

CULTURAL KEYSTONE PLACES AND THE CHUMASH LANDSCAPES OF *HUMQAQ'*, POINT CONCEPTION, CALIFORNIA

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The places people live and spend time are steeped in history, memory, and meaning from the intersection of daily life, environmental interactions, cultural practices, and ritual. Geologic features, plants, animals, and ecosystems merge with these cultural histories, forming critical parts of the landscape and areas of “high cultural salience,” or cultural keystone places (CKPs). We identify *Humqaaq'* (Point Conception) and the surrounding area in California as a Chumash CKP. Ethnohistoric accounts and contemporary Chumash community members have long demonstrated the importance of Point Conception in Chumash worldview and identity, while biologists, ecologists, and conservationists reference the area’s rich biodiversity and significance as a biogeographical boundary. Recent archaeological survey of the coastline surrounding *Humqaaq'* highlights these connections, identifying over 50 archaeological sites, including shell middens, villages, lithic scatters, and rock art, with at least 9000 years of occupation. Ongoing collaborations among archaeologists, The Nature Conservancy, and Chumash community members help document and understand the long-term linkages between cultural and biological diversity and how integrating these perspectives can help ensure the resilience of this nexus of human and natural history in the Anthropocene future.

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In a time of rapid global change, understanding connections between the places people live and the relationships they form with local ecosystems through time is important for enhancing conservation biology and human and environmental welfare. Landscapes help shape identity, subsistence and ecology, settlement and land use, and cultural and ritual systems. Archaeologists have long recognized the significance of persistent places—locations that have long-term occupations and played a special role in human settlement systems and cultural practices (Gamble 2017; Moore and Thompson 2012; Schlanger 1992; Thompson 2010). Building on earlier work on cultural keystone species (Garibaldi and Turner 2004), Cuerrier et al. (2015:431; see Lepofsky et al. 2017:449) presented the term cultural keystone places (CKPs) defined as: “A given site or location with high cultural salience for one or more groups of people and which plays, or has played in the past, an exceptional role in a people’s cultural identity, as reflected in their day to day living, food production and other resource based activities, land and resource management, language, stories, history, and social and ceremonial practices.” CKPs and persistent places are related, but distinct frameworks that emphasize the deep time links among place, culture, and ecology. Specifically, Cuerrier et al. (2015:432) established ten indicators of a CKP (Table 1). These indicators emphasize the important relationships and knowledge that Indigenous peoples have with the landscapes they inhabit and that people actively shape and are shaped by the world around them. CKP designations are especially important because they highlight the connections between biological and cultural diversity that can aid in environmental conservation and cultural preservation (Cuerrier et al. 2015; Lepofsky et al. 2017).

CKPs have been described for several locations in Canada, particularly the Pacific Northwest (Cuerrier et al. 2015; Lepofsky et al. 2017), but partly because the framework is relatively new it has received limited application in other areas. Here, we draw on an

archaeological survey, ethnohistoric data, and contemporary Chumash perspectives to document long-term patterns of coastal land use and settlement spanning at least 9000 years near *Humqaaq'*, Point Conception, California (Figure 1).¹ Point Conception is a biogeographical boundary point for many coastal and marine species, harbors unique biodiversity, and has long been recognized as an area of conservation priority (Dawson 2001; Elsberry et al. 2018). Until recently, the land surrounding *Humqaaq'* was a private ranch for over a century, with the point itself owned by the US government. Moreover, few studies had been published about the archaeology of this coastline compared to areas to the north and east.

Humqaaq' is of great importance to the Chumash, particularly the Shumwhich and Samala Chumash, and is known to some as the Western Gate or where souls bathe prior to departing for the afterlife (Blackburn 1975; Haley and Wilcoxon 1997, 1999). Flanking the point at the mouths of two large drainages are two Historic Period Chumash villages: *Shilimaqshutush* and *Shisholop*. These villages and a third closely related satellite settlement of *Shisholop* called '*Upop*' were described by early Euro-American explorers and in Mission records, yielding a variety of ethnohistorical information on the Chumash who lived near *Humqaaq'* (Gamble 2008; Hudson et al. 1977; Johnson 1988; King and Craig 1978). In the 1970s, members of Chumash bands, activists, and other supporters occupied an area near Point Conception to protest a proposed liquefied natural gas plant, which was ultimately canceled. While working on a Traditional Cultural Property nomination (a formal National Register designation administered by the US National Park Service), Haley and Wilcoxon (1997, 1999) revisited the ethnohistory of *Humqaaq'* and argued that anthropologists had created much of the knowledge around the significance of the area and that the importance of Point Conception among some bands of the Chumash might not have been widespread until recent decades. The Traditional Cultural Property was never formalized, but the research and perspectives from this work generated considerable debate about the making of Chumash identity and traditional customs (see Erlandson et al. 1998; Haley and Wilcoxon 1997), providing a foundation for our work and a means to explore the significance of *Humqaaq'* over two decades later.

Largely missing from this discussion of the cultural significance of *Humqaaq'* is an overview and assessment of the archaeology of the region. Several compliance and other archaeology projects have been conducted in and around Point Conception (Erlandson et al. 1993; Erlandson and Vellanoweth 2002; Glassow 1978; Lathrap and Hoover 1975; Nocerino et al. 2016; Ruth 1936; Wilcoxon 1990). However, the area between Jalama Creek and Cañada del Cojo generally appears blank on reviews of Santa Barbara Channel archaeology site maps (see Glassow et al. 2007: figure 1). Additionally, studies of fishing and shellfishing that explore the importance of the Point Conception biogeographic divide on human subsistence present no data from this area (Glassow and Wilcoxon 1988; Gobalet 2000). To help fill this void, we present the results of an archaeological survey and radiocarbon dating project focused on a 13 km stretch of coastline surrounding *Humqaaq'*, within an area now known as the Jack and Laura Dangermond Preserve (JLDP), owned and managed by The Nature Conservancy (TNC). Conducted in collaboration with TNC and the Santa Ynez Band of Chumash Indians (SYBCI), our research is guided by two overarching questions: 1) Where and when did people settle along the coast on either side of *Humqaaq'*?; and 2) How do archaeological data on past settlement and land use potentially articulate with ethnohistoric and contemporary Chumash perspectives and the making of a CKP? We place our work in the context of other collaborative approaches in archaeology and environmental conservation, demonstrating the value of integrating biological and cultural

perspectives in an era of rapid environmental and climatic change (Douglass et al. 2019; Gonzalez et al. 2018; Lepofsky et al. 2017; Lightfoot et al. 2013a).

Context and Background

Point Conception and the JLDP are located on the southern California Coast in Santa Barbara County. The JLDP is roughly 24,329 acres, with ~13km of coastline, a mountainous interior, and bounded by Vandenberg Air Force Base (VAFB) to the north and the Hollister Ranch, an area of private estates, to the east. A small (29.6 acres) parcel of land immediately surrounding Point Conception and its lighthouse is managed by VAFB. We use the term *Humqaaq'* to refer to Point Conception and the 29.6 acres of land surrounding it. We use the terms *K=Humqaaq'* region or surrounding area to reference the JLDP, which is the larger coastline and interior associated with *Humqaaq'* and the location of the major Chumash villages that were closest to the Point (Figure 1).

