

AN ARCHAEOLOGY OF THE PACIFIC RIM

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ABSTRACT

In this paper, I discuss five themes that unite archaeological studies in the Pacific Rim region. These include (1) the Asiatic origins of indigenous Pacific Rim peoples; (2) the maritime or aquatic adaptations many of these cultures shared; (3) the similarity of many technological traditions of the Pleistocene/Holocene transition; (4) later parallels in the development of cultural complexity; and (5) similarities in the responses of many Pacific Rim peoples to European contacts. My purpose is to illustrate how archaeologists working in California are contributing to a range of anthropological issues with Pacific Rim -- and indeed global -- implications.

In discussing similarities among the maritime cultures of the North Pacific, Watanabe (1992:108) recently suggested that, ". . . there is a need to create a new framework of intercontinental studies to enlarge and combine the regional perspectives on which traditional anthropological and archaeological studies have been based." I agree with this viewpoint, but I also believe archaeologists and anthropologists have much to gain from an even broader comparative perspective, one that encompasses not just the North Pacific but a larger Pacific Rim region.

During the last decade, a number of American universities -- including the University of Oregon -- have reoriented their programs to reflect the growing importance of countries, markets, and students from across the Pacific (Erlandson 1993:24). I first encountered this "Pacific Rim" perspective in 1990 at the University of Alaska at Fairbanks, where I was asked to teach a class in the archaeology of the Pacific Rim. This class gave me the opportunity to ponder some of the geographic and archaeological themes that link many Pacific Rim cultures. The more I thought about it, the more I was convinced that a coherent argument for a "Pacific Rim Archaeology" could be constructed. In this paper, I discuss some environmental and cultural themes that unite

this vast region, emphasizing the implications for archaeologists working in California. My focus is on those areas and issues I know best, the coastal zones and the development of maritime societies.

I begin with some basic definitions and geography. What is the Pacific Rim, for instance, what geographic variables are common to the area, and how do these differ from other areas around the world? As I define it, the Pacific Rim region consists of those lands bordered by the Pacific Ocean, including the numerous islands of the Pacific Basin. Just where the Pacific Rim stops and the "Atlantic Rim" or other regions begin is a more difficult question, but for now I define the boundaries of the Pacific Rim region as the relatively mountainous zones that border the Pacific Ocean. Because of the nature of human dispersals around the Pacific, a strong argument could be made that a "Pacific Rim cultural region" should include all of North America, South America, and Australia. This larger area encompasses a much wider range of landscapes and habitats, however, which detracts from the coherence of the environmental and archaeological records discussed in this paper.

Most flat world maps divide the globe

down the middle of the Pacific, reflecting the historical links between the Caucasian societies of Europe and the Americas, and an ancient cultural divide between European and Asian cultures. As these traditional cultural perceptions break down, it is worth emphasizing that prior to European contact and colonization the archaeological record of the Americas clearly speaks of cultural links not to Europe, but to Asia.

Geography

The vast Pacific region is environmentally diverse, but the margins of the Pacific are united by regional concordances ultimately related to their geological origins. For millions of years, processes of plate tectonics have fueled the formation of oceanic plates as they moved inexorably outwards from the spreading centers of the mid-Pacific ridge. Around the Pacific "Ring of Fire," this oceanic crust collides with the western edge of North and South America, and the eastern edges of Asia and greater Australia. The result is often plate subduction with intensive vulcanism, mountain building, and earthquake activity. Thus, the dramatic landscapes of the Pacific Rim are geologically young, mountainous, and tectonically active, traits with important implications for humans – past and present. Topography is generally steep both on land and offshore, for instance, which tends to stack a variety of habitats close to the coast. Through much of the Pacific region, islands are also relatively common. Both mountainous coastlines and islands are landscapes where cultures tend to develop in environmentally circumscribed areas, a key point I will return to.

Another shared geographic trait is intuitively obvious but also very important: the entire region is bounded by the Pacific Ocean. This leads to inevitable similarities in the marine resources available to many Pacific Rim peoples: similar types of shellfish, fish, sea mammals, sea birds, etc. This is true even of Australia, where dramatically different terrestrial flora and fauna reside. In the North Pacific, the periodic emergence of a Beringian land bridge

between Asia and the Americas also insured that biological similarities existed between many terrestrial flora and fauna.

