

THE ARCHAEOLOGY AND ETHNOHISTORY OF KASHTAYIT (CA-SBA-1491): A LATE PERIOD AND HISTORIC CHUMASH VILLAGE

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Archaeological and ethnohistorical data demonstrate that SBA-1491 is part of the historic Chumash village of Kashtayit. Radiocarbon dates from the site range from roughly 7800 years ago to historic times, but it appears to have been occupied primarily between about AD 1350 and AD 1810. Although no house structures and relatively few features were identified in the investigated area, the size, depth, density, and contents of the site – including glass trade beads – leave little doubt about the identification of the site as Kashtayit. A wide range of chipped stone, ground stone, bone, and shell artifacts were recovered, along with a large and well preserved faunal assemblage. Analysis of the faunal remains supports general assertions about the nature of Chumash economies along the Santa Barbara Coast, with a diversified and relatively eclectic subsistence economy dominated by fishing. After over 400 years of more-or-less continuous occupation, Kashtayit was abandoned around AD 1810, as the impacts of Spanish colonialism forced the Chumash to abandon their traditional economic pursuits. The rapid growth and increasing environmental impacts of Spanish cattle herds may have played a key role in this abandonment.

In AD 1769, Spanish chronicles suggest that about 200 people lived at the Chumash village of Kashtayit (Brown 1967), located at the mouth of Canada de la Santa Anita on the western Santa Barbara Coast (Figure 1). By about AD 1810, however, the village had been abandoned. In 1901, construction of the Southern Pacific Railroad divided the village site into northern and southern sections, now respectively referred to as SBA-1491 and SBA-1492. SBA-1492 has seen only limited archaeological work (e.g., WESTEC Services 1984), but SBA-1491 was intensively investigated in the late 1980s (Erlandson et al. 1993). In this paper, we summarize some key aspects of our historical and archaeological research at Kashtayit. Most of the data have not been published previously, although a brief synopsis of the research was presented by Erlandson and Rick (2002). Chumash subsistence at Kashtayit was contrasted with Early Holocene peoples of the same region (Erlandson 1994:277), and Santoro (1990) summarized the evidence for bead drill and shell bead production at the site. The investigation of Kashtayit provided a wealth of data on the structure, age, and contents of SBA-1491 as well as valuable information on the nature of coastal Chumash

adaptations between about AD 1350 and 1810.

THE ETHNOHISTORY OF KASHTAYIT

According to John Johnson (1988:93), the Chumash word Kashtayit means “willow.” Also known as Estait, the village was mentioned by the members of early Spanish expeditions such as Portola’s exploratory foray in AD 1769. At that time, between about 130 and 200 people reportedly lived at Kashtayit, occupying about 30 houses and owning 3 to 5 plank tomols (Brown 1967; J. R. Johnson 1988). Spanish accounts suggest that Kashtayit was located between two larger sociopolitical capitals, Shisholop to the west at Cojo and Onomyo to the east at Gaviota. The captain or wot of Kashtayit was recorded as Tulala, later referred to as Zeferino Tulala by the mission padres (Table 1). According to John Johnson (1988:84), a total of 111 people from Kashtayit appear in Mission baptismal records, with 103 baptisms recorded at Mission La Purisima, 6 at Mission Santa Barbara, and 2 at Mission Santa Inez. Mission records also suggest

