



An Archaeological and Historical View of Quiroste Tribal Genesis

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Abstract The ethnographic Quiroste tribe has been described as the most powerful tribe on the San Francisco Peninsular coast (Milliken 1991:186). Archaeological and historical information from within their ancestral territory, especially at Año Nuevo State Park, reveals a long tradition of in situ cultural developments spanning the middle and late Holocene. Año Nuevo State Park was the center for Monterey chert stone tool production, and a source of export for economically important olivella and abalone shell. These resources, along with abundant terrestrial and marine foods and materials, established the Quiroste as a prominent polity among the many others that controlled territories throughout the San Francisco Bay Area.

Resumen La tribu etnográfica Quiroste ha sido descrita como la tribu más poderosa en la costa de del península de San Francisco (Milliken 1991:186). La información arqueológica e histórica desde adentro de su territorio ancestral, especialmente en el Parque Estatal de Año Nuevo, revela una tradición larga de desarrollo cultural in situ abarcando el Holoceno Medio y Tardío. El Parque Estatal de Año Nuevo fue el centro de producción de herramientas líticas de sílex Monterey y una fuente económicamente importante de exportación de conchas de olivella y abulón. Estos recursos, junto con la abundancia de alimentos terrestres y marinos, establecieron la Quiroste como una entidad política importante entre los muchos otros que controlaron los territorios por todo el área de la Bahía de San Francisco.

European explorers, missionaries, and colonists arriving at the San Francisco Peninsula in the early 1770s found a region controlled by a mosaic of individual

Native American tribal polities (Milliken 1991, 1995). Spanish authorities mobilized to settle the area, and native communities of the peninsula were soon inducted into one or more of the three Franciscan missions that were strategically placed among them (Mission Dolores, established 1776; Santa Clara, established 1777; and Santa Cruz, established 1791). Other villagers were attracted to the Royal Presidio of San Francisco (established 1776) and the Pueblo of San Jose de Guadalupe (established 1777).

Our study is concerned with one polity in particular, identified as the *Quiroste* by Spanish missionaries, whose members were documented at all three missions (Milliken 1991, 1995). The *Quiroste* controlled one of the most productive resource zones on the peninsular coast, with a territory ranging from Point Año Nuevo northward to Pescadero Marsh and inland into the Santa Cruz Mountains (Figure 1). Archaeological research within *Quiroste* territory reveals a long tradition of local cultural development (Hildebrandt et al. 2009; Hylkema 1991, 2002). This article provides a brief outline of key trends in their prehistory to provide contextual framework for other papers in this issue.

Recent archaeological and environmental investigations within the newly established 220-acre Quiroste Valley Cultural Preserve in Año Nuevo State Park elucidate how the *Quiroste* maintained their autonomy within a rather spatially circumscribed territory. We argue that their solution to increasing population was to manage landscapes to increase biotic resource productivity (Cuthrell et al. 2012; Lightfoot and Parrish 2009; Lightfoot et al. 2013), and to participate in a larger regional economy that emphasized the export and import of various commodities between the coast and interior (Hylkema 2002).

Key resources within *Quiroste* territory included fish, mollusks, sea mammals, sea birds, and marine aquatic plants within a complex littoral zone paralleling narrow coastal grassland terraces, as well as interior upland meadows interspersed among mixed hardwood and coniferous forests. The *Quiroste* ranged far into the uplands of the Santa Cruz Mountains to hunt primarily mule deer (*Odocoileus hemionus*), tule elk (*Cervus canadensis* ssp. *nannodes*), and occasionally pronghorn antelope (*Antilocapra americana*), as well as to gather and process vegetal foods. Bedrock mortar milling stations are scattered among mixed hardwood forests on the steep ridges and knolls from the coastal foothills to the crest of the Santa Cruz Mountains, attesting to the considerable labor that the coastal people undertook to add nut crops to their diet.

The *Quiroste* also augmented their subsistence needs through offshore fishing via tule balsa boats. As noted by Governor Fages in 1775, “The Indians at Año Nuevo are very clever at going out to fish embarked on rafts

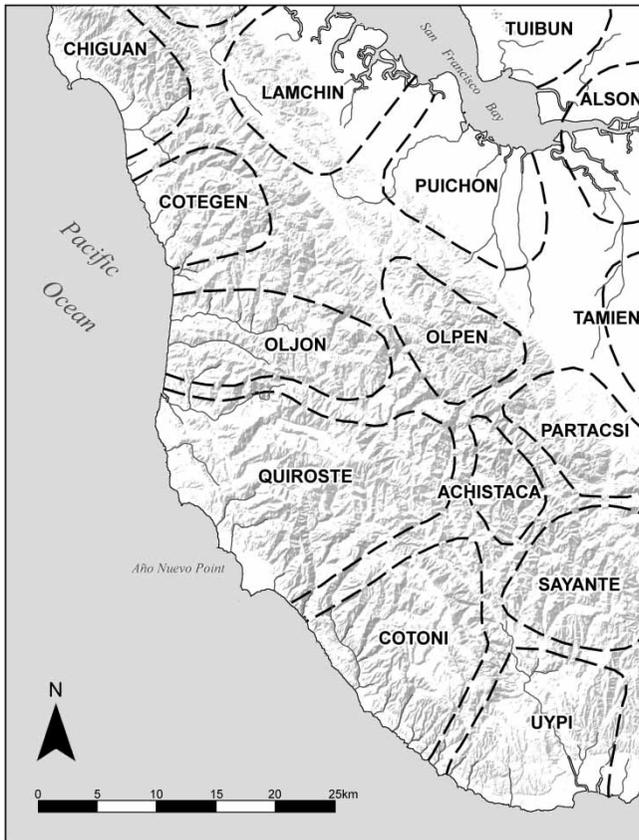


Figure 1. Approximate territories of the Quiroste and nearby polities, after Milliken (1995), with modifications.

of reeds, and they succeed, in good weather, in getting their provisions from the sea” (Fages 1937:70).