The California coastline at Point Conception makes an abrupt shift to the east-west trending Transverse Range. The coastline north of Point Conception is dominated by surfswept, sandy beaches flanked by kelp forest and rocky intertidal habitat. In contrast, areas to the east of the Point are considerably more sheltered, with the Northern Channel Islands oriented as a chain of four islands just offshore. This area marks a mixing of colder northern and warmer southern ocean currents and approximates a biogeographic dividing point for many coastal and marine organisms (Dawson 2001; Elseberry et al. 2018). Terrestrial plant communities in and around Point Conception also harbor unique biodiversity. This location is a biodiversity hotspot, with a high number of endemic species and biogeographic crossroads that serves as a “mixing” zone, or ecotone, between cooler, more maritime climate adapted terrestrial and freshwater species of the Central Coast and species adapted to the warmer and drier South Coast and Northern Baja California region (Butterfield et al. 2019; Gatewood et al. 2017).

Humqaaq' and the larger Santa Barbara Channel region have been inhabited by the Chumash and their ancestors for at least 13,000 years (Erlandson et al. 2011; Lebow et al. 2015). Chumash refers to a language family with at least three branches (Northern, Central, and Island) and six different languages (Obispeño, Purismeño, Samala/Ineseño, Shmuwich/Barbareño, Isleño/Cruzeño, and Mitsqanaqan/Ventureño), corresponding to different Chumash tribal groups (Golla 2007:80). The JLDP is in the southern part of Purismeño territory (Gamble 2008; Glassow 1978:6, 1996; Johnson 1988). Chumash villages north of Point Conception generally had smaller populations than those to the east along the Santa Barbara Channel (Glassow and Wilcoxon 1988; Johnson 1988). The *Humqaaq'* area is home to three primary Chumash villages and one satellite village: *Shilimaqshutush* to the north of Point Conception, *Shisholop* and the satellite settlement of *'Upop* to the southeast of the point, and *Xalam* in the interior (Gamble 2008; Hudson et al. 1977; Johnson 1988; King 1975; Lathrap and Hoover 1975; Wilcoxon 1994).

Ethnohistoric accounts provide insight into the Chumash people who lived at these villages, but especially *Shisholop* and *Shilimaqshutush*. Mission baptism and census records provide estimates of the number of people living at these villages and direct genealogical ties to contemporary Chumash tribal members, particularly the SYBCI (Johnson 1989a). McLendon and Johnson (1999) noted that there were 106 baptisms associated with *Shilimaqshutush* and 197 with *Shisholop*, with population estimates for both villages between 150 and 250 individuals (Brown 1967; Gamble 2008:74; Johnson 1988:113, 115). *Shisholop* is described as a capital village with at least one chief (Johnson 1988:120) and Crespi, a Franciscan missionary, noted six

canoes and 38 grass houses at the site in AD 1770 (Gamble 2008:75). In addition to these villages, there was also a Mission vineyard and winery, and olive and walnut orchards along Jalama Creek that were aligned with Mission La Purisima located several kilometers to the north (Harrison 1960; Ruhge 2009).

Similar to the biogeographic divisions, Point Conception marks the approximate location of a number of important cultural differences. Point Conception was a likely dividing point for the use of the *tomol* (redwood plank canoe), a technology linked to maritime trade, offshore fishing, and the rise of socio-political complexity in the Santa Barbara Channel region. People to the north of the Point used tule reed canoes instead of plank boats, but groups to the east along the Santa Barbara Channel and Northern Channel Islands relied heavily on plank boats (Brown 1967; Gamble 2002, 2008; Landberg 1965). Geographic variation in watercraft types needs further research, but is supported by differences in archaeological fish remains from sites to the north and east of Point Conception (Gobalet 2000). Analysis of shellfish remains from sites to the north and east of Point Conception also demonstrate significant differences in the nearshore habitats that were utilized on either side of the point, although no data from the JLDP were available for either the fish or shellfish studies (Glassow and Wilcoxon 1988). The offshore waters near Point Conception have produced a number of artifacts identified by local divers, including net weights perhaps from discarded fishing gear and sandstone bowls and a charmstone perhaps from ritual discard, suggesting the waters off Point Conception are also culturally significant (Hudson 1976, 1979).

Methods and Approach

An important step towards understanding the *Humqaa'* region CKP is documenting where and when people lived at various localities and how long-term cultural landscapes were created. In 2019 and early 2020, we conducted a systematic pedestrian survey of the entire 13 km stretch of coastline of the JLDP from Jalama Creek in the north to Cañada del Cojo Creek and to the interior for 0.3-0.75 km, depending on terrain (Rick et al. 2021). Our research was conducted in consultation with the SYBCI Elder's Council, Chumash archaeological consultants, and TNC's JLDP staff.

Survey transects consisted of people spaced out with gaps between each individual 8-10 m apart, comparable to other surveys in the region (Perry et al. 2019:584). Archaeological sites were identified through the presence of faunal remains, artifacts, dark soil, and architectural features on the surface with no subsurface testing. Dense vegetation, recent dune sand or other sediment, road construction, and other obstacles obstructed the identification of archaeological sites or site boundaries in some locations. In these areas, we looked for rodent tailings and other ground disturbances or exposures to help identify site boundaries. Nonetheless, vegetation cover, dune sand, and other sediments hindered our ability to precisely define site boundaries and may have precluded relocation of a few previously recorded or unidentified sites (Rick et al. 2021). Given ongoing erosion and the dense vegetation (iceplant) and recent sand, we anticipate additional undocumented sites within our survey area are buried or obscured and additional sites will be identified in the coming years.

Graham built a platform for recording site information in Esri's Collector and Survey123 mobile platforms. This allowed us to record information digitally in the field on a tablet enabled by external Bluetooth GPS with accuracy around 1 m. The information recorded in the field was then output into the California Department of Parks and Recreation (DPR) site record format. This required some trial and error to establish proper protocols, but proved an important means

for digital collection of data that should be instrumental for future surveys and monitoring at JLDP and beyond. Archaeologists are increasingly using Esri's Collector, Survey123, and other GIS mobile applications to record information on handheld devices in the field (Lindsay and Kong 2020). To our knowledge, this is the first project in California to digitally integrate this information into state DPR forms.

In discussion with our Chumash consultant, we collected marine shells from eroding deposits or from small probes at sites that had not been previously excavated to obtain *in situ* samples for radiocarbon dating. Although a few sites contain beads, projectile points, or other objects that can be used to determine approximate ages of a given site, radiocarbon dates provide the best means to understand the general chronology of a site and associated activities of people. For the few sites in the area that have been excavated, we also dated materials housed in the repository at UCSB or synthesized previously reported radiocarbon dates.