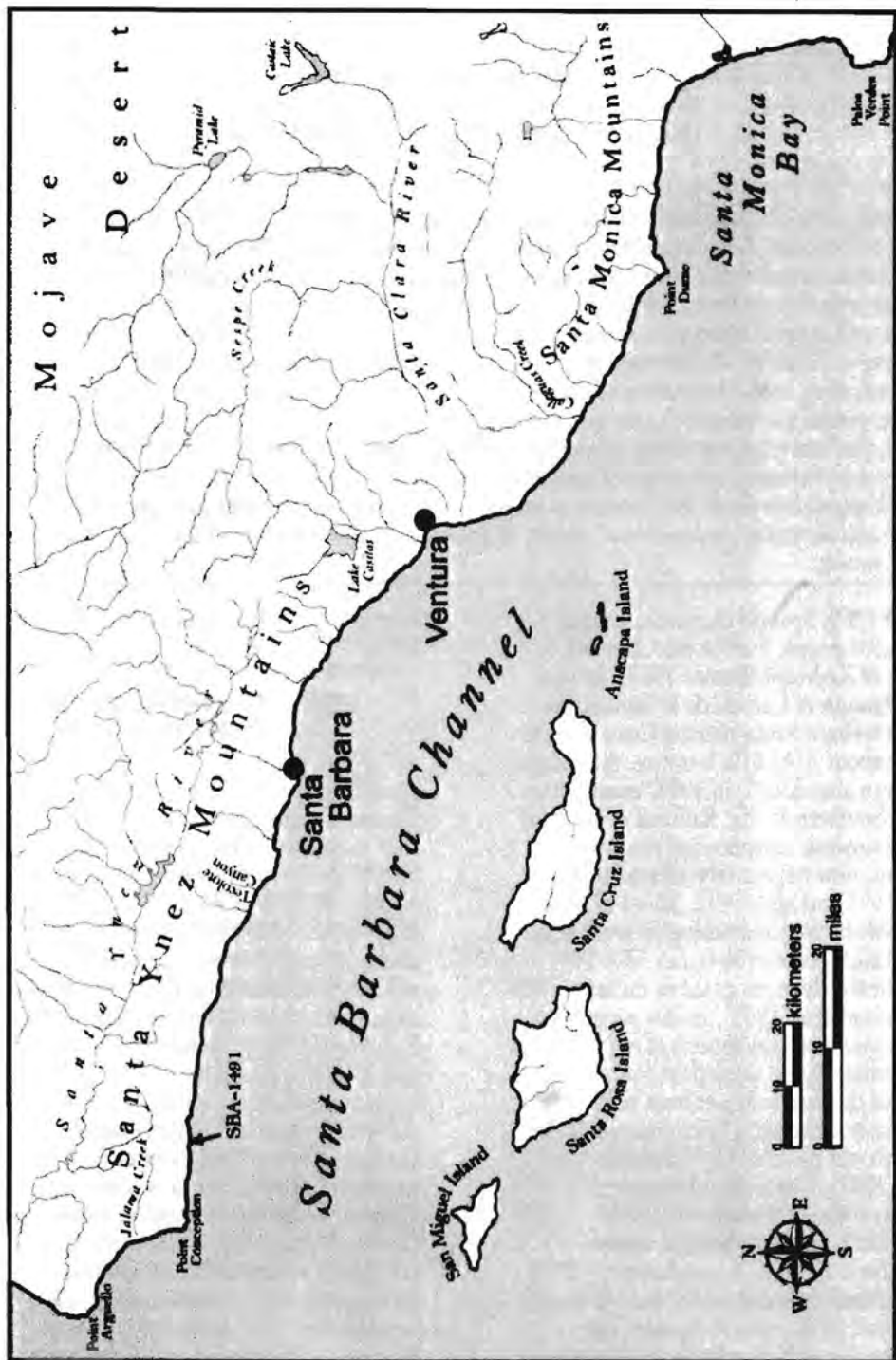


Figure 1. General Location of CA-SBA-1491.

that most marriages at Kashtayit followed a matrilineal residence pattern (J. Johnson 1988) and the marriages show links to villages to the west (3 to Shisholop, 2 to Noqto on South Vandenberg) and to Santa Ynez Valley villages to the north (3 to led most scholars to place the village within what is sometimes referred to as Purisimeno Chumash territory.

In AD 1795, the Spanish Crown granted a large block of land surrounding Kashtayit to Jose Francisco Ortega. This land grant, known as Nuestra Senora del Refugio, encompassed roughly 35 km (22 miles) of the western Santa Barbara Coast, from Refugio on the east nearly to Cojo on the west. Ignoring Chumash property rights established by millennia of continuous occupation, the Ortega land grant was stolen from the people of Kashtayit and neighboring villages, accelerating the profound transformation of the economic and cultural landscape of the western Santa Barbara Coast. During the 1780s and 1790s, the Spanish coastal road (El Camino Real), which facilitated commerce and travel between the missions, appears to have run along the outskirts of Kashtayit, insuring that the Chumash occupants had regular contact with colonial officials and other interlopers. By AD 1796, Old World diseases and relocation to the missions had reduced the population of Kashtayit to 68. Between AD 1803 and 1805 most of these survivors moved to Mission La Purisima (J. Johnson 1988).

