Chapter 11

Taking the Bight out of complexity: elaborating interior landscapes within south-central California

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Introduction

Complexity discourse in California has focused intensely upon the maritime cultures of the Pacific-facing embayment called the California Bight. In particular, the work of Arnold, Erlandson, Glassow, and a cadre of other researchers has produced a rich corpus of publications on the prehistory of the Santa Barbara Channel Chumash. Characterised as 'prototypical complex hunter-gathers' (Arnold and Graesh 2004, 1), the island and coastal Chumash are evaluated under evolutionary principles of adaptation, human behavioural ecology, and a set of criteria defining the Later Period and Historic populations as Chiefdom societies. However, this discourse has not evaluated inland and interior populations: in fact, the populations of the Bight are cast to be the 'top-end' of complex social (i.e. hierarchical) and economic (i.e. trade and craft specialisation) systems, with the result that inland and interior groups are either marginalised to a supporting, even subservient status towards their coastal counterparts, or ignored altogether. Going hand-in-hand with this maritime emphasis, is a corresponding neglect of how complexity plays out across south-central Californian landscapes: most non-maritime groups found themselves locked within complex terrestrial geographies, in some cases surrounded by neighbours on all sides, embroiled within rugged and difficult terrains, and forced to deal with great variety of linguistic families. I argue here that the lack of investigation into terrestrial regions is due, in part, to the theoretically strict criteria underpinning the term 'Complexity' as used in California. The geological pinwheel of south-central California provides a matrix of land-forms, linguistic groups, and myriad interactions between neighbouring populations and between people, environment, and landscapes. The elaboration of mainland multi-component site 'complexes' with rock-art can be seen as part-and-parcel of a wider geographic phenomenon where people interacted in wide ranging social networks, but grounded those interactions at specific locales. These sites were core to both economic and religious facets, feeding daily life while financing ceremonial events. Played out at specific places with valuable natural and cultural attributes, the locales embellished with rock-art can be seen as part of the process of creating a hierarchy of places within the inhabited landscape. This chapter examines the relationship between maritime and terrestrial groups from the perspective of

inland and interior populations under the rubric of complexity without the capital "C".

Plieto: an interior rock-art complex

Approaching the rock-art locale called Pleito is best done along the banks of a modest, perennial flowing stream. Animal tracks (Fig. 11.1) show that a wide variety of species come down to drink from the waters: quail, fox, coyote, deer, and bear are just a few found leaving marks in the mud. Moving upstream, a large sandstone formation narrows the approach – red pigment fragments are still visible on the eroded, honeycomb pockmarked surface. Entering the locale takes one by a discrete wetland surrounding a spring feeding the creek running past. It is a rich riverine biome (Fig. 11.2) in a wider south-central California semi-arid landscape.

Lining the banks, oaks, cotton woods, and willows form an open woodland; native bunch grasses, cucumber, coyote melon, elderberry, and jimson weed are some of the many native plants also flourishing in the shadows and sunlight near the perennial stream: 74 plant species in 34 different families have so far been identified at Pleito

Fig. 11.1. Animal tracks along Pleito Creek

(Thomas 2004). For indigenous peoples, these species would have provided a wealth of different food products, medicines, and raw material for tools both practical and ceremonial. Some of these tools – projectile points, drills, blades – can be found on either side of the creek and the spring on open terrace formations. Midden deposits evidence a wide range of on-site activities. Groundstone showing seed-food processing; lithics showing the use and modification of stone implements; burnt deer bone and fire-affected rocks showing different cooking techniques; asphaltum covered pebbles indicating that water-tight basketry and composite artefacts were made on-site; and tiny white shell beads hinting towards economic and perhaps depositional practices. These midden deposits lap up against a large boulder with cupule patterns outlining a small open shelter containing polychrome paintings – anthropomorphic and zoomorphic figures, sun symbols, and geometric designs. Alongside the boulder, carved steps allow access to the top. Upslope and immediately next to this large boulder are numerous smaller bedrock formations containing conical mortars carved deep into the rock. These were used to pound seeds and other foods, particularly acorns.

Overlooking the terraces and their middens, the stream, and the spring, a wide cave contains the most elaborate known pictographs in North America (Fig. 11.3). Carved steps allow access into the shelter. Intensely applied pigment forms myriad shapes, some similar to the boulder cave below, but others exceedingly intricate polychrome compositions, with multiple layers of superimposition. The mouth of this cave dominates the locale: even in its eroded state, many of the brightly coloured

