



An Overview of the Archaeological Evidence for Hohokam and O'odham Cultures

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The O'odham language is the northernmost within the ancient southern Tepiman group of languages (within the large Uto-Aztecan language family, Figure 1), which is divided into northern and southern branches (Shaul and Hill 1998:377). With an estimated origin of at least 9,000 years ago (and probably even earlier), Uto-Aztecan is one of the oldest languages in North America, but its place of origin is still debated. Recent work (Merrill et al. 2009) proposes that it developed in the western Great Basin during the early Holocene, more than 9,000 years ago. Uto-Aztecan is also one of the most geographically widespread families in the Americas, ranging from Shoshone in Idaho to Pipil in Costa Rica. The largest group of Uto-Aztecan speakers today are Nahua, with over 1.3 million speakers in Mexico alone (Vidal and Brusca 2020).

In this essay references and descriptions of Hohokam culture refer to the archaeological concept of Hohokam, as recognized by scientists working in the Southwest: specifically, the archaeological culture that was in south-central Arizona from roughly 450 to 1450 CE, as represented by the material cultural remains from that ca. 1,000-year-long period (Fish and Fish 2007). It specifically does not deal with the concept of *huhugam*, an O'odham word often referring to any O'odham

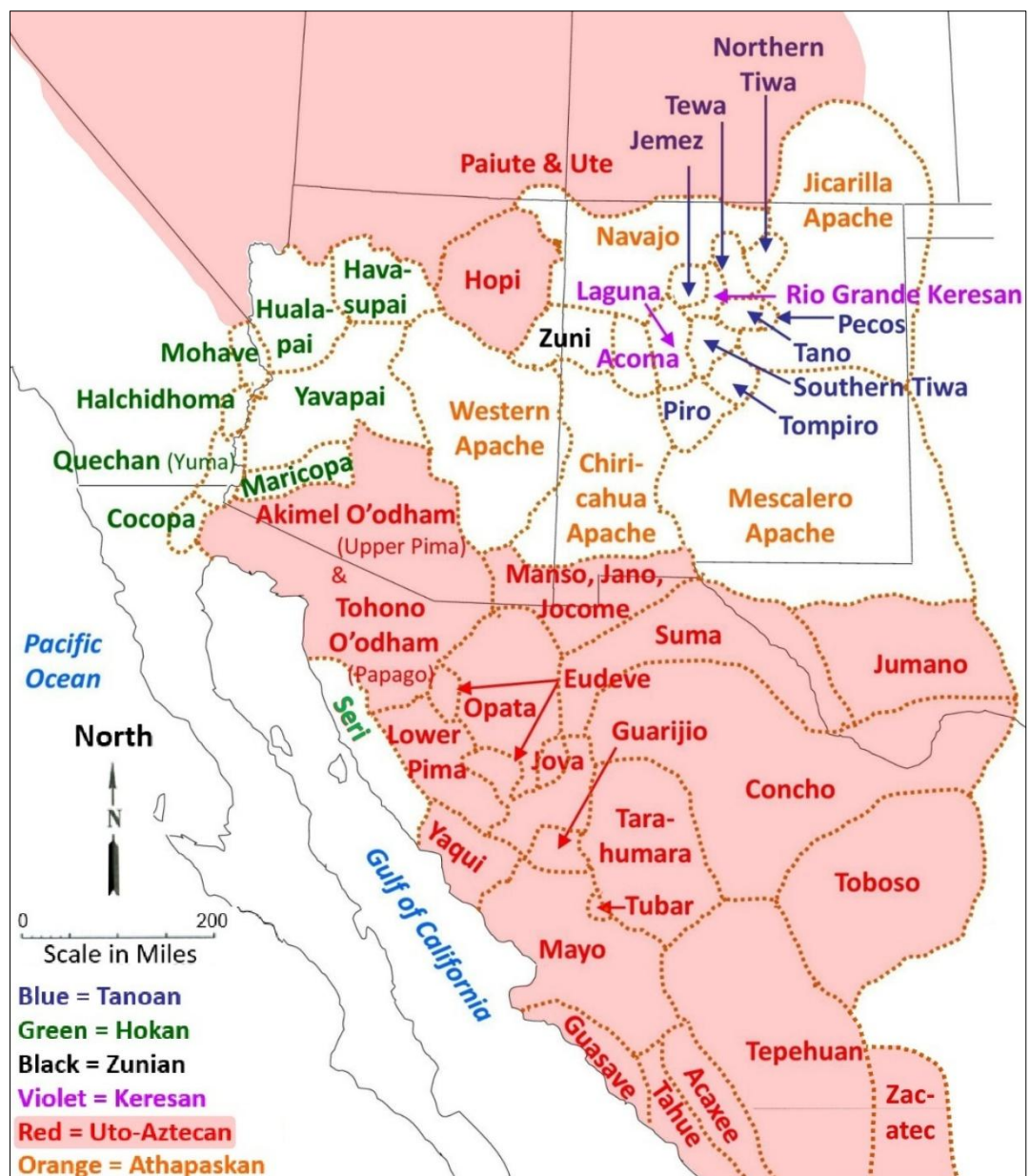


Figure 1. Map of historical Native American language groups with Uto-Aztecan language groups (or suspected so) highlighted (Map by Allen Dart adapted from *Archaeology of the Southwest*, 2nd edition, by Linda S. Cordell [1997]; *Handbook of North American Indians: Volume 9, Southwest*, edited by William C. Sturtevant, [1979]; and "A Call from Home" by Michael Galban in *News from Native California* at <https://newsfromnativecalifornia.com/a-call-from-home/> [2015])

