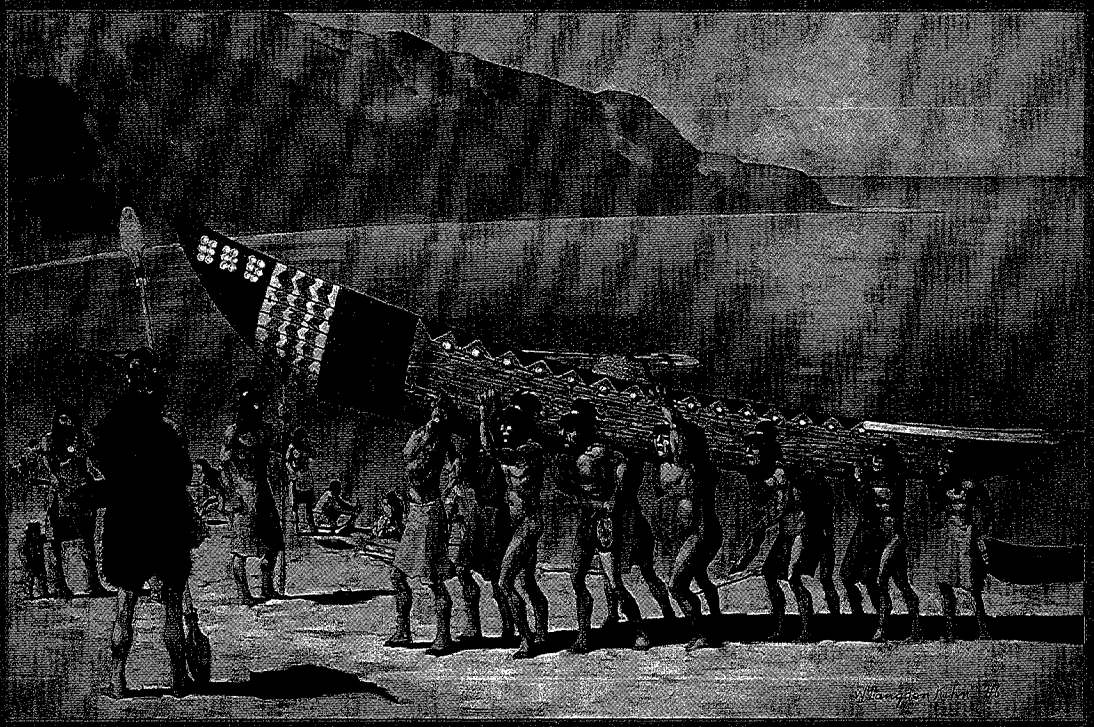
CALIFORNIA PREHISTORY

Colonization, Culture, and Complexity



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CHAPTER 8

Punctuated Culture Change in the San Francisco Bay Area

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THE SAN FRANCISCO BAY AREA SUPPORTED A DENSE hunter-gatherer population over thousands of years, a population that has left a rich and varied archaeological record. When Spanish settlements were established in 1776, the Bay Area was a place of incredible language diversity. Seven languages were spoken—Southern Pomo, Wappo, Patwin, Coast Miwok, Bay Miwok, Karkin Costanoan, and San Francisco Bay Costanoan (Figures 8.1, 8.2). The diverse ecosystem of the bay and surrounding lands supported an average of three to five persons per square mile, but reached over six persons per square mile in the Los Altos–Palo Alto vicinity in the South Bay and 11 persons per square mile in the Petaluma River basin in the North Bay (Milliken 1995a:19–21).

