 | Totals | Date of Feature Based on Imported Ceramics |
|---|---|---|---|---|---|---|
| 66 | 4 | 7 | 1 | 1 | 13 | 1784 – 1850 |
| 79 | 85 | 268 | 97 | 7 | 457 | 1822 – 1850 |
| 111 | 8 | 21 | 15 | 20 | 64 | 1822 – 1850 |
| 115 | 5 | 5 | 2 | 4 | 16 | 1822 – 1850 |
| 119 | 2 | 7 | 1 | 3 | 13 | 1822 – 1850 |
| 120 | 1 | 12 | 2 | 2 | 17 | 1822 – 1850 |
| 121 | 1 | 22 | 2 | 1 | 26 | 1822 – 1850 |
| 135 | 2 | 23 | 1 | 1 | 27 | 1784 – 1798 |
| 149 | 3 | 13 | 5 | 4 | 25 | 1822 – 1850 |
| 152 | 36 | 148 | 23 | 6 | 213 | 1799 – 1821 |
| 155 | 42 | 148 | 13 | 9 | 212 | 1784 – 1850 |
| 163 | 3 | 8 | 4 | 4 | 19 | 1799 – 1821 |
| 169 | 97 | 386 | 48 | 13 | 544 | 1784 – 1798 |
| 182 | 12 | 20 | 6 | 5 | 43 | 1822 – 1850 |
| 185 | 5 | 23 | 26 | 19 | 73 | 1822 – 1850 |
| **Totals** | **306** | **1,111** | **246** | **99** | **1,762** | |

both whole *Olivella* shells and *Olivella* detritus (97.4 g.) within our sample of the *ranchería* faunal assemblage, possibly indicative of bead making (Garlinghouse and Boone in press). While not identified at the *ranchería*, bead anvils or drilling platforms have been recovered at other locations around the mission (L. Hylkema, personal communication 2018). Furthermore, shell beads recovered from cemetery contexts at Mission Santa Clara are only of the H1a and H1b types; the roughly shaped "blanks" (H3 and H2) are missing from these ceremonial contexts (Hylkema and Van Bueren 1995; Leventhal et al. 2011). This suggests that these beads were being manufactured in the *ranchería* and the finished products then used in other contexts throughout the mission site.

Craftspeople used both stone and metal tools to produce the shell artifacts. These tools were used to abrade, chip, cut, and drill shell to construct ornaments. All of the *Haliotis* beads were drilled with metal needles, while the clam disk beads exhibited a mixture of conical and biconical drilling. While the A, B, and G Series *Olivella* beads were produced using stone drills, the E and H Series beads were drilled with a metal implement. Further research is necessary to determine if the stone-drilled beads were produced locally or imported. However, given the use of stone tools to produce abalone pendants at the mission, we cannot rule out the possibility of local production. A microscopic analysis and comparison of the abalone pendants with experimental replicates (McKenzie in press) showed that the majority of the abalone artifacts were manufactured locally using stone tools, including sandstone abraders and flaked-stone cutting implements similar to those used in coastal California during pre-contact periods (Pletka 2001; Smith et al. 2015). Only 13 of the 152 abalone artifacts (8%) were at least partially manufactured with such metal tools as iron knife blades, files, and perforating implements. Stone tools were almost exclusively used in the initial abrading and cutting steps of the manufacturing sequence. Conversely, 43% of the pendants analyzed were perforated with metal implements. The single *Mytilus* rectangular tube bead may have been drilled using a sea lion whisker drill bit, a technique described for the Santa Barbara Channel area (Hudson and Blackburn 1987:124–126).

Skilled ornament manufacturers transformed shell into a variety of bead and abalone pendant types. The assemblage of *Olivella* beads included A, B, E, G, and H Series beads (Fig. 19; Bennyhoff and Hughes 1987; Milliken and Schwitalla 2012). Hylkema and Maher (in press) grouped the A series beads (n=2,391) into predefined small (n=2,128), medium (n=262), and large (n=1) categories. We identified B2 end-ground beads (n=25) and B5 spire beads (n=2) within the B Series beads (n=27). Although not well represented, we did recover E Series beads (n=7), of the E1a1, E2a, E2a1, and E2b varieties. There were also 42 *Olivella* G1 Tiny Saucer beads and 2 G6c Oval Irregular Saucer beads among the assemblage. The H Series was the largest series of *Olivella* beads represented (n=2,045). We recovered all subtypes within this series, including H1a (n=383), H1b (n=1,277), H2 (n=278), and H3 (n=107). Like the *Olivella* series, we identified 1a, 1b, 2 and 3 "style" beads within the *Haliotis* assemblage. The collection of clam shell beads was composed primarily of the VIaII type. We identified the types of abalone pendants using Gifford's exhaustive typology (Gifford 1947). While 4 of the pendants were too fragmentary to characterize, we identified 5 different types among the other 36 specimens: disk or oval, lozenge, pentagonal, trapezoidal, rectangular, and triangular. When possible, each type was further identified by the number of perforations, edge decoration, and species of *Haliotis* used. As Table 7 indicates, nine unique types of pendants were identified.