Figure 1 note: The Maricopa of southwestern Arizona speak Yuman of the Yuman-Cochimi Language Family. (See Figure 2, next page,) Maricopa (Piipaash) became friends and allies of the O'odham and in some cases relatives by marriage. They began moving to the Middle Gila River to live among the Akimel O'odham in the eighteenth century and by 1850 they had all moved to that area to live among the O'odham (Winters 2021). See Vidal and Brusca (2020) for details on Uto-Aztecan biocultural diversity in Mexico.



Figure 2 (. Historical extent of Yuman–Cochimí languages in the United States and Mexico; see Vidal and Brusca (2020) for details on Yuman-Cochimí biocultural diversity in Mexico

(https://commons.wikimedia.org/wiki/File:Yuman%E2%80%93Cochim%C3%AD_map.svg,

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who are no longer living, over the entire history of their people. *Huhugam* means “that which once was, but is no longer” or “those who have finished” (Shaul and Hill 1998:375).

Winters (2021) stated, “The O’odham word, *huhugam* . . . includes the people archaeologists call Hohokam as well as many other peoples, for example one’s great-grandparents; people who are gone, who aren’t alive any more. It is not limited to people whose traits define the archaeologists’ Hohokam.” Thus, in the broadest context the Ancestral Pueblos and ancient Egyptians are also *huhugam* and, in fact, many things can be *huhugam* (water, cooked food, money, etc.). When used as *Huhugam O’odham* it refers to the “finished persons,” who modern O’odham believe were their predecessors going back to the first O’odham that ever lived.

The word Hohokam was created by Frank Russell (1908:24; see Figure 3), who apparently heard this pronunciation of their word *huhugam* by his Pima (Aki-mel O’odham: River People) informants; a word choice that has bedeviled southwestern archaeology ever since. Further, Russell’s use of the term referred only to the Classic period Hohokam, so does not correspond to the full 450-1450 time range of the entire Hohokam archaeological culture. Russell (1908:24) also wrote that the Pima of his time did not know anything about their relationship with the Hohokam or of the meaning of *si’van*^v – the name given to all Hohokam chiefs.

However, the *huhugam* concept is not the subject of this essay, which instead focuses on a



specific archaeological culture called Hohokam as represented by material cultural remains.

Earliest Archaeological Evidence of O'odham

Abundant archaeological evidence of a probable proto-Hiach'ed O'odham (Sand Papago or Areneño O'odham) culture, dating to at least the Middle Archaic 4000 BCE, is seen today all along the northern Sonora coastline (Figure 4). This is described in Mitchell et al. (2020) and is fully documented in Mitchell et al. (2024b). The record could be much older than this, but earlier archaeological evidence would be submerged off the current coastline, which represents the last sea level rise stabilization at ca. 6,000 years ago (subsequent to a 100-150 m rise since the Last Glacial Maximum ca. 19,000 years ago). These likely ancestral O'odham lived as hunter-gatherers in northwestern Sonora over 4,000 years before the first appearance of what archaeologists recognize as the Hohokam archaeological culture. In fact, the ancestral Areneños were likely the earliest southern Uto-Aztecs present in the Sonoran Desert and they apparently represent the oldest populational, cultural, and linguistic root of the O'odham, long preceding the appearance of a Hohokam culture (Mitchell et al. 2024b).

Mitchell et al. state:

The varied lines of evidence from our explorations along the coast lead us to conclude that, beginning 6000 years ago, the Puerto Peñasco-Bahía Adair middens were mainly created by the desert dwelling ancestors of the Areneños (Sand Papago or Hiach'ed O'odham) who lived in the western Papaguería during historical times, and whose exploitation of marine resources along this northeastern stretch of the Gulf coast is recorded by both first-hand accounts and oral traditions (e.g., Lumholtz 1912; Childs 1954; Hayden 1988a, 1988b, 1988c, 1998). This scenario would imply that the prehistoric coastal foragers who created the middens in our project areas were the ancestral Areneños, and that the Hiach'ed O'odham of the western Papaguería represent one of the oldest Tepiman-speaking groups and life-ways in the Sonoran Desert. It would also support culture history models that infer a long-present O'odham population and culture that originated in the Sonoran Desert during the Archaic era and eventually interacted with neighboring Hohokam, Patayan, Comcaac and Trincheras cultures during later pre-history (Di Peso 1956, 1979; Hayden 1970). [Mitchell et al. 2024b:195]

Amadeo Rea, Charles Di Peso, Julian Hayden, Randall McGuire, C. G. Turner II, Malhi et al., and others have also argued that the O'odham are likely descendants of Archaic hunter-gatherer populations in the Sonoran Desert or areas just south of it (Figures 5 and 6).