Some scholars have proposed ecological explanations for Chumash migration to the missions, suggesting that it was caused by environmental perturbations and related food shortages (see Coombs and Plog 1977; Larsen et al. 1994), including a drought that struck the Santa Barbara area between about AD 1798 and 1802. The Chumash survived numerous drought and El Nino cycles over the millennia, however, and most Chumash people appear to have entered the Mission system after the 1802 drought had ended. As Farris (1999:177) recently noted, moreover, the movement of the Kashtayit (and other) Chumash to the Spanish missions may have been more closely related

Naxuwi, 2 to Lompo, and 1 each to Sh'ahuchu, 'Iriyqsh, and Kalawashaq'). These marriage patterns, along with the fact that most of the people of Kashtayit moved to La Purisima Mission after it was christened in AD 1787, have to the growing impacts of Spanish agricultural production on acorns and other traditional Chumash plant foods. Regarding the impacts of the Ortega's livestock on the natural environment, Farris cited a letter written by Father Gregorio Fernandez of Mission La Purisima in AD 1803. Written in opposition to the land grant petition of rancher Francisco Reyes, the letter stated that:

It is also very certain that the Neophytes of the Missions of Santa Barbara, La Purisima and San Luis will be much prejudiced, particularly those of Santa Barbara from los Dos Pueblos as far as the Gaviota; and those of this mission, from la Quemada as far as los Pedernales, which have for several years, been deprived of the grain produced by the native soil, the same having been consumed by the stock of the Senores Ortegases, and the other individuals on his rancho. . . . The harvests of this mission are not sufficient to give two rations of atole and one of pozole daily to 1060 neophytes which the Mission has; wherefore it is necessary to support them on the wild grain, which the goodness of God has furnished on their native soil.

This letter suggests that Mission La Purisima, at least, was not capable of providing adequate food to its Chumash Indian population, raising doubts that the Chumash abandoned their traditional territories because of the better opportunities at the missions. It also suggests that the Chumash moved to the Missions not because of natural climatic fluctuations, but because of the severe effects of Spanish livestock grazing on a foundation of Chumash subsistence—the acorns, seeds,

and other plant foods carefully managed by proscribed burning, and other methods.

Whatever the cause, by AD 1810 Kashtayit seems to have been largely abandoned by the Chumash (Erlandson et al. 1993:16-4), although some people may have stayed to work on the Ortega Ranch or in a home the Ortega's built in Canada de Santa Anita. After Mexican independence in AD 1822 and the secularization of the California missions in AD 1834, the Mexican government confirmed the Ortega's Refugio land grant and the colonial dispossession of the Kashtayit Chumash.

ARCHAEOLOGICAL INVESTIGATIONS

The first known archaeological excavation at Kashtayit was by antiquarian Stephen Bowers in AD 1878, work probably done primarily in SBA-1492 (Benson 1997). Clarence "Pop" Ruth noted the presence of the site in 1967, but appears to have done little excavation. Kashtayit was only officially recorded as an archaeological site in 1977, when Macko and Henton documented SBA-1491 and SBA-1492 as part of a cultural resource survey related to a proposed Liquefied Natural Gas project that was never built (see King and Craig 1978).

In the 1980s, archaeologists from WESTEC Services (a.k.a., ERCE) and UCSB were charged with finding an acceptable right-of-way across the lower reaches of Canada de Santa Anita to accommodate construction of paired oil and natural gas pipelines linking a Chevron USA processing plant near Gaviota with a production platform located off Point Arguello. Several alternative routes were examined, but the site could not be completely avoided due to a variety of environmental and engineering constraints. To minimize impacts to high sensitivity areas, a pipeline route adjacent to the railroad tracks along the southern site margin was chosen, extensive mitigation excavations were conducted in the area, construction impacts to intact soils were tightly controlled, and trenching through the site was carefully monitored by

archaeologists and Chumash cultural resource personnel.