These ecological similarities led to many adaptive convergences among Pacific Rim societies. These may be most pronounced around the North Pacific, but there are southern and northern environmental analogs, as well. The fjords and complex archipelagoes of southern Alaska, Tierra del Fuego, and New Zealand, for example, are all areas where we might expect adaptive similarities to have developed between widely separated and ethnographically diverse peoples.

Archaeology

I turn now to five general archaeological themes that link past Pacific Rim cultures. These include: (1) their common Asian origins; (2) their general (but highly varied) reliance on the exploitation of both aquatic (marine, estuarine, riverine, and lacustrine) and terrestrial resources; (3) broad similarities in technological traditions of the Pleistocene/Holocene transition (see Straus et al. 1996); (4) the development of sociopolitical and economic complexity during the latter half of the Holocene; and (5) the generally devastating effects of European contacts after about AD 1500.

Asian Origins

All the indigenous peoples of the Pacific Rim are of Asian origin. Except for a small number of Middle and Lower Paleolithic sites in East Asia, the Pacific Rim archaeological record is also associated almost exclusively with anatomically modern humans. The antiquity of distinctively Asian peoples is still debated, with ideas ranging from about 2 million years to 100,000 years or less. In this often polarized debate, pitting advocates of "Multi-regional Evolution" vs. those of "African Origins" theories, I suspect that a synthetic model marked by a more recent origin and spread of *Homo sapiens sapiens* will eventually prove correct. Whatever the antiquity of modern

humans in East and Southeast Asia, however, current evidence suggests that most of the Pacific Rim was settled well after 100,000 years ago: "Greater Australia" (Sahul) about 40,000 to 60,000 years ago, the Americas most likely between about 12,000 to 15,000 years ago, and much of Oceania between 5,000 and 1,000 years ago.

Thus, the Pacific Rim archaeological record is overwhelmingly one of anatomically modern humans, with the initial colonists of Australia, the Americas, and the Pacific Islands all originating in Asia. This means that the indigenous cultures of the Pacific all derived from common stock with virtually identical intellectual capabilities. The archaeology of the Pacific, then, is about the different developmental trajectories of various Asian-derived peoples and cultures through time. If the origin of anatomically modern humans eventually proves to be an "Out of Africa" story, the peopling of the Pacific will just as clearly be an "Out of Asia" story.

For the most part, therefore, the archaeology of the Pacific can focus on similarities and differences in cultural developments through time, without significant concern about the physical and intellectual evolution of the peoples we study. This sets us apart from many Old World archaeologists and allows us to more freely focus our research on the relationships between human societies and their environments, on the historical processes that led to the diversification of Pacific cultures, on the fundamental causes of culture change, and on other issues common to the study of anatomically modern humans.

Maritime and Aquatic Adaptations

A second issue common to Pacific Rim archaeology is that most societies of the region have been nurtured, to one extent or another, by a reliance on marine or aquatic resources. The antiquity and nature of such adaptations is still debated, but the picture is profoundly muddled by postglacial sea level rise, coastal erosion, and the possible inundation or

destruction of early coastal sites.

During the Holocene, some Pacific Rim peoples (e.g., the maritime Aleut and Koniag) subsisted almost completely on aquatic resources. Most Pacific Rim societies relied on a mix of aquatic and terrestrial resources, however, depending on the relative productivity, diversity, and accessibility of various aquatic and terrestrial resources. Rich anadromous fish runs in coastal rivers of the North Pacific sometimes extended the accessibility of marine resources hundreds of kilometers into interior regions. In other areas, seasonal movements of peoples or the trade of food and other goods allowed interior people to obtain marine resources and coastal peoples to access terrestrial resources. Along relatively mountainous Pacific Rim coastlines, however, the close spacing of marine and terrestrial habitats often allowed people to exploit a rich and productive variety of resources within relatively small territories. This diversity and productivity often led to relatively high population densities and the development of relatively complex cultures, topics I will return to.