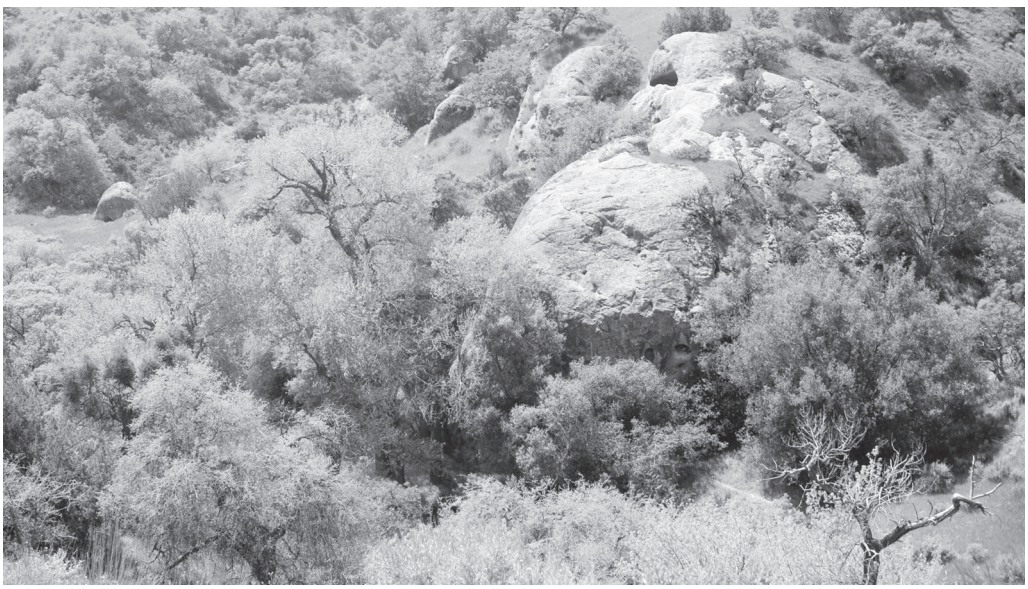

Fig. 11.2. Pleito riverine rock-art locale, looking west from upper terrace: Main Cave in upper right; boulder with pictographs, lower terrace, and bedrock mortars on bottom left in clearing

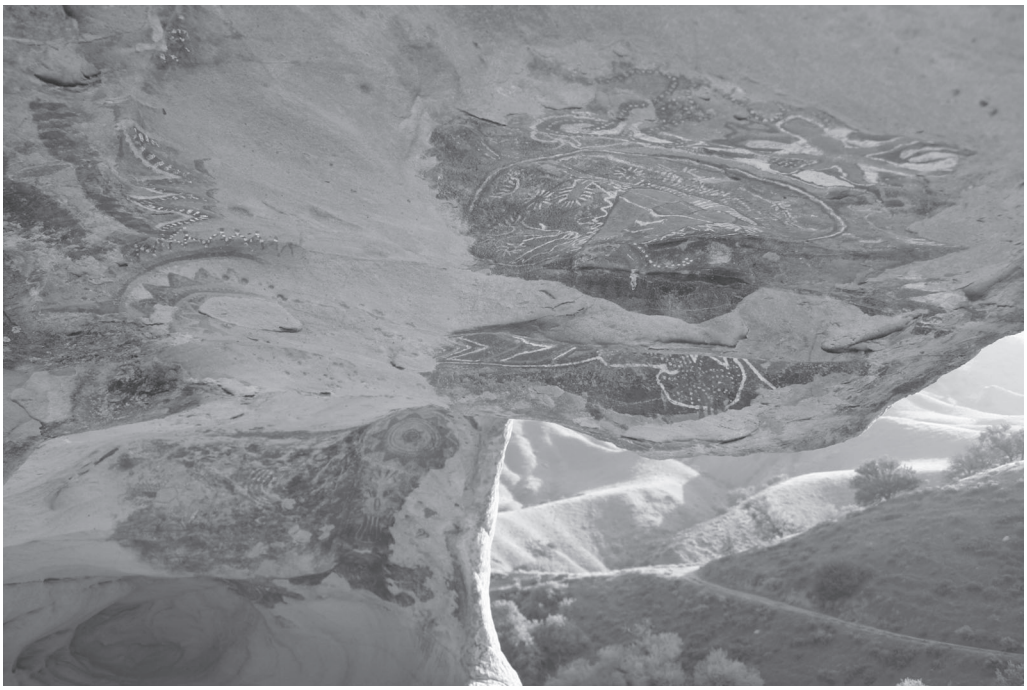

Fig. 11.3. View within Pleito, Main Cave

paintings can be seen from below. The hundreds of elements and multiple layers of pigment show the importance of this particular cave; equally, the natural and archaeological components of its surroundings reflect the importance of the cave's setting.

In sum, the rock-art locale at Pleito is a rich riverine environment, having a perennial water supply attracting many animal and plant species, two separate midden deposits, 13 bedrock mortar stations with 60 bedrock mortars, multiple dozens of cupules, and elaborate pictographs found in six different locations, among which are the most densely applied pictographs on the continent. Pleito is much more than a simple rock-art site: it is multi-component *complex* locality in the heart of interior south-central California.

Taking the Bight out of complexity

As the condor flies, Pleito is over well over 100 kilometres from the shores of the Pacific and over 60 kilometres from the Santa Barbara Channel, the northernmost expression of the California Bight (Fig. 11.4). Complexity discourse in California has focused most intensely upon the maritime cultures of this Pacific-facing embayment. Fieldwork has focused most intensely on the indigenous people called the Chumash