During testing and mitigation work at SBA-1491, 55 shovel test pits and 59 test units were excavated. These were distributed on both the east and west sides of Santa Anita Creek, in areas designated as Loci B, C, and D. All excavated sediments were water-screened over 1/8-inch (or finer) mesh and sorted under controlled laboratory conditions. The large collection of artifacts and ecofacts recovered during field work at the site was subjected to a variety of analyses, the results of which are summarized in the sections that follow. A more detailed discussion of the archaeology of SBA-1491, authored primarily by Loren Santoro, can be found in the two volume technical report for the Chevron Point Arguello Project (Erlandson et al. 1993).

Site Structure, Stratigraphy, and Chronology

SBA-1491 is located on the broad and relatively level floodplain on either side of Santa Anita Creek, between about 40 and 50 feet (12-15 m.) above sea level. Surface reconnaissance and subsurface testing established that intact archaeological materials were present in an area extending at least 130 m north-to-south by 250 m east-to-west. The density of cultural materials varied dramatically across this area, from dense shell and bone midden areas to low density lithic aprons around the site periphery. Soils in this area also vary, but generally consist of well developed and culturally enriched grayish-brown sand or silt loams. Midden soil ranging from about 120 cm to 220 cm thick is built in alluvium deposited by intermittent flooding of Santa Anita Creek. Soil pH values range from mildly acidic to mildly alkaline (Table 1), but were generally conducive to the preservation of shell and bone artifacts and faunal remains. Within the shell midden, however, there was little evidence of cultural stratigraphy, the soil having been heavily mixed by the burrowing of gophers, earthworms, and other animals. One burned rock feature exposed in Locus C had been translocated to the base of the A horizon, a pattern typical of heavily bioturbated soils

along the Santa Barbara Coast (Erlandson and Rockwell 1997; D. L. Johnson 1989).

Fourteen radiocarbon dates for marine shell samples from Kashtayit provide the foundation of the site chronology (Table 2). A date on an estuarine clam shell from a deeply buried shell midden identified on the southeast edge of SBA-1491 suggests that the site was occupied about 7800 years ago, but little is known about this deposit exposed only in a deep backhoe trench (Erlandson 1994:169). The other ¹⁴C dates, when combined with ethnohistorical data, suggest that SBA-1491 was occupied more or less continuously between about AD 1350 and AD 1810. All these dates fall within the Late period (King 1990), three predating European contact, five dating to the Protohistoric period (AD 1542-1769), and five to the Historic period. The temporally diagnostic artifacts recovered at Kashtayit support this chronology, although obsidian hydration readings from the site (Table 3) are much more difficult to reconcile with other chronological evidence.

The Artifact Assemblage

As expected from a Late period and historic Chumash village, the large assemblage from SBA-1491 includes a wide variety of artifacts. Chipped stone tools recovered included 222 bifaces, 157 small drills interpreted as bead drills (Santoro 1990), 154 large drills, 115 flake tools, 45 hammerstones, 24 cores, and tens of thousands of pieces of chipped stone debitage. Projectile points include contracting stem dart tips, a variety of large and small leaf-shaped points, and a number of small triangular arrow points. The chipped stone assemblage included numerous obsidian artifacts, but these consisted primarily of small pieces of debitage, including numerous pressure flakes. Geochemical analysis of a sample of 20 obsidian artifacts suggests that over 90 percent of the obsidian used by the people of Kashtayit was obtained from the Coso Volcanic Field in Inyo County in eastern California.

Ground or pecked stone tools include 20 mortar fragments and 6 pestles, 3 metate fragments and 4 manos, a charmstone, a steatite comal fragment, a net weight, and a sandstone sphere. Also found were 32 tarring pebbles and 6 asphalt applicators.

Of the 77 bone tool fragments recovered, most were badly fragmented and their function could not be identified. Fourteen of these were pointed tool fragments that probably served as awls, pins, barbs, or gorge fragments.