Like the initial peopling of various Pacific Rim regions, aquatic adaptations developed at different times in various areas. Traditionally, the exploitation of aquatic resources has been seen by many scholars as evidence of intensification and population pressure (see Cohen 1977). The peopling of greater Australia about 50,000 years ago now appears to have been a purposeful maritime migration, however, and Melanesian shell middens dating to about 35,000 BP suggest that these people arrived with a tradition of coastal adaptations.

In California, these issues arise in explaining the very origins of the earliest coastal peoples. Did a coastal migration contribute to the initial peopling of California and the Americas? Meighan (1989) suggested that the people who occupied early island sites like Daisy Cave (CA-SMI-261) and Eel Point (CA-SCLI-43) had economies too different from the more terrestrial economies of mainland Paleoindians for the two to be closely related.

Like Dixon (1993) and others, I have noted that seaworthy boats appear to have been used in Melanesia and Japan 25,000 to 35,000 years ago, and that the Kurile Islands could have served as "stepping stones" leading from Japan to the Aleutians or the coastlines of Beringia and the New World (Erlandson 1993, 1994:268-269).

Such proposals are intriguing, but ultimately unsatisfying without archaeological evidence from closer to home. In California, at least 1,000 years still seem to separate the earliest coastal middens from the earliest Paleoindian sites of the interior. Until Pacific Coast middens are found that are as old or older than mainland Clovis sites, I suspect that relatively few scholars will be convinced by circumstantial evidence for the coastal migration theory. Along the Pacific Coast of North America, postglacial sea level rise and coastal erosion still confound our understanding of the origins and antiquity of maritime adaptations. These problems are not insurmountable, however, and ongoing research along the Northwest Coast and the California coast may shed additional light on such problems.

Pleistocene/Holocene Technologies

Technological similarities also provide a common thread for many Pacific Rim cultures of the last 15,000 years. The most striking of these are the terminal Pleistocene and Early Holocene bifacial and microblade traditions of Northeast Asia and the Americas. The bifacial tradition of Northeast Asia, marked by leaf-shaped bifaces, blades, and a variety of flake tools, almost certainly is related to the Nenana complex in Alaska and the Clovis and other Paleoindian complexes more widely distributed in the Americas. In California, Clovis, San Dieguito, and related assemblages of the Pleistocene-Holocene transition seem clearly derived from such Northeast Asian precursors. Northeast Asian microblade complexes – in which wedge-shaped cores and microblades are diagnostic – may mark a separate migration into northwestern North America (Aikens and Dumond 1986), but so far little or no evidence

of such "Paleoartic" peoples has been found in California.

What other technologies did early migrants to the Americas carry with them? Unfortunately, much of the answer to that question still eludes us. Although the record of perishable technologies is very sketchy, basketry impressions from Eurasia were recently dated to about 27,000 years ago and cordage from the Sea of Galilee area has been dated to about 19,000 years. Thus, the first Americans almost certainly carried woven fiber technologies with them. It should be no surprise, therefore, to find broad similarities in the early basketry traditions of western North America, where cave sites have produced woven objects dated between about 9,000 and 11,000 years ago. Other than this, we know relatively little except that in California and the Americas, much of the Holocene archaeological record documents the development and diversification of basic Northeast Asian technologies.

Cultural Complexity

Another common theme that can be applied worldwide, but has particular resonance around the Pacific Rim, is the development of cultural complexity during the Holocene. In various areas of the Pacific, the development of complexity took many forms: from the broad spectrum revolution to the rise of complex hunter-gatherers; the early and independent development of agriculture in New Guinea, Southeast Asia, China, Mesoamerica, and the Andes; the sweeping migrations of maritime agriculturalists throughout Polynesia; and the rise of state-level civilizations in East Asia, Mesoamerica, and the Andes. Understanding the environmental, cultural, and historical roots of this variation in societal complexity will be a major focus of Pacific Rim research in decades to come.