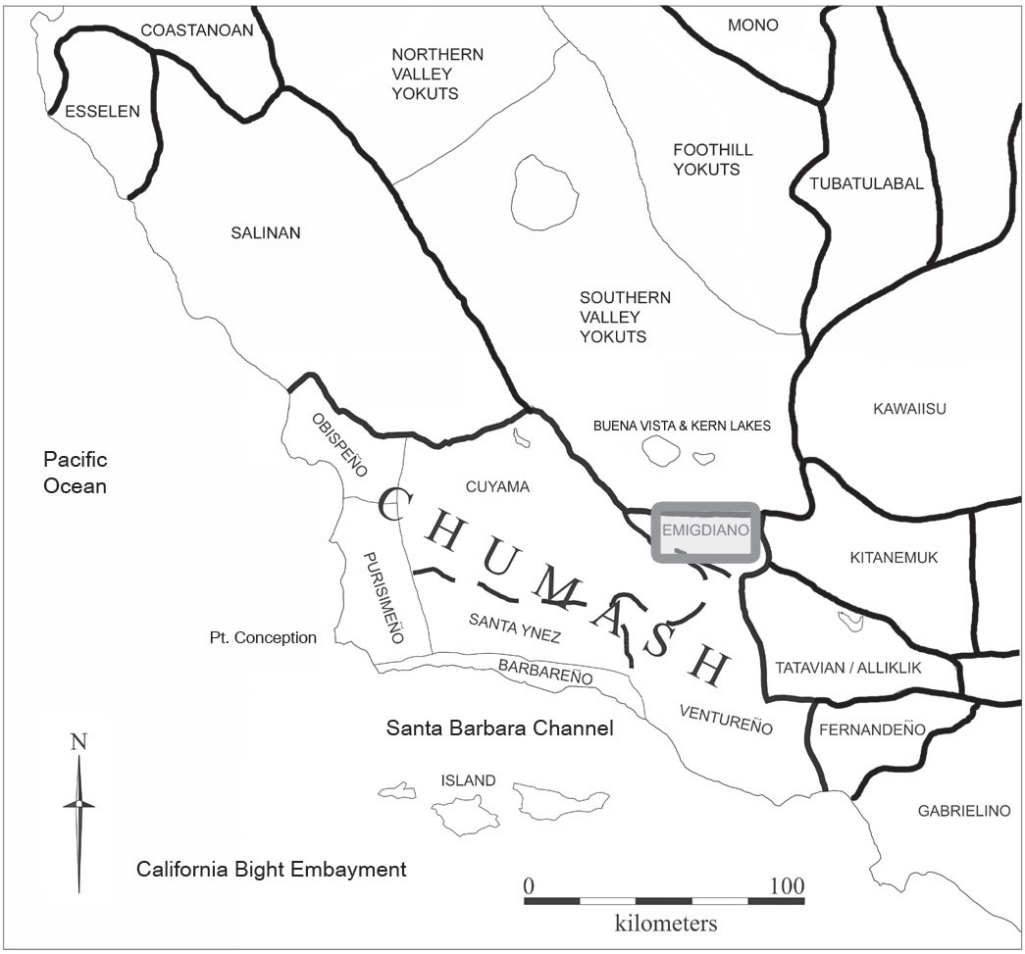

Fig. 11.4. Linguistic boundaries within South-Central California: Pleito Cave is found within the Emigdiano Chumash dialect territory outlined by central box

and their coastal settings – both island and mainland – along the Santa Barbara Channel (for instance Arnold 1987, 1992, 2001a; Erlandson 1991; Erlandson *et al.* 1999; Glassow *et al.* 1988b; Johnson 1988; Kennett 2005; Orr 1943). This research characterises the Chumash as 'prototypical complex hunter-gathers' (Arnold and Graesh 2004, 1) whose past is told as a story of cultural adaptation, shifting maritime ecologies, behavioural and organisational responses to fluctuating temperatures, and the emergence of 'complex chiefdoms', before the subsequent tumultuous changes brought through Spanish missionisation, Mexican and American displacement.

Research has long since concentrated upon easily recognisable, dense coastal middens (e.g. Harrington 1928, Olson 1930, Rogers 1929) – full of shell species, fish bones, and large ocean pelagic fish, research on these middens links Chumash

subsistence with intertidal and offshore ocean resources (Bernard 2004; Colton 1989; Erlandson 1991; Pletka 2001; Porcasi and Fujita 2000; Rick and Glassow 1999; Slyke 1998). The Chumash were renowned by the Spanish colonialists, and now by archaeologists, for their redwood plank canoes called *tomols*: in both archaeological literature and in modern Chumash terms, *tomols* have become emblematic of this maritime focus (see Kelly 2001). Watercraft technology was key to a variety of Channel Chumash subsistence and economic activities, such as fishing and cross-channel trade, the later of which enabled the mass distribution of beads (Arnold 1995, 1997, 2001c; Arnold and Bernard 2005; Bernard 2004; Fagan 2004; see Jones and Klar 2005 for recent proposal of Polynesian origination of *tomol* technology). Beads were made by the millions, mostly from readily available *olivella* shell species on Santa Cruz and other neighbouring Channel islands (Arnold and Graesch 2001). These in turn were distributed through far-reaching trade networks across all of south-central California, up and down the Pacific coast, and deep into western North America (see Bennyhoff and Huges 1987). Beads are central to recent and ongoing questions concerning the development of Chumash social complexity: beads are to have played roles in developing craft specialisation, the creation of differential status, and the emergence of influential 'chiefdoms' (particularly Arnold 1987, 1992, 2001a, 2001b, 2001c, 2004; Glassow 2004). Indeed, the word Chumash is a name ascribed to the people on Santa Cruz Island by mainland people (Hoffman 1885, 29): Chumash probably means 'beadmaker' (Applegate 1974). This name has been applied as an anthropological term to the entirety of the linguistically related peoples who occupied a portion of south-central California from Malibu on the south coast, up to San Luis Obispo on the north coast, but also over 100 kilometres inland into the midst of the Transverse Ranges and the western margins of the immense San Joaquin Valley (Grant 1978, 505; Kroeber 1925, 550–551).

Researchers have rarely evaluated inland and interior populations under the rubric of complexity: in fact, the concentrated coastal populations of the Bight are considered to be the 'top-end' of complex social (i.e. hierarchical) and economic (i.e. trade and craft specialisation) systems. Consequently, the less populous inland and interior groups are either marginalised to a supporting role in trade relations towards their coastal counterparts, or ignored altogether. Going hand-in-hand with this maritime emphasis, is a corresponding neglect of how complexity plays out across south-central Californian landscapes even though exchange operated both ways as interior and inland goods made their way to the islands down the bead network (King 1976). In short, little consideration has been given towards theorising the complex systems of non-marine south-central California populations, not only in relation to the coastal groups, but even within their own inhabited landscapes.