The *Quiroste* also controlled the source location of Monterey chert, a siliceous shale that was made suitable for stone tool use through the controlled application of heat (Parsons 1987). This lithic source, easily accessed at an exposure on Point Año Nuevo, is ideally situated within one of the most biologically productive zones for sea mammals on the central California coast (Gifford-Gonzalez 2011; Hildebrandt et al. 2009). Consequently, various stages of chipped stone tool manufacturing debris are abundantly evident among all of the regional sites regardless of temporal affinities (Hylkema 1991).

The development of increasingly complex social organizations throughout interior central California involved wealth displays and exchanges of exotic

and labor-intensive goods, such as shell beads and ornaments (Hughes and Milliken 2007:259–271; Milliken et al. 2007). This put the *Quiroste* into an advantageous position as providers of economically important olivella (*Olivella biplicata*) shells, a raw material for bead-making, as well as red abalone (*Haliotis rufescens*) and black abalone (*Haliotis cracherodii*) shells that were used to make pendants and ornaments. During the Bonny Doon Phase (ca. 900–230 BP) of the Late Period, non-dietary olivella shells became common constituents at excavated archaeological sites in *Quiroste* territory, although shaped and drilled beads are rare.

Quiroste Prehistory

Archaeological studies of the cultural prehistory of the peninsular coast and northern Monterey Bay, also referred to as the Santa Cruz Locality, have found that the majority of coastal sites studied thus far date from the middle and late Holocene and represent adaptive strategies developed after the stabilization of sea level ca. 6,000 years ago (Breschini 1983; Hildebrandt et al. 2009; Hylkema 1991, 2002; Jones et al. 2007; Masters and Aiello 2007:35–51; Milliken et al. 2007). Figure 2 identifies several key sites mentioned in this article, and radiometric results are presented in Supplementary Table 1.

Within the Santa Cruz Locality, four general archaeological phases have been defined based on (a) changing combinations of artifact forms from temporally discrete archaeological sites, and (b) proposed decreases in group mobility through time. These are the Metcalf Phase (ca. 10,000–5,500 BP), the Sand Hill Bluff Phase (ca. 5,500–3,000 BP), the Año Nuevo Phase (ca. 3,000–900 BP), and the Bonny Doon Phase (ca. 900 BP to Spanish colonization) (Jones et al. 2007:137; Milliken et al. 2007:104). Figure 3 shows temporal changes in key Santa Cruz Locality artifact types throughout these phases. Though absolute chronological boundaries are difficult to distinguish in this region, several general trends emerge from comparison of sites throughout the Santa Cruz Locality. One of the most noticeable diachronic changes in artifact composition is among combinations of projectile point forms and the source materials from which they were made. Also, greater use of olivella shell beads and abalone pendants, which served as markers of wealth and group membership among peoples throughout central California, gave a significant economic advantage to coastal groups such as the *Quiroste*, who acted as the suppliers of raw material for these prized goods. Below we outline the basic characteristics of the Sand Hill Bluff, Año Nuevo, and Bonny Doon phases.

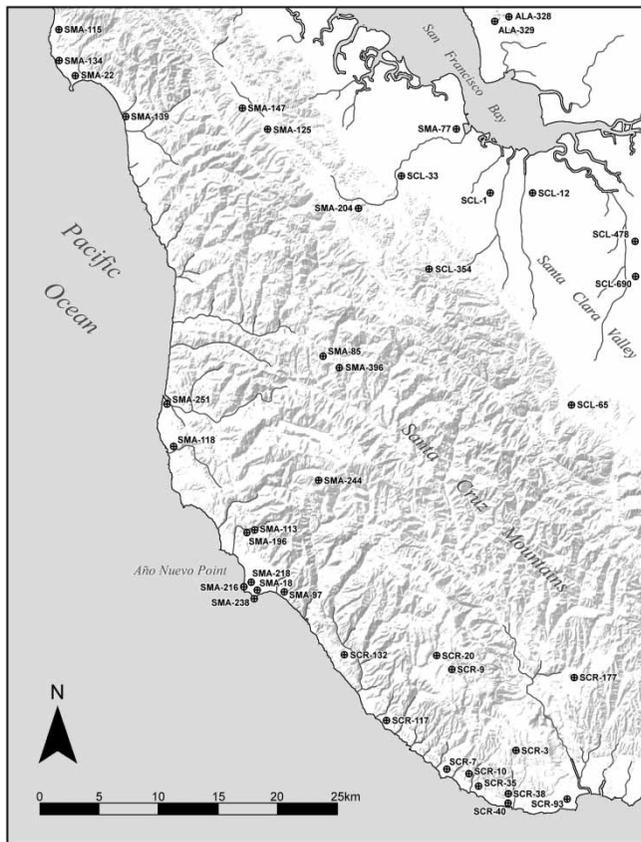


Figure 2. Locations of archaeological sites mentioned in this article.