At Spanish contact, the Bay Area people were organized into local tribelets that defended fixed territories under independent leaders (Kroeber 1932). Typically, individual Bay Area tribelets included 200 to 400 people distributed among three to five semipermanent villages, within territories approximately 10 to 12 miles in diameter (Milliken 1995a). Bean and Lawton (1973) describe aspects of contact period regional organization as follows:

> Within the aboriginal social-religious institutions ... smoothly articulated intergroup relationships were regulated by ... secret societies or cults, confirming and demonstrating who had economic and political privileges, always supported in a ritual and cosmological referent of some sort. These institutions were responsible for distributing energy within the various subsystems, so that temporal or spatially related inequities in food and other economic goods could both be alleviated or maintained, depending on the particular needs of the corporate group. (Bean and Lawton 1973)

The distribution of artifacts in protohistoric sites—clamshell disk beads, distinctive *Haliotis* pendants, flanged steatite pipes, chevron-etched bone whistles and tubes, elaborately finished stone "flower pot" mortars, and needle-sharp coiled basketry awls—reflects the relative complexity of the native world at the Spanish arrival.

In 1984 both Moratto and the Chartkoffs dated the appearance of complex hunter-gatherer societies in the Bay Area to about 4,000 years ago, and both argued that complexity increased from that time forward. Both authors looked to population growth as a stimulus for resource intensification, increased cooperation, and social stratification (Chartkoff and Chartkoff 1984:227–237; Moratto 1984:276, 281–283). Moratto (1984) differed from the Chartkoffs (1984) by incorporating "language group migration" into his explanatory model. He posited that proto-Utians (ancestors of all Costanoan and Miwok-speaking groups) entered the East Bay about 4,500 years ago and then expanded throughout the Bay Area at the expense of forager groups who spoke Hokan languages. Subsequent development took place, he suggested, through internal change within the Utian population, with final Augustine Period development driven by indirect influence from Wintuan populations expanding into the North Bay (Moratto 1984:283). Chartkoff and Chartkoff (1984:205) rejected the importance of language group migration as an explanation, and instead asserted that new kinship systems were the innovation that freed people to increase status differentiation and develop rational regional institutions (Chartkoff and Chartkoff 1984:149–150).

The San Francisco Bay Area archaeological record as of the early 1980s has been summarized by Moratto (1984:227–237, 252–283). As ground disturbance has continued in the Bay Area since then, so too has archaeological fieldwork. Large-area survey, common in rural California, seldom takes place in the urban Bay Area. Instead, sites are usually encountered prior to or during

however, continued along the Pacific coast of San Mateo County (Hylkema 2002:261).

Upper Middle Period (Late Upper Archaic), cal A.D. 430 to 1050

A dramatic cultural disruption occurred in central California at about cal A.D. 430. The *Olivella* saucer bead trade network suddenly collapsed, 53 of 103 known M1 sites were abandoned, sea otter bones spiked in the remaining sites, and the Meganos extended burial mortuary pattern began to spread in the interior East Bay (Bennyhoff 1994a, 1994d). These changes co-occurred with the inception of a series of *Olivella* saddle bead horizons—M2, M3, and M4—that would mark central California bead trade until cal A.D. 1000 (Groza 2002). "A Castro phase inhabitant, decked out in Saucer beads and black *Haliotis* ornaments, would have seen a Sherwood phase inhabitant, wearing ear spools, saddle bead appliqué, and red *Haliotis* rectangles, as different, even if few past archaeologists did," wrote Bennyhoff (1986:69), contrasting people of specific lower Middle Period (M1 Bead Horizon) and upper Middle Period (M3 Bead Horizon) cultural phases of his Alameda district.

The first sign of the Meganos complex, characterized by dorsal extended burials, appeared at ALA-413, the Santa Rita village site in the Livermore Valley. There, a 30-year-old man was buried at the end of Bead Horizon M1 with approximately 30,000 *Olivella* saucer beads (the largest documented California bead lot), quartz crystals, and bead appliquéd bone spatulae (Wiberg 1988). Unlike the deeper flexed interments at the site, this individual was buried in dorsally extended Meganos style. One associated saucer bead provided a median AMS intercept of cal A.D. 388 ($\Delta R = 225 \pm 35$; Groza 2002:158). Within a few years the saucer beads disappeared as burial accompaniments, replaced by rough-edged full saddle *Olivella* beads with remarkably small perforations, markers of Bead Horizon M2a. Six full saddle *Olivella* beads have been directly dated so far, from flexed burials at ALA-329 and CCO-269 along the bay shore, and from extended burials at ALA-413 and CCO-151 farther inland. All six have calibrated median intercepts in the narrow cal A.D. 420–450 time range (Groza 2002).