Most of these non-maritime groups found themselves locked within complex terrestrial geographies, living within semi-arid and oftentimes difficult terrains, while surrounded on all sides by others speaking a variety of entirely different languages and dialects (see Fig. 11.4). The strategies people developed to negotiate such scenarios have so far been largely ignored by complexity theorists. This is due, in part, to the sheer intensity of coastal archaeological research compared to the inland/interior, but also due to the sometime rigid definitions of complexity in terms of '*hierarchical,*

hereditary leadership and leaders' control over non-kin labor and/or products of labor' (Munns and Arnold 2002, 144, italics original), thus equating complexity with the anthropological definition of a simple chiefdom. This definition structures the archaeological investigation itself by posing hypotheses to test the deep midden deposits for evidence of 'bona fide occupational specialisms' (*Ibid*., 133). Complexity along the California Bight has therefore generally been linked to a specific range of material culture and technology, namely bead, lithic, and boat technologies. Brief attention has also been paid to population dynamics, 'territorial circumspection' (Erlandson and Rick 2002, 180–181), and settlement/village organisation (for instance Gamble *et al*. 2002, 108–109; Graesch 2004; Perry 2004), but what has been lacking is research oriented towards, and explicitly analysing, how complexity is played out in landscape contexts.

Following, I will redress this imbalance by moving away from the Bight, focusing instead on the landlocked Chumash linguistic subgroup known linguistically as the Emigdiano, but documented by Merriam (1967) as calling themselves the *Hool*. Here, I will explicitly analyse aspects of *Hool* complexity within their own landscape. I will then return to reconsider the relationship between inland/interior and coastal/island peoples. Only by first taking the Bight out of a consideration of complexity can an appreciation of interior cultural elaborations be approached.

Fig. 11.5. View south towards the San Emigdio Hills emerging from the floor of the Southern San Joaquin Valley. Canyon aperture is San Emigdio Canyon, location of ethnohistorical village of Tashlipun

Landscape of the *Hool*

Rising from the floor of the San Joaquin Valley, the San Emigdio Hills (Fig. 11.5) demarcate the southernmost extent of an immense valley over 650 kilometres from north to south. Geologically, these southern hills are a turbulent and complex region of intersecting faults and rapidly uplifted topography. The hills are cut by north flowing canyon *arroyos*: most are narrow canyons, with their waters spilling out into the southern plain, sinking to become subsurface ground water and feeding the large lakes of the Lower San Joaquin, including Buena Vista and Kern Lakes. Within the hills, geological activity confuses the terrain: side canyons, raised terraces, ridge lines, and other landforms crisscross the north-south drainage systems, either facilitating or hindering movement.

Encompassing the hills is a modern nature sanctuary called the Wind Wolves Preserve. Over the past several years, I have conducted extensive surveys sampling a variety of landforms across the Preserve to identify site distribution, rock-art location, and land-use practices. The landscape can be divided into five topographic zones.

Canyon Apertures

First, are the entrances into the landscape at canyon mouths. Where streams are perennial – Tecuya, San Emigdio, and Santiago canyons, for instance – ethno-historically documented villages are typically found: *Tecuya*, *Tashlipun*, and *Matapuan* respectively. These canyons are major corridors through the landscape while also being the richest in biotic diversity. Large terrace landforms near canyon apertures allowed village sites to be situated close to reliable water supply while maintaining ties to lake dwelling people to the immediate north known as the Yokuts.

Up-Canyon

The second zone is up-canyon, including major and minor creeks. Interspersed along the banks of these creeks are small middens, lithic scatters, and bedrock mortar sites. A few pictograph sites are found, particularly near creek junctions.

Potreros

Above these creeks, large plateau grassland areas known as *potreros* are found at intermediate elevations. Few sites of any kind have so far been discovered, even where boulder formations are abundant.

Oak Woodland

At the upland margins of these plateaux, extensive open oak woodlands intersperse along tributaries feeding watersheds below. It is here, in the acorn rich oaks, that bedrock mortars cluster and the majority of rock-art locales are found.

Fig. 11.6. Upper elevation survey at crest of Chimney's rock formation (with Rick Bury and Carole Bury)

Pinyon Woodland

Continuing even higher, upper elevation rock formations (Fig. 11.6) and the beginnings of pine forests terminate the landscape. Even though this zone is the richest in terms of rock, and concerted effort has surveyed some of the most dramatic formations, only one pictograph site has been found.

Land-use patterns

The survey provides clear evidence that *Hool* land-use practice was heavily oriented towards bedrock mortar (BRM) based food preparation: 70 sites (66%) had bedrock mortars, while surface lithics or midden materials were noted at only 16 (15%). The quantity of BRMs and the prevalence of oak woodland in *Hool* lands show that acorns formed an integral part of the prehistoric food supply. Gathered from various species of oak, acorns required winnowing, pounding, and leaching to remove bitter tannic acids before cooking and consumption. It is widely documented that acorns were the major staple for the majority of later prehistoric Californian populations (see Fagan 2004 for recent overview), with bedrock mortars indicative of the substantial labour investment needed to process them – that this should also be the case for the *Hool* is not unusual in any sense.