**Table 7**

**ABALONE PENDANT TYPES (GIFFORD 1947)**

| TYPE | COUNT |
|---|---|
| K6aIII | 1 |
| M | 1 |
| O1aIII | 8 |
| O2a | 1 |
| Q1aIV | 17 |
| S2aIII | 4 |
| U2aIII | 2 |
| U2bII | 1 |
| U6aII | 1 |
| Unknown | 4 |
| **TOTAL** | **40** |

Archival evidence suggests that the economic and ceremonial use of shell beads and ornaments continued throughout the colonial period. In 1790, Governor Fages offered to pay native peoples from the Santa Clara area with strings of abalone shell to help build the Monterey Presidio. It is unclear if these were raw shells or finished ornaments, but Fages sweetened the deal by mentioning the possibility of their harvesting raw shell during their employment in Monterey (Milliken 1991).

Dancers covered themselves in ritual regalia adorned with shell, beads, and feathers and performed dances in the California missions (Lightfoot 2005; Panich 2014). Shell beads may also have been used during mourning ceremonies (Panich 2015). Within the *ranchería* assemblage, 53% of the shell beads show evidence of burning, possibly a result of funerary practices involving the destruction of personal property (Hull 2011, 2012; Hull et al. 2013; Panich 2015). Alternatively, this may be evidence of a response to epidemics during which personal objects might have been destroyed in order to sterilize residential areas (Hylkema and Maher in press).

## TRADITIONAL OBJECTS AND "CHANGING CONTINUITIES"

We recovered a number of artifacts within the Indian *ranchería* at Mission Santa Clara de Asís that are also commonly found in precolonial archaeological sites in California. This evidence indicates that while living within a new colonial space, a diverse population of indigenous craftspeople continued to use traditional raw materials (stone, bone, and shell) as the resource for making tools and other items. Some of these raw materials were available locally, but others came into the *ranchería* through trade networks or neophyte movements beyond the mission walls (Panich and Schneider 2014). To interpret these craft industries at Mission Santa Clara as simply the continuation of a precolonial cultural system would be misleading, since the setting, manufacturing techniques, producers, availability of raw materials, and consumer markets were in flux during the colonial period. When we examine these objects in more detail, looking beyond the finished product and focusing instead on the daily practices involved in making, exchanging, and using the stone, bone, and shell artifacts, we see that these objects tell a more complicated story—one of "changing continuities."

When compared with precolonial contexts, it can be seen that there are many shifts in the production and exchange of these traditional objects. For example, within precolonial contexts, ground stone was derived primarily from local sources. While *ranchería* residents continued to exploit local ground stone sources, colonial institutions brought in new material sources and tool forms, such as basalt and vesicular basalt hand stones and milling stones. The imported varieties were used side-by-side with the locally-made tools. Indeed, imported forms did not eclipse those made of local ground stone. Bone tools were also produced in precolonial times using the bones of locally available animals. We see a continued use of deer and bird bone within the missions to construct traditional bone tools such as awls and gaming pieces. In addition, *ranchería* specialists used bone from cows and other introduced artiodactyls to create gambling dice and bone tubes. Shell beads and ornaments are also present within the *ranchería* assemblage, but display significant differences when compared to similar precolonial artifacts. For the first time, groups of people in the *ranchería*, whose ancestors had lived in the Central and Santa Clara valleys, appear to be controlling the production of these highly valued objects. In addition, specialists used stone tools as well as metal drills, files, and knives to manufacture shell artifacts. The use of stone tools to grind shell may reflect conscious or unconscious choices made by native people to retain traditional methods of production, methods that could be intertwined with ideas about an artifact's value or about traditional practices associated with native identity. Furthermore, while we see the continuation of many traditional forms, Late Period abalone pendant forms such as banjo (N series) forms are markedly absent from the collection (see Hylkema 2007:419–420). Specialists continued to produce flaked tools using a core/flake production strategy. However, as with the shell bead industry, *ranchería* residents produced fine, serrated points from exotic obsidian and glass, while the locally available Franciscan chert is generally absent from the assemblage. The types or forms of tools also changed. The variation in arrow point styles may be a testament to the multi-ethnic population of the *ranchería*, which was composed of both local peoples and those from regions to the east.

Similarly, indigenous peoples used traditional artifacts in a myriad of both old and new ways within the mission context. Traditional ground stone was likely used to grind and pound local seeds and nuts, but also to process introduced foodstuffs such as corn and wheat. While projectile points produced in the mission were undoubtedly used for hunting, many historical accounts document the fact that native residents of the missions used bows and arrows during colonial military excursions. *Ranchería* residents continued to use bone artifacts

in gambling, tattooing, doctoring, and basket making. But bone was also fashioned into a new form—battens—likely using the same grinding, shaping, and polishing techniques that were used to make awls and bone tubes. The battens were then employed in a new technology—weaving. Finally, we argue that the stone, bone, and shell beads, ear tubes, and pendants retained their function as personal adornments, with both economic and ceremonial functions (Panich 2015). We should be careful, however, to avoid assuming that either an object or a function conveyed the same meaning in the colonial *ranchería* setting. For example, an elaborately decorated ear rod may have signaled one set of meanings in the native village environment, and something very different in the *ranchería* environs.