All radiocarbon samples were from single California mussel (*Mytilus californianus*) or black abalone (*Haliotis cracherodii*) shells analyzed using Accelerator Mass Spectrometry (AMS) at the NOSAMS radiocarbon facility at Woods Hole Oceanographic Institute. Marine samples were calibrated in OxCal 4.4 using the Marine20 calibration curve and applying a local Santa Barbara Channel reservoir correction of 128 ± 104 (Bronk Ramsey 2009; Heaton et al. 2020). The reservoir correction was obtained from the 14Chrono database and is based on the Marine20 curve applied to three known-age samples from Ingram and Southon (1996) that were used to calculate the updated ΔR value for a previous value that was long used in the Santa Barbara Channel region (225 ± 35 ; Erlandson 1997; Glassow 1997). When necessary (Supplemental Table 1), we used a sequence to produce modeled dates/posteriors that take into account a likely end of occupation at 1835 ± 5 CE, roughly corresponding with the end of the Mission Period. We used OxCal to estimate the boundaries of phases and their durations (Supplemental Table 2). For sites with more than one radiocarbon date, we estimated the span of occupancy, including boundary start and end dates. We evaluated support for the presence of two phases/a gap in occupancy based on our radiocarbon dating and grouped 13 dates into the Early Holocene and 37 into the Middle and Late Holocene (Supplemental Table 3).

We used the R package *rcarbon* (Crema et al. 2017; Crema and Bevan 2020) to generate a summed probability distribution of radiocarbon dates (SPD). Although our data are limited by a small number of dates or even a single date from many of the sites, the SPD helps visualize general patterns and identify gaps and priorities for future sampling to refine the phase patterns identified in OxCal. We used the function *spd()* to aggregate calibrated radiocarbon dates using Marine20 and our marine reservoir correction, with a cut off window of 115 cal BP to exclude the post-Mission Period. Given the coarseness of our sampling, we display a rolling average of 500 and 1000 years for smoothing to explore general patterns and avoid overinterpreting the data.

Coastal Settlement Through Time

Our survey draws on 57 archaeological sites that document the long-term Chumash landscapes of the *Humqaq'* region (Table 2). While focused on sites along the immediate coastline, we also discuss a few sites that are further to the interior. Archaeological sites attest to diverse cultural land use across the coastline, including small and large sites (lithic scatters, shell middens, and villages) exposed in sea cliffs, on high coastal hilltops, and in dunes/blowouts (Figures 2 and 3). Fifty radiocarbon dates from 33 sites establish a chronology from ~9000 cal BP to the early 19th century (Supplemental Table 1; Figures 4 and 5).

Three sites on the JLDP produced radiocarbon dates in excess of 8000 cal BP. CA-SBA-1523 and CA-SBA-4201 are both hilltop sites overlooking the ocean and CA-SBA-2118 is located at the mouth of a small canyon (Table 2, Supplemental Table 1; Figure 4). All three contain mostly California mussel shell, with a few chert flakes and trace amounts of barnacle. Erlandson (1994; Erlandson et al. 1993) reported a chipped stone eccentric crescent obtained during excavations at CA-SBA-1912. Although previously obtained radiocarbon dates from the site were Late Holocene in age, likely from bird activity or a later cultural component, eccentric crescents date to between 12,000-7500 cal BP in coastal California, indicating an Early Holocene occupation for this site (Erlandson 1994; Erlandson et al. 2011).

Following a small gap in dated components between 8050-7890 cal BP, seven sites contain components dated to the Middle Holocene (8000-4000 cal BP) (Supplemental Table 1, Figure 4). This includes shell midden sites like CA-SBA-1666 (Erlandson and Vellanoweth 2002), CA-SBA-1844 located on a canyon rim, CA-SBA-2013 and CA-SBA-4207 located on hilltops, and CA-SBA-4188 located in a dune field. The Middle Holocene occupation contains the largest gap in the trans-Holocene sequence between 6050-4520 cal BP. This ~1500 year gap is around the time of the Altithermal and apparent drying conditions (Erlandson 1997; Glassow 1997; Rick et al. 2020), but future dating and excavation at JLDP could help fill this chronological gap. Excavated data from CA-SBA-1666 (Erlandson and Vellanoweth 2002), CA-SBA-1522 (Erlandson et al. 1993), and surface observations at the other sites demonstrate that, like the Early Holocene sites, most are dominated by rocky intertidal California mussels. Two sites contain estuarine shellfish (CA-SBA-1844 and CA-SBA-4207), suggesting that, similar to other areas of the western Santa Barbara Coast, people took advantage of newly formed estuaries following postglacial sea level rise (see Erlandson 1994, 1997).

Like most other areas of the Santa Barbara Coast and Northern Channel Islands, the number of archaeological sites dramatically increases during the Late Holocene (4000 cal BP-present) (Erlandson and Rick 2002; Glassow 2002). Fourteen sites contain components dated between 3900 and 400 cal BP (Table 2; Figure 4). A few sites have age ranges that extend from the Late Holocene into the Historic Period and vice versa. We have grouped these sites in the figures depending on where the majority of the age range falls. Late Holocene sites are found throughout the JLDP in sand dunes, sea cliff exposures, and along creek banks, but no Late Holocene sites have yet to be identified on hilltops. However, we caution that the vast majority of the interior of the JLDP has not been surveyed. There are a few small gaps in the Late Holocene radiocarbon sequence (e.g., between 2940-2790 and 2140-2040 cal BP), but we suspect that many of these may result from the lack of additional sampling.

Nine sites have radiocarbon dates in the Protohistoric and Historic periods between about 400 and 110 cal BP (Table 2). Four other sites produced historical artifacts (e.g., CA-SBA-546), but at three of these (CA-SBA-1602, -3579, -4204) those objects appear to be from a later Euro-American occupation (Figure 4). Badly eroding and remnant shell middens at CA-SBA-4195, CA-SBA-2595, and CA-SBA-4192 might be seasonal or satellite localities where people processed shellfish, made tools, and engaged in other activities. This is a pattern noted during the latter half of the Late Holocene, where a variety of smaller shell middens are found alongside large village sites like CA-SBA-203/541. Our work and other studies confirm the location of *Shilimaqshtush* at CA-SBA-205 and *Shisholop/Upop* at the complex of sites that includes CA-SBA-546, CA-SBA-1503, and CA-SBA-1522, and CA-SBA-203/541. Finally, we recorded one new site about 4 km to the interior on Jalama Creek that contains a dense midden dated to the 17th to 19th centuries and may be part of the village of *Xalam* and perhaps associated with

adjacent CA-SBA-206. There have long been questions about the location of *Xalam*, which has not received as much attention as *Shilimaqshutush* or *Shisholop*. Johnson (1988:97, 99) raised the possibility that CA-SBA-1190 at Salsipuedes Creek further to the interior may have been the location of *Xalam* rather than on Jalama Creek. Our radiocarbon dating of CA-SBA-4209, the site location along Jalama Creek, and the diverse contents of the midden suggests that CA-SBA-4209 may be the location of *Xalam*. Future research is needed to evaluate this assertion and investigate the linkages to the Jalama winery and orchards (Harrison 1960; Ruhge 2009).

Discussion:

***Humqaaq'* as a Cultural Keystone Place**

Our work focused on two overarching questions: 1) Where and when did people settle along the coast on either side of *Humqaaq'*?; and 2) How do archaeological data on past settlement and land use potentially articulate with ethnohistoric and contemporary Chumash perspectives and the making of a CKP? When placed in the context of ethnohistoric accounts and contemporary Chumash communities, our archaeological survey and radiocarbon data provide a comprehensive picture of coastal settlement and land use, the creation of trans-Holocene Chumash landscapes, and the *Humqaaq'* region as a CKP. This is a story of the region's historical ecology and the long-term persistence and renewal of Chumash peoples at a CKP. Collectively, these archaeological and ethnohistoric data demonstrate that the *Humqaaq'* region satisfies all ten cultural indicators for a CKP (Table 1).