The numbers of individual BRMs vary greatly from locale to locale – some sites may have one BRM, others a few, others with up to or exceeding 100 BRMs. Jackson's (1984, 1991) research in land-use of the southern Sierra Nevada Mountains – demarcating the eastern edge of the San Joaquin Valley – shows that the number of BRMs is very important to understanding both individual sites and larger landscape

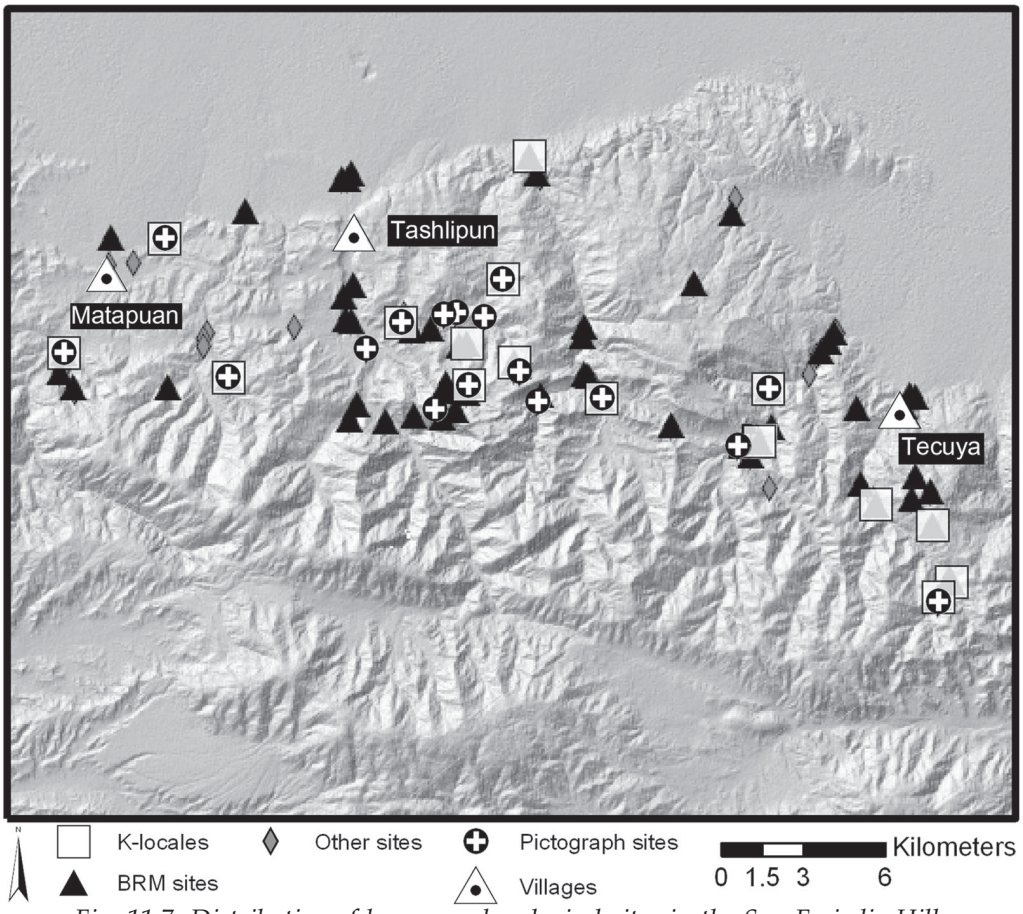

Fig. 11.7. Distribution of known archaeological sites in the San Emigdio Hills

patterns. In Jackson's survey area, small BRM sites were found to be numerous and fairly evenly dispersed, while sites with many BRMs (i.e. at least 14 or more) were much rarer: these larger BRM sites were distributed consistently through the landscape and within the scatter of lesser BRM sites (Jackson 1984, 199–203). The smaller sites were probably used by smaller groups – perhaps nuclear families – on a short-term basis, particularly for initial acorn harvesting (Jackson 1991). Sites with at least 14 BRMs were likely places where multiple family groups came together to pound acorns for longer periods (*ibid*.). These larger sites, which often included surface midden deposits, were termed 'K-sites'. The regular spacing of K-sites in otherwise ubiquitous BRM distributions led Jackson (*ibid*., 312) to the conclusion that the sites 'were situated to accommodate systematic annual movements across the landscape to collect and process, primarily, the acorn resource.'

Considering that California ethnography overwhelmingly associates BRMs with women, Jackson (*ibid.*, 312) further argues that '[t]hese food processing sites represent the creation by women of fixed production facilities on the landscape which are related directly to the organization of women's labour and production'.

Jackson noted that lower elevation winter villages had high numbers of BRMs, but were differentiated from K-sites (*ibid.*). Returning to the Wind Wolves Preserve, I found that the distribution of BRM sites is similar to these patterns described by Jackson – a pattern perhaps reflective of a widespread Late Prehistoric land-use strategy of acorn exploitation across much of South-Central California.

Previously (Robinson 2006), I adopted the term K-locale rather than K-site, since some 'sites' are so near to each other as to be essentially part of the same 'locale.' Also, following Jackson's nomenclature, I do not define BRM clusters associated with ethnohistoric villages as K-locales: *Matapuan*, *Tashlipun*, and especially *Tecuya* all have high BRM concentrations but, as will be discussed below, must be seen as primarily residential locales and not temporary encampments. In other words, sites with many BRMs found at canyon apertures are documented village locations and are distinct from backcountry, or upland acorn processing K-locales associated with seasonal movements away from these villages. I also have chosen a slightly higher minimum number of BRMs (18 or more) to constitute K-locales for the *Hool* since this better reflects the data within this particular landscape. All in all, a total of 16 K-locales are now known of on the Preserve (Fig. 11.7) – significantly, 11 K-locales have pictographs. It is also significant when considering sites with few BRMs. There are 55 sites on the Preserve having between one and 17 BRMs, but none of these have pictographs directly associated. In other words, while most K-locales have associated pictographs, minor BRM sites do not have any pictographs whatsoever. Clearly, the majority of *Hool* pictographs correlate with the majority of BRMs.