The changing continuities we observe in the production, exchange, and use of traditional material objects may be related to the negotiation not only of cultural or ethnic identity, but also of other aspects of one's social identity, aspects tied to status and gender. One of the most significant changes we observed involves objects considered of high value, and that were associated with status—obsidian, shell beads, and abalone pendants. In precolonial contexts, such objects were produced outside of the Santa Clara Valley; the Ohlone and Yokuts traded for these objects, and obtained them in nearly complete or finished form. At Mission Santa Clara, however, we see strong evidence that obsidian and shell were obtained in a raw form and then fashioned into tools and ornaments by Ohlone and Yokuts peoples within the *ranchería*. Within the mission context, native peoples were able to create their own wealth, display that wealth within the mission population, and likely trade it to people living outside the mission walls. Both access to and the consumption of high-value materials (obsidian, shell beads, and pendants)—especially those formed into highly stylized points and pendants—were visible displays of status to *ranchería* members. Obsidian was widely recognized as a material of prestige and status in California, and therefore was a status symbol that cross-cut ethnic boundaries. Within a multi-ethnic community, obsidian would have been a clear and obvious signal of status. It is tantalizing to consider the possible role of gambling, as expressed in bone hand-game tubes and dice, in the accumulation and distribution of exotic or wealth items in the new colonial setting.

Access to prestige and status may have been intertwined with gender identity. Because of their gender, indigenous men were taught Spanish and were allowed to occupy sanctioned leadership roles; for example, only men were allowed to become *alcaldes* (Bouvier 2001:158–159; Hackel 1998:123). However, for women living in the mission *ranchería*, organized labor was influenced by both Spanish and traditionally-prescribed gender roles: cooking, sewing, weaving, basketmaking, and child rearing were all traditional female tasks that were also acceptable in a Spanish ideology of gender. Archaeological evidence from the *ranchería* indicates that traditional practices commonly associated with women persisted in the *ranchería* in both public and private spaces (see Peelo et al. in press). For example, the ground stone and bone artifacts associated with female activities are found within the large, communal refuse features (Blount in press; Garlinghouse and Boone in press). Alternatively, traditional objects generally associated with men, such as flaked tools, were recovered primarily within the private household spaces (Ellison in press). Women also continued practices that likely were not as sanctioned by the Spanish, in both public and private spaces within the *ranchería*. There is evidence, for example, that at least some women were tattooed and wore highly visible and ornate ear rods, likely in public spaces (Blount in press). The relative freedom of women to openly engage in traditional practices may have been because the Spanish viewed both women and their labor as "non-threatening." Indigenous women experienced a great deal of abuse at the hands of the Spanish and were not given the same access as men to colonial systems of power. Their lives were greatly impacted by the California mission system in unique ways because of their gender. However, because of the parallels between women's economic roles in Spanish and indigenous cultures, women's traditional economic practices were allowed to continue in public spaces. In addition, women practiced traditional social, political, and possibly religious lifeways openly in the *ranchería*, and some women continued to hold positions of authority in their communities (Peelo et al. 2018). We argue that while women openly participated in permitted economic roles in the *ranchería*, they were also publicly negotiating other, less approved social and political roles. Women actively taught children about traditional practices, and

were very active in ensuring the persistence of indigenous lifeways. In addition, the continuation of traditional lifeways, knowledge, and ritual may have provided indigenous women with an opportunity to gain access to positions of power, in a colonial system that denied them such accolades.

The mission experience for *ranchería* residents was fluid, situational, temporal, multifaceted, and highly variable. Our investigation of the changes that occurred in the production, exchange, and use of traditional forms of material culture suggests that native peoples continued to construct their own identities from their own cultural perspective while experiencing the changes involved in living in mission communities. These "changing continuities" in identity were not solely tied to ethnicity, a notion of pan-Indianness (Lightfoot 2005), or even original tribal identities (Haas 2011, 2014). Concepts of status and gender were also actively constructed through daily practices as native peoples traversed between colonial and traditional identities within their *ranchería* homes.

## ACKNOWLEDGEMENTS

Albion fielded a large team of archaeologists guided by a veteran crew chief (Dave Makar), field directors (Stella D'Oro, Albert Gonzalez, Gilbert Browning, and John Ellison), a principal investigator (Sarah Peelo), a project manager (Clinton Blount), and lab directors (Stella D'Oro and Lindsley Britton). The Director of Cultural Resource Management for Santa Clara University, Linda Hylkema, provided the project with essential logistical and informational support. Other University operations staff, including the late Joe Sugg, Steve Brodie, and Don Akerland, were and remain crucial in supporting the mitigation of impacts to the significant resources in the *ranchería* at Mission Santa Clara.

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