Shell artifacts were also abundant at Kashtayit, including numerous circular shell fishhooks and a variety of beads and ornaments. The beads and ornaments include 262 made from *Olivella* shells -- 120 disk beads, 70 cup beads, and *Olivella* spire-removed beads --, as well as specimens made from clam, mussel, and abalone shell, 31 stone beads, and 44 glass beads. Also recovered were small numbers of shell and stone bead blanks, as well as small amounts of *Olivella* bead detritus, suggesting that some bead-making took place on site (Santoro 1990).

Faunal Remains

Faunal remains from SBA-1491 show that a wide variety of resources were harvested by the people of Kashtayit. A sample of about 2,000 fish bone elements from at least 22 discrete taxa were identified. These were dominated numerically by sardines or other clupeids (65%), rockfish (11%), croakers and surfperch (9% each), and Pacific mackerel (8%), with smaller numbers of seniorita, jacksmelt, jack mackerel, members of the sole family, midshipman, kelp bass, yellowtail, bonito, barracuda, halibut, and others. Other vertebrate remains are derived from a variety of small, medium, and large land mammals, sea mammals, several birds (cormorant, duck, gull, pelican), snake, and turtle. Except for a variety of small rodents, the bone assemblage is heavily burned and fragmented, suggesting that it is largely of cultural origin.

The shellfish assemblage was also quite diverse, with the remains of 39 discrete taxa

identified. Several species appear to have been important contributors to the shellfish diet, including the littleneck clam (*Protothaca staminea*, 20%), California mussel (*Mytilus californianus*, 13.6%), chitons (12.3%), abalone (*Haliotis* sp., 11.1%), sea urchin (*Strongylocentrotus* sp., 5.8%), platform mussel (*Septifer bifurcatus*, 4.6%), turban snail (*Tegula* sp., 4.3%), crab (2.9%), Pismo clam (*Tivela stultorum*, 2.5%), and rock scallop (*Hinnites multirugosus*, 2.2%).

Despite the recovery of over 32 kg of marine shell, dietary reconstructions derived from meat weight conversions for faunal samples (see Erlandson [1994:57-58] for a discussion of methods) from both Locus B and Locus C suggest that shellfish provided less than 10 percent of the animal flesh represented. Fish dominate the meat diet, contributing 65 percent or more of the estimated meat yield, with sea mammals, land mammals, shellfish, birds, and reptiles all representing secondary resources. Plant foods, although poorly represented in the assemblage, must have also been a major contributor to the local economy.

SUMMARY AND CONCLUSIONS

Investigations at SBA-1491, part of the historic Chumash village of Kashtayit, suggest that the site was occupied primarily between about AD 1350 and 1810. Radiocarbon dates and artifactual evidence suggest that the site was occupied through portions of the early Late period, the Protohistoric period, and the Mission period. Although relatively few features were encountered during excavation, the density, extent, and contents of the site leave little or no doubt that it is Kashtayit. The artifact assemblage is large and diverse, with a wide variety of activities represented. The faunal assemblage is also large and diverse, but dietary reconstructions strongly suggest that marine fishing was the primary subsistence activity of the Kashyayit Chumash.

For over 400 years, the people of Kashtayit inhabited a cultural landscape that was uniquely Chumash. They may well have been the descendants of maritime peoples

who thrived and survived in the Santa Barbara Channel area for more than 12,000 years. From Malibu to Morro Bay, however, the elaborate and sophisticated Chumash way of life developed over the millennia came rapidly to an end with the arrival of Europeans. Within 25 years of the local establishment of the Spanish Mission system, Kashtayit was abandoned. The vibrant maritime economy of the coastal Chumash was supplanted by the agrarian and pastoral economy of Spanish colonial overlords. With their freedom constrained by the Mission fathers and the encroaching pueblo of Santa Barbara, their land stolen and turned into a pasture for thousands of cattle, their health sapped by disease and the stresses of living under the yoke of oppression and prejudice, the surviving Chumash melted into the rapidly changing multicultural landscapes of the Spanish, Mexican, and American periods.

Only the most optimistic observers of the late 19th century or early 20th century could have foreseen the survival and eventual re florescence of Chumash culture. Despite some cynical anthropological appraisals of the integrity of Chumash revival (i.e., Haley and Wilcoxon 1997), however, the people of Kashtayit have survived and played a key role in the preservation, investigation, and interpretation of the site. This paper is dedicated to the Chumash people of Kashtayit, past and present.