The hierarchical economic landscape

Jackson's (1991) K-site analysis of Yokuts populations to the northeast and Horne's earlier (1981) catchment model of inland Chumash populations to the southwest provide templates for further considering the movements of the *Hool* through their seasonal round – a pattern of aggregation, dispersal, and re-aggregation starting at villages situated at canyon mouths. These would probably have been wintering locations where people assembled in the largest numbers, lived in houses, and engaged in the largest variety of activities. The population would have dispersed seasonally into the backcountry, especially for late summer and autumnal acorn harvesting, when the water table drops and non-perennial streams dry out. Once in the backcountry, they would disperse into oak groves having ripe acorns – perhaps individual groves were owned by families or moieties, but certainly there would have been traditional rights-of-access (see discussion below). In any case, groups would be dispersed – likely hardly more than an extended family, perhaps reflecting a household. Under the oaks, acorns and other foods would be gathered, and where water was available, the first acorn meals prepared at small BRM stations. Pictographs

would not be seen at these locations. Moving from grove to grove or staying at a locale would have lasted for a limited amount of time (perhaps only a few days to a week or so). The group would then travel, their unprocessed acorn loads in carrying baskets, to a nearby backcountry K-locale, with its reliable water supply and abundant BRM stations. Here, more family groups would arrive in order to engage in the most important sustenance activity of the yearly round – storage and mass preparation of acorn meal. These are the sites where the greatest amount of rock-art would be seen. These are also the sites with crucial natural resources: like Pleito discussed at the beginning of this chapter, a diversity of plants provided a wide variety of uses at these invariably well-watered biomes. The archaeological evidence found at pictograph K-locales show that they were inhabited for several months, particularly during the acorn harvesting. The investment in painting mirrors the investment in labour. However, as winter approached, the groups would travel back to the main villages in the canyon mouths, perhaps caching acorns at K-locales (see Robinson 2006, 268–269), but certainly taking large amounts with them to see them through the lean winter months ahead.

Acorn harvesting was not straight forward: different trees and different groves produced acorns differentially through the years (Basgall 1987, 24). Tracking which groves were fruitful each year required intimate knowledge of the oaks and their landscape location. It may be that K-locales are situated in relation to this factor. Storage was an important strategy in building-up food for years of poor harvest, but also for conspicuous consumption and for trade. Rock-shelters at K-locales would have been ideal for the storage of acorns. Carved steps at Pleito suggest hands needed to be free: perhaps this aided transport of goods for storage. Ethnographic accounts in other Chumash contexts document that foodstuffs were sometimes stored in caves (see Hudson and Blackburn 1983). Archaeologically, this has been confirmed at cache caves where large granary storage baskets have been found (see Gollar 1996): at K-locales, if storage was a function, the presence of rock-art may have discouraged trespass in the absence of the group maintaining rights-of-access. Pictographs could have been powerful indicators of ownership of K-locales, signifying the authority of those who made or sponsored the making of the art. Their display at these sites also may have given individuals or even groups the rights to share the product of the women's labour. Over-painting may have been a reiteration or even competition for such rights.

For the *Hool*, acorn production would have been a primary exportable resource in lands abundant in oaks but lacking in other raw materials (such as shell for beads or lithics for tools). It is highly probable that these acorns would have been traded to the Yokuts to the immediate north, who dwelt along the oak-poor lakes and must have traded for acorns (Beals and Hester 1974, 4, 9). With no known local chert sources so far identified on the Preserve along with the abundance of easily recognisable foreign cherts and occasional obsidian found at *Hool* sites, the San Emigdio populations must have traded to acquire lithic materials. Acorns can be seen as *the* primary raw material constituting the basis not only for local tribal sustenance, but also for external exchange.

As the backdrop for this seasonal round, BRM and pictograph patterns present

significant implications in terms of understanding landscape and complexity for interior inhabitants. First, it is clear that there is an uneven distribution of pictographs in the landscape. Rock-art is not placed simply where rock formations are found: instead, they are most often placed at locales that have intersecting attributes, each of considerable value in itself, but in total constituting immense value within indigenous society. Two of the most important attributes were the reliable water, followed by the abundant acorn crop. Second, and following from the first implication, the elaboration of these places with highly visual media indicates a conscious acknowledgement of their importance by differentiating them from other places. The marking of K-locales must be seen not only as an acknowledgement, but as an act enhancing or increasing the value of the place itself. This practice of enculturating specific places elevated K-locales to even greater importance than other backcountry sites, effectively creating a spatial hierarchy within the landscape. This certainly must be viewed as a land-use strategy responding to complex topography and resource distribution, but also a means of influencing already complex relations between individuals, groups, and the surrounding biotic environment.

At Pleito and other pictograph sites, the intersection of multiple factors coalesced into oftentimes intense elaborations, reflecting and creating the most important interior backcountry locales. We must also consider indigenous conceptions of these factors: some plants, such as jimson weed or tobacco, were afforded sentience or varying degrees of affective power. The world was not simply a place full of impersonal resources and goods: it was teaming with many different types of animal agents, hidden or ambiguous powers, and even mythological presences. Rock formations were often conceived as the ossified remains of mythological characters while springs were likewise thought to house supernatural entities (see Robinson 2006, 252–254, 263–264). The hierarchical marking of specific spaces reflected the melding of a slew of complex interrelationships, especially vital economic and ontological precepts.

The hierarchical social landscape

What social implications might there be to the existence of hierarchically important places in the landscape, visibly enculturated with rock-art imagery? In Chumash languages, leaders were called *wots* ('chiefs' in complexity discourse). These individuals were usually, but certainly not always, male. *Wots* were not just political leaders, they also were members of the *'antap* organisation – an elite institution that organised elaborate public festivals called *fiestas* in Historical times (Hudson and Blackburn 1978, 225): these were events where economic, political, and religious institutions and practices were most explicitly brought together. Beads, food, and other items were exchanged in large quantities at such ceremonies: *wots* used beads to pay performers such as dancers, singers, mourners, and flute-whistle-players. Each attendant individual or visiting delegation was obligated to bring gifts of beads, prestige items, or food, often acorns, the bases of wealth for the *wot*.