Sand Hill Bluff Phase (ca. 5,500–3,000 BP)

Several archaeological sites within the Santa Cruz Locality and San Francisco Peninsula dating to the Sand Hill Bluff Phase produced artifacts that suggest relatively high group mobility. Given that Franciscan chert sources are spatially restricted to the Santa Clara Valley and Monterey chert to the coastline around Año Nuevo Point, the distribution of these materials serve as markers of exchange and travel. Although locally available Monterey chert from the Año Nuevo source typically dominates chipped stone inventories in most Santa Cruz Locality sites through time, the regular occurrence of non-local lithic materials and the variety of point forms during the Sand Hill Bluff Phase indicates higher group mobility than in the subsequent Año Nuevo Phase, when

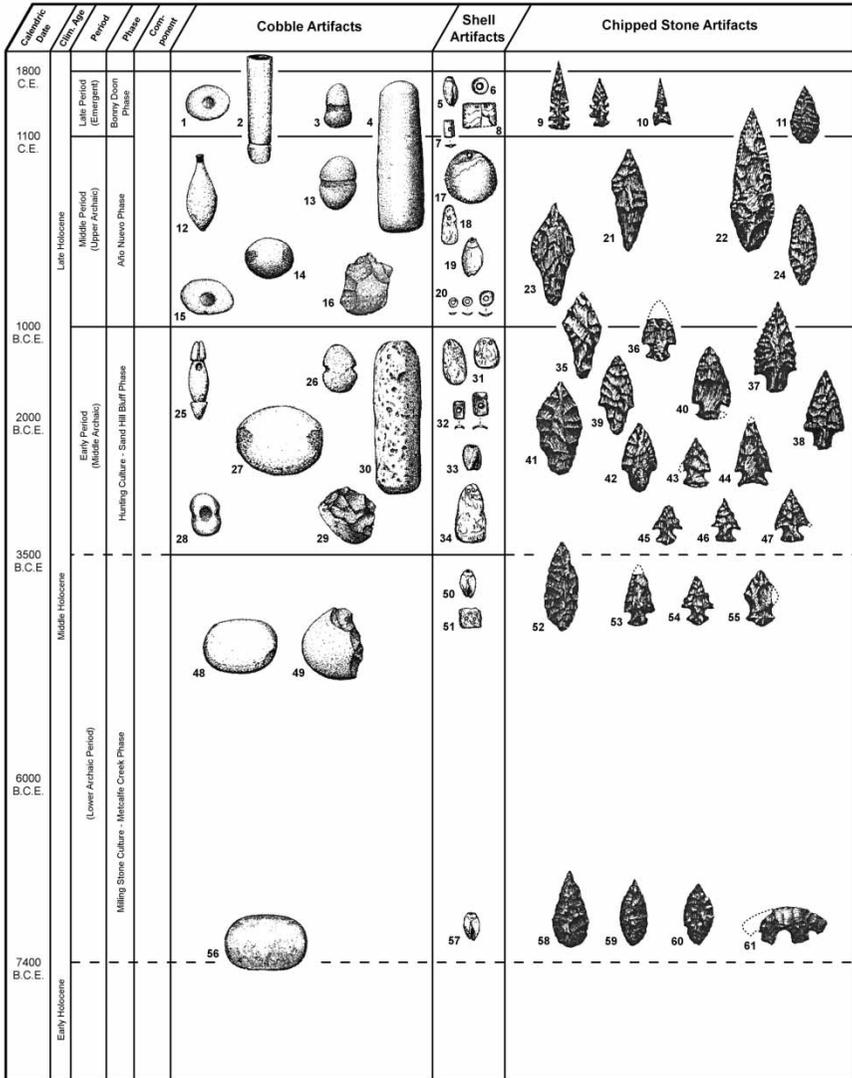


Figure 3. Artifact and temporal components for the Santa Cruz Locality (Hylkema, in Milliken et al. 2007:120–121). Artifact scale is approximate and artifacts selected for illustration are represented at multiple sites. Drawings by Mark Hylkema. 1 – Sandstone bi-pitted cobble, SMA-134; 2 – Chlorite schist tobacco pipe, SCR-117; 3 – Andesitic grooved sinker, SMA-238; 4 – Sandstone pestle, SCR-20; 5 – *Olivella biplicata* type A1 series bead, SMA-244; 6 – Steatite disk bead, SMA-244; 7 – *Olivella* M1a thin rectangle bead, SCR-20; 8 – *Haliotis* type RC5e ornament, SMA-238; 9 – Napa obsidian Stockton-Serrated points, SMA-244; 10 – Monterey chert Desert Side-notched point, SCR-20; 11 – Napa obsidian lanceolate point, SMA134; 12 – Andesitic piled charmstone,

(Continued on page 231)