The archaeological sites of the *Humqaaq'* region document an archaeological record that attests to diverse Chumash landscapes created over 9000 years, including the dense villages and satellite sites of the Late Holocene that persist into the Historic Period communities described in ethnohistoric accounts (Craig et al. 1978; Gamble 2008; Johnson 1988; King and Craig 1978). The Sudden Flats Site (CA-SBA-1547) located on VAFB near Point Arguello about 12 km northwest of the JLDP produced a series of radiocarbon dates and a chipped stone crescent dating to 10,700 cal BP (Lebow et al. 2015). The proximity of the Sudden Flats Site to the JLDP suggests people were likely at *Humqaaq'* in excess of 10,000 years as well. The trans-Holocene Chumash landscapes around the *Humqaaq'* coastline contain shell middens, lithic scatters, villages, and a range of other sites. When extended to the interior there are lithic quarries and workshops, rock art localities, and other sites that represent a diverse range of activities from hunting to plant gathering to ritual and ceremony.

The villages documented in the 18th and 19th centuries integrate coastal and interior landscapes at two major drainages, including *Shisholop*, *Shilimaqshutush*, and *Xalam*. Population estimates based on Mission census and baptismal data suggest that together these villages were home to over 500 people during the Mission Period (Brown 1967; Johnson 1988; McLendon and Johnson 1999). These villages were important locations that connected to other villages in the area in complex social networks that included ceremony, ritual, exchange, and intermarriage (see Gamble 2008; Johnson 1988; McLendon and Johnson 1999). *Humqaaq'* was also a distinct sacred site, especially to Shmuwich and Samala Chumash community members (Erlandson et al. 1998; Haley and Wilcoxon 1997, 1999). People conducted a broad swath of activities from fishing, shellfishing, and *tomol* construction to feasting, ritual, and ceremony, activities that shape the cultural landscapes and persistent places of the area (Gamble 2017; Schlanger 1992). The complex of sites near the mouth of Cañada del Cojo with some 8000 years of occupation through to *Shisholop*, the roughly 6000 years of occupation at Point Conception proper, and likely other

areas that remain to be fully explored also fit the definition of a persistent place (Schalnger 1992; Thompson 2010).

On Santa Cruz Island, El Montón has been documented as a Chumash persistent place, where for 4000 years people built a mounded landscape complete with a dance floor, cemetery, and evidence for feasting and a wide variety of other activities (Gamble 2017). Similar to other discussions of shell middens in the Southeastern USA and Brazil, Puebloan sites in the American Southwest, and Paleolithic Europe, these persistent places and the archaeological sites that characterize them are far more than just ancient refuse—they are the physical remains of the social, cultural, political, and ecological activities of the people who left them behind (Gamble 2017; Moore and Thompson 2012; Schlanger 1992; Shaw et al. 2016; Thompson 2010). They are places of memory and meaning-making that are imbued with deep cultural importance. The villages of the *Humqaq'* area at *Shilimaqstush* and *Shisholop* document this dense and sustained occupation of daily activities, ritual, ceremony, and all facets of social life, but they cannot be removed from the context of the broader landscape, changing environmental conditions, and the numerous diverse sites in the area that reflect a wide range of human activities. Smaller shell middens and lithic scatters attest to the seasonal and other movements of people around the landscape that were actively shaping, managing, and influencing the Point Conception area as part of everyday life and broader ritual and ceremony. Collectively, these activities and the sites or persistent places that represent them create the Chumash landscapes of the area and the making of the CKP.

The establishment of the winery and orchards in Jalama Canyon during the Mission Period and the persistent effects of colonialism and mission activities at *Humqaq'* began a new era of change, one that resulted in the dramatic alteration of local and regional ecosystems and largely removed the original Chumash inhabitants and stewards from the system they had shaped for the entire Holocene (Dartt-Newton and Erlandson 2013; Gamble 2008; Harrison 1960; Johnson 1989b). The ensuing Mexican and American periods ushered in a century of ranching, agriculture, lighthouse construction and activities, and the effects of the Southern Pacific Railroad. Despite disenfranchisement of the Chumash by the missions and dramatic changes to Chumash lifeways due to disease, missionization, and alteration, Chumash descendants continued to visit, live, and work in the area. Fernando Librado Kitsepawit, a well-known Chumash tribal member who was born at the Santa Buenaventura Mission, had Chumash parents from Santa Cruz Island, and was a Misqanaqan (Ventureño) and Isleño/Cruzeño speaker, worked on ranches near Point Conception, had broad knowledge of the area, and met extensively with ethnographer John Harrington in the early 1900s (Haley and Wilcoxon 1999:216; Hudson et al. 1977; Johnson 1982). Similarly, Maria Solares, a Samala Chumash tribal member who also worked with Harrington, visited Point Conception at least twice as a midwife for the lighthouse caretaker's wife and on a family camping trip and provided great insight into the sacred nature of *Humqaq'* (Haley and Wilcoxon 1997, 1999). Fast forward to the late 1970s, Chumash tribal members again asserted the importance of *Humqaq'* and the area to Chumash life and culture by protesting and successfully preventing the construction of a liquefied natural gas pipeline in the area (Erlandson et al. 1998; Haley and Wilcoxon 1997). Today, several Chumash tribal members, particularly from the SYBCI, are direct descendants of Maria Solares or people who lived at *Shisholop* and have other deep ties to the cultural landscapes and legacies of the *Humqaq'* region. The Chumash ties to the *Humqaq'* region are woven into the shell middens and lithic scatters of the past 9000 years or more through the villages of the Mission era and into present day communities. The broader landscapes of *Humqaq'* offer a testament to Chumash

persistence and renewal over roughly 10,000 years, a story that is key to the persistence of other California tribes and Indigenous peoples throughout the Americas and beyond (Lightfoot et al. 2013b; Panich 2016; Schneider 2015).

The story of cultural persistence and connection to the *Humqaq'* region is deeply intertwined with the ecology of Point Conception. As colonialism has worked to remove Indigenous peoples, their histories, and their culture from the landscape, the CKP designation offers a way to further build or rebuild those linkages and to show the deep connections between people and place and between cultural and biological diversity (Cuerrier et al. 2015). An important first step in this work and more effectively managing and preserving the ecosystems and organisms of Point Conception is recognizing the long-term links to the Chumash people, their legacies on the landscapes and coastal ecosystems, and the changes that ensued during the Mission, Ranching, and Modern periods. The CKP framework demonstrates the connections between the area's landscapes and ecosystems and the importance of the area to the Chumash from *Shisholop* to *Shilimaqshtush* and *Xalam* throughout the past 9000 years (Cuerrier et al. 2015; Lepofsky et al. 2017). While we have focused on archaeological sites as physical manifestations of the Chumash landscapes of *Humqaq'*, Lepofsky et al. (2017) noted that the contemporary plants, animals, and geological features are also crucial to the Pacific Northwest CKPs. This is true for the *Humqaq'* region as well, and will be a crucial component of future work documenting the area's historical ecology through collaboration among the SYBCI, TNC, researchers, and other community members in the coming years and decades.