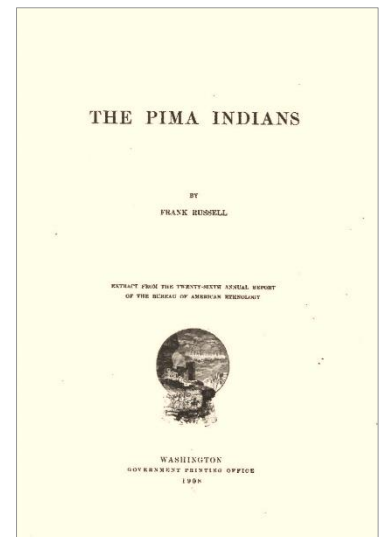


Figure 3. Title page from Frank Russell's 1908 *The Pima Indians* volume



Figure 4. El Pinacate and Gran Desierto, Sonora, Mexico, home of the Hiach'ed O'odham (Sand Papago or Areneño O'odham) for thousands of years; large bay is Bahía Adair (NASA Earth Observatory photograph)



Figure 5. The Sierra Pinacate in Sonora, Mexico, looking east across the Gran Desierto (Photo by the author)



Figure 6. Salina Grande in Bahía Adair, Sonora, destination of the Tohono O'odham salt treks for thousands of years; Salina Grande remains sacred to the O'odham (Photo by the author)

Oral Traditions of the O'odham

The oldest O'odham creation stories put them in southern Arizona prior to the Hohokam archaeological culture, typically consider the O'odham and Hohokam to have been enemies, and claim the O'odham won their battles against the Hohokam. There are many ancient O'odham stories about this (Bahr et al. 1994). Father Kino, speaking with O'odham at the site of Casa Grande (in Arizona) was told their ancestors did not build that village and were, in fact, enemies of those who did (whom they called “Jackrabbit Eaters”) (Bolton 1936). During ethnographer/linguist Amadeo Rea's work with the River Pima (Akimel O'odham), they told him emphatically that they were not the descendants of the Hohokam and Rea's linguistic research supports this view (Rea 1983, 1997, 1998, 2007). Rea, who has been studying the Akimel O'odham for over 60 years, writes:

Some scholars see a connection between the Hohokam and the modern Pima, but there is scant support for such an idea. Riverine Pima ties – linguistically, esthetically, mythologically, ethnohistorically – are interconnected to the other Piman groups to the south, of which they are just the northernmost extension. The Piman response to both Hispanic and Anglo explorers was the same when asked about the great ruins found in the Salt-Gila Valley: they disassociated themselves completely from them. [Rea 1983:10]

Rea also notes (2007:137), “Revisionist historians, promulgating the Hohokam-Piman continuum hypothesis, would do well to consider what O'odham themselves have maintained for generations about their relationship with the earlier inhabitants of the country.” Rea's linguistic work suggests the Piman (O'odham) language did not evolve in the Sonoran Desert, but south of it, perhaps in tropical deciduous forest and/or pine-oak grassland ecosystems of lower-most Sonora or northern Sinaloa, in the foothills of the Sierra Madre Occidental.

Some Tohono O'odham (Desert People) today claim their ancestors were the farmers who lived at the Las Capas site in the Santa Cruz River valley (ca. 1200-800 BCE), and this is likely the case. O'odham legends also speak of trading with visitors from the Gulf of California ca. 800 BCE, well before the first appearance of the Hohokam culture.

The Gila Pima unequivocally disassociated themselves from the Classic period Hohokam (the “builders of the great ruins”) and made this clear to both the Hispanic missionaries and the earliest Anglos who inquired (Manje, in Bolton 1936:370; Wyllys 1931; Sedelmayer 1955; Whittemore 1893; Bartlett 1854). Manje did not use the terms Hohokam or huhugam, but referred to a people who “came from the north country.” And, at the time of European contact, over 90 percent of the area O'odham occupied lay entirely outside the Hohokam archaeological culture region (Spicer 1962:11).

Bahr et al.'s (1994) *The Short, Swift Time of Gods on Earth: The Hohokam Chronicles* presents the



most comprehensive compilation of traditional (pre-European) Pima Indian (Akimel O'odham) oral historical traditions ever compiled. They are verbatim records of Pima elders recorded over several nights in spring 1935 at Snaketown, Arizona. Although they are stories about the Pima People, most of the stories take place during the era of the Hohokam, and fully three-fourths of them deal to some extent with the Hohokam (hence the book's subtitle, *The Hohokam Chronicles*). These myth-stories and songs indicate that the Pima long preceded the Hohokam in time. Bahr et al. (1994:1-2) also acknowledges the Juan-Allison narrative, concluding that "the Hohokam conquest was internal and fraternal, if not fratricidal – something like a civil war."