NOTES

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Table 1: Some of the Chumash Individuals from Kashtayit recorded in Ethnohistoric Records*

Name	Gender	Born	Baptized	Died	Noters or Comments
Zeferino Tulala	Male				Listed as village capitan
Antonio Maria Talux	Male	1764	1786	1814	1 st baptism listed for Mission Santa Barbara (MSB)
Bona Maria Michecsca	Female	1737	1787	1804	Baptized at MSB; mother of 3 daughters (see below)
Angela Maria Huanchichi	Female	1763	1787	1788	Baptized at MSB; daughter of Bona Maria
Maxima Maria Supanamejue	Female	1767	1787	1833	“; daughter of Bona Maria
Sabina Maria Anach	Female	1773	1787	1804	“; daughter of Bona Maria
Manuel “El Ciego” Palaquiui	Male		1799	1835	Blind, interpreter and prayer leader; witnessed 79 marriages
Crispiniano Stanajuyuyu	Male	1791	1792	1826	Baptized at Mission La Purisima
Antonio Putsuc	Male	1763	1803	1829	Baptized at Mission La Purisima
Delfina	Female	1776	1804	1820	Baptized at Mission La Purisima
Ana Francisca	Female				Married to Castor Uastiol (Noqto) and Esteban Taluxma (Saxpil)

* compiled from Brown (1967); Farris and Johnson (1999); J. Johnson (1988), and J. R. Johnson (p.c., 2001).

Table 2: Soil pH Values for Several Test Pits at the Chumash Village of Kashtayit (SBA-1491).

Depth	B:12	B:19	B:52	B:56	C:13	C:15	C:17	C:45
0-20 cm	6.75	6.90	6.15	6.25	6.85	6.60	6.70	7.25
20-40 cm	7.10	7.55	6.85	6.45	6.90	6.65	6.90	7.70
40-60 cm	7.35	7.60	6.90	6.90	7.05	6.90	7.05	7.80
60-80 cm	7.45	7.55	7.05	6.85	7.25	7.30	7.20	8.00
80-100 cm	7.60	7.55	7.00	7.00	7.45	7.45	7.35	8.10
100-120 cm	7.65	7.70	7.25	6.95	7.55	7.50	7.45	8.20
120-140 cm	7.65	7.65	7.25	6.90	8.30	7.40	--	--
140-160 cm	--	7.70	--	6.80	--	--	--	--
160-180 cm	--	7.70	--	6.65	--	--	--	--
180-200 cm	--	7.70	--	7.35	--	--	--	--
200-220 cm	--	7.80	--	7.40	--	--	--	--
220-240 cm	--	7.80	--	--	--	--	--	--

Notes: Soils analyzed by Simons (1987) using a Fisher pH Electrometer and a 1:1 slurry of soil and distilled water; pH values are slightly acid (6.1-6.5), neutral (6.6-7.3), mildly alkaline (7.4-7.8), or moderately alkaline (7.9-8.4). The letters preceding test pit numbers refer to the site locus.

Table 3: ¹⁴C Dates from the Chumash Village of Kashtayit (SBA-1491).