CKPs are an informal designation (i.e., not sanctioned by governments) and some may ask why this designation matters, especially if more formal governmental or other constructs exist? For instance, the 26 acres at the Point itself, including the archaeological sites, are an Archaeological District on the National Register of Historical Places (Glassow 1978). That same area was also proposed as a Traditional Cultural Property, another federal designation, but was never formalized (Haley and Wilcoxon 1997; Wilcoxon 1994). We argue that the less formal CKP designation allows for the recognition of the importance of the larger coastline at Point Conception, including the sacred nature of *Humqaq'*, but also the major nearby villages and the cultural landscapes left behind that manifest in the stone tools and other artifacts, faunal remains, plants, animals, and natural features that blanket the landscape of the area. CKP is also a designation that is not static, recognizes that the past provides a framework to understand how we arrived at the present and can help shape the future, and does not preclude other more formal governmental designations like Traditional Cultural Properties (Cuerrier et al. 2015; Lepofsky et al. 2017). In this sense, the *Humqaq'* region CKP recognizes, promotes, and celebrates the continued cultural and environmental renewal by contemporary Chumash peoples and ensuing generations. This perspective can also help overturn centuries of erasure of Chumash and other Indigenous peoples from the landscapes of their traditional homelands (see Toniolo et al. 2019).

Finally, as Lepofsky et al. (2017; see also Cuerrier et al. 2015) discuss for CKPs of the Pacific Northwest, recognizing the *Humqaq'* region as a CKP does not mean that it is the only CKP in Chumash territory or that the other parts of the territory are also not significant. There are likely many others and should be explored for their significance to California's historical ecology and the legacies of the Chumash past, present, and future written in the landscape.

Conclusions

Identification of 57 archaeological sites and an occupation history spanning 9000 years or more documents the long-term Chumash histories at Point Conception and the continuum from

the deep past, the Historic and Mission periods, and the present day. The Chumash landscapes of Point Conception manifest in the rich archaeological record of the region and attest to a landscape filled with history, memory, and meaning that coalesce in a CKP (Gamble 2017; Lepofsky et al. 2017; Thompson 2010). The *Humqaaq'* region and, indeed, much of the world are a complex web of human and natural processes that create long-term landscapes that are a mix of cultural and natural processes. Recent global mapping demonstrates that people affected roughly 75% of terrestrial ecosystems around the world by at least 12,000 years ago, and that a key to more effective management is integrating historical ecology and traditional knowledge (Bliege Bird and Nimmo 2018; Ellis et al. 2021). Archaeologists continue to emphasize the importance of archaeological research to conservation science and practice and a wide variety of other issues in the Age of Humans or Anthropocene (Armstrong and Veteto 2015; Armstrong et al. 2017; Boivin and Crowther 2021; Braje 2015; Lightfoot et al. 2013a). All the while, we are working to preserve the cultural heritage (archaeology, ethnohistory, contemporary knowledge) that is central to this endeavor, but is threatened by climate change, development, acculturation, and a myriad of other processes (Erlandson 2008; McGovern 2018). The CKP framework offers an important means to link cultural and biological diversity, to demonstrate the power of archaeology to help understand place, and to help Indigenous communities assert their heritage, stewardship, and cultures in a post-colonial world (Cuerrier et al. 2015; Lepofsky et al. 2017).

Earlier we noted that CKPs have received relatively limited attention outside of Canada, a factor due in part to the relatively recent development of the concept (Cuerrier et al. 2015). Our work at *Humqaaq'* expands the relevance of CKPs for Native American peoples in California and provides a framework for collaboration that allows Indigenous peoples, archaeologists, anthropologists, and others to assert the cultural and ecological significance of particular places and highlight that significance to the public, governments, and other groups. CKPs can be used in tandem with other designations like Traditional Cultural Property and Historical Register Nominations, but is also a standalone concept that offers fluidity to link the past and present and allow for building histories on the landscape into the future. We hope that others will explore the CKP concept as a tool for linking the long-term cultural and environmental significance of particular places around the world, providing a framework that can empower Indigenous peoples to assert their sovereignty and deep ties to their ancestral homelands. While CKPs have been used to describe places of significance to Indigenous peoples of North America, Cuerrier et al.'s (2015) definition is open ended and does not preclude using CKP for other contexts. Future studies, could seek to explore an even broader use of CKPs as they apply to a wide range of culturally and environmentally significant places.

Our own work at the JLDP is just beginning and we anticipate future collaboration among the Chumash, archaeologists, biologists, and others to help restore the long-term natural and cultural environmental links at Point Conception and manage for a more sustainable future in an era of rapid change and uncertainty. Point conception and the JLDP are rich in biodiversity and ecosystems with bears, mountain lions, bobcats, coyotes, deer, oak woodlands, kelp forests, rocky intertidal and sandy beaches, all playing a pivotal role in the biogeography and ecology of California and the eastern Pacific Coast. The area is also alive with people's history and tradition from the Chumash to the ranching period to the JLDP. The legacy of Chumash land use, spanning the Holocene, persists throughout the region and continues today with contemporary Chumash communities. The key moving forward is integrating these perspectives to help preserve the ecosystems and Chumash legacies of the *Humqaaq'* CKP.

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Data Availability Statement. All of the survey data for this paper, including radiocarbon dates are presented in the paper, tables, or supplementary materials. A more detailed confidential report and California Department of Recreation site records are available at the Central Coast Information Center, University of California, Santa Barbara.

List of Supplemental Materials

Supplemental Tables

Supplemental Table 1. Trans-Holocene radiocarbon data for Point Conception Sites.

Supplemental Table 2. Estimates of site occupation spans using Oxcal Boundary Function for sites with more than one radiocarbon date.

Supplemental Table 3. Modeled Interval gap between the Early and Middle Holocene and the Middle and Late Holocene.

Supplemental Figure

Supplemental Figure 1. Site spans for all radiocarbon dates at the JLDP grouped by Early, Middle, Late Holocene, and Historic Periods (produced using the R package *ggplot2*).

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Note

¹*Humqaaq'* has several different spellings (e.g., *humkak*, *humqaa'a*, *kumqaaq*; *kunq'aaq'*) and meanings (see Applegate 1974 and Haley and Wilcoxon 1999), with the derivation *kumqaaq'* translating to 'the ravens come' (see Applegate 1974:200; Blackburn 1975; Haley and Wilcoxon 1999). Haley and Wilcoxon (1997, 1999) and Blackburn used the Shmuwich spelling of *Humqaaq* in their discussions of the ethnohistory of the Point Conception area. We follow this usage that dominates the published literature and use *Humqaaq'* adding a glottal stop for the correct linguistic pronunciation (see Applegate 1974). We have capitalized the word throughout in recognition of it being a formal place, although Chumash words are not generally capitalized. ***We are awaiting final tribal approval of the spelling which will accompany the final version of the paper***

Table 1. Ten indicators of a cultural keystone place following Cuerrier et al. (2015:432) and the correlates identified at *Humqaaq'*.