Resemblances between O'odham culturally diagnostic items (for example, pottery types, stone and shell artifact styles, degree of artistic elaboration, and architecture) and those of Hohokam are almost non-existent. Nothing analogous, nor even faintly similar to the distinct Hohokam snake-eating-toad and bird-eating-snake themes appears in published accounts of O'odham creation stories, traditional stories, or songs (Wright 2022).

Harry J. Winters, Jr. (see this issue's first article) is a geological engineer who began learning the O'odham language at age 17 (in 1957) and over many years became close friends with families in several districts of the Tohono O'odham Nation (Winters 2020a). Over many decades he heard O'odham traditions from elders in numerous districts of the Nation. He visited the Casa Grande Ruins with some of those elders and, while there, he listened to their tradition stories about the battle between O'odham and Casa Grande dwellers, who are thought by archaeologists to have been Late Classic period Hohokam and who the O'odham called "Jackrabbit Eaters" (*Chuuv Ko'adam*). However, the O'odham elders never used language that suggested a massive invasion or conquest of the whole middle Gila River and lower Salt River region by the Hohokam or O'odham.

In Winters' opinion, the attacks on the *vapaki* (houses built on platform mounds) like the Casa Grande ruins were targeted at specific individuals at a limited number of locations. The objective was to remove those persons who the O'odham living in the area believed to be practicing malevolent witchcraft aimed at harming them. Those O'odham brought in reinforcements from outside to assist them. They drove the *vapaki* people away from Casa Grande and they never returned. Winters (2024) noted that once the O'odham defeated the people at Casa Grande in the fifteenth century they began to occupy the land that previously had been occupied by the Hohokam. Winters never heard any details about the ancestors of the *vapaki* people, only that they came from "the north." Winters' O'odham informants made it clear that these people were not O'odham and they did not even know what language the people spoke (Winters 2021).

Architectural and Ceramic Evidence

Ethnographer Frank Russell (1908) found no resemblance between Pima/Akimel O'odham post-1150 houses and the Classic period "pueblo style" architecture of the Hohokam (Figures 7 and 8), and the Pimas' refusal to adopt adobe-walled houses argues against their relationship to the Classic period Hoho-

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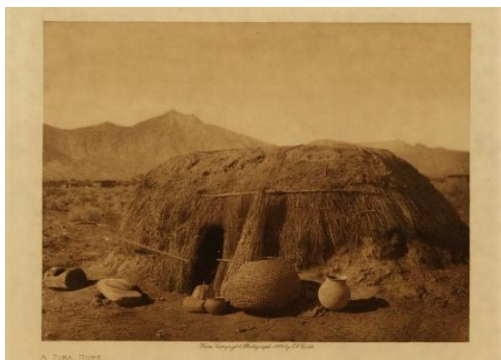


Figure 7 (left). "A Pima Home"
(Photo by Edward S. Curtis,
1907, U.S. National Archives)

Figure 8 (right). 1930s excavation
of part of the S'edav Va'aki
(Pueblo Grande) platform mound
showing pueblo style architecture
(S'edav Va'aki Museum photo
courtesy of Laurene Montero)





kam. Russell also found Pima pottery inferior to Hohokam ceramics (Russell 1908). Nor did Pima ceramics emulate the Mesoamerican/West Mexico attributes so distinctive in Hohokam ceramics, such as incising, the triangular motif, interlocking spirals, contrasting positive and negative symbols, and use of shiny natural materials such as mica and ground schist (Figure 9).

At the time of his studies in 1901-1902, Russell said, “[The Pima] now frankly admit that they do not know anything about the matter” of the prehistoric ruins in the vicinity. And, as Doyel (1991) notes, the Pima did not build hundreds of miles of canals, over 225 ballcourts, and over 45 platform mounds, did not have an economic system encompassing over 65,000 sq km, and did not possess the complex settlement hierarchies recorded for the Hohokam.

Genetic Evidence

Several studies have assessed genetic affinity between the Hohokam, the O’odham, and other southwestern Indigenous groups through analyses of genetically based dental morphological traits, concluding that the Hohokam and Pima are not biologically close (e.g., Turner 1987, 1993; Turner and Irish 1989). Instead, these studies found that the Hohokam are most close to northern Mexico cultures. The Pima/Akimel O’odham, in contrast, show closest ties to other Arizona Indian groups. Turner’s 1993 study analyzed 4,619 individuals.

A large-scale genomic analysis by Nakatsuka et al. (2023) indicates deep dates for the O’odham by revealing a distinctive genetic lineage shared between northwest Sonora (e.g., La Playa and Trincheras Cultures) and modern O’odham dating to at least 2,900 to 5,000 years BP.”