Bead Horizon M2b is marked by mixed *Olivella* saddle beads with tiny 1.0- to 1.5-millimeter perforations that date to cal A.D. 430–600. The Meganos mortuary style continued to spread westward during M2b. A number of new items appeared in Central Bay sites during the M2a and M2b horizons, including beautifully fashioned show blades, fishtail charmstones, new *Haliotis* ornament forms, and mica ornaments (Elsasser 1978:39:Fig. 3). The earliest evidence for inland manufacture of *Olivella* wall beads is found on the Santa Rosa Plain (Tamez 1978).

The climax of upper Middle Period stylistic refinement occurred during Bead Horizon M3 (cal A.D. 600 to 800). It is marked by small, delicate square saddle *Olivella* beads in burials, occasionally with small, poorly shaped *Olivella* saucer beads, often in off-village single component cemeteries. Single-barbed bone fish spears, ear spools, and large mortars first appear during M3. Wohlgemuth (2004:146) notes an increase in seed recovery from middens dated to this time. The Meganos mortuary complex spread during M3 from the interior almost to the Bay at the Fremont BART site (ALA-343), and into the Santa Clara Valley at Wade Ranch (SCL-302). It did not, however, reach the West Bay or the North Bay.

Bead Horizon M4 (cal A.D. 800 to 1050) may be a period of postclimax culture in parts of the Bay Area. It is marked by a devolution of the *Olivella* saddle bead template into a variety of wide and tall bisymmetrical forms, and by the appearance of distinctive *Haliotis* ornament styles (unperforated rectangles and horizontally perforated half ovals). Grave accompaniments are completely lacking at the Santa Teresa Locality Mazzoni site (SCL-131) in the South Bay, and few other mortuaries can even be dated to this time period.

Initial Late Period (Lower Emergent), cal A.D. 1050 to 1550

The lifeways in place at the Spanish entry emerged during the time of the Late Period shell bead horizons. Culture moved up a notch in complexity, from that of collectors who buried their dead with diverse, numerous, but fairly simple ornaments to collectors who invested large amounts of time in the creation of finely wrought wealth objects. The Late Period was called the Emergent Period by Fredrickson (1973, 1994c:100–101), in recognition of the appearance of a new level of sedentism, status ascription, and ceremonial integration in lowland central California. Scheme A dated the beginning of the Late Period to cal A.D. 300, but it is now clear that the Middle/Late Transition (MLT) bead horizon, marking the beginning of the Late Period, began at cal A.D. 1000. During the MLT, fully shaped show mortars, new *Olivella* bead types, and a new array of multiperforated and bar-scored *Haliotis* ornaments appeared at such sites as CCO-308

(Fredrickson 1973), ALA-42 (Wiberg 1997), and SCL-690 (Hylkema 2006). These items are initial markers of the Augustine Pattern. The classic Augustine Pattern markers appeared in Bead Horizon L1 (after cal A.D. 1250); among them were the arrow, the flanged pipe, the *Olivella* callus cup bead, and the banjo effigy ornament (Bennyhoff 1994c).