Ten Indicators of a CKP	Correlate at <i>Humqaaq'</i>
Agreement within a cultural group about the importance of a place	Strong significance documented by historical and contemporary Chumash community members.
Occurrence in language and discourse	Formally named by the Chumash with different derivations among ethnolinguistic groups.
Intensity and frequency of use	~ 9000 years of occupation and > 50 recorded sites on the coastline, including two major village complexes.
Diversity of use	Villages, stone tool production sites, a ritual center, rock art sites, etc. attest to the diverse use.
Antiquity of use	> 9000 years of occupation through the present day.
Extent of traditional resource management undertaken	Intensive fishing, hunting, shellfish and plant collecting documented. Area deserves more research.
Uniqueness	Cultural dividing point for various technologies and exchange. Known to some as “Western Gate.”
Ecological diversity	Highly diverse ecosystems and organisms at a biodiversity hotspot and transition zone.
Role in trade and cultural exchange	<i>Xalam</i> and <i>Shisholop</i> were noted as important trading villages with strategic locations.
Role in cultural protocols	Direct connections to specific Chumash ethnolinguistic groups and ritual center at the point is a sacred spot.

Table 2. Archaeological sites discussed in the paper, including site type and chronology.

Site (CA-)	Site Type	Age (cal BP, 2 Sigma) ¹	Site (CA-)	Site Type	Age (cal BP, 2 Sigma) ¹
SBA-203	Midden/village	1690-1090	SBA-2118	Midden	8620-8050
SBA-203/541	Midden/village	1340-280	SBA-2595	Lithic scatter/midden	470-120
SBA-204	Midden/lithic scatter	3540-2150	SBA-3504	Lithic site	Unknown
SBA-205	Midden/village	370-110	SBA-3577	Shell/lithic scatter	3900-3310
SBA-542	Shell scatter	Unknown	SBA-3579 ²	Historics/lithic scatter	Unknown/H
SBA-546	Midden/village	LH/H	SBA-4187	Midden/lithic scatter	960-490
SBA-1503	Midden/village	390-110	SBA-4188	Midden	4520-3890

SBA-1522	Midden/village	6660-6050/H?	SBA-4189	Midden	320-110
SBA-1523	Midden	8960-8360	SBA-4190	Midden/historics	220-110
SBA-1594	Midden	2790-2140	SBA-4191	Lithic scatter	Unknown
SBA-1595	Midden	1990-1350	SBA-4192	Shell/lithic scatter	450-120
SBA-1596	Midden	1850-1310	SBA-4193	Midden/lithic scatter	660-200
SBA-1597	Midden/historics	320-110	SBA-4194	Midden	900-220
SBA-1598	Midden	Unknown	SBA-4195	Midden	1810-1290
SBA-1599	Shell/lithic scatter	Unknown	SBA-4196	Midden	310-110
SBA-1600	Shell/lithic scatter	Unknown	SBA-4197	Lithic scatter	Unknown
SBA-1601	Lithic scatter	Unknown	SBA-4198	Lithic scatter	Unknown
SBA-1602 ²	Lithic scatter	Unknown/H	SBA-4199	Lithic scatter	Unknown
SBA-1603	Midden	7040-6460	SBA-4200	Lithic scatter	Unknown
SBA-1604	Midden	3780-3170	SBA-4201	Midden	8990-8390
SBA-1664	Lithic scatter	Unknown	SBA-4202	Midden	1580-1060
SBA-1666	Midden	7780-6050	SBA-4203	Midden	2040-1450
SBA-1843	Midden/lithic scatter	Unknown	SBA-4204 ²	Lithic scatter/historics	Unknown/H
SBA-1844	Midden/lithic scatter	7890-7150	SBA-4205	Lithic scatter	Unknown
SBA-1876	Lithic scatter	Unknown	SBA-4206	Lithic scatter	Unknown
SBA-1912	Lithic scatter	TP/EH/U	SBA-4207	Midden	7160-6590
SBA-2012	Lithic scatter	Unknown	SBA-4208	Lithic scatter	Unknown
SBA-2013	Lithic scatter/midden	7250-6700	SBA-4209	Midden/village	390-110
SBA-2014	Shell/lithic scatter	Unknown	--	--	--

¹2 sigma age ranges are presented with detailed radiocarbon data provided in Supplemental Table 1. Some sites list general chronological information based on artifact associations. H=Historic, LH=Late Holocene, TP=terminal Pleistocene, and EH=Early Holocene. Historics refers to historical artifact and debris scatters that post-date Mission period. Future research is needed at SBA-1597 and -4190 to determine if the date on the shellfish is actually associated with the shell midden.

²Historic artifacts likely associated with later Euro-American occupation.