In California, cultural complexity developed almost exclusively among hunter-gatherers. California Indian societies are often viewed as anomalous for having population

densities, sedentism, technological sophistication, economic affluence, and social stratification more typical of agricultural societies. The complexity of Native California cultures varies considerably through space and time, however, and probably for a variety of reasons. Research all around the state can contribute to a better understanding of the development of complexity among California Indian societies (see Arnold 1987, 1992; C. King 1990; T. King 1974; and many others). In so doing, we also contribute to the resolution of fundamental questions related to why complexity developed at all: environmental abundance, population pressure, environmental disruptions, social factors, or other stimuli. I believe the development of complexity in California and elsewhere is best seen as a long and complex process influenced by numerous variables. A critical factor in many Pacific Rim cases was almost certainly the human saturation of environmentally bounded landscapes – Carneiro's (1970) concept of territorial circumscription. This forced people to adapt and survive within relatively small territories, to intensify and diversify their economies, and to develop the sociopolitical institutions to manage larger populations, more complex interaction networks, and other relations with their neighbors. In California, the height of complexity may often occur in the last thousand years or so, but these peaks are the end result of processes that span millennia.

European Contact

Around most of the Pacific Rim, we are also confronted with historical evidence for the devastating impacts of European contact on indigenous societies. From Australia to the Arctic, from Oceania to the Americas, the general effects of European exploration and colonization were much the same. Epidemics of deadly Old World diseases – smallpox, influenza, syphilis, and many others – decimated Native peoples (see Ramenofsky 1987; Stannard 1989; Thornton 1987; and others), but disease was only one aspect of the sweeping post-contact changes that affected Pacific Rim societies. Colonization by

European powers led to the dispossession and disenfranchisement of most Pacific peoples. Millions of people died, thousands of acts of violence took place, hundreds of languages were lost, and all the cultures that came in contact were irrevocably changed. Against all odds, however, most indigenous cultures of the Pacific Rim survived and adapted, and many are flourishing today.

Comparative study of these contact processes provides fertile ground for archaeologists working in California and elsewhere around the Pacific Rim, as Kent Lightfoot's (1994; Lightfoot et al. 1991) collaborative work at Fort Ross, in Hawaii, and in Alaska clearly shows. As archaeologists and anthropologists, our interests should not end or begin with the early historical period. There should be no epistemological division between the study of "prehistoric" and historic societies (Lightfoot 1995). Instead, this boundary should be seen as a period of continuous transition that leads to the living descendants of pre-contact groups and to the pluralistic American society of today (Moss and Erlandson 1995:34).

Conclusions

I have argued that there are a number of geographic and cultural reasons to construct a coherent "Archaeology of the Pacific Rim." Clearly, broad similarities in geography and resources around the Pacific caused considerable adaptive convergence among Pacific Rim cultures. Just as clearly, sweeping "Out of Asia" migrations and direct historical relationships among indigenous Pacific Rim peoples argue for continuities through space and time. Recognizing these cultural relationships and common themes in the archaeological record provides a vast amount of comparative data that can be used to contextualize the interpretation of California archaeology.

In arguing that a broad Pacific Rim perspective can make valuable contributions to California archaeology (and vice versa), however, I do not imply that we should ignore

the diversity of cultures and adaptations that developed within California and throughout the Pacific Rim region. California archaeologists, like those working in any part of the world, should be aware of the role their work plays in the broad sweep of human history. It is equally important, however, to document the local and regional variations in the development of Pacific Rim societies. It is to this valuable process that each and every one of us contributes when we do archaeology in California or elsewhere in the Pacific Rim and beyond.

What does a Pacific Rim perspective mean for those of us who do California archaeology? It means that to do the most effective research, we must be aware of the broader contexts of what we study. It means that, to the best of our abilities, we should read widely – not just within our primary research areas, but beyond them. It means we should strive to avoid provincialism, to look for broad connections, and to understand the "big picture." Following these prescriptions requires time and energy – increasingly rare commodities in today's world. They can dramatically enrich not just the personal and professional horizons of individual California archaeologists, however, but the intellectual horizons of California archaeology as a whole.