Figure 3. (Continued) SCR-132; 13 – Sandstone grooved sinker, SCR-132; 14 – Granitic shaped hand stone, SCR-132; 15 – Sandstone bi-pitted cobble, SCR-132; 16 – Basaltic cobble chopper, SMA-218; 17 – *Haliotis* type CA3h ornament, SCR-10; 18 – *Haliotis* type OB3 ornament, SCR-9; 19 – *Olivella biplicata* type A1 series bead, SMA-18; 20 – *Olivella biplicata* type G series beads, SMA-218; 21 – Monterey chert Año Nuevo Long-stemmed point, SCR-9; 22 – Napa obsidian lanceolate point, SMA-97; 23 – Monterey chert Año Nuevo Long-stemmed point, SMA-218; 24 – Napa obsidian lanceolate point, SMA-18; 25 – Serpentine perforate charmstone, SCR-93; 26 – Sandstone edge-notched sinker, SMA-77; 27 – Granitic hand stone, SCR-9; 28 – Granitic bi-pitted cobble, SCR-7; 29 – Quartzitic cobble chopper, SCR-7; 30 – Sandstone pestle, SCR-40; 31 – *Haliotis* type SC3 and FA5 ornaments, SMA-77; 32 – *Olivella biplicata* L series rectangle beads, SMA-77; 33 – *Olivella biplicata* type B series barrel bead, SCR-38; 34 – *Haliotis* type OK5 ornament, SMA-77; 35 – Monterey chert Año Nuevo Long-stemmed point, SMA-218; 36 – Monterey chert notched point, SCR-9; 37 – Franciscan chert Rossi Square-stemmed point, SCR-9; 38 – Monterey chert Rossi Square-stemmed point, SCR-7; 39 – Monterey chert shouldered contracting-stemmed point, SCR-40; 40 – Chalcedony notched point, SCR-7; 41 – Monterey chert contracting-stemmed biface, SCR-7; 42 – Monterey chert shouldered contracting-stemmed point, SCR-7; 43–47 – Franciscan chert notched points, SCR-7; 48 – Sandstone hand stone, SCL-65; 49 – Quartzitic cobble chopper, SCR-177; 50 – *Olivella biplicata* A1 series bead, SCL-832; 51 – *Haliotis* type H2a bead, SCL-832; 52 – Monterey chert bifaces, SMA-196; 53 – Monterey chert notched point, SCR-249; 54 – Monterey chert notched point, SCR-313; 55 – Monterey chert notched point, SCL-65; 56 – Sandstone hand stone, SCL-178; 57 – *Olivella biplicata* type A1 series bead, SCL-178; 58–60 – Monterey chert lanceolate points, SCR-177; 61 – Monterey chert eccentric crescent, SCR-177.

lithic assemblages comprise almost exclusively Monterey chert and a few North Coast Range obsidians (Hylkema 1991).

Sand Hill Bluff Phase sites share similar mixes of corner and side-notched point forms, as well as the larger Rossi Square-stemmed type (defined by Jones and Hylkema 1988) and shouldered contracting-stemmed forms made from Monterey and Franciscan cherts. Points and bifaces of locally available chalcedony, opal, and quartz (Hylkema 2012), as well as of imported obsidian (sourced from the North Coast Ranges and eastern Sierra Nevada), are found regularly in sites throughout the interior Santa Clara Valley, the Scotts Valley basin, and along the coastlines of Santa Cruz and San Mateo counties.

The Sand Hill Bluff Phase site CA-SCR-7 has produced nearly 200 weapon tips representing a wide variety of notched dart and spear head forms (Hylkema 1991, 2002), including the Rossi Square-stemmed type (Jones and Hylkema 1988), various shouldered contracting-stemmed forms, and a range of lanceolate forms. Corner- and side-notched points, often with diverse basal styles and serrated blade margins, are the most frequently recovered types. Points made from non-local lithic materials composed 32 percent of the

CA-SCR-7 assemblage. Although Franciscan chert projectile points are present in these coastal sites, an absence of associated debitage suggests that they arrived with people who had access to the Santa Clara Valley source. Conversely, points and debitage from coeval archaeological site CA-SCL-65 in the town of Saratoga shows a reversed ratio of Franciscan to Monterey cherts, but produced similar point forms (Fitzgerald 1993). This parallel order probably represents the extent of coast and interior travel by the same or a closely related social group.

Lithic assemblages with similar point type and source material attributes are also evident at other sites on both sides of the Santa Cruz Mountains during this phase, including CA-SCL-33, CA-SCR-3, SCR-10, SCR-38, SCR-40, and SCR-313, as well as the lower components of CA-SCR-9 and CA-SCR-20 (Jones et al. 2000; Fitzgerald 1993; Hylkema 1991, 2002). At CA-SCR-3, points made from exotic Franciscan chert and obsidian composed 13 of 34 (38.2 percent) specimens, and 15 of the 27 (55.5 percent) points recovered at CA-SCR-9. Compare this ratio with Año Nuevo Phase site CA-SMA-218, where 98 percent of the recovered points and bifaces ($n = 100$) were made from Monterey chert and did not include any of the earlier notched or square-stemmed forms or Franciscan chert. On the coast, notched forms have their origins in even older Metcalf Phase times (Jones et al. 2000; Milliken et al. 2007:120–121; Wesson and Bobo 1999). One site in particular, CA-SMA-196 in Quiroste Valley, may be as old as Metcalf Phase given the presence of two Monterey chert side-notched points and a basin-shaped milling slab in a deposit completely lacking organic material such as bone, shell, or charcoal, suggesting an archaic date. Regardless of their temporal origins, notched point forms and the Rossi Square-stemmed type dominate the Sand Hill Bluff Phase and are totally absent during the later Año Nuevo Phase.