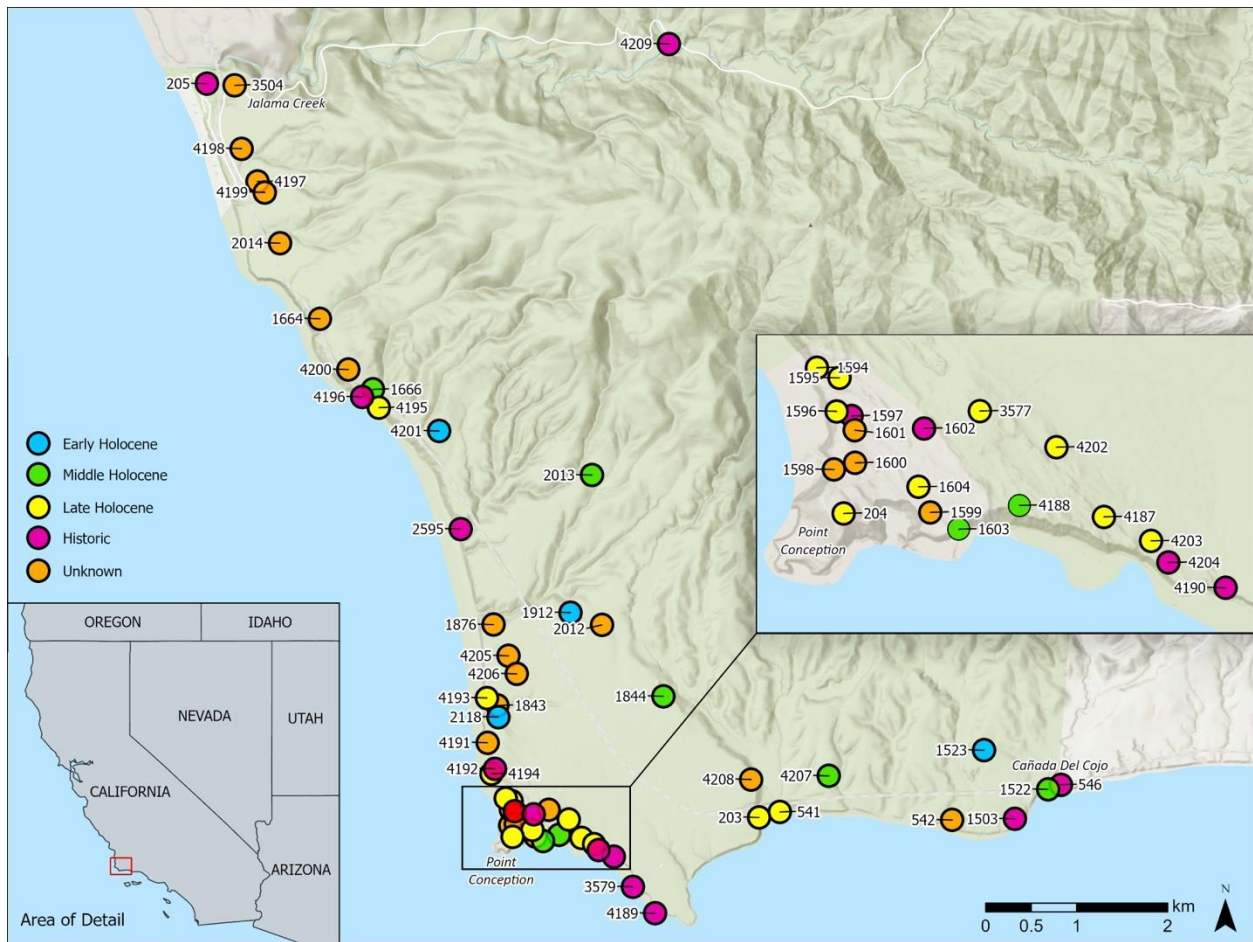


Figure 1. Coastal Archaeological Sites in Point Conception and their age based on radiocarbon dates or artifact associations. Some dates have multiple components. See Supplemental Table 1 or Figure 4 for other site components. All site numbers should be preceded by CA-SBA-. Site numbers correspond with site descriptions in Table 2 and radiocarbon dates in Supplemental Table 1. Area in green corresponds to the JLDP boundaries. Dots are deliberately large to obscure precise site locations and should be considered as approximate locations.



Figure 2. Early and Middle Holocene sites and current landscapes. An ~8600 year old hilltop site at CA-SBA-4201 looking out towards point conception in the distance (left). A 6800 year old hilltop site at CA-SBA-4207 which contained California mussel and Washington clam (top right). Under the iceplant in the foreground is an ~8300 year old site at CA-SBA-2118 looking at the interior mountains of the JLDP (bottom right). A mano/groundstone found on the surface near CA-SBA-4207 (bottom left inset).

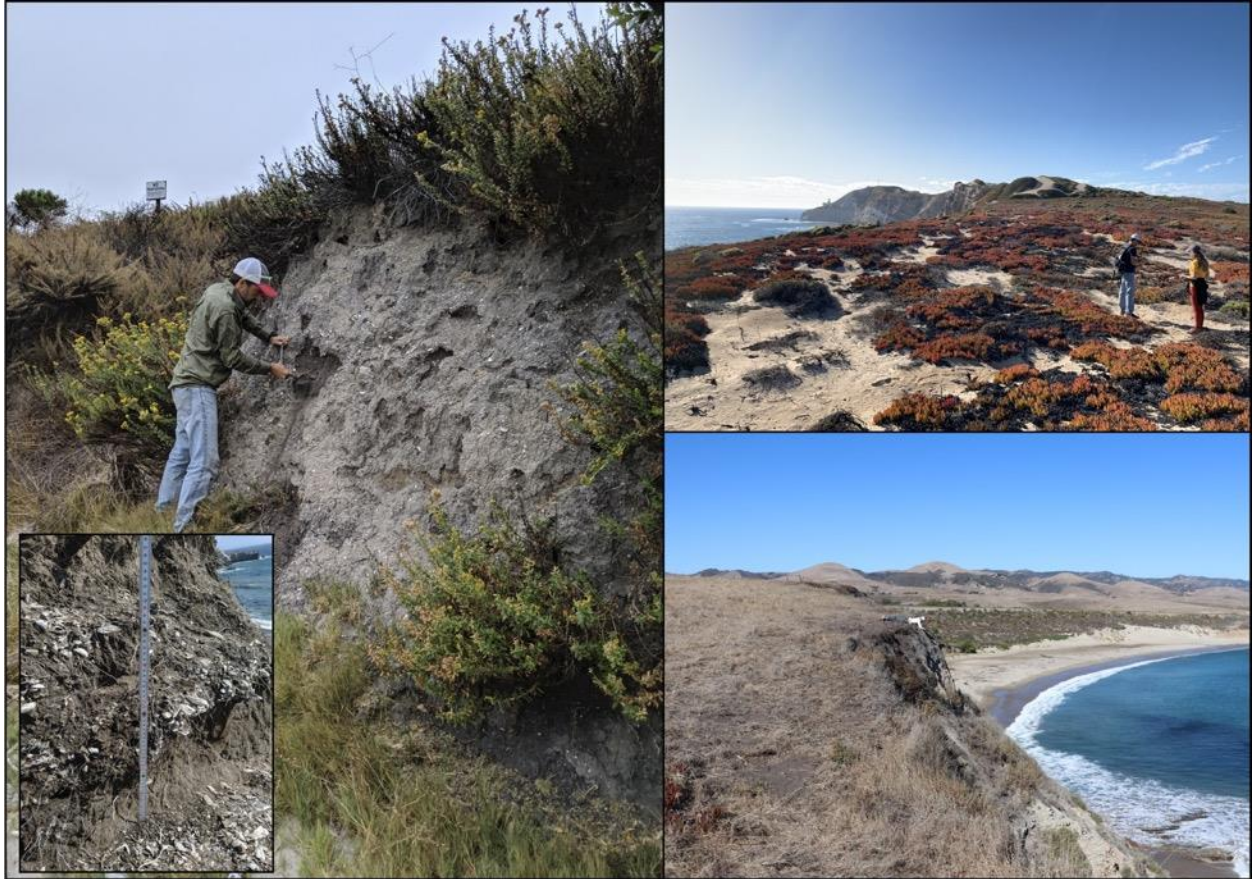


Figure 3. Late Holocene and historical sites and current landscapes on the JLDP coastline. A dense midden exposure dated from 1340 to 280 cal BP at CA-SBA-203/541 with midden present in the entire unvegetated exposure (left). A lithic scatter and early 20th century historical debris scatter is present in the patches of bare sand overlooking Point Conception and lighthouse just visible in the center left of the photo (top right). A dense midden and village site at CA-SBA-203 dated to 1690-1090 cal BP and overlooking a sandy beach and the mountains in the distance on the eastern end of the JLDP (bottom right). A closeup of a dense midden exposure (~40 cm thick) at CA-SBA-4194 dated to 900-220 cal BP (bottom left inset).