Notes

I thank Mike Glassow and Jim Cassidy for inviting me to participate in their *A Pacific Rim Perspective for California Archaeology* symposium at the Society for California Archaeology meetings. I am also indebted to Judyth Reed, who assisted in the editing and production of this manuscript. Finally, Richard Jordan, as Chair of the Department of Anthropology at the University of Alaska at Fairbanks, first suggested that I teach Pacific Rim Prehistory and gave me the chance to ponder the relationships discussed in this paper.

REFERENCES CITED

Aikens, C. Melvin and Don E. Dumond
1986 *Convergence and Common Heritage:*

Some Parallels in the Archaeology of Japan and Western North America. In *Windows on the Japanese Past: Studies in Archaeology and Prehistory*, edited by R. J. Pearson, pp. 163-178. Center for Japanese Studies, University of Michigan, Ann Arbor.

Arnold, Jeanne
1987 *Craft Specialization in the Prehistoric Channel Islands, California.* University of California Publications in Anthropology 18. University of California Press, Berkeley and Los Angeles.

1992 *Complex Hunter-Gatherer-Fishers of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands.* *American Antiquity* 57:60-84.

Carneiro, Robert L.
1970 *A Theory of the Origin of the State.* *Science* 169:733-738.

Cohen, Mark N.
1977 *The Food Crisis in Prehistory: Overpopulation and the Origin of Agriculture.* Yale University Press, New Haven.

Dixon, E. James
1993 *Quest for the Origins of the First Americans?* University of New Mexico Press, Albuquerque.

Erlandson, Jon M.
1993 *California's Coastal Prehistory: A Circum-Pacific Perspective.* *Proceedings of the Society for California Archaeology* 6:23-36. San Diego.

1994 *Early Hunter-Gatherers of the California Coast.* Plenum, New York.

King, Chester D.
1990 *Evolution of Chumash Society.* Garland Publishing, New York.

King, Thomas F.
1974 *The Evolution of Status Ascription around San Francisco Bay.* In *?Antap: California Indian Political and Economic Organization*, edited by L. J. Bean and T. F. King. Ballena Press Anthropological Papers

2:35-54. Ramona.

Lightfoot, Kent G.

1994 The Archaeological Study of Culture Change and Continuity in Multiethnic Communities. *Proceedings of the Society for California Archaeology* 7:7-12. San Diego.

1995 Culture Contact Studies: Redefining the Relationship between Prehistoric and Historical Archaeology. *American Antiquity* 60:199-217.

Lightfoot, Kent G., Thomas Wake, and Ann Schiff

1991 *The Archaeology and Ethnohistory of Fort Ross, California (vol. 1)*. Contributions of the University of California Archaeological Research Facility No. 49. Berkeley.

Meighan, Clement W.

1989 Early Shell-mound Dwellers of the Pacific Coast of North America. Paper presented, Circum-Pacific Prehistory Conference, Seattle.

Moss, Madonna L. and Jon M. Erlandson

1995 Reflections on North American Pacific Coast Prehistory. *Journal of World Prehistory* 9(1):1-45.

Ramenofsky, Ann F.

1987 *Vectors of Death: The Archaeology of European Contact*. University of New Mexico Press, Albuquerque.

Stannard, David E.

1989 *Before the Horror: The Population of Hawaii on the Eve of Western Contact*. Honolulu: Social Sciences Research Institute and University of Hawaii Press.

Straus, Lawrence G., Berit V. Eriksen, Jon M. Erlandson, and David R. Yesner (editors)

1996 *Humans at the End of the Ice Age: The Archaeology of the Pleistocene-Holocene Transition*. Plenum, New York.

Thornton, Russell

1987 *American Indian Holocaust and Survival: A Population History Since 1492*.

University of Oklahoma Press, Norman.

Watanabe, Hitoshi

1992 The Northern Pacific Maritime Culture Zone: A Viewpoint on Hunter-Gatherer Mobility and Sedentism. In *Pacific Northeast Asia in Prehistory*, edited by C. Melvin Aikens and Song Nai Rhee, pp. 105-111. Washington State University Press, Pullman.