Other attributes of this temporal phase include the common occurrence of pebble choppers or hand axes made from andesitic and quartzitic cobbles, possibly used to split larger bones to extract marrow from larger prey species. Mixed assemblages of milling tools are evident, and although milling slab fragments are infrequent, numerous discoidal hand stones that often exhibit deliberately shaped shoulders and slightly beveled axial ends are regularly recovered. Sand Hill Bluff phase assemblages also include mortars and pestles, an indication of the increasing value of acorns and possibly other plant foods to the diet, as well as greater dependence upon storable food resources. At CA-SCR-9, which has a Sand Hill Bluff Phase lower component and a transitional Año Nuevo Phase upper component, nearly equal representations of both sets of milling gear were found throughout the two-meter deep midden deposit. The

CA-SCR-9 assemblage included nine partial mortars, 13 pestles, 14 handstones, and two partial milling slabs (Hylkema 1991).

Also common during this phase are bi-pitted cobbles that were possibly used as anvils to split shellfish or as shell-meat tenderizers (these become increasingly common during the subsequent Año Nuevo Phase; Hylkema 1998). Distinctive discoidal stone fishing-net weights with wide notches appear at CA-SCR-3 and other regional sites. Olivella shells and beads are not very common in Sand Hill Bluff Phase sites, but thick rectangular L series (Jones et al. 2007:134–136) and whole olivella A series and “barrel” beads representative of this phase have been found at CA-SCR-38 and CA-SCR-93 (Hylkema 1991).

Año Nuevo Phase (ca. 3,000 to 900 BP)

The Año Nuevo Phase saw a change in lithic materials, with bifaces and points made from Monterey chert (and less commonly from exotic obsidian) becoming the exclusive chipped stone source used throughout the coastal and interior upland zones of the Santa Cruz Mountains and peninsular coast (Hylkema 1991; Milliken et al. 2007). This corresponded to a time of greater artifact diversity and social complexity among peoples living in the valleys and oak woodlands surrounding San Francisco Bay, where an increasing reliance on stored nut crops has been credited as a key element leading to a greater level of social complexity and possibly to greater territorial circumscription, with a corresponding reduction in group mobility (Basgall 1987; Breschini 1983; Hylkema 2007; Milliken et al. 2007).

During this time, two economic spheres developed and interacted. Where coastal communities maintained an older adaptive strategy of logistical foraging, people of the Bay Area developed leadership and membership institutions and permanent residential bases, as evidenced by the large cemeteries and expressions of monumentality in mounds such as CA-ALA-328, CA-ALA-329, CA-SCL-1, and many others (e.g., Hylkema 2002; Leventhal 1993; Lightfoot and Luby 2002; Milliken et al. 2007; Nelson 1909). Through these enduring institutions, the many Native American polities present at the time of Spanish colonization probably began to coalesce at this time (Hylkema 2007:397–420).

This is also when a population from the interior Livermore area, manifested as the Meganos Tradition, entered the southeast bay and encountered people represented archaeologically by the Berkeley Pattern (Hughes 1994:81–89). Evidence of increased violence and conflict during this time is apparent (Allen 2012:197–216; Hylkema 2002:260), and was particularly evident at site

CA-SCL-478 in the Santa Clara Valley, dated ca. 2,000–2,500 BP (Wiberg 2002). This expression of increased violence arguably could have resulted in the need for cohesive mechanisms of kinship and alliance to enforce territories and defense, or from which to make offensive strikes. These types of population movements and territorial disputes may have led the ancestral Quiroste to become more spatially restricted and focused on localized resources.

On the peninsular coast, Año Nuevo Phase sites CA-SCR-9 (upper component), CA-SMA-18, CA-SMA-218, and others contain voluminous deposits of dietary shell (principally California mussel [*Mytilus californianus*]), and a variety of faunal remains including marine and terrestrial mammals as well as fish and birds. CA-SCR-9 produced 1,477 faunal bone specimens, many identified taxonomically, and >80 kg of marine shellfish remains per m³. At CA-SMA-218, Año Nuevo Phase chipped stone artifacts were associated with a large collection of northern fur seal (*Callorhinus ursinus*) elements that composed nearly half of the identified faunal assemblage. In contrast, the coeval shell-rich upland site CA-SCR-9, located ca. 7 km from the coast, was dominated by large numbers of deer bone elements with only a few fur seal bones. These bones, along with other seasonally diagnostic faunal elements, suggest a year-round presence in the uplands with regular visits to Año Nuevo for access to Monterey chert and fur seals. However, archaeological surveys indicate that the larger mortuary sites were situated on the coastal terraces rather than in the uplands (Hylkema 1991).

Regional sites also contain large quantities of Monterey chert debitage (Hylkema 1991, 2002; Hildebrandt et al. 2009). For example, CA-SMA-18 produced 258.8 flakes per m³, 98 percent of which was Monterey chert, and CA-SCR-132 produced 871 flakes per m³, with 99 percent Monterey chert. At CA-SMA-218, Unit 7 produced 17,304 specimens (9.3 kg), for a debitage density >90 kg/m³. This site also produced 339 bifaces and points that were almost exclusively of the Año Nuevo Long-stemmed type, along with preforms in various stages of manufacture. This pattern of staged point reduction sequences is mimicked at nearly all other contemporaneous local coastal sites (Hylkema 1991). A virtual absence of Franciscan chert artifacts at CA-SMA-218 and other coastal sites during the Año Nuevo Phase implies that the coastal cultures no longer accessed the Santa Clara Valley lithic source.