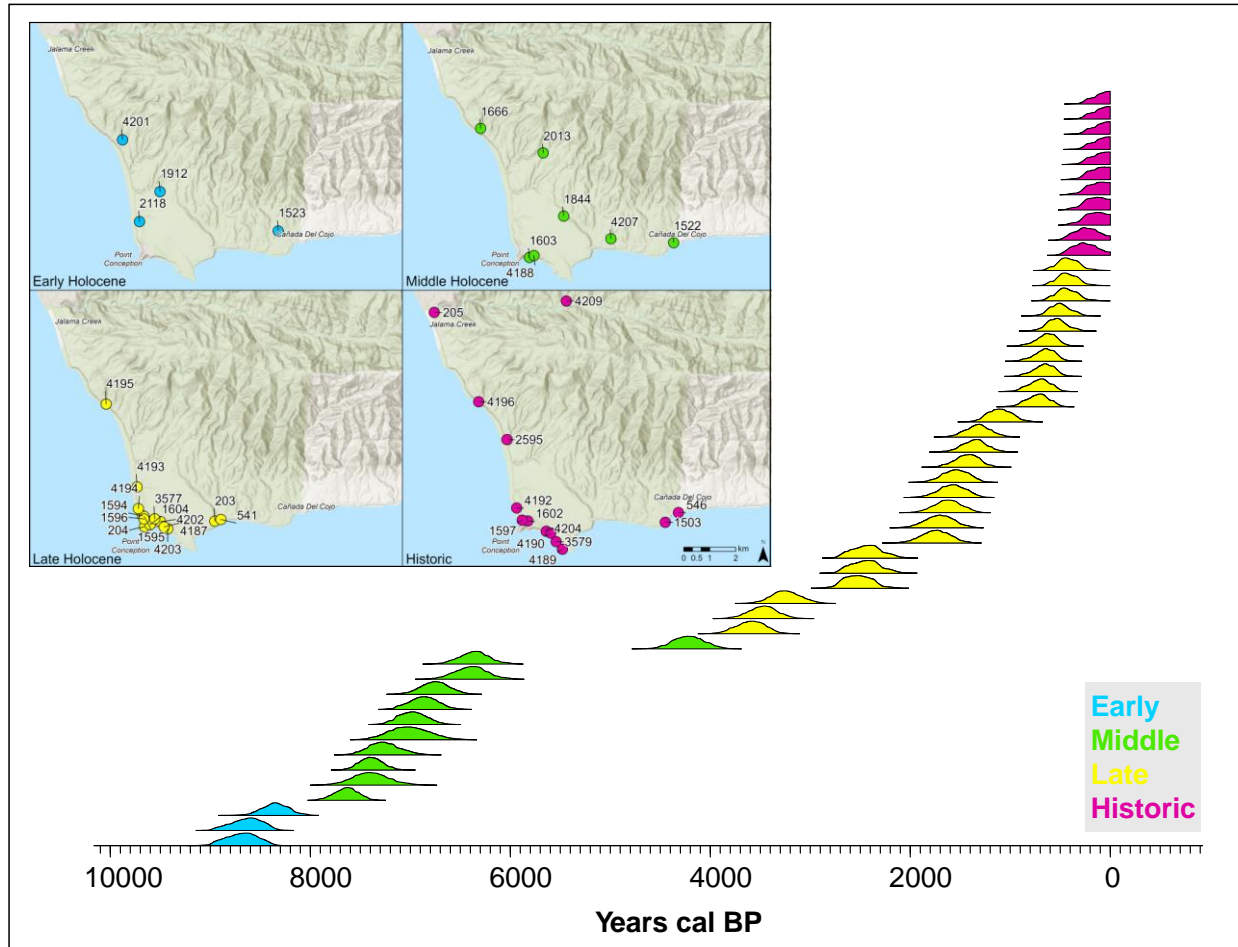


Figure 4. Archaeological site locations by time period based on radiocarbon dates and artifact associations and distribution of dates radiocarbon components through time. All site numbers should be preceded by CA-SBA-. Site numbers correspond with site descriptions in Table 1 and radiocarbon dates in Supplemental Table 1. Area in green corresponds to the JLDP boundaries. Dots are deliberately large to obscure precise site locations and should be considered as approximate locations. Date distributions produced using R package, *rcarbon*. See Supplemental Figure 1 for an alternative view of date distribution through time with sites labeled and Supplemental Table 2 for the data used to create the date distribution.

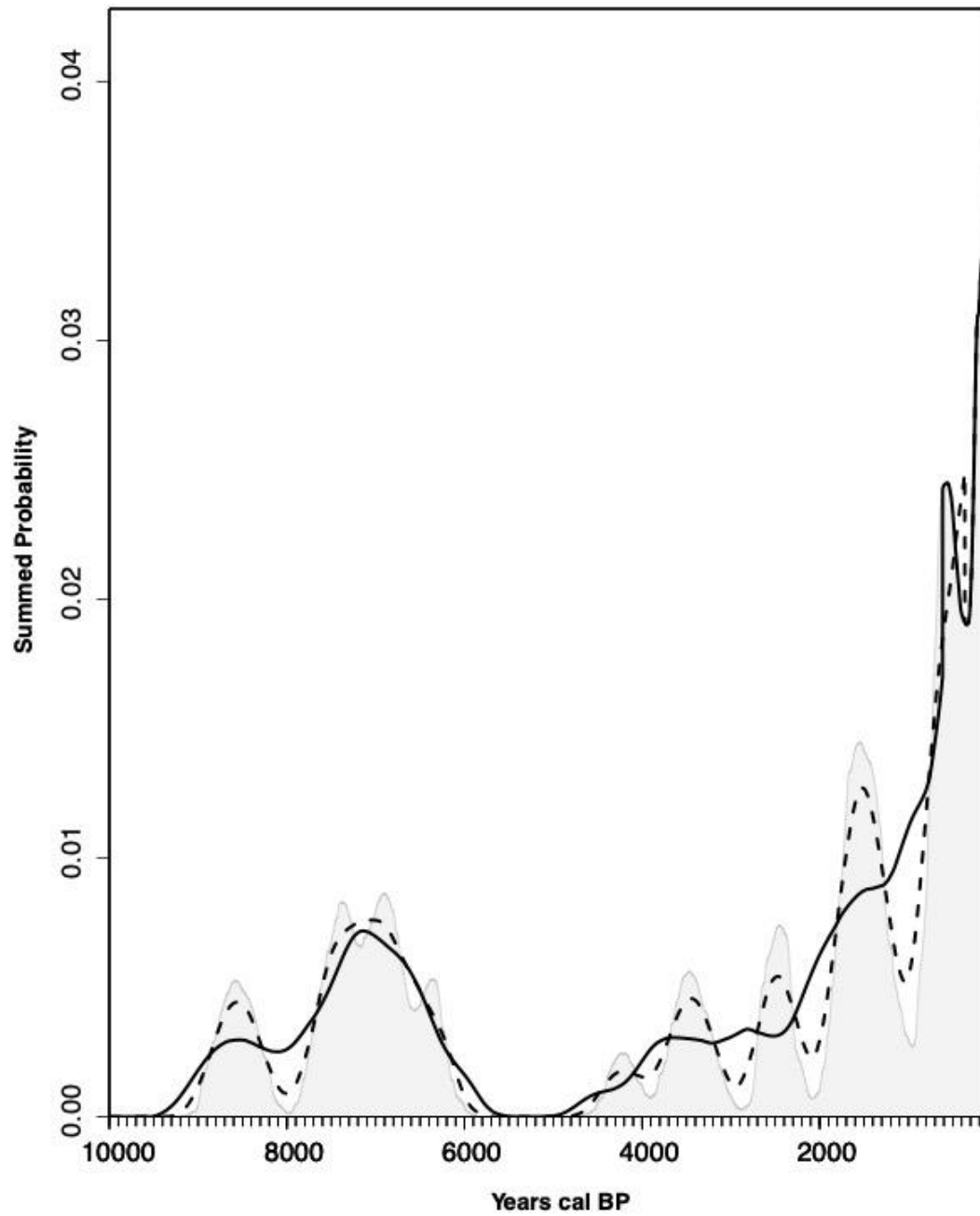


Figure 5. Summed probability model of radiocarbon dates from the JLDP produced using the R package *rcarbon*.