

# ŌSAKA ARCHAEOLOGY

**Richard Pearson**

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Cover image: The Daisen Ryō Kofun (upper) and Kami Ishitsu Misanzai keyhole shape tombs (*zenpokoefun*), of the Mozu Tomb Group. Fifth century AD. The total length of the Daisen Ryō Kofun is 850 m. From Ōsaka Furitsu Chikatsu Asuka Hakubutsukan 2006: 86).

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# Chapter 1

## Ōsaka Archaeology

This book is an archaeological study of the Ōsaka region from the about 20,000 years ago to 1868 AD. Its purpose is to introduce the recently excavated rich archaeological heritage of the Ōsaka area and to show how archaeology contributes to our general knowledge of Ōsaka in unique ways. While I provide minimal historical background in some sections, the book focuses on excavations, environmental data, sites, and artifacts and their interpretation.

From reports of recent excavations and environmental studies, I describe the unusual features of the region and its people. Located at the terminus of the Silk Route that extended from Europe through central Asia to maritime Asia and Japan, Ōsaka was the gateway to the Kinai hinterland of western Japan (Figure 1.1) and became a kind of economic powerhouse. I contextualize discoveries in terms of some established topics of anthropological archaeology, such as trade and social complexity. I also introduce the topic of Ōsaka cultural heritage management and provide introductions to some of the interesting archaeological museums in the region.

In the first chapter I introduce Ōsaka archaeology and its place in Japanese archaeology and point out its specific strengths and contributions to the study of Ōsaka. A comparative chronology of Japan, Korea, and China is given in Figure 1.2, a chronology of Japan in Figure 1.3, and a list of major sites in Figure 1.4.

### The general significance of Ōsaka archaeology

A narrow coastal plain roughly 20 km x 20 km, now the center of Ōsaka City, has been a cultural and economic center of power of Japan for a very long time. It is the geographic center of the Kinai region, which extended from the shore of Ōsaka Bay through a network of rivers to the basins of Nara, Kyōto, and Omi. It played a critical role in industrial production and economic exchange from the end of the Jōmon Period around 1000 BC to the present.

While the entire Kinai region can be seen as the center of Japanese culture until the rise of Tōkyō and the Kantō region after 1615 AD, I argue that one sub region, the Ōsaka Plain, played a primary role. It was an area of vigorous Palaeolithic and Jōmon culture, the center of a network of large villages during the Yayoi Period, and the political center of Japan for parts of the Kofun, Asuka and Nara Periods. Later it was an area of rich and powerful manors in the Heian and Kamakura Periods.

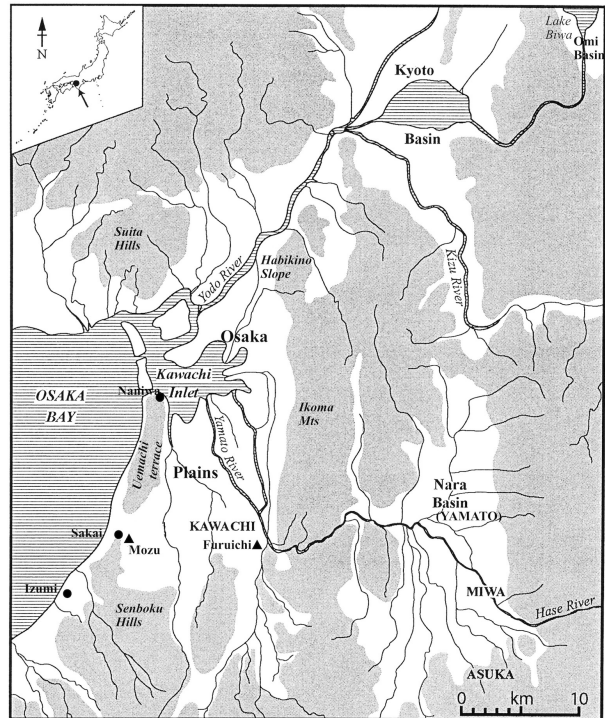


FIGURE 1.1. ŌSAKA, THE KINAI REGION, AND JAPAN. ADAPTED FROM BARNES 2007: 11. COURTESY DR. G. L. BARNES.

Unquestionably it worked in tandem with the adjacent Nara and Kyōto Basins, conveying people, ideas, and goods from continental Asia via the Inland Sea. Its ports were essential for the development of inland political centers. In the Chūsei (Mediaeval) Period, the city of Sakai emerged as the financial and cultural center of Japan. In the Azuchi-Momoyama Period, Ōsaka Castle dominated the region. In the Tokugawa Period Ōsaka continued to be a commercial center although the political center moved to Edo (Tōkyō).

As in every area of Japan, the past four decades witnessed the production of an incredible amount of new archaeological information, as archaeologists struggled to explore sites before they were destroyed in the path of economic development. Of course, key sites have been protected. Enormous rescue archaeology projects have been carried out since the 1970's, when Ōsaka was modernized with urban railway lines, sprawling highways, shoreline land reclamation, suburban housing and commercial centers, and an island airport. These developments, following the destruction caused by World War II bombing, left a concrete landscape with few vestiges of the past except the enormous "Imperial

	JAPAN (OSAKA)	KOREAN PENINSULA	CHINA
Late Palaeolithic	30,000 to 14,000 BC	Late Palaeolithic c. 30,000 to 8000	Late Palaeolithic 30,000 to 8500 BC
Jōmon	(6 periods) 14,000 to 1000 BC	Chulmun 8000 to 1500 BC	Neolithic c. 8500 to 2100 BC
Yayoi	Initial 950 to 780 BC Early 780 to 380 BC Middle 380 BC to 1 AD	Mumun 1500 to 300 BC	Xia c. 2100 to 1600 BC Shang c. 1600 to 1046 BC
Kofun	Late 1 to 240 AD Early 240 to 400 AD Middle 400 to 500 AD Late 500 to 