On the Origin of the Hohokam

In the broadest sense, there are two general theories on the origin of Hohokam culture. One views



Figure 9. Examples of Hohokam ceramic artifacts with attributes noted in text: a-c, Snaketown Red-on-buff sherds from archaeological site AZ AA:12:285(ASM) showing incisions, mica or schist inclusions, and triangular rim motif; d, interlocking spirals on a Gila Butte-Santa Cruz Red-on-buff jar from site AZ AA:16:49(ASM); e, Cañada del Oro Red-on-brown pottery scoop from site AZ AA:16:49(ASM) featuring contrasting positive and negative symbols – the oval images appear to be “negative” (unpainted) depictions of *Glycymeris* shell bracelets on the “positive” painted red background (Photos a-c by Allen Dart, c and d photos and all pottery type identifications by William L. Deaver)



them having arisen out of a band of Mesoamericans who migrated north from central-west Mexico, carrying with them Mesoamerican cultural icons. The other sees them as having arisen in situ, a group of semisedentary peoples who, through trade connections with people from central-west Mexico, gradually adopted many Mesoamerican material and cultural traits (perhaps by way of merchants traveling up from central-west Mexico, or perhaps by Hohokam explorations to the south, or maybe through shared cultural knowledge among the many Uto-

Aztec speakers ranging from Arizona to deep in Mexico). Regardless of which view might be correct, there seems no question that the "Hohokam millennium" (Fish and Fish 2007) was contemporaneous with only a portion of the deep history of the O'odham and did not predate the O'odham. Despite a thousand years of Hohokam-O'odham coexistence and material and cultural exchanges, there is no evidence that the Mesoamerican cultural traits of the Hohokam "traveled forward" into O'odham culture.

Linguistic evidence (Shaul and Hill 1998) and evidence from burial practices (Shaul and Anderson 1989) suggest that Hohokam encompassed a multiethnic community that consisted of both Yumans and Pimans (thus sharing Tepiman/Uto-Aztec and Yuman languages), and perhaps also Ancestral Zuni later in time (Schroeder 1963). (See Figure 2.) Results of a large genetic study by Malhi et al. (2003) are in accord with this idea. The latter study examined mtDNA diversity of New World Native Americans with the specific goal of understanding origins of southwestern Indian groups. Although Zuni is a language isolate, the Zuni People have incorporated a number of words from Hopi and O'odham, especially pertaining to religion.

The earliest recognized Hohokam culture included small pithouse villages, grooved and decorated pottery, agriculture, and cremation of the dead. By the early Colonial period (750-850 CE), a Hohokam presence can be identified in more geographically diverse areas, and by the Sedentary period (950-1150) they were at their maximum at roughly 65,000 to 73,000 sq km (Snaketown was abandoned ca. 1050). Archaeological consultants for the Bureau of Reclamation alone have surveyed 3,900 Hohokam sites, and excavated over 10 percent of them.

Floodwater farming was an important agricultural strategy throughout the Hohokam sequence, even in areas where irrigation was well developed (Gladwin et al. 1937; Wilcox 1979; Cable and Doyel 1985a, 1985b, 1987). In addition to farming, hunting and resource gathering were also utilized to various degrees.

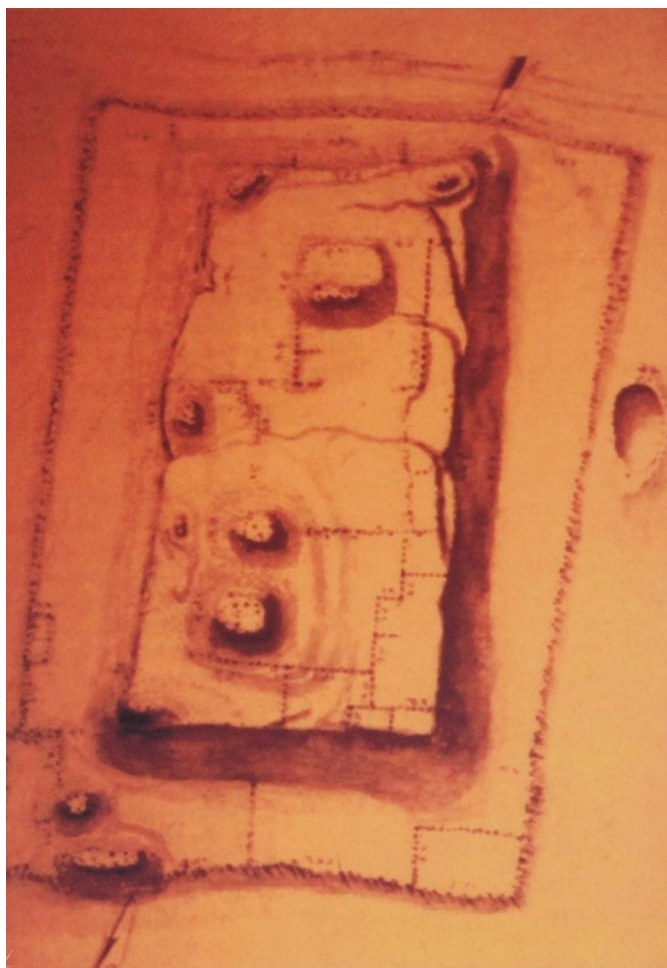
Haury first advocated that the Hohokam evolved in place, based on similarities between preceramic Cochise (Archaic period) culture and Hohokam points, cremation, and incipient agriculture. However, after his second excavation at Snaketown he reversed himself and argued that the Hohokam migrated from Mesoamerica around 300 BCE (Haury 1976). Others supporting the migration hypothesis include Gladwin (1948), Di Peso (1956), and Schroeder (1966). Since then, many others have argued against the migration hypothesis (Dean 1987; Cable and Doyel 1987; Doelle 1985; Doyel 1980, 1981, 1987a, 1987b, 1991; Fish 1987; Plog 1980; Wilcox 1979; Schroeder 1966, 1981; Kelly 1980; Di Peso et al. 1974), and the majority opinion today seems to be that the Hohokam developed in situ out of an Archaic culture base as suggested by Malhi et al. (2003) and noted above.

Despite Haury's early view that Hohokam villages were structured much like the sprawling rancherías recorded among the historic Pima (Akimel O'odham) of the area, subsequent workers (e.g., Wilcox et al. 1981; Howard 1982, 1985) showed they comprised clusters of houses, not the kind of ranchería Haury

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Figure 10. Petroglyphs in Arizona's Coyote Mountains; some archaeologists interpret this to depict Hohokam pithouses arranged in a courtyard group (Photo by Allen Dart)



had envisioned. During the Pioneer period (ca. 475 BCE to ca. 750 CE), Hohokam homes were mostly large pit-houses and there was no distinct village plan, but simple humanoid clay figurines were made and macaw feathers were already being used in rituals. Later, groups of individual houses clustered around exterior courtyards (Figure 10), and these groupings tended to maintain their integrity over time. Courtyard groups often had communal cooking ovens (*hornos*), trash mounds, and cemeteries. Each courtyard group probably comprised 16-20 individuals. Howard (1982) referred to these close-proximity courtyard groups as “village segments.”

Also countering the Mesoamerican migration hypothesis is the fact that recognized Mesoamerican or north-western cultural customs and artifacts did not appear all at once among the Hohokam, but arrived little by little over time, likely moving north along trade or social routes. The northward movement, over time, of Mesoamerican/West Mexican cultural artifacts (e.g., copper bells, scarlet macaws, pyrite-encrusted mirrors), and the reverse movement of millions of pieces of turquoise southward, are material manifestations of the Uto-Aztec language chain between these two regions (Wilcox et al. 2008). One of the most profound and widespread Mesoamerican traits, human bloodletting and sacrifice, apparently never found its way into the Southwest.

The first flat-topped Hohokam mounds (Figure 11) did not appear until the Colonial period (750-950 CE), as did censers and ballcourts. Mosaic mirrors from Mesoamerica arrived, and ceramics and shell carving became much more elaborate. Cremation was the preferred form of burial.

Humanoid figurines became more complex and were produced in greater abundance during the Colonial period (over 1,000 human figurines were recorded from Snake-town). The large court at Snaketown (Figure 12) could have accommodated 500 people on its massive embankments and was the largest ballcourt ever constructed by the Hohokam (Doyel 1980, Wilcox and Sternberg 1983, Wilcox 1979, 1986b). Although well-made clay human figurines have been documented in Late Archaic/Early Agricultural period (Heidke 2019), and clay figurines were made by other southwestern populations, the Hohokam are unique in the sheer numbers, styles, and variety involved and this has been interpreted as a reflection of Mesoamerican affinity or influence.

Figure 11. Plan view sketch by anthropologist Adolf Bandelier of the largest Hohokam platform mound at Pueblo Grande (now called S'edav Va'aki) in Phoenix; notice the room outlines and built-up structure ruins (small mounds) atop the mound and the surrounding compound wall (Photo by Allen Dart of colored image of the sketch on an interpretive sign at the Mesa Grande platform mound site in Mesa, Arizona)



Figure 12. End-view of the large ballcourt at the Snaketown archaeological site (1986 photo by Allen Dart)

Some of the Colonial period Hohokam figurines are very similar to those from the Valley of Mexico and the Gulf Coast (McGregor 1965; Ekholm 1940, 1942) (See Figure 13).

During the Sacaton phase (Sedentary period, 900-1100), village complexity and size increased, platform mounds were elaborated as specialized religious structures, both cremation and inhumation burials took place, mosaic plaque mirrors were elaborated (showing an identical developmental sequence to that of Mesoamerica), and copper bells from central-west Mexico appeared.

During the Classic period (1100-1450), inhumation tended to replace cremation as Hohokam territory contracted, many settlements moved away from rivers, villages show evidence of highly centralized organization, pithouses were supplanted by above-ground, post-supported solid adobe walls, and new designs reflective of Mesoamerican styles appeared on Middle Gila red-on-buff pottery (Kelley 1966). After 1050, much of the highly ornate material culture of the Hohokam stopped being made, including the carved stone and modeled clay effigy figures and the palette-censer complex. The culmination of the Classic period platform mound architectural tradition can be seen in the still-standing Casa Grande, a four-story structure, the first floor of which is a platform mound (Figure 14). The Casa Grande Great House was built between 1300 and 1450 and abandoned thereafter (Wilcox and Shenk 1977).

Like elsewhere in the Southwest between 1350 and 1450, numerous large Hohokam villages in the Phoenix Basin were abandoned. Explanations for the abandonment of these villages include a variety of environmental (floods that destroyed irrigation canals, drought periods leading to low summer river flows, soil salinization, deteriorating climate) and sociocultural causes (overpopulation, internal warfare, cessation of trade, shifting centers of power, domination by Casas Grandes in Chihuahua, Mexico). By ca. 1450, all archaeologically recognizable Hohokam villages in the Phoenix Basin were depopulated; having flowered spectacularly, Hohokam culture was gone. There is no reliable archaeological evidence to support the idea of introduced European disease being the culprit, as suggested by Di Peso (1956; Di Peso et al. 1974) and a few others.



Figure 13. Cache of fired clay figurines and miniature furnishings from the Vaughan family collection, found in a Hohokam house on the family homestead at Rillito, Arizona (Photo by William Platt)



Figure 14. The Casa Grande viewed from the southeast ca. 1878 (Arizona Department of Library, Archives and Public Records photo, reproduced in Clemensen [2002])



Figure 15. This freshwater pozo at Salina Grande, Bahía Adair, Sonora, was a source of potable water for the Hiach'ed O'odham (Sand Papago or Areneño O'odham) for thousands of years; Salina Grande remains sacred to the O'odham (Photo by author)

The Origin of the O'odham

Historically, the O'odham inhabited an enormous area of land in the Southwest, extending from northwestern Sonora, Mexico to central Arizona just north of Phoenix, west to the Gulf of California, and east to the San Pedro River (Figures 15 and 16). Spanish explorers named a large part of this land the Papaguería (Figure 17), but the entire O'odham territory they explored had been home to the O'odham for thousands of years (Loendorf and Lewis 2017).

The earliest recognized evidence of O'odham culture, as described above, is the likely of proto-Hiach'ed O'odham who lived along the coast of northern Sonora (Figure 16) at least as early as 4,000 BCE (Mitchell et al. 2023, 2024b). These earliest coastal O'odham lived and subsisted much in the same ways

that historical Hiach'ed O'odham (Sand Papago, Areneño O'odham) did (Brusca 2024, Mitchell et al. 2024a). These proto-O'odham may have arrived in southern Arizona via migration or expansion from coastal Sonora (or further south) as early as 4000 BCE, during the later part of the 7000-2500 BCE (Lachniet et al. 2020) Altithermal period, as the region's increased cooling and moisture led to more abundant wild resources and agricultural potential. It is estimated that about 1,000 individuals in Arizona continued to self-identify as Hiach'ed O'odham (Plummer 2024).

Early agriculturists (2100 BCE to 50 CE) lived in southern Arizona long before the Hohokam appeared, growing maize along the Santa Cruz River in the Tucson Basin by 2100 BCE, and using canal irrigation by at least 1500 BCE (Woodson 2024:54-56). DeJong (2011) notes, "The Pima have a long history of irrigated agriculture, going back at least 2,000 years." They lived in loosely arranged villages and constructed shallow pit houses. They generally buried their dead (inhumation) in a flexed position in pits located about the village (in contrast to the Hohokam, who burned their dead until the Classic period when they added inhumation). These agriculturists were likely part of a widespread pool of Indigenous peoples of the Pimería Alta region who all spoke a more-or-less common version of Piman language (the Tepiman language subgroup of the widespread Uto-Aztecan language family) out of which historical Tohono O'odham and Akimel O'odham coalesced (as also noted by Winters 2021).



Figure 16. Shell midden on coast of Sonora (Estero Morua, near the town of Puerto Peñasco) with abundant surface and subsurface deposits (Photo by the author)

In summary, the evidence indicates that the O'odham were here before, during, and after the 450 to 1450 CE Hohokam archaeological culture period. When the Spaniards first arrived in the Papaguería, all of the speakers they encountered spoke Piman, and the northernmost Pima/O'odham tribes along the Gila and Salt rivers could have walked more than a thousand miles, to Jalisco, and communicated the whole way in a shared language throughout the "Tepiman corridor" (Wilcox 1986a, 1986b; Rea 1998; Wilcox et al. 2008).

Figure 16 note: Middens on the northeastern coastline of the Gulf of California accumulated anthropogenic materials continuously from at least 6,000 years ago. Excavation-based research described in Mitchell et al. (2024) proposes that the middens on the coast of the Gran Desierto were created by the ancestors of the Areneños (Hiach'ed O'odham) who lived in the western Papaguería during historical times.

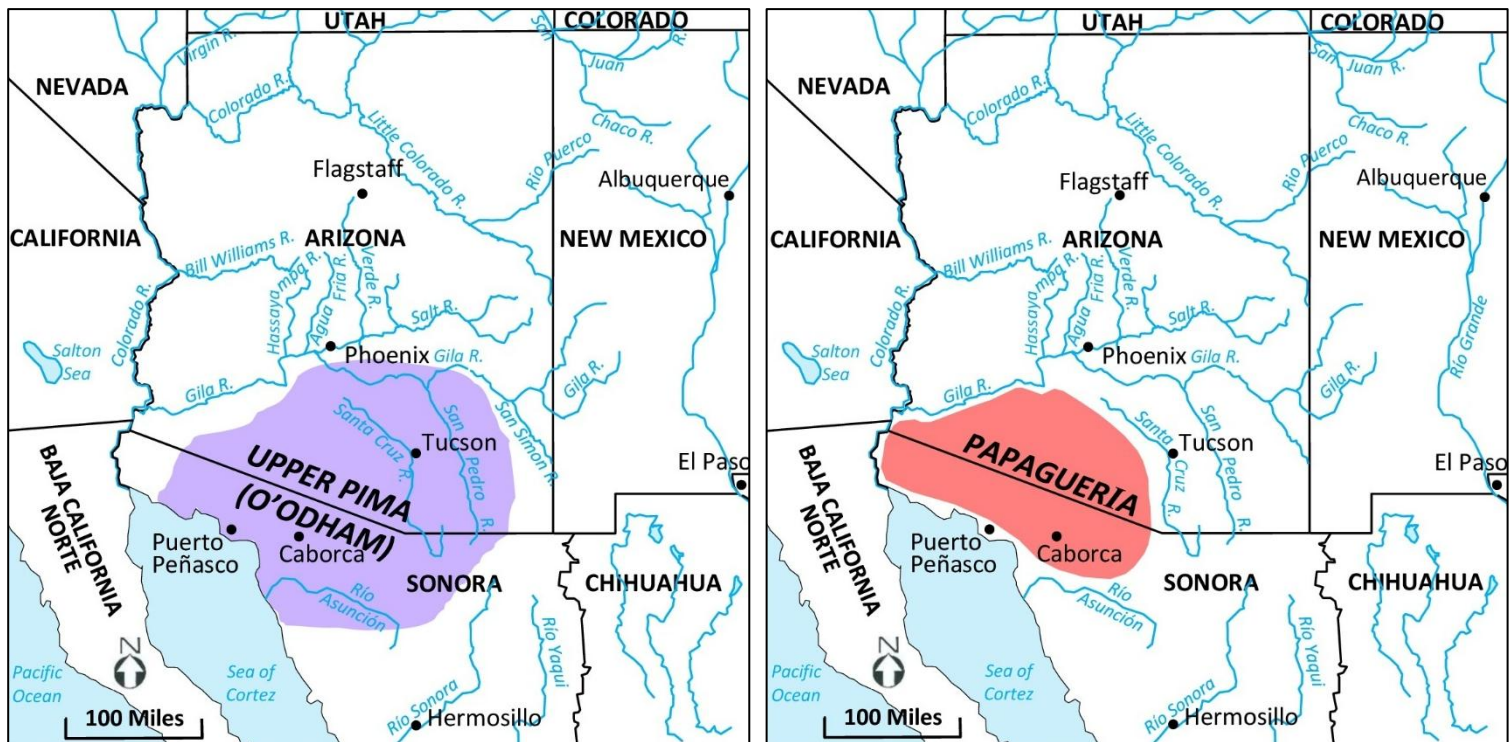


Figure 17. Maps comparing the approximate historical extent of the entire Upper Pima group of O'odham, left, and the portion of that extent that was called the Papaguería, right (Maps by Allen Dart, Old Pueblo Archaeology Center)

Figure 17 note: The Upper Pima and Lower Pima names were given by Spanish colonials. Upper Pima included Akimel O'odham (Pima) in the Gila River region, Sobaipuri O'odham (Soba and Jipuri; also referred to historically as Akimel O'odham [Bolton 1936]) in the upper San Pedro and Santa Cruz valleys, and – in the nonriverine Papaguería – the Tohono O'odham (Papago) west and south of the Santa Cruz and Gila valleys, respectively, and the Hiach'ed O'odham (also called Hia-Ced, Sand Papago, Areneño) west and south of the Tohono O'odham. The territory of the Lower Pima group of O'odham, not shown here, was in Sonora south of Hermosillo.

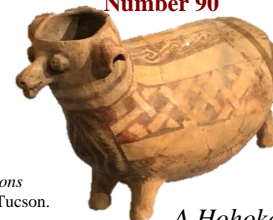
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A Hohokam animal effigy jar in the Arizona State Museum (Photo by Allen Dart)

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Some Akimel O'odham and Tohono O'odham historical artifacts in the Arizona State Museum Paths of Life exhibit, 2019 (Photo by Allen Dart)