Along with Franciscan chert, notched point forms disappear during this phase. The Año Nuevo Long-stemmed point type defined by Jones and Hylkema (1988:163–186), with lesser numbers of large and small obsidian lanceolates from North Bay sources, dominate the projectile point styles nearly to the exclusion of all others forms for over 1,500 years. Obsidian lanceolates pair

with long-stem points at sites CA-SMA-18, CA-SMA-97, CA-SMA-218, and interior bay shore site CA-SMA-77. Situated on the San Francisco Bay shore side of the peninsula, CA-SMA-77 produced eight long-stems and four obsidian lanceolates from among 14 points. Various stages of long-stemmed point manufacture are evident at most sites in the region, especially CA-SMA-218 (285 bifaces, 54 projectile points; 82 percent of identified points being long-stemmed) and CA-SMA-238 (>400 bifaces at all reduction stages) at Año Nuevo Point (Hylkema 1991). At nearby site CA-SCR-132, two Año Nuevo Long-stemmed points were recovered, as well as several bifaces showing the long-stem reduction sequence, all found above a dated floor feature with a single Franciscan chert Rossi Square-stem point found 20 cm below the feature. Two radiocarbon dates separate the components well (WSU No. 3205, *Haliotis* sp., U-4, 30–40 cm, $1,900 \pm 50$; WSU No. 3231, charcoal, U-4, 60–70 cm, $5,240 \pm 100$ [Hylkema 1991:220–239]).

The Año Nuevo Long-stemmed type defined by Jones and Hylkema (1988) was first described by Dr. Bert Gerow of Stanford University, who recovered eight of them (as previously noted) from CA-SMA-77, a mortuary site along the southwestern San Francisco Bay shoreline (Gerow and Force 1968; Justice 2002:257).¹ Findings from this site led Gerow to propose an “Early Bay Tradition” that was initially distinct from sites of the East Bay and San Joaquin Delta (i.e., the Lower Berkeley Pattern), but eventually merged with other contemporary populations (Gerow 1974). A result of this “convergence” was the development of the subsequent Upper Berkeley Pattern, as proposed by Fredrickson (1974:57–73), sometime around 2,500 BP (Milliken et al. 2007:104). Interior Bay Shore and Santa Clara Valley populations trended towards an increased reliance on stored nut crops, with substantial reductions in group mobility and increases in social hierarchy (Basgall 1987; Bennyhoff and Hughes 1987; Hylkema 2002; Lightfoot and Luby 2002).

On the coast, milling tool assemblages continued to include hand stones and milling slabs, as well as mortars and pestles, an indication of the continued need to pursue a diversified nut and seed food harvesting strategy. Increasing numbers of grooved and edge-notched stone weights, along with bone fishing gorges, suggest a greater emphasis on line fishing than during the previous Sand Hill Bluff Phase, but faunal data are currently lacking (see Gobalet 1992). Bone scapula saws, awls, and fragments of whale rib and abalone prying tools have been noted at several sites (Hylkema 1991, 2002).

Whole olivella type A series beads and unmodified olivella shells are present at most coastal sites in this phase (Hylkema 1991, 2002), reflecting their increased valuation among interior cultures, but shaped beads are nearly absent, with only a

few olivella type G series saucer beads recovered at CA-SCR-9 and CA-SMA-218. Whole olivella shells are also present in most sites, albeit in low numbers. It appears that the export of olivella beads or whole shells to California's interior was one component of coastal peoples' economies during this time.

In sum, two distinct traditions developed during the Año Nuevo Phase. Peoples in the interior San Francisco Bay area (Berkeley Pattern) shifted toward greater reliance on stored food resources, and more pronounced social hierarchies developed. In contrast, peoples living near the coast continued to pursue more generalized subsistence strategies, and large, permanently occupied sites are much less common here than in the vicinity of the Bay. Expressions of wealth and social hierarchy do not seem very apparent in coastal sites of the Año Nuevo Phase. However, unusually large obsidian lanceolate blades that may have been prestige items have been found at several coastal sites, including CA-SMA-18 and CA-SMA-97 (Hildebrandt et al. 2009; Hylkema 1991).

Bonny Doon Phase (ca. 900 BP to Spanish Colonization)

On the coast, many cultural attributes that characterized the Año Nuevo Phase remained constant between ca. 3,000 and 900 BP, but shortly thereafter changes in technology and social organization within the San Francisco Bay region resulted in increasing territorial circumscription. These changes are illustrated by the large number of historically documented tribal polities in the Santa Cruz Locality, including the *Quiroste*.

Within the greater San Francisco Bay area, a trend toward more complex social organization appears to have gained momentum after 1,300 BP with the advent of the Middle/Late Transition (ca. 1,100–900 BP) and the Late Period, also referred to as the Augustine Pattern (Fredrickson 1974:57–73). This was a time of cultural transition that replaced earlier artifact assemblages, particularly of olivella shell beads and abalone pendants, with new types that served as markers of wealth and specialized social group membership (Bennyhoff and Hughes 1987; Groza 2002; Hughes 1994; Milliken et al. 2007; Hylkema 2002, 2007). Higher densities of these shells at coastal sites during this phase indicate that coastal peoples increased collection in response to greater demands for these raw materials by peoples living in the interior. Mortuary contexts in interior sites throughout central California display large increases in olivella and abalone shell goods after the Middle/Late Transition (ca. 1,100–900 BP), and up to the Spanish Mission Period (Hughes 1994; Hylkema 2007; Schwitalla 2013).