Gayton's (1929, 1945, 1948a, 1948b, 1976) anthropological research into the Yokuts

has found similar religious-economic-social integrations, with the *tiya* as their counterpart to the Chumash *wot*:

> 'The administrative powers of the chief [*tiya*] covered the salient features of Yokuts life: he held directive control of the great mourning ceremony, an intertribal affair of extensive proportions, authorized the movements of families on seed-gathering and trading expeditions….' (Gayton 1945, 417)

As Gayton (*ibid*.) put it, the *tiya* 'effected the control of the acorn crop'. Gayton's (1948a, 11) detailed information on the Yokuts show that oak groves were owned by a tribe, specific trees claimed by individual women, marked by stakes, and passed down to their daughters – the same was true for some, if not most, bedrock mortar stations (Jackson 1991:319).

K-locales were therefore situated within a multifarious economic and social landscape, quite literally feeding the ceremonial system. Since ethnographic information overwhelmingly associates bedrock mortars stations with women, the produce from women's labour sustained the entire ceremonial system: a system which in turned reified social hierarchies. The control of this system was in the authority of *tiyas*, *wots*, and, for the Chumash, the '*antap* institution. If rock-art had intonations of authority, then *Hool* pictographs can be thought of as a projection of that authority into the landscape. In one sense, this can be viewed as an appropriation of women's labour in the creation and maintenance of social stratification; however, it also highlights the importance of women in the social system, and strongly suggests that women may have made more of the art than currently recognised (see Whitley 2000). Dick-Bissonette (1998) argues that senior Yokuts women played a significant role within tribal governance, in some cases being chiefs or other officials, and in other cases having high status craft or ritual specialisms. Jackson's observations that BRM sites were 'fixed' women's facilities show that hierarchical landscape patterns of the *Hool* were anchored to women's practices. Within indigenous terms, the 'fixing' of pictographs at K-locales can be best seen as a complementary strategy reinforcing women's investment of labour with the most vibrant and visible media available for the benefit of the entire local community.

The development of interior complexity?

The model outlined above allows us to conceive of how interior complexities were played out in landscape contexts. However, the lack of archaeological excavations in *Hool* territory leads to a lack of chronological understandings for this interior prehistory. Artefacts diagnostic of Late Period (approximately 650 BP to 200 BP) and Historical (approximately AD 1769 to AD 1848) occupations of K-locales are commonly seen in surface deposits. The making and use of bedrock mortars went hand-in-hand with increasing acorn exploitation that intensified throughout much of California in the Late Period. Mission records, traveller accounts, and anthropological research clearly show that a significant population was living in the San Emigdio Hills immediately before and during the Mission Period. All of this indicates

that the model outlined above is firmly applicable to Late Period or Protohistorical times.

But what about earlier times? In order to understand the development of this landscape hierarchy, a better understanding of both changing land-use and ceremonial practices is needed. Regarding the latter, Corbett (2004) has analysed Chumash deer tibia whistles, exclusively associated in ethnohistoric accounts with *'antap* ritual specialists. He found that the use of these and other ceremonial whistles were significant aspects of the late Middle Period (approximately 2500 to 800 BP) and was part of a process integrating and incorporating 'increasingly large numbers of people into the Chumash ceremonial system' (*ibid*., 71).

More significantly, recent research by Whitley *et al*. (in press) finds that there was there was a significant population 'collapse' during the Middle Period to Late Horizon transition in the neighbouring region of the Carrizo plain, to the northwest of the San Emigdio Hills. This drastic decline in population out on the Carrizo correlates with the desiccation of Soda Lake between 800 and 1200 BP due to the effects of the Medieval Climatic Anomaly – a well-documented period characterised by extreme droughts. Whitley *et al*. (*ibid*) note a shift in settlement patterns, with Late Period sites focusing upon the most reliable water sources.

It is therefore very likely that during the later stages of the Middle Period, and then into the Late Period, perennial water sources became of paramount importance. With the contraction of populations into areas with reliable water supplies, it is indeed possible that the reformulation of population and settlement patterns were tied to the increased economic and ideological importance of such locales. Along with all the factors discussed above, decreasing water supplies may have made springs even more important during such times of stress. However, this is only a sketch of possible factors contributing to the development of interior dynamics. Obviously, more interior research particularly focused on teasing out chronological detail is needed to add substance to these ideas.

What can be confidently stated is that *Hool* K-locales and their attendant pictographs would have been vitally important to the ceremonial system of later prehistoric and historic interior populations. As discussed, this ceremonial system would have played a major role within the lives of local populations; however, this system did not only influence local populations. Such ceremonies and festivals often attracted people from more distant landscapes and it is known that an extensive exchange system linked many different areas of south-central California: this is reflected in mission documents that show intermarriage between sometimes distant villages (Johnson 1988). Indeed, the landscape and it attendant social geographies involved a complex network of relationships: it must be kept in mind that as the landscape influenced people and they in turned modified the landscape through processes of enculturation, the character of use and importance of specific places changed through time. Equally, indigenous society was comprised of many different forms of identities – different linguistic groups, polities, moieties, 'brotherhoods', political officials, many different types of craft or ritual specialists, people with individual talents and capabilities, people of different ages, genders, and people of varying states of health. Certainly this vast array of group and individual identities

interacted in ongoing complex situations: in this sense, the social structure of indigenous South-Central California involved complexities operating in both hierarchical and non-hierarchical ways that should not be viewed as static. The changing landscape played significant and active roles within those changing relations. I now return to the relationship between coastal and interior peoples, with a focus on how backcountry K-locales and pictographs may have played a significant role in wider south-central complexities.