Provenience	¹⁴ C Date	Calendar Age Range	Lab #	Material	Reference
<i>Locus B (cm)</i>					
Unit 20, 60-80	260 ± 80	AD 1720 (1890) 1950*	Beta-17212	Red abalone	Erlandson 1988
Unit 20: 80-100	310 ± 90	AD 1680 (1820) 1950	Beta-17213	Red abalone	Erlandson 1988
Unit 20: 40-60	400 ± 80	AD 1640 (1680) 1820	Beta-17211	Red abalone	Erlandson 1988
STP 503: 0-90	500 ± 60	AD 1520 (1630) 1670	Beta-12946	Red abalone	Erlandson 1988
Unit 7: 20-40	670 ± 70	AD 1400 (1450) 1500	Beta-17210	Pismo clam	Erlandson 1988
<i>Locus C (cm)</i>					
Unit 7: 20-40	Modern	Modern	Beta-15050	<i>Protothaca</i> shell	Erlandson 1988
Surface	220 ± 70	AD 1910 (1910) 1950	Beta-10225	Red abalone	Erlandson 1988
Unit 6: 0-20	300 ± 80	AD 1690 (1820) 1950	Beta-15046	<i>Protothaca</i> shell	Erlandson 1988
Unit 7: 0-20	430 ± 80	AD 1580 (1670) 1720	Beta-15049	<i>Protothaca</i> shell	Erlandson 1988
Unit 7: 100-120	470 ± 60	AD 1540 (1650) 1680	Beta-12948	Mixed shell	Erlandson 1988
Unit 6: 20-40	470 ± 80	AD 1530 (1650) 1690	Beta-15047	<i>Protothaca</i> shell	Erlandson 1988
Unit 6: 40-60	640 ± 60	AD 1430 (1470) 1520	Beta-15048	<i>Protothaca</i> shell	Erlandson 1988
Unit 7: 20-40	760 ± 80	AD 1320 (1410) 1450	Beta-12947	Red abalone	Erlandson 1988
East edge: 220	7100 ± 90	5840 (5775) 5670 BC	Beta-20404	<i>Tresus nuttalli</i>	Erlandson 1994

Note: All shell dates in uncorrected ¹⁴C years, without ¹³C/¹²C corrections. All dates were calibrated using CALIB 4.3 (Stuiver and Reimer 1993). Calendar age midpoints in parentheses. Dates with an * had multiple intercepts.

Table 4. Obsidian Geochemistry and Hydration Data for artifacts from Kashtayit (SBA-1491)

Locus/Provenience	Artifact Type	Size (mm)	Obsidian Source	Hydration Reading
B: Surface Shot #38	Pressure flake	8	Coso Volcanic Field	7.9 (7.7-8.0)
B: Unit 9, 180-200 cm	Pressure flake	11	Coso Volcanic Field	5.9 (5.8-6.0)
B: Unit 19, 120-140 cm	Pressure flake	7	West Sugarloaf, Coso	4.4 (4.2-4.5)
B: Unit 20, 80-100 cm	Flake fragment	10	Coso Volcanic Field	7.0 (6.9-7.1)
B: Unit 20, 100-120 cm	Flake fragment	12	Coso Volcanic Field	5.0 (4.9-5.2)
B: Unit 25, 60-80 cm	Flake fragment	7	Casa Diablo	4.1 (4.0-4.3)
B: Unit 52, 40-60 cm	Flake fragment	10	Coso Volcanic Field	4.2 (4.1-4.3)
B: STP 502	Flake	10	Coso Volcanic Field	6.1 (5.9-6.2)
C: Unit 7, 0-20 cm	Pressure flake	8	Coso Volcanic Field	4.5 (4.5-4.6)
C: Unit 13, 20-40 cm	Flake fragment	10	Coso Volcanic Field	5.6 (5.6-5.7)
C: Unit 17, 60-80 cm	Pressure flake	9	Coso Volcanic Field	4.8 (4.7-4.8)
C: Unit 30, 40-60 cm	Flake fragment	17	West Sugarloaf, Coso	5.5 (5.4-5.5)
C: Unit 32, 20-40 cm	Pressure flake	8	Coso Volcanic Field	4.5 (4.3-4.7)
C: Unit 34, 80-100 cm	Flake fragment	13	West Sugarloaf, Coso	4.6 (4.5-4.7)
C: Unit 34, 100-120 cm	Flake fragment	11	Coso Volcanic Field	4.3 (4.2-4.4)
C: Unit 44, 60-80 cm	Biface fragment	15	West Sugarloaf, Coso	Variable, burned?
C: Unit 46, 80-100 cm	Reworked biface	38	West Sugarloaf, Coso	5.0 (4.8-5.1)
C: Unit 46, 80-100 cm	Pressure flake	8	West Sugarloaf, Coso	5.1 (4.9-5.2)
C: Unit 47, 20-40 cm	Flake fragment	10	West Sugarloaf, Coso	2.0 (1.9-2.1)
C: Unit 49: 0-20 cm	Pressure flake	9	Coso Volcanic Field	6.6 (6.5-6.6)

Note: Data compiled from Erlandson (1987), Hughes (1987), and Origer (1987)