Hylkema (1991) compared the volumes of olivella shells from two Año Nuevo Phase sites (upper component CA-SCR-9 and CA-SCR-132) with two Bonny Doon Phase sites (CA-SMA-97 and CA-SMA-244). The earlier sites produced a combined total of 4.3 olivella shells/m³ of excavated deposits, while the later ones produced 64 olivella shells/m³. CA-SMA-19 produced 3,799 olivella specimens (681 whole) from 0.8 m³ of deposits (4,748.8 shells/m³), most of which had been bleached by heating. Eight AMS dates (six from California mussel shell, two from charred botanical remains) from CA-SMA-19 ranged between ca. 620–300 cal. B.P (Supplementary Table 1). Activities associated with olivella bead production, including raw material collection, firing, and bead blank cutting, clearly indicate substantial investments of labor during the Late Period Bonny Doon Phase, but drilled and shaped beads are rare.²

During the Bonny Doon Phase, the spread of bow and arrow technology throughout the Santa Cruz Locality is indicated by the presence of small, serrated lanceolate obsidian points (Stockton Serrate type; SS) and the Desert Side-notched (DSN) type. At CA-SMA-244, five obsidian SS points were recovered from 7.5 m³ of excavated deposits, as well as numerous talc-schist disk beads. All points were from the Napa Valley source and produced hydration readings ranging between 1.3 and 1.7 μm (Hylkema 1991:349). At CA-SCR-20 (the Bonny Doon site), three obsidian SS points from the Napa Valley source were recovered from the upper 50 cm and yielded hydration rim readings of 1.2–1.4 μm (Hylkema 1991:189–190). Many DSN points were also found, documenting co-occurrence of these two types. This was also true of CA-SMA-113 in Quiroste Valley (Cuthrell et al., this issue). It is likely that larger dart tips, possibly Año Nuevo Long-stems, were still in use too. These may have been the point type described by Fr. Palou of the Rivera expedition in 1774 when traveling in the Santa Cruz Mountains: “They carried short lances having curved blades made of flint as well worked as if it had been iron, the only difference being these have no grain” (Stanger and Brown 1969:141).

Tubular stone tobacco pipes appear during this phase as well. Fragments of a large one were noted at CA-SMA-97 (Hylkema 1991), and a small pipe was recovered from CA-SCR-117 (Fitzgerald and Ruby 1997).

Research on landscape management practices presented in this issue indicates that people in Quiroste territory used fire to alter natural patterns of vegetation succession, maintaining open grasslands around Quiroste Valley by the early part of the Bonny Doon Phase (Lightfoot et al., this issue). Since substantial investments of time and labor were required to maintain landscapes with more highly productive and reliable yet more costly resources, landscape management likely indicates a high degree of stability in territories during this time.

Quiroste Tribal Identity

With the advent of Spanish colonial contact in the 1770s, encounters with the *Quiroste* demonstrated that they were a well-organized polity whose management practices maintained open coastal landscapes that produced predictable herbaceous seed and geophyte resources in their territory (for discussion of the ecological effects of burning, see Cuthrell, this issue). Extensive burned grasslands were recorded by the members of the Portola expedition in the fall of 1769, both in *Quiroste* territory (Supplementary Figure 1) and throughout “Ohlone” territory (Brown 2001; Browning 1992). Fr. Juan Crespi pointedly observed that they burned the meadows “for a better yield of the grass seeds that they eat” (Brown 2001:565). On the journey, Crespi also observed stands of burned California hazel (*Corylus cornuta* var. *californica*) south of Santa Cruz (Cuthrell, this issue; Stanger and Brown 1969:79).

In their initial foray into *Quiroste* territory in late October 1769, members of the Portola expedition were guided to a *Quiroste* village that we believe is site CA-SMA-113 along Whitehouse Creek, where they were hosted and recorded several insightful observations. Crespi wrote:

Here we stopped close to a large village of very well-behaved good heathens, who greeted us with loud cheers and rejoiced greatly at our coming. At this village there was a very large grass-roofed house, round like a half-orange, which, by what we saw of it inside, could hold everyone in the whole village. Around the big house they had many little houses of split sticks set upright ... These heathens presented us with a great many large black and white-colored tamales: the white tamales were made of acorns, and they said that the black-colored ones were very good too. They brought two or three bags of the wild tobacco they use, and our people took all they wanted of it. One old heathen man came up smoking upon a very large and well-carven Indian pipe made of hard stone. The Indians almost all carry tall red-colored staffs, some with feathers; they presented four of these staffs to Sergeant Don Francisco Ortega [Stanger and Brown 1969:88].

The ceremonial use of tobacco in the region was also noted by Father Palou in 1774. Near San Bruno, he presented the native people with glass beads and tobacco and wrote:

...upon seeing [the tobacco] they named it with the same term as at Monterey, *sauans*; they set to smoking, and I noticed used the same ceremony of

blowing the smoke upwards, saying some words with each puff: I could understand only one of them, which was *Esmen*, meaning Sun. I saw they had the same custom of the headman's smoking first and then giving the pipe to another, when it goes around among all of them [Stanger and Brown 1969:141–142].

At Casa Grande, Portola noted that the village was composed of some 200 people (Companys 1983:384). Although the Quiroste clearly held a numerical advantage over the small group of explorers, they displayed great hospitality, as noted by engineer Miguel Costanso:

The Indians, advised by the scouts of our coming to their lands, received us with great affability and kindness, and, furthermore, presented us with seeds kneaded into thick pats. They also offered us some cakes of a certain sweet paste, which some of our men said was the honey of wasps; they brought it carefully wrapped in the leaves of the Carrizo cane, and its taste was not all bad. In the middle of the village there was a large house, spherical in form and very roomy; the other small houses, built in the form of a pyramid, had very little room, and were built of split pine wood. Because the large house so surpassed the others, the village was named after it [Browning 1992:107].