Putting the Bight back in

Moving from the San Emigdio Hills, towards the coastal plain, the landscape quickly gives way to the rugged Santa Barbara backcountry – a series of transverse ranges, cutting across the north-south ranges that typify California geomorphology. The entire region is characterised by mixtures of sandstone, siltstone and conglomerates, in a crisscrossing terrain of reverse faults and folds. This geological complexity is illustrated in the fact that the 'entire Transverse Range Province has been rotated in a clockwise direction during the past 15 million years' in an area of maximum geological compression (Harden 1998, 398).

Within this complex range system, Horne (1981) documented a network of inter-village relations. Ethnohistoric records show that intermarriages between villages were at the core of a political system interlinking a trans-regional economy (Johnson 1988). Key to this socially driven system, were inland items that could be traded to the islands. King (1976, 1990) collated ethnohistoric sources showing a slew of inland finished and raw materials that moved to the coast and islands from inland sources. Most prominent in these accounts were acorns. Archaeological investigations reiterate this prominence: Hildebrant (2004) has shown that the village of *Xonxon'ata* likely produced surplus acorns to trade to coastal peoples, while analysis of excavations at *Soxtonucmu'* found marine fish and shell remains confirm its involvement in an inland–coastal trade network (McRae 1999, 124). Of course, many sites evidence the almost ubiquitous distribution of the all-important 'money' beads from the islands.

The complex chiefdoms of Santa Cruz Island were therefore dependant upon their inland exchange sources. This fact is highlighted by the abandonment of the island after the introduction of Spanish glass beads undermined the regional economy along with the Missionisation of inland communities disrupting these long established trade networks. Arnold (2001c, 295) has argued a truly 'complex chiefdom' society based upon hereditary leadership and control of economic exchange appeared on the islands during the Transitional Period (800–650 BP). A 'great blossoming of exchange' (*ibid*, 289) at this time correlates to drought conditions and oceanic fluctuations that periodically diminished near-shore resources (Arnold 2001d, 26–31; Arnold and Graesch 2004, 9). Again, this generally matches the Medieval Climatic Anomaly scenario on the Carrizo Plain outlined by Whitley *et al*. (in press) discussed above. It is during this time that the intensification of trade from the interior reached levels enough to drastically effect island social organisation, and

the increase in trade of acorns must have gone hand-in-hand with this overall increase. As the foundation of the entire circulating system, pictographs at K-locales must be seen as marking the most fundamentally important places upon which the economy of the Bight thrived.

But what of the pictographs themselves? Positioned as they are at K-locales associates them within this complexity, but what was their relationship to the web of geographic intricacies? Again, chronological issues prevent a thorough examination of this question, but certain interpretations can be tentatively advanced. First is the observation that some rock-art certainly was made by specialists. This is not only highlighted in ethnohistorical accounts, but has been shown through pigment analyses at site such as Pleito, where the techniques of pigment preparation and application indicated high levels of skill and knowledge (Scott *et al*. 2002). While the location of pictographs at female gendered spaces calls into question the interplay of gender and the making of rock-art, ethnohistoric evidence almost universally associates South-Central pictographs with males (see Whitley 2000). If the making of pictographs was predominately a male craft, the spread of similar motifs and compositional 'set-pieces' (see Robinson 2006) across Chumash territory can possibly be explained by matrilocal residence patterns documented by Johnson (1988). Again, it is important here to understand landscape patterns, both socially and geographically. With BRMs being owned by women, a residential pattern whereby women remained within their own territories made sense. Men typically moved into a women's village, and therefore had to integrate themselves into a landscape hierarchically defined by women's fixed localities. The spread of rock-art motifs within linguistically defined zones may be related to movement of males within this social landscape, tied into trade networks, and ultimately influencing a wide array of indigenous identities, from the interior, throughout the inland, and along the coastal populations of the Bight.

Conclusion

In widening the scope to consider the entirety of south-central California, it becomes clear that social and economic relations created a mosaic of interdependent communities, none of which lived in isolation. The populous and powerful polities of coastal and lacustrine areas both contributed towards and received from groups situated away from marine environments. Such inland and interior populations developed different ways of integrating their social, ceremonial, and economic practices within their own inhabited landscapes: these were fundamentally different manners of day-to-day life than the well researched maritime cultures initially encountered by the Spanish. Yet each embraced the other through marriage networks, trade relations, and the exchange of material culture derived from their respective landscapes. By analysing these facets as networks moving through the landscape, we are able to reconstruct the conditions wherein a wide array of identities interacted. For example, the interplay between female networks seen in fixed bedrock mortar facilities intertwined with male networks seen in marriage patterns brings to the fore

the importance of considering different forms of indigenous complexity other than searching for nascent chiefdoms.

The development of non-maritime prehistory of south-central California is hampered by a lack of chronological detail. Future work must aim towards resolving temporal resolution and investigating the timing of settlement shifts and the enculturation of specific places seen in rock-art and other media. Research into the interior must not simply transplant the questions asked along the Bight into this very different topography – this may necessitate a rethinking of our definitions of complexity in order to make sense of the peculiarities of living in landlocked terrestrial territories. Such questions must adapt to the landscapes themselves, transforming and appreciating the different complexities within different historical trajectories. This requires a deeper understanding of the processes of enculturation between people and their environment, both practical and conceptual (see Robinson 2006). Deep into the interior, multi-component complexes such as Pleito stood out as intersections of value at the very heart of these conjoined facets of indigenous life. At these rock-rich, well watered locales, teaming with animal and plant life, people produced their most abundant food supply and their most spectacular art. The intricate, detailed, and finely crafted artistry on display at Pleito is a demonstration of the intricate, complex world of interior lives.

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