The first arrow-sized projectile point types in the Bay Area were the Stockton serrated series, a unique central California type (Bennyhoff 1994b:54; Hylkema 2002:49; Justice 2002:352). Surprisingly, they did not appear until after cal A.D. 1250. Biface and debitage production dropped significantly at Napa Valley Glass Mountain quarries with the appearance of the bow and arrow (Gilreath and Wohlgemuth 2004:14). At the same time, Napa Valley obsidian manufacturing debris increased dramatically in the interior East Bay. "Technological organization is defined by acquisition of large Napa Valley flakes that were treated as cores to produce small points, preforms, and miscellaneous simple flake tools," wrote Bieling (1997:76). In the San Jose and Point Año Nuevo Localities of the South Bay, however, debitage and casual tools continued to be derived from local Franciscan chert, and finished projectile points of Napa Valley obsidian continued to be imported from the north (Bellifemine 1997:124–136; Clark and Reynolds 2003:8; Hylkema 2002:250). Jackson and Ericson (1994) argue that Late Period North Bay obsidian exchange was regulated by social elites.

More evidence of increasing social stratification is provided by mortuary evidence. Partial cremation, often associated with the wealthiest grave offerings, appeared, or in some places reappeared. Although numbers of shell beads with burials actually dropped (Milliken and Bennyhoff 1993:392), the overall array of uncommon wealth items increased in high-status burials and cremations (Fredrickson 1994b:62). Fredrickson (1974b:66) and Bennyhoff (1994b:70, 72) suggested that the mortuary pattern, including signature *Haliotis* "banjo" effigy ornaments, reflected a new regional ceremonial system that was the precursor of the ethnographic Kuksu cult, a ceremonial system that unified the many language groups around the Bay during Bead Horizon L1.

Terminal Late Period: Protohistoric Ambiguities

The signature *Olivella* sequin and cup beads of the central California L1 Bead Horizon abruptly disappeared at around cal A.D. 1500 to 1550. Clamshell disk beads, markers of the L2 Bead Horizon, began to spread across the North Bay at that time, but were not initially traded south of Carquinez Strait. From cal A.D. 1500 to cal A.D. 1600 or 1650, the only shell beads in South Bay and Central Bay mortuaries were *Olivella* lipped and spire-lopped beads, and they occurred in far smaller numbers than the bead offerings of the L1 Horizon (Milliken and Bennyhoff 1993:392). While site distributions did not change remarkably, L2 components often seem to be thin signatures on the surface of rich L1 middens.

The North Bay was the seat of innovation during the L2 Horizon in the Bay Area. The toggle harpoon, hopper mortar, plain corner-notched arrow-sized projectile point, clamshell disk beads, magnesite tube beads, and secondary cremation all appeared in the north first. The toggle harpoon, known earlier in northwest California, replaced the multibarbed fish spear. The hopper mortar appeared on the Santa Rosa Plain and the Napa Valley for the first time, but did not spread to the Central or South Bay (Bennyhoff 1994b:54; Wickstrom 1986). Simple corner-notched points replaced Stockton serrated points in the North Bay and began to appear in the Central Bay, while Desert side-notched points spread into the South Bay from the Central Coast (see Hylkema 2002; Jackson 1986, 1989a; Jurmain 1983).

Clam beads were not manufactured in volume on the coast. Some manufacture did occur at Point Reyes (King and Upson 1970:131), but at Bodega Bay, known ethnographically as a collecting point for clamshells, only one bead blank and several drills were recovered during controlled-volume sampling at five separate sites (Kennedy 2005). Evidence of a thriving clam disk manufacturing industry does appear on the Santa Rosa Plain some 30 kilometers inland (Keswick 1990; Wickstrom 1986), as well as at NAP-539, 80 kilometers inland in the Berryessa Valley (Hartzell 1991), and YOL-69 (Wiberg 2005), 115 kilometers inland in the lower Sacramento Valley. The earliest date for clam disks south of Carquinez Strait, cal A.D. 1670, was obtained from a charcoal lens at CCO-309 (V. M. Fredrickson 1968).

Why did shell bead types, mortuary wealth distributions, and some technological artifact types change after cal A.D. 1500? Had population shot past carrying capacity due to success of regional organization during the L1 Horizon, spawning conflict and wealth contraction? Were populations on the move, forcing or marrying their way into neighboring lands? Did European-introduced epidemics spread across the continent following Spanish explorations in Mexico, causing population crashes and cultural disturbances (Erlandson