Costanso also wrote that they were furnished with four guides from the village of Casa Grande who showed them the way to Pescadero after they left Whitehouse Creek. He gives a positive impression of the landscape and mentioned that they met several Indians along the way who were actively engaged in harvesting seeds from the meadowlands: “To us, the land seemed rich and of good quality; the watering places were frequent; and the natives the best disposition and temper that we had yet seen” (Browning 1992:109).

Later expeditions sought out the Quiroste at the village that came to be called the *Rancheria de la Casa Grande*. In December 1774, Father Francisco Palou observed that near the big house was a cemetery, “in which was planted a high pole, this being the monument used by the heathen for the sepulchers of the chief men of the village” (Bolton 1926:295).

Mission registers note that many Quiroste identified themselves as being from a coastal village called *Mitine* (also *Mutene*, or *Mitline*) that may have been the site of Casa Grande (Brown 1973; Merriam 1968). It was said to be on the coast west of a mountain village named *Chipletac*. Another village called *Churmutce* (San Rafael) may have been in Pescadero Valley (Milliken 1991:459).

The *Quiroste* people are credited with leading the first active resistance to Spanish colonialism in the bay area. In 1791, a 60-year-old *Quiroste* headman named Charquin was baptized at the Mission San Francisco outstation in San Pedro Valley. He left eight days later, possibly disenchanted that a neighboring chief, Lachi of the Oljon tribe of San Gregorio Creek, was given special status by the Spanish authorities (Milliken 1991:186). Milliken noted that at the time of his baptism, Charquin did not have any relatives at Mission San Francisco, while Lachi did:

[Lachi] was part of a family already intermarried with one of the most important Christian families of Mission San Francisco, that of *Pruristac* captain Luciano Tiburcio Mossues. The *Quiroste* had been the largest, most powerful group on the Pacific Coast between the Golden Gate and Monterey Bay. Yet in 1791 they found themselves outsiders in the mission network of status and power [Milliken 1991:186].

In 1793, missionaries visiting the *Quiroste* villages learned they were providing sanctuary to several fugitive neophytes. By late April or May 1793, Spanish soldiers sought out and captured Charquin and he was sent as a prisoner to the Santa Barbara Presidio. In retaliation, on December 14, 1793, several *Quiroste* under the leadership of at least two men named Ochole and Pella attacked and burned buildings at Mission Santa Cruz.

Spanish soldiers were immediately transferred to Mission Santa Cruz as reinforcements and scouts were sent into the mountains to capture the *Quiroste* ringleaders. In February 1794, it was reported that Indians in the Santa Cruz Mountains were making arrows, presumably to carry out a second attack on the mission (Milliken 1991:189–190, 1995:120). In the same month, a raid on the remaining *Quiroste* holdouts by a small group of neophytes resulted in the capture of Pella and seven other *Quiroste* people. Soon afterward, a large number of people from the “San Bernardino district,” which encompassed *Quiroste* territory, joined Mission Santa Clara. In 1794, 224 neophytes from this district were baptized at the mission, more than twice as many as in any other year (Milliken 1995:274). In 1795, Charquin escaped from the Santa Barbara Presidio, but he was recaptured. By April 1796, both Charquin and Ochole were imprisoned at the San Francisco Presidio. At this time, they were transferred to the Monterey Presidio and then to the Presidio of San Diego, where both men died in 1798.

Yet, more than two generations after most of the *Quiroste* people had been brought into the missions, a local Native American presence in *Quiroste* territory continued. In 1857, Alex Garvey, a San Mateo County surveyor working near Skyline, came across “Indian huts” on a shelf in the side of a canyon. Historian

Alan Brown noted that “These people—remnants of who-knows-what groups (perhaps the Mission Indian village in Redwood City)—seem to have gone to work for the local Basque sheep rancher, Juan Mendicoa, when he settled nearby at the Laguna del Corazón in 1859” (Brown 1973:18).

Conclusion

The *Quiroste* people’s territory included economically important lithic and bead raw materials as well as a mixture of terrestrial, marine, and wetland flora and fauna. This productive resource zone placed them in an economically advantageous position among polities of the San Francisco Peninsula, and archaeological research within their tribal homeland is providing greater resolution into their lifeways as they developed through the millennia. Today, the Muwekma Ohlone and Amah Mutsun Tribal Band membership embodies the descendants of the *Quiroste* nation, as well as the many other tribes who eventually melded into the Hispanic mission system. The 220-acre Quiroste Valley Cultural Preserve, established in 2009 within Año Nuevo State Park, celebrates the continuation of Ohlone Indian tribal identity.

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Notes

1. In regards to the Año Nuevo long-stem, Justice (2002:248) illustrated the wrong specimen in his compendium on California and Great Basin spear and arrowheads, and misidentified their attributes and distribution in his discussion.

2. The lack of coastal olivella shell beads may simply reflect a sampling bias between regions. In the interior, large cemeteries have been the focus of numerous archaeological projects involved in mitigating the impacts of urban development. The relative lack of urbanization on the coast has

generally not necessitated large-scale cemetery excavations, resulting in a much smaller mortuary assemblage data set.

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