

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/yjfa20>

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To cite this article: John Philip Carpenter, Guadalupe Sánchez, Rommel Tapia-Carrasco, Andrew R. Krug, Edson Cupa, Dakota Larrick, Carlos Eduardo Hernández, Robin R. Singleton & Matthew C. Pailes (25 Sep 2023): In Search of a Borderland: Material Culture Patterns on the Southern Limits of the North American Southwest, Journal of Field Archaeology, DOI: [10.1080/00934690.2023.2258715](https://doi.org/10.1080/00934690.2023.2258715)

To link to this article: <https://doi.org/10.1080/00934690.2023.2258715>



Published online: 25 Sep 2023.



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In Search of a Borderland: Material Culture Patterns on the Southern Limits of the North American Southwest

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ABSTRACT

Recent research conducted in southern Sonora, Mexico provides an opportunity to revisit debates about interaction between Mesoamerica and the North American Southwest (NAS). In the borderland between these traditions, communities show few signs of cultural amalgamation, instead exhibiting either an avoidance of overt identity markers or an emphasis on more local connections. This pattern contrasts with most discussions of Mesoamerican influence on the NAS that focus on regionally atypical centers of foreign goods consumption or evidence of foreign religious traditions in distant localities. By recentering on local contexts where cultural amalgamation is expected but minimal, we raise important questions about why more distant groups found Mesoamerican societies to be worthy of emulation. The results suggest researchers should devote equal attention to cases in which distinct identities are erased or suppressed as they do to cases in which social boundaries are maintained or created anew.

ARTICLE HISTORY

Received 18 April 2023
Accepted 4 September 2023

KEYWORDS

Borderlands; social boundaries; cultural amalgamation; Mesoamerica; North American Southwest; Rio Sonora; Serrana

Following trends in archaeology, particularly those focused on themes such as diaspora (Lilley 2004; Orser 1998), migration (Burmeister 2000; Hackenbeck 2008), and ethnicity (Hu 2013; Jones 1997; Voss 2015; Weik 2014), borderlands studies often focus on the maintenance of distinct sub-altern social identities or the emergence of new amalgamated identities. These interests reflect anthropology's concern with appreciating culture diversity, a position that by necessity requires the identification of multiple groups within the limits of a study. As a majority of such studies center on colonial contexts, there is a tendency to portray the retention or emergence of distinct social identities as a form of resistance or at least a predictable response to colonial oppression (Liebman 2013; Schneider 2015; Silliman 2001). Many of these goals are not easily imported to pre-colonial Indigenous contexts. And despite the laudable contemporary social goals, they also tend to over emphasize the maintenance or creation of social boundaries at the expense of examples that reflect their erasure or avoidance. Researchers certainly recognize the importance of homogenizing processes, but they tend to receive far less attention in practice. This study aims to contribute to this other side of identity studies by exploring the often acknowledged but rarely interrogated ancient borderland between Mesoamerica and the adjacent societies of the North American Southwest (NAS).

This discussion requires some historical framing to position it relative to most discussions of NAS-Mesoamerica interaction. The earliest theories of interaction were rooted in a culture history framework that envisioned a diffusionist wave model in which culture areas such as the Hohokam or Ancestral Puebloans reflected the geographical highwater mark of Mesoamerican traits. This model was refuted by some of the earliest luminaries of the NAS who undertook

peripatetic surveys of northwestern Mexico (Phillips 2002). These efforts indicated Mesoamerican influences in the form of either physical goods or emulated traits did not have a gradual fall-off to the south but instead disappeared almost entirely across a substantial portion of northwestern Mexico (e.g. Hewett 1930; Mason 1938). These observations led to a number of models that we collectively characterize as a gap-and-corridor approach (Nelson, Fish, and Fish 2016; Phillips 2002). This perspective emphasizes that in any given period there are only a few clearly endowed waypoints of consumption in northwestern Mexico, such as El Ombligo, Rincon de Buyubampo, and Paquimé, and the strongest cases for regional scale adoptions lie far from Mesoamerica amongst groups such as Classic Mimbres, pre-Classic Hohokam, and Pueblo II Chaco Canyon (Figure 1).

We perceive three basic models of motivation that retain some level of academic support that invoke the gap-and-corridor framework: direct political control through small cadres of foreign rulers (Lekson 1991; Mathiowetz 2019; Turner and Turner 1999), interaction through long-distance commercial exchange (DiPeso 1983; Kelley 2000; Pailles and Whitecotton 1979; Whalen 2022), and shared religious traditions propagated by pilgrimage (Fish and Fish 1999; Gilman, Thompson, and Wyckoff 2014; Phillips 2002; VanPool and VanPool 2018). All three invoke a similar mechanism of transmission: leap frogging agents capable of negotiating diverse social landscapes in a manner that leaves few signs of contact except at endpoints and a few key waypoints. The brevity of this categorization should not be taken as dismissal of an important and dynamic set of debates. Researchers of the past several decades make nuanced comparisons between specific societies of both the NAS and

Mesoamerica (Lekson 2009; Mathiowetz 2018; Nelson, Fish, and Fish 2016; Pailes and Searcy 2022; VanPool and VanPool 2015; Whalen and Minnis 2009). We offer this review primarily to highlight what has not been asked but tacitly accepted: why is there not evidence for a more gradual and broad increase in Mesoamerican goods and ideas the farther south one travels? In essence, our focus picks up the threads of a discussion last visited over a half century ago and imagines how research questions would have evolved if we had first posed the question of interaction not in places such as Snaketown or Chaco Canyon, far removed from Mesoamerica, but at the southern reaches of northwestern Mexico.

Borderlands and Group Boundaries

The term “borderland” is frequently applied to all of northwestern Mexico, an area extending some 800 km north to south. This label invokes multiple conceptions: the modern political boundary, the nearly coincident borders of culture areas (Hohokam/Trincheras and Rio Sonora and Casas Grandes/Mogollon), and the transitional zone between the state-level societies of Mesoamerica and the non-state societies of temperate North America (see Figure 1). It is this last set of entities that we discuss in this paper in order to delineate where such a borderland actually would have existed and outline emerging views on its basic character. To address the relevant questions with modern sensibilities, we must first consider issues of terminology relevant

both to describing borderlands and the unique patterns of identity that form in their environs.

In reference to the emergence of novel identities common to borderlands, we follow Liebman (2013) in the use of the inclusive term of “cultural amalgamation.” This concept encompasses the processes of creating and modifying identities via the selective inclusion and rejection of elements from existing cultural repertoires. Amalgamation encompasses more specific conceptions of syncretism, bricolage, creolization, mestizaje, and hybridity. This more nuanced lexicon parses variation in how the adoption of exterior traditions facilitates diverse goals of integration, accommodation, and resistance. The temporal and geographic scale at which we approach these issues requires we opt for the more general term. The more specific terminology also fails to adequately capture the emphasis placed on creative avoidance perceived in this case study. This may belie a common approach to how social group boundaries were negotiated in pre-colonial contexts that diverges from ethnographic case studies which necessarily draw from predominantly colonial settings.

There is no reason to expect something akin to a stable political boundary ever demarcated a homogenous and coherent Mesoamerica from the macro-culture area of the NAS. Social group boundaries were certainly present within and between these regions that often corresponded to distinct physical territories, but the sorts of political boundaries that characterize modern nation-states or the imperialist frontiers of ancient empires are poor analogs. Much of the



Figure 1. Culture areas of the NAS and selected regions of Mesoamerica in relation to previous interpretations of the border between the two macro-regions. Note “HNAI” is Handbook of North American Indians.

lexicon, including the term “borderland,” developed for states and empires must accordingly be adjusted (Parker 2006). For our purposes, “borderland” is used to refer to a zone in which there is a strategic blurring of some cultural distinctions and an augmentation of other differences. Playing on classic definitions of the frontier, it is a space where no group holds an uncontested monopoly on status as the dominant group but expressions of cultural amalgamation are widely understood to convey important claims of social group membership.

A critical point to draw from recent discussions is that borderlands rarely emerge in a singular domain. Rather, there are reinforcing and/or constraining links between geography, demography, politics, economics, and culture that may not be coincident and often resolve at differing scales (Parker 2006; Parker and Rodseth 2005). There is substantial debate over whether archaeologists, in the absence of historical documents and/or oral tradition, can appropriately identify distinct elements of material culture as reliably signaling subjective emic culture boundaries such as ethnicity (Conkey and Hastorf 1990; Sackett 1985; Voss 2015; Wiessner 1983). Group boundaries form for a litany of reasons, some for clearly intentional or strategic ends and others from largely unconscious dynamics resulting from long-term intimate interactions that crystallize into a perception of primordial sameness (Hu 2013). These non-exclusive processes should correspond to material manifestations that span a continuum from the overt manipulation of symbols to the unquestioned replication of patterns through shared approaches to crafting (Bentley 1987; Dietler and Herbich 1998; Hegmon 1992).

We will reference a variety of material culture evidence, but by necessity we predominantly rely on ceramic artifact data. This approach follows a long, if not entirely unproblematic, approach in NAS archaeology by inferring decorated ceramics serve as reliable markers of intentional affiliation (Borck et al. 2015; Mills et al. 2013; Peeples 2018). Over a century of research has shown there is substantial variation in the sort of social boundaries indicated by ceramic data, but most NAS archaeologists accept at least implicitly that the consumption of distinct decorated traditions signifies ascription to regionally coherent emic identities (Abbott 2000; Claypatch 2022; Gilman, Canouts, and Bishop 1994) and/or ascription to religious traditions (Crown 1994; Gilman, Thompson, and Wyckoff 2014; VanPool and VanPool 2007). Building on this foundation, we assume the maintenance of local decorated traditions insinuates a shared social identity and that consumption of ceramics imported or emulated from great distances implies a knowledge of those regions and a statement of overt, if at times aspirational, affiliation. Conversely, we also assume that the adoption of banal material culture in the presence of manifest alternatives was an intentional act of avoiding statements of affiliation.

Our approach does not presume a predetermined character for a borderland nor accept received wisdom of this particular borderland’s location. Rather, we first examine macroscale patterns to identify the location of major changes in affiliation reflected in material culture; we then attempt to infer the scale and character of the groups that seemed to alternatively adopt or reject amalgamated culture identities in this borderland, and then finally, we begin the process of situating these empirical patterns within a broader,

historically contingent framework. The discussion integrates data from recent fieldwork (2017–2023), as well as legacy data drawn from the Nuri Valley and surrounding regions of southern Sonora and northern Sinaloa. This wider region is most notable in present literature for the obstacle it has presented to classification at the scale of traditional culture areas (Rio Sonora, Serrana, Huatabampo, and Tacuichamona). A recent article (Carpenter et al. 2023a) on the neighboring Huatabampo tradition highlights this difficulty, arguing that coastal traditions of southern Sonora and northern Sinaloa do not fit existing models for either the NAS or Mesoamerica. Here, we predominantly focus on areas to the immediate east of Huatabampo in the Sierra Madre Occidental (SMO) foothills to argue what we and others have long perceived as an issue of typological ambiguity may also be a reflection of familiar borderlands patterns that encourage both the creation and erasure of certain boundaries. Referencing our own recent fieldwork, we approach this borderland from the north but note other scholars are coming to similar conclusions by working from the south (Vidal-Aldana, Gómez-Ambríz, and Nelson 2024). Figure 2 provides a guide to the physical geography of northwestern Mexico referenced throughout the remainder of this discussion.

Ethnohistory of Nuri and Surrounding Regions

We developed a project focused on the Nuri Valley owing to speculation that it was the location of Oera (DiPeso, Rinaldo, and Fenner 1974, 108; Sauer 1932, 41), a polity that played a central role as a waypoint in the expedition of Francisco de Ibarra in the early 1560s A.D. Oera was described as consisting of 1000 houses and associated with an army of 400 men (Obrégon 1928, 160–161). The ethnohistorian Carroll Riley (1987, 2005) inferred Oera was a node in pan-regional exchange economies, serving as a gateway between coastal regions of West Mexico and the river valleys of the SMO. Our initial research interests were thus an out-growth of the gap-and-corridor framework. As presented below, it now seems highly unlikely that the Nuri Valley corresponds to the Oera of 16th century A.D. descriptions, as there are essentially no signs of regionally exceptional population concentrations and even less evidence for long-distance interaction. Because 16th century A.D. chroniclers described locations with vague references to valleys and mountains and rough estimates of distances from established centers, it is possible that much of what the chroniclers described was accurate but simply not pertinent to the Nuri Valley. All 16th century A.D. accounts agree there were multiple distinct groups in the region affiliated with particular river valleys that engaged in frequent hostile interactions (Pailes 2022).

Cultural identities remain ambiguous for the Nuri region in the subsequent 17th and 18th centuries A.D. (Figure 3). Early Jesuit accounts regularly note the multi-lingual character of Nuri but differ in what languages were spoken. This confusion persisted despite intense missionization in the region subsequent to A.D. 1622. Jova, Eudeve, Cahita (e.g. Tepahue), Guarijio, and Taparantana, the later an isolate unique to Nuri, are all listed by various observers. Pennington (1980, 8) notes that the name Nuri (*nunu’ori*) may reference the Tepehuan word for language (*nun*), suggesting multilingualism was regionally exceptional. Notably though, Tepiman (Piman) was not among the list of observed

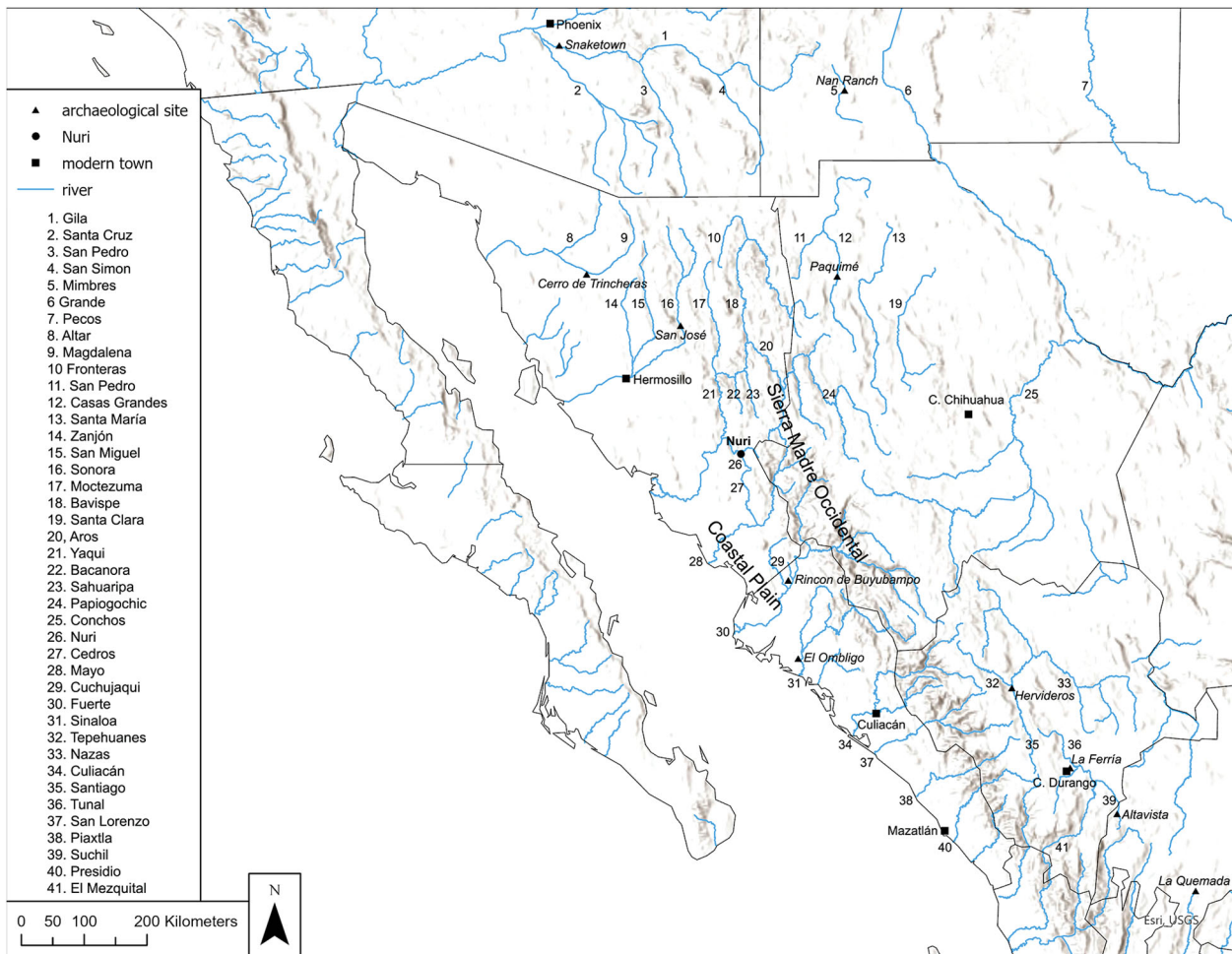


Figure 2. Physical geography of northwestern Mexico.

languages until the 1700s A.D. Pérez de Ribas (1999, 399), writing in the early–mid-1600s A.D. clearly states that the Nure (Nuri) are a different language and nation than the Nevome (Lower Pima). Based on this and other documents, several scholars (Pennington 1980, 25; Shaul 2001, 225) infer the occupation of the valley by Nevome (Lower Pima) was a development of the colonial period. Edward Spicer alternatively identified Nuri as the origin of a several hundred strong contingent of Nevome that left their homeland to follow Cabeza de Vaca south in A.D. 1540. This group established the settlement of Bamoa in the Sinaloa Valley (Spicer 1962, 87). To Spicer, the Nuri resident's willingness to abandon their circumstances suggested a marginal position in regional dynamics. The overall Jesuit ethnohistoric record of the Nevome, including Nuri, suggests minimal regional integration, as evidenced by a lack of coordinated opposition to the Spanish or other Indigenous groups (Spicer 1962, 91). Though these ethnohistoric interpretations are to some degree irreconcilable, they all portray the Nuri Valley and the surrounding region as conforming to various depictions of a borderland. Those by Pennington and Shaul describe a dynamic community of polyglots that were culturally connected to diverse surrounding groups. Spicer, in contrast, portrays a frontier community on the precipice of dissolution that nonetheless endowed its members with the ability and willingness to mold themselves to rapidly changing conditions through migration.

Syntheses of recent historical ethno-linguistic distributions provide a final set of relevant observations (see

Figure 3). For decades, researchers debated the curious juxtaposition of the Tepiman and Opata-Cahitan branches of the larger southern Uto-Aztecan family that intermingle in this region. Most now accept Tepiman speakers as later arrivals, but their presence is sufficiently ancient that we should assume both groups were regionally resident for the entirety of the concerned period (Greenhill et al. 2023), ca. A.D. 1000–1500. An extended period of interaction between these groups is supported by inferences that Eudeve, a member of Opata-Cahitan, resulted from a creolization of Opata by ancestral Tepiman (Shaul 2001; 2014, 176). The pre-colonial extent of Eudeve is ambiguous but apparently widespread on the southern and western margins of Opata territory. These observations support both long-term interaction and the dominant status of Opata. Other linguistic groups in the immediate region included Guarijio, Tarahumara, Tubar, and several other poorly documented examples which were likely also Uto-Aztecan. In the early colonial period, observed ethno-linguistic/political boundaries displayed a granularity equivalent to local river valleys (Sauer 1934, 1935). Many of the earliest records of these groups conflict on details, but it is clear the area hosted many dialects and distinct languages. Many of the coastal and foothills groups were ultimately subsumed into either Yoeme or Yoreme communities in the colonial period. This could reflect a change in the scale of effective group consolidation in response to colonial pressure.

To summarize, the ethnohistoric data depict a region in which even long-term resident observers struggled to

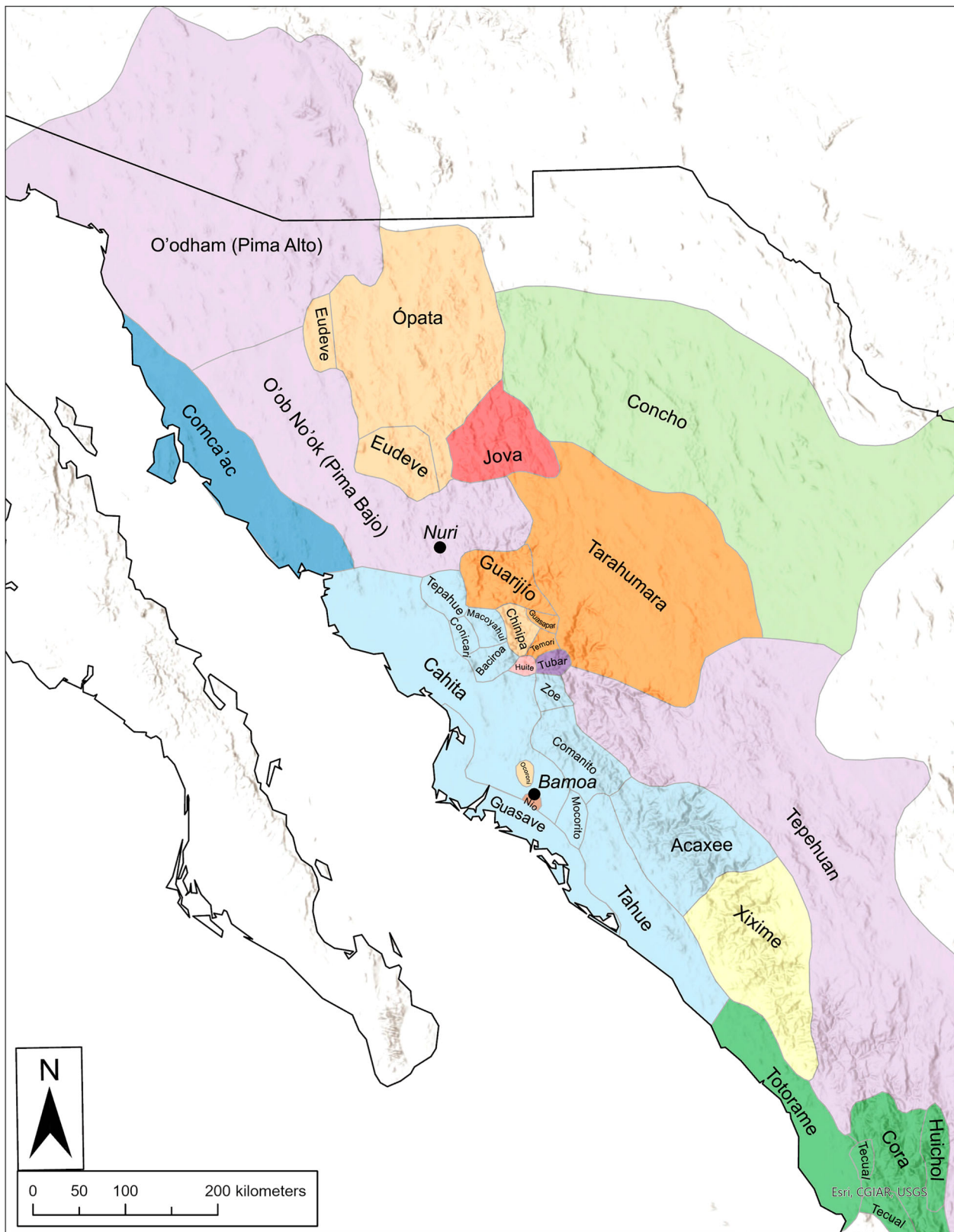


Figure 3. Proto-colonial political and linguistic boundaries. Data principally drawn from Sauer (1934), which places Nuri in the region of Pima Bajo, a controversial interpretation.

identify the affiliations of populations. In some cases, this likely reflects a mere lack of consistent observation, but it also bespeaks a scenario in which many localities maintained diverse populations. The linguistic data from the recent historic era may not reflect the ancient geographical positions of ancestral groups but, on a larger scale, reflect a dynamic region in which bilingualism was common but language also served to demarcate group boundaries at multiple scales.

Regional Archaeological Setting

The region considered here is identified with the Serrana tradition or alternatively as the southern branch of the Rio Sonora tradition (see Figure 1). In the south and west, this tradition abuts the ancestrally related Huatabampo tradition of the coastal plain, which extends minimally into foothills terrain. The geographic extensiveness of most material

cultural patterns and non-contiguous distributions of decorated ceramic types has complicated attempts at internal partitioning of this region. Internal heterogeneity was recognized as early as the 1970s A.D. (Pailes 1973, 1978) and more fully described in subsequent decades (Carpenter and Sánchez 2007, 2008; Carpenter and Vicente 2009; Pailes 1997). Initial work conducted near the Fuerte Valley and then in the central Sonora Valley noted distinct parallels in textured ceramic traditions (incised, punctuated, and corrugated), as well as commonalities in architecture. It was only with subsequent investigations that it became apparent much of the intervening space (Carpenter et al. 2021; Gallaga 2013) lacked the defining textured wares (Figure 4). Instead, bichrome traditions distinct to local river valley segments or occasionally an entire river valley dominate decorated assemblages in these areas (Figure 5).

Over the last 20 years, researchers have investigated an appreciable number of discrete communities throughout the SMO. The vast majority of dated contexts correspond to the period after A.D. 1000. Population centers are typically segmented from one another by narrow canyons and substantial uplands. The evidence for interaction between these communities is highly variable. For example, obsidian provenance studies mostly reflect predictable distance from source frequency fall-off curves, but there are also some communities that maintained preferential connections to more distant sources and others that were excluded from relatively nearby sources (Carpenter et al. 2021; Pailes 2017). Many communities produce what can only be considered spartan assemblages of items that index distant connections such as turquoise or marine shell. The emerging picture of the SMO region is one of highly autonomous communities with high variation in the degree and direction of external connections (Pailes 2016).

Interpretations of long-distance exchange, underpinning the gap-and-corridor framework, emphasize foreign polychrome traditions. Attempts to trace routes from the northeast to the southwest rely on Casas Grandes polychromes and exotic materials common at the primate site of Paquimé. Communities as far west as the Upper Bavispe watershed maintained close affiliations with Casas Grandes groups (Bagwell 2004; Carpenter et al. 2023b; Martínez-Ramírez and Pérez-Jaramillo 2013). Polychrome evidence of Casas Grandes interaction then drops off precipitously, with only trace amounts of foreign ceramics in neighboring communities to the west and southwest (Figure 6). An inverse scenario is perceptible from southwest to northeast, with the painted traditions of West Mexico present in appreciable numbers in a few sites of northern Sinaloa (i.e. El Ombligo) before disappearing completely in southern Sonora. Rare goods, such as copper objects, associated with both Casas Grandes and West Mexico, seem to be present in low frequencies, coincident with both of these polychrome traditions (Vargas 1996; Vidal-Aldana, Gómez-Ambríz, and Nelson 2024) before disappearing completely throughout southern Sonora.

Archaeological Evidence from Nuri

Archaeological fieldwork was conducted in the Nuri Valley for approximately six weeks. Pedestrian survey targeted the dissected Neogene terraces that form mesas adjacent to the principal river corridor. Site densities in the Nuri Valley

were much lower than previously studied valleys in the northern SMO, in which it is rare that large terraces do not present evidence of at least one habitation site (Doolittle 1988). Ultimately, a total of 20 sites were located within the Nuri Valley. Of these, four are predominantly historic in age, eight include historic and late pre-colonial components (post A.D. 1000), seven are predominantly late pre-colonial in age, and one (Riolita Rosa) was potentially of Archaic age (Figure 7).

The two largest pre-colonial habitation sites are heavily disturbed. The first of these is the site of Nuri Viejo (Son P:15:12), immediately adjacent to the modern town of Nuri. Preserved ancient components were located only on the very southern end of the mesa, and even here there was substantial historic disturbance. At the far southern end of the valley, there was a second substantial site, Cuba Vieja (Son P:15:26), on the mesa that is adjacent to the modern town of Cuba. A modern gravel quarry mostly destroyed this site. Ancient remains on the eastern portion of the mesa and dispersed materials on the quarry margins demarcate the approximate size of the original site. The location of the two largest sites adjacent to the only two modern population centers bespeak a continuity of populations from ancient to historic to modern times. The general prevalence of sites with pre-colonial and historic components further confirms continuity in populations, which is common in much of the SMO (Carpenter et al. 2023b; Pailes 1997).

Since the largest sites in the valley were destroyed, the project was forced to focus excavation work on smaller (hamlet) contexts, which we briefly describe.

Mesa Arnulfo (Son P:15:17) presented relatively dense scatters of ceramic sherds, most associated with rock clusters composed of basalt cobbles. A test trench through one such feature produced numerous artifacts. This was most likely an extramural midden context. There was no charcoal present in the feature's fill. A luminescence assay of a plain brownware sherd produced a date of 1700 B.C. +/- 470. This is an extremely old date, and while we have no basis for discrediting this age, which was internally consistent between both OSL and uncorrected TL methods, we are reluctant to accept it without further confirmation.

Las Urracas (Son P:15:018) was one of the few sites located on a low first terrace. It consisted of a large but very low-density sherd scatter. At the far southern end of the site, there was a dry-laid stone structure foundation of historic age, confirmed by a ^{14}C age of 105 B.P. +/- 21 (A.D. 1691–1725 [25%] or A.D. 1808–1922 [70%]). We excavated a 2 x 2 m unit in this historic context and a second 2 x 2 m unit in the area with the densest material concentration of pre-colonial materials. The later context failed to produce charcoal samples or temporally diagnostic materials. A luminescence assay of a plain brownware sherd produced a date of A.D. 1020 +/- 100.

Las Pirangas (Son P:15:022) presented a relatively dense artifact scatter that included numerous pieces of burned daub with impressions of architectural wood. These fragments potentially reflect the archaeological signature of flat-roofed houses described by early chroniclers which were distinguished from neighboring populations employing woven mat houses. Test excavations of 11 m² failed to locate any in situ architectural deposits. One ^{14}C sample from the site produced a post-bomb date that is clearly intrusive. At the far southern end of this landform, there was a historic building foundation.

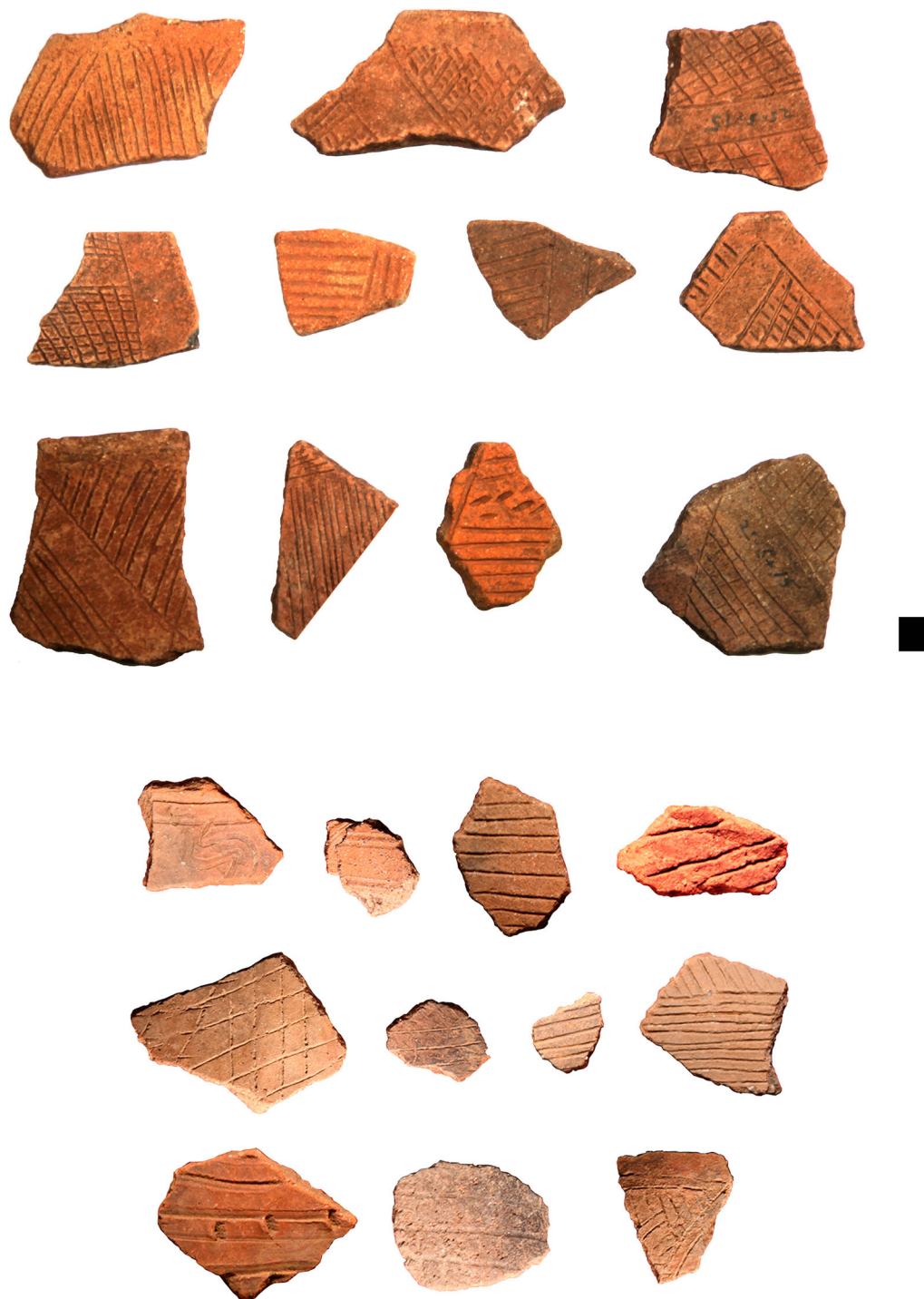


Figure 4. Textured ceramics of the Rio Sonora/Serrana regions: top, Moctezuma Valley; bottom from R. Pailles' (1973) survey collection in southern Sonora. Photos by M. Pailles.

El Centinela (Son P:15:008), located in the northern portion of the valley, represents the only site with preserved surface evidence of pre-colonial architecture. Structure foundations comprised rows of river cobbles partially set into the ground surface. We placed a series of test units in two different sets of outlines. In the feature designated structure 2, excavation revealed melted and tumbled adobe wall fragments (Figure 8). This structure produced a ^{14}C date of 494 B.P. $\pm$ 22 (A.D. 1408–1445). The feature designated structure 1 produced a ^{14}C date that appears intrusive at 194 B.P. $\pm$ 22. Structure 1 was located immediately adjacent to what we believed to be a historic house foundation made of large, stacked, basalt river cobbles (Figure 9A). Intrigued by the possibility of demographic continuity at this location,

we placed a 1×1 test pit in this structure that fortuitously encountered a possible hearth or a small pit (Figure 9B). A luminescence date from a sherd in this internal feature's fill produced a date of A.D. 1420 $\pm$ 100. A ^{14}C sample from this same context produced an age of 57 B.P. $\pm$ 21; owing to a substantial plateau in the calibration curve post A.D. 1600, 30% of the date's probability distribution falls in the interval of A.D. 1695–1725.

Material culture interpretations

The Nuri Valley is most conspicuous for what it is lacking. The most manifest difference between Nuri and previously investigated SMO contexts is the minimal presence of

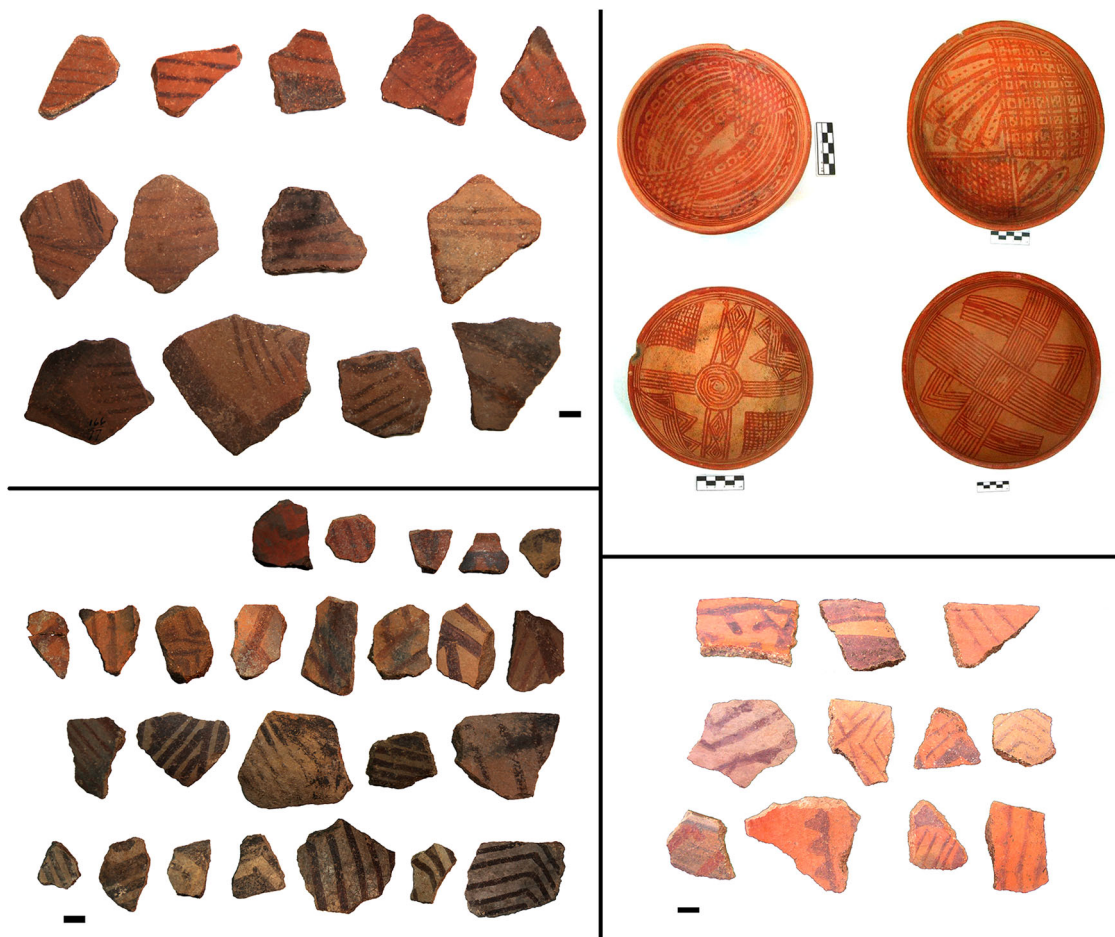


Figure 5. Selected bichrome ceramic traditions of Sonora, clockwise from top left: Rio Sonora, Guasave, Onavas, and Sahuaripa (Arivechi). Rio Sonora and Sahuaripa photos by M. Pailles, Guasave by Carpenter and colleagues (2023a), and Onavas courtesy of Emiliano Gallaga.

obvious pre-colonial architecture at most sites. Given the preservation of the classic river cobble *cimiento* (foundation) pattern at El Centinela, it is unlikely the absence can be attributed to local formation process issues, such as increased cattle trampling. Rather, it seems a different approach to construction of a pan-regionally similar architectural style (*jacal*) was pursued at most sites. Previously, one of us has noted (Pailles 2017) there is little functional benefit to the use of stone *cimientos*, and they likely served a more symbolic purpose of demarcating space and perhaps cultural identity. Their rarity in the Nuri Valley may thus indicate an intentional avoidance of marking identity through architecture, given that the remains from Las Pirangas indicate the same basic materials (*jacal*) were used as in other sub-regions of the SMO.

Another glaring absence is any form of decorated ceramics. Only two painted sherds were collected (total assemblage $n = 4244$). One sherd is Arivechi R/br (see Figure 5); this tradition is common in the Sahuaripa and, to a lesser extent, Bacanora Valleys. The second painted sherd is an unnamed type that appears widely in low frequencies in much of central and southern Sonora. The type is similar to the Viejo Casas Grandes type of Santa Ana, but they appear exclusively in much later deposits. There were also only two textured sherds, both incised and one possibly also tool punched. Similar designs are known from the north beginning in the Moctezuma Valley and to the south in the Fuerte Valley. As we emphasize in the subsequent regional discussion, textured sherds are a hallmark of NAS traditions, making their absence

highly notable. All decorated sherds are clearly imports to the Nuri Valley. Other potentially culturally diagnostic ceramics are equally rare. Redwares are a ubiquitous component of Huatabampo assemblages, including locations such as Onavas, the Batacosa site, and coastal regions. In the Nuri Valley, there were only 23 examples, and 22 of these are historic with diagnostic organic temper. Brushed ceramics were also rare in the Nuri Valley, with only 12 specimens. This treatment is associated with the earliest phases of ceramic manufacture in the broader region (Douglas and Quijada 2004) but may persist throughout the entire sequence. A modestly higher presence of these sherds at El Centinela and Nuri Viejo may indicate longer records of occupation. In total, the ceramic assemblage from Nuri is most notable for its complete lack of diversity and near exclusive use of plain brownwares.

Only 10 pieces of marine shell were recovered from pre-colonial contexts in the Nuri Valley. All of the marine shell is inferred to be from the Sea of Cortez. Eight of the recovered specimens were debitage, suggesting local manufacture. The only finished pieces were one very small bead and a bracelet fragment. Given Nuri's proximity to the coast, the presence of debitage is not particularly surprising, but the overall paucity is hard to explain as anything other than indifference or intentional avoidance of the sorts of group identities signified by shell adornment.

Finally, only four pieces of obsidian were present in the lithic assemblage. The total assemblage size ($n = 1463$) does not adequately represent the scarcity of this material, as the

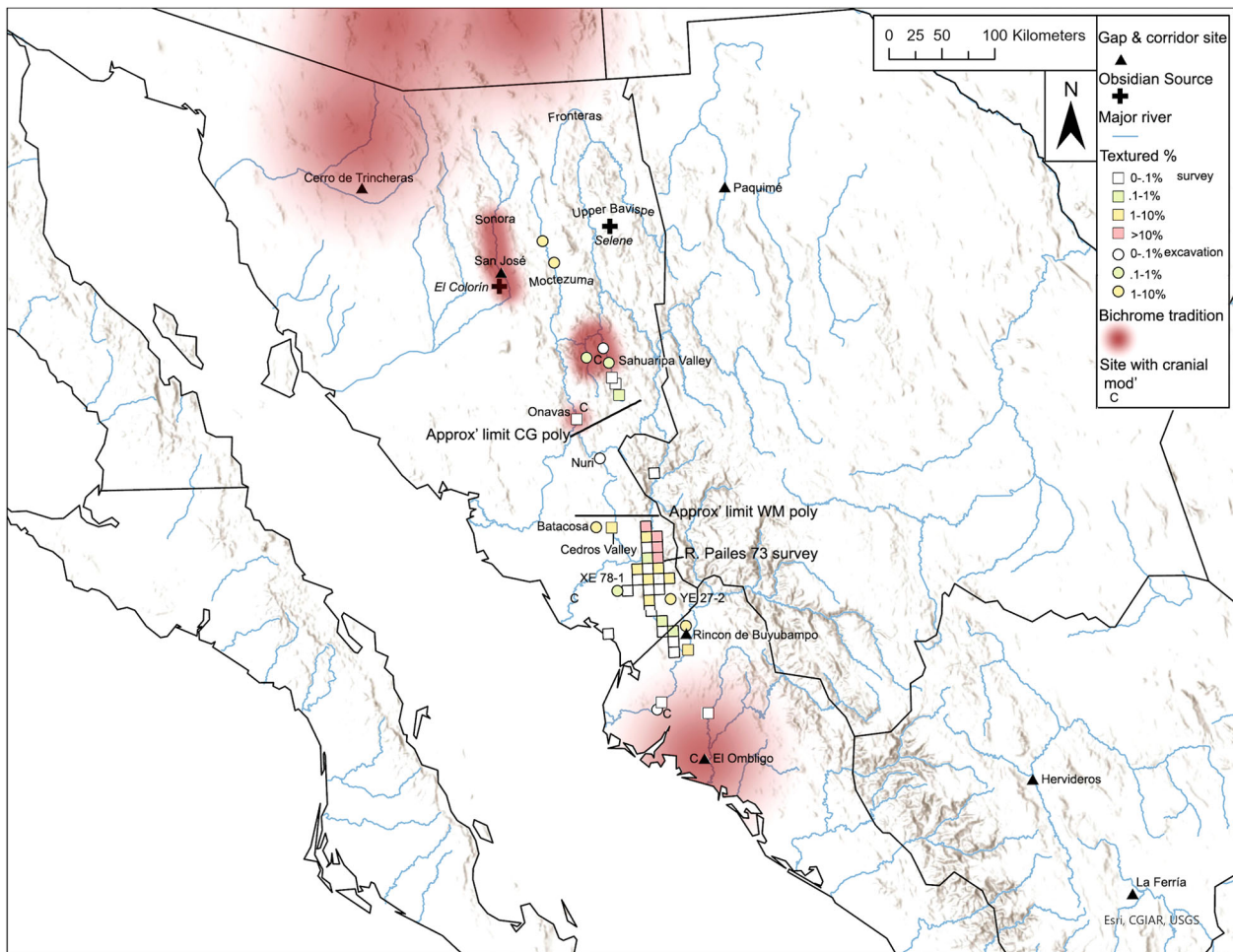


Figure 6. Distributions of material culture markers discussed in text. Note that survey data are likely to produce higher ratios of diagnostic materials and are therefore not directly equivalent to excavation data.

surface of all sites were scoured for any sort of diagnostic artifact; this is how three out of the four specimens were obtained. The lithic assemblage overall presents an overwhelming reliance on poor quality local volcanics with a chert/basalt ratio of only 0.13. Determining the provenance of the four pieces of obsidian through XRF analysis was complicated by unknown sources in this portion of northwestern Mexico. The four pieces likely correspond to three different sources. The two pieces from the same source may derive from the Cow Canyon source located near the headwaters of the Gila River of Arizona (Shackley 2021). It seems more likely the chemical similarity is incidental and corresponds to yet another unknown source closer to Nuri.

Comparisons to neighboring valleys

The settlement pattern, architectural, and artifact data indicate the Nuri Valley is not only a region that was isolated from long-distance flows of materials but also one that had very little interaction with near neighbors, including those of both the Serrana and Huatabampo traditions. These results are contextualized by a number of variously sized projects conducted in settings that surround the Nuri Valley. At this broader scale, a heterogeneous pattern emerges, with groups variously following Nuri in predominantly producing material culture lacking in its capacity for signaling distinct identities or groups that developed distinctly local traditions while also signaling affiliation to more expansive identities (see Figure 6).

To the northwest, along the Middle Yaqui Valley, several projects have been conducted in the vicinity of Onavas (Gallaga 2013; Garcia-Moreno 2011, 2012, 2013). This work includes a regional survey and site excavations, including a large burial population from El Cementerio, which is potentially an extremely large anthropogenic mound (100 × 65 × 2 m). Many of the individuals interred at El Cementerio present tabular erect cranial modification (Watson and García 2016). Though this practice was shared with West Mexican groups, it appears to be a local practice across much of the Huatabampo and neighboring region (Carpenter et al. 2023a) (see Figure 6). Burials included a modicum of rare goods such as turquoise and marine shell. A relatively modest survey collected 1191 shell specimens (Gallaga 2013, 91). The region is most notable for its unique bichrome ceramics, Onavas P/br (see Figure 5). With its emphasis on simple geometric forms, the type parallels approaches common to both West Mexico and the NAS. Notably lacking in Onavas is almost any sort of rare good that can be tied to a known cosmopolitan center. For instance, the survey by Gallaga (2013) found only one potentially foreign sherd from West Mexico and 15 from Casas Grandes,¹ 0.01% (total assemblage $n = 10,740$). Obsidian objects are also quite rare. Onavas thus has connections to Huatabampo patterns but is clearly locally distinct (Watson and García 2016, 230). The use of El Cementerio into the proto-colonial period indicates continuity with the historic population of Nebomes (Tepiman speakers), which contrasts with the Cahitan descendants of Huatabampo seen on the coast (Carpenter et al. 2023a).

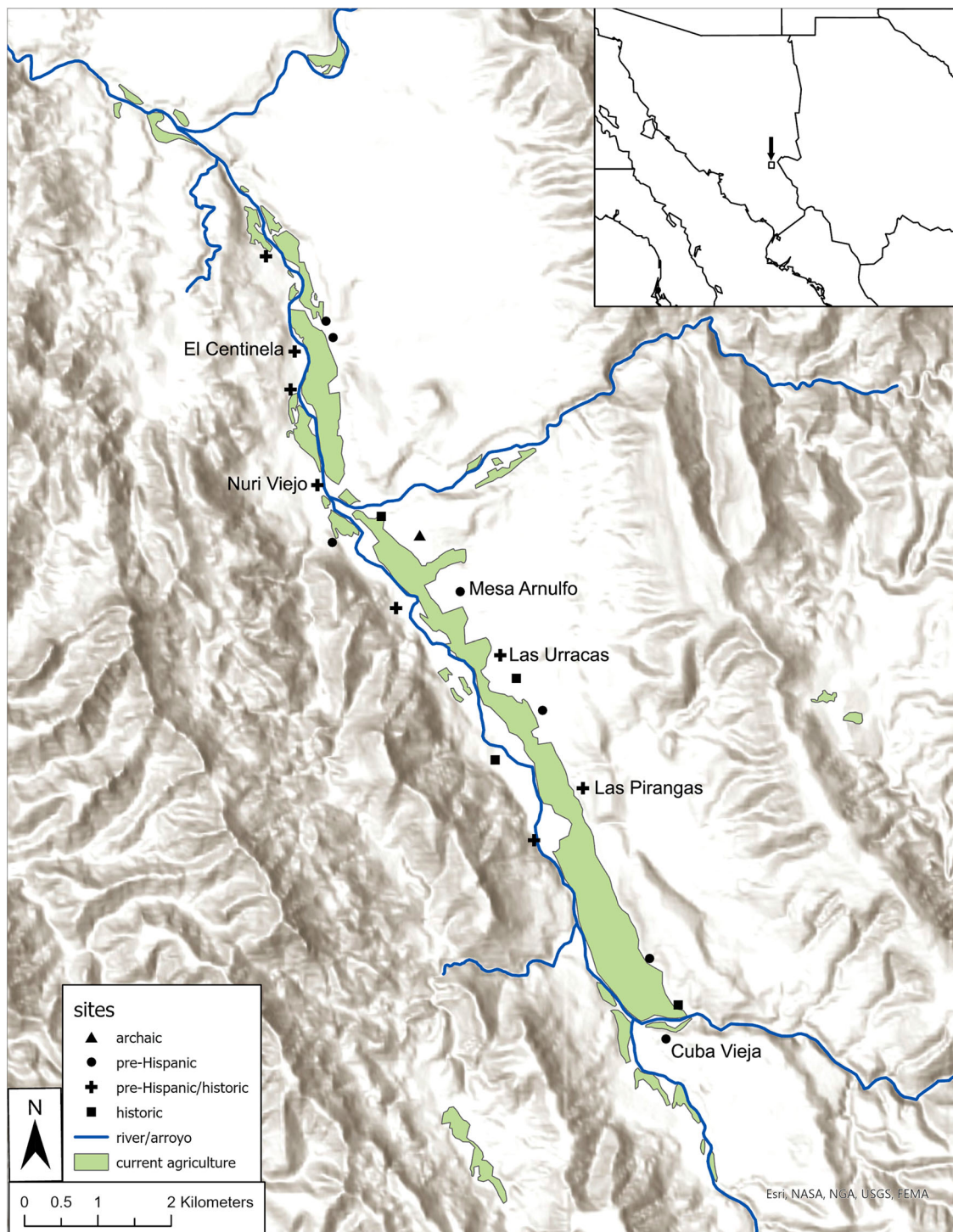


Figure 7. The Nuri Valley.

These observations mark Onavas as reflecting the incorporation of diverse group identities into a locally distinct tradition.

To the northeast along the Sahuaripa Valley, there is more substantial evidence of regional and pan-regional interaction. A summary of findings is provided by Carpenter and colleagues (2021). A distinct ceramic bichrome tradition, Arivechi (see Figure 5), with substantial color palette variation, dominates the decorated assemblage. Similar to Onavas, the use of simple geometric forms evidences potential connections to the north or south. This tradition was centered in the Arivechi ($n = 331$ of 11,379) and Sahuaripa ($n = 159$ of 7774) portions of the valley but was minimally dispersed to at least Guisamopa (south) and Bacanora (west). In the

Sahuaripa and Bacanora Valleys combined, there were very few textured ceramics, ca. 0.1% ($n = 24$ of 26,347), which contrasts markedly with areas farther to the north (Pailes 2017). Foreign ceramics are also extremely rare, ca. 0.1%, but neutron activation studies confirm a modicum of direct imports from the Casas Grandes region. There is also a diverse obsidian assemblage with connections to sources frequently utilized by many SMO communities, i.e. Selene and El Colorín. One copper object was recovered in this valley. Lastly, several burials display the same tabular erect cranial modification described in Onavas. This region was occupied by Eudeve and Opata speakers at contact with an intermingling of Jova. Of all the locations discussed here, it is now the leading contender for the ethnohistoric location of Oera.



Figure 8. Cimiento stones and melted adobe of structure 2, El Centinela. Photo by Rommel Tapia-Carrasco.

Several projects have been conducted to the south of the Nuri Valley, including one of the first systematic studies in Sonora by R. Pailles (1973) along portions of the Mayo and Cuchujaqui. This research included a substantial survey supplemented by two small excavations. The survey recovered a handful of West Mexican sherds ($n = 43$ of 15,898; 0.2%) but none from the Casas Grandes region. There were also a handful ($n = 36$) of R/br sherds; most are likely Guasave R/br, associated with local traditions of northern Sinaloa. Textured sherds, including a local corrugated type, were present in appreciable numbers at some sites (18%, $n = 2874$ of 15,898 survey total), particularly those in foothill settings along the Mayo. Two excavated sites provide a less biased estimate of textured sherd proportions with 6% ($n = 313$ of 4937) at YE 27-2 and ca. 0.1% ($n = 8$ out of 7008) at XE 78-1, denoting a significant range of variation. This research was critical in recognizing a distinction between what are now considered Serrana (foothills) and (coastal plain) Huatabampo groups. However, we note that among the foothill sites, the distribution of textured ceramics suggests that only a handful of sites reflect communities with regionally exceptional ties to groups farther north where very similar textured wares dominate decorated assemblages. Most sites presented only very low numbers of any sort of decorated sherds or other distinctive element of material culture, a pattern akin to that described for Nuri. Marine shell was relatively abundant at several sites. Several overhanging manos and corresponding metates were recovered that link the region to more southern traditions. The Rincon de Buyubampo site is located near this region and reflects a rare instance of a singularly connected site in the gap-and-corridor model with a few examples of West Mexican polychromes, a few sherds of potential Casas Grandes origins, and rare goods such as copper (Carpenter and Sánchez 2007, 2008). This is a truly exceptional case relative to the surrounding region. Other sites in the upper Fuerte present

a modicum of textured sherds, but these disappear near completely in the lower coastal plain portion of the watershed (Carpenter et al. 2010, 2011).

We conducted a small-scale survey in the environs of Quiriego along the Cedros Valley. This effort confirmed a sparse settlement pattern similar to that of the Nuri Valley. Only six sites could be located during a survey that targeted approximately 50% of the feasible landforms that surround the river course for 9 km. We suspect the modern town of Quiriego also sits atop an ancient forerunner. A site at the southern end of the valley was evidenced by fairly abundant ceramic and lithic scatters in the unpaved streets of the small town of Bacusa, conforming to the pattern of demographic continuity. Surface collections of diagnostic artifacts at all sites failed to produce a single piece of obsidian or any form of rare good. There were only sparse ceramic assemblages visible in most contexts, but these were sampled and thoroughly searched during the survey for diagnostic specimens. This effort produced only one potentially (fugitive) painted sherd and a modicum of textured sherds at 3% of the assemblage ($n = 7$ out of 229); these specimens are incised except for one corrugated sherd.

Finally, several seasons of survey followed by small scale excavation in the Batacosa region to the west of the Cedros Valley produced only slightly more impressive results in regard to indicators of exterior connections. The largest site, Batacosa, is a heavily eroded context with ubiquitous surface material. Two seasons of test excavations produced an appreciable sample of material (Garcia-Moreno 2009, 2010). There is a high diversity of ceramics, but the vast majority are variations of plainwares that are hard to interpret in regard to their implications for regional or local interaction. From the first excavation season, textured wares comprise 5% ($n = 74$ of 1500) of the sample, but only 2% if a potbreak of an incised vessel is excluded. The second season of excavation produced a similar figure ($n = 95$ of

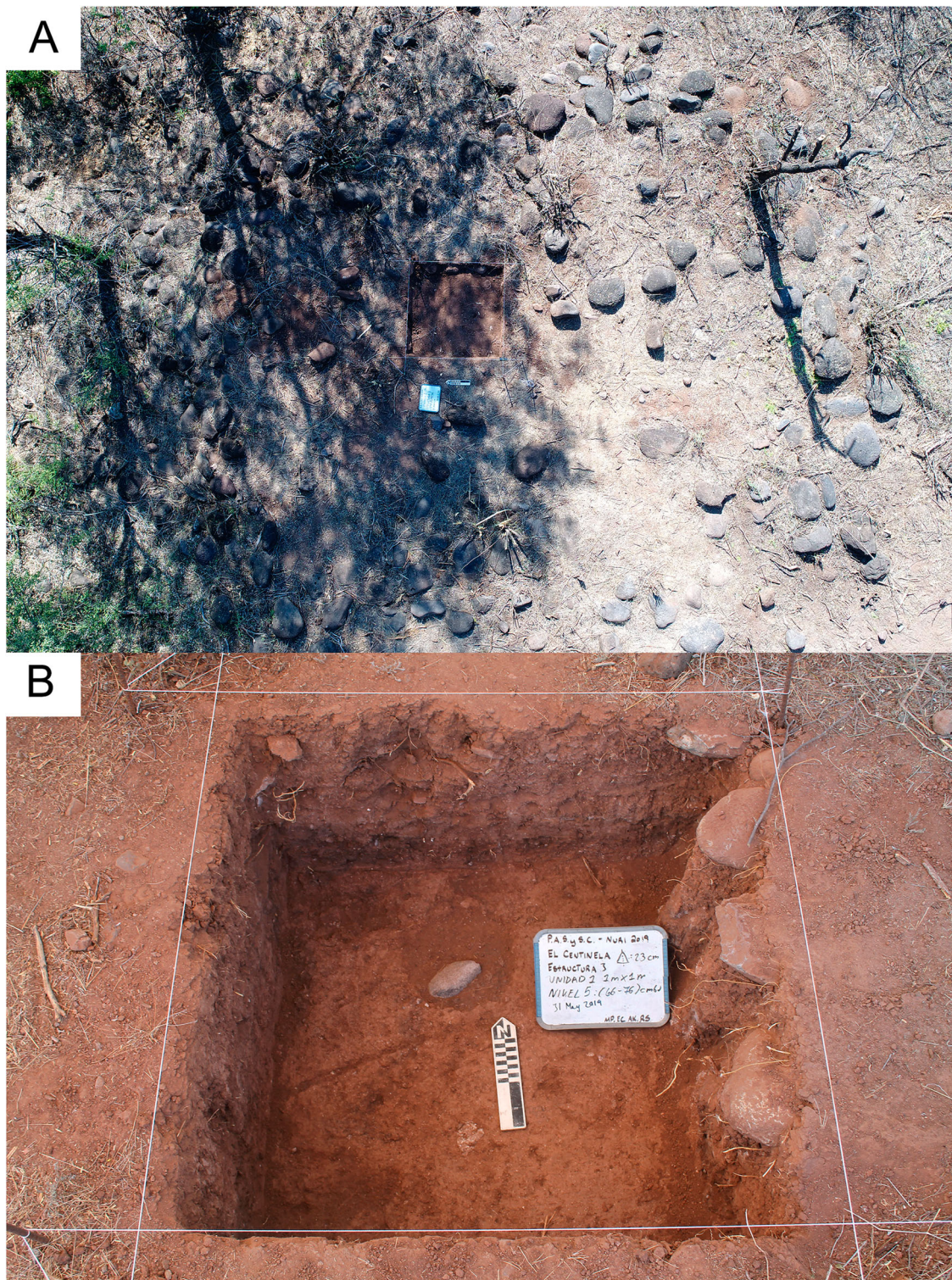


Figure 9. A) Drone image of structure 3 (suspected proto-colonial age) and B) pit or hearth feature of structure 3 prior to excavation. Note different orientations of photos. Photos by M. Pailles.

1993). Guasave R/br were 3% ($n = 48$) and 1% ($n = 25$), respectively, for each year. Obsidian was present ranging from 4% of the collected assemblage to 0 in the excavation seasons. A few overhanging manos were recovered. Comparatively, this reflects a relatively well-connected community, particularly if the diverse plainwares reflect connections to Huatabampo groups.

There are several interesting patterns discernable from this survey of regional data when placed in an even larger geographic context. The following interpretations account for the caveat that judgmental surveys are going to

disproportionately collect diagnostic and rare goods relative to excavation (see Figure 6). The northern SMO, including valleys such as the Sonora, Moctezuma, and Fronteras present regionally coherent patterns similar in scale to those of the southern US Southwest. There is certainly variation by valley, but this is relatively minor in a macroscopic perspective. Moving farther to the south, the described examples of Onavas (middle Yaqui) and Sahuaripa present departures from these more coherent macroscale patterns. These locations retained some widespread northern patterns (i.e. architecture) while eschewing others (textured ceramics) in

favor of local traditions (bichromes) or southern affiliations (cranial modification). Farther to the south, patterns break down almost completely. Many valleys seem to present material culture stripped of iconic or indexical potential, or conversely present evidence of affiliations to more far flung spatially discontinuous groups (bichrome or textured traditions). Across these areas, there are rare sites that support gap-and-corridor interpretations, but these sites do not reflect widespread engagement with distant groups. Finally, even farther to the south (northern Sinaloa), which we did not discuss above, a reverse trajectory plays out, with increasing evidence for affiliation with West Mexico but with high spatial heterogeneity before entering a region of greater conformity.

Discussion

Heading Parker's (2006) call to consider multiple forms of boundaries, we review the several domains implicated in this study: geography, demography, politics, and especially culture. The concept of Mesoamerica was originally developed in relation to ecological criteria that contrasted arid/oasis settings of the NAS to the high agricultural potential of Mesoamerican systems (Kirchhoff 1943, 1954). Conceptions of Mesoamerica have shifted substantially since this definition, but permanent farming villages are an uncontroversial hallmark of Mesoamerican societies. The region under consideration here does not perfectly conform to any ecological boundary, lying at the irregular intersection of the coastal plain and SMO foothills. However, there is an appreciable drop in humidity from south to north that progressively limits the feasibility of farming, eventually constraining its distribution only to well-watered valleys or topographically challenging uplands. These environmental features have the effect of segmenting populations into less contiguous groups relative to southern neighbors. This may have been particularly true in the focal region of this analysis where river valley catchments and resultant flows are much more limited relative to those farther north (Yaqui and Sonora) or the more humid regions to the south. Estimates of demographic density by Sauer (1935, table I) capture corresponding rapid fall-offs in potential from south to north. The Totoraime of Nayarit and southern Sinaloa (see Figure 3) are estimated at 10 people/km². This figure then drops by half for most groups of northern Sinaloa (i.e. Tahue 5.2 and Cahita 4.3) and then by an order of magnitude across the area of discussion (i.e. Lower Pima 0.6 and Opata 1.5). The majority of these populations would be concentrated along river courses. This concentration and physical separation of populations placed obvious constraints on political and economic systems (Pailes 2015, 2016). There are some ethnohistoric suggestions that certain rulers such as Sisibotari of the Sahuaripa region (Pérez de Ribas 1999)—somewhat on the margins of our perceived borderland—were able to sustain multi-valley coalitions that spanned low density hinterlands. The most ubiquitous element of the ethnohistoric record are frequent observations of animosities between topographically segmented neighbors (Pailes 2022).

The final major strand considered by Parker is subsumed in the category of culture boundaries. Parker defines culture as including religious, linguistic, and material boundaries. As we review in the ethnohistorical section, there was certainly

linguistic variation in the region. Though there was a shared ancient Uto-Aztecan ancestry, there are many indications that mutual unintelligibility existed at a fine scale of granularity. Relative to northern portions of the NAS, the density of distinct languages may only be matched by the Puebloan region. In terms of religion, we are confronted with a paucity of evidence. However, it is worth noting that while many details remain controversial, there is a substantial basis for inferring that those aspects of religious traditions typically cited as reflecting Mesoamerica influence in the NAS are absent in the region discussed here. Ethnohistoric data reveals widespread participation in forms of ceremonialism retained in Yoeme and Yoerme communities that include ancient concepts such as the flower world (Hill 1992). Cahitan traditions such as Deer Dancers certainly penetrated well into Opata territory of the SMO (Yetman 2010). However, the archaeological and ethnohistoric record is devoid of references to widespread traditions such as Venus (Mathiowetz et al. 2015) or alternatively Hero Twins imagery (Gilman, Thompson, and Wyckoff 2014), macaws (Schwartz, Plog, and Gilman 2022), feathered serpents (VanPool, VanPool, and Harmon 2008), or depictions of specific Mesoamerican deities (Mathiowetz 2018, 2020, 2022; Schaafsma 1999) common farther north.

As to material culture boundaries, our above analysis displays contrasting patterns. At the macroscale, the always-rare markers of regional interaction anchored by the northernmost Mesoamerican-inspired ceramic traditions (i.e. Aztatlán) and southernmost, widespread traditions associated with Paquimé reach their respective limits in southern Sonora and northern Sinaloa. At the regional to local scales, ceramic traditions are heterogeneous, with spatially discrete emphasis on local bichrome traditions, textured traditions, or a complete avoidance of any decorative embellishments. We interpret this heterogeneity as reflecting alternative degrees of requisite local group consolidation and strategic deployment of widely shared markers of affiliation in a dynamic and fluid landscape of social group boundaries. While our discussion has largely approached this implied borderland from the north, we note scholars working from the south are arriving at similar perspectives (Vidal-Aldana, Gómez-Ambríz, and Nelson 2024). In short summary, macroscale patterns indicate southern Sonora was the limit of direct Mesoamerican influence, and this same region is characterized by a break down and balkanization of regional affiliations in which local communities plotted distinct strategies of affiliation, often emphasizing none at all.

Conclusions

In this paper, we refocus discussion of Mesoamerican and NAS interaction both spatially and conceptually. Rather than considering all of northwestern Mexico as a borderland, we move discussion to the region of amorphous affiliations near the Sinaloa and Sonora border. We further focus on the more numerous populations living outside of the sites that underpin the gap-and-corridor model, which we recognize as highly useful. Our perspective assumes groups had clear knowledge not only of near neighbors but distant locations (Lekson 2015, 2018). This same premise is reflected in much of the modern scholarship concerning Mesoamerican West Mexico and NAS interaction in which passing material

similarities are taken as proof of intentional emulation (Mathiowetz and Pohl 2024). What is lacking in much of this discussion is detailed consideration of why such far flung groups found emulating near or distant neighbors attractive. The answers to this much harder question will require serious work of untangling the potential benefits of emulation not only of distant lands but more spatially proximate neighbors. To this end, it is telling that the groups discussed in this article with close physical proximity to the machinations of Mesoamerican grandeur found little attractive. This is not to deny the importance of occupying such a nodal location in continental scale interactions. The omnipresent models of politically integrated Mesoamerican societies no doubt served as a constant source of inspiration for aspirant local leaders. The highly variable degrees of interaction with Mesoamerica reflected in the few sites that underpin the gap-and-corridor provide examples of local leaders jockeying for favored positions in trade networks. However, the diffuse nature of the ancient borderlands region, and the potential for unconstrained movement along the coast, likely made trade connections impossible to monopolize and thus unlikely to be the instigation for the development of regional polities as previously envisioned (Riley 1987, 2005).

It is more vexing to explain why Mesoamerican religious themes seemed to have so little purchase in the borderlands relative to the seeming wholesale adoption of such themes at much greater distances. Compared to these regions, there was a much less effective mobilization of Mesoamerican concepts as a means to legitimize institutionalized religious offices. To climb out on a significant limb, we suggest that the proximity of the borderlands might not have been conducive to aspirant leaders leveraging Mesoamerican ideology and belief systems. Local peoples may have had too much awareness of the implications entailed in participating in such traditions and found them incompatible with local precepts. Any number of specific objections might underpin such a response, from a desire to retain household economic autonomy and the avoidance of tribute common to the politico-religious systems of Mesoamerica or a simple incommensurability in religious ideals with established traditions.

Far more manifest in the daily lives of regional inhabitants of the borderlands seems to be the relative push and pull of participating in more local, if still inter-group, dynamics. Topography played a strong role in segmenting populations into discrete groups with large hinterlands. The resulting demographic distributions certainly placed constraints on the practicality of political unification at geographically large scales. We argue the tendency of local river valleys to develop highly distinct or highly banal material culture patterns reflects a bifurcation in strategies to negotiate a fraught and balkanized political landscape. High local group solidarity would certainly have its benefits in these contexts, as would the ability to seemingly pass as a credible member of multiple groups. Locations such as Sahuaripa and Onavas that evidence distinct local traditions also exhibit commitments to outward signs of shared regional identities reflected in cranial modification. These cases thus anchor one end of a continuum of strategies of overtly marking one's affiliations with a truly amalgamated identity. Nuri, and indeed much of the foothills region to the south in the Cedros Valley and to the west along the Mayo, seem to have taken the alternative path of limiting overt statements of affiliation. It is likely no

coincidence that these same regions were often described ethnohistorically as being bilingual and, in the case of Nuri, as the source population of the historic Bamoa that illustrated an openness to migration as a means to take advantage of perceived changes in local dynamics. There is a broader lesson here that the erasure of difference and the avoidance of ethnic distinction is as much a corollary of borderland contexts as cultural amalgamation—viz. the creation of new identities from preexisting cultural repertoires. This insight should have relevance to related contexts such as diaspora studies, which exhibit an over-emphasis on tracing social group continuity through the maintenance and construction of distinction.

Tacking between scales of analysis, we note the cultural identities archaeologists ascribe to Mesoamerica and the NAS would have little relevance to the ancient groups we discuss in this paper. None of the topographical and resultant political-economic, demographic, or culture boundaries would be recognizable in an emic sense as the final frontier of macroscale units. Rather, the landscape would be awash in local divisions that were accentuated by the alternative weak ties that lightly pulled at different communities in opposing directions that archaeologists conceptualize as Mesoamerica and the NAS. However, while the material evidence of ties to these macro-traditions are extremely spartan, we think it is no coincidence that the region in which they finally meet and become mostly mutually exclusive is also one in which patterns of affiliation become very hard to define at even sub-regional scales. Rather than patterns of cultural amalgamation, what we mostly see is the entrenchment of alternative traditions at very local scales or a complete avoidance of overtly symbolic content of any kind. Future work should interrogate whether these sorts of responses were common in pre-colonial contexts. This work suggests historical contexts of ethnogenesis that transpired under conditions of stark and long-term power differentials may, unsurprisingly, be a poor analog for much of human history. Looking to future research, we note we are describing only one portion of what must have been an extensive borderland continuing to the east. The decades-old debates about the relationship between the Loma San Gabriel and Chalchihuites cultures of Durango (Foster 2000; Hers 2013) present obvious parallels to our own discussion and are ripe for future comparative analyses.

Endnote

1. From provided figures, three of these appear to be “Santa Ana” described above, which are likely not from the core Casas Grandes region.

Acknowledgements

We extend our profound appreciation to the communities that hosted this research, including Rosario de Tesopaco, Nuri, Quiriego, Sahuaripa, Tacupeto, Onapa, Choix, and Mochicahui. We are further indebted to other regional scholars whose data sharing made this research possible, especially Cristina García-Moreno, Emilliano Gallaga, and the late Richard Pailes.

Disclosure Statement

The authors report there are no competing interests to declare.

Funding

This work was supported in large part by National Science Foundation Grant BCS 1724445, with supplemental funding by a University of Oklahoma Junior Faculty Fellowship, a Rust Family Foundation Grant, and the Instituto Nacional de Antropología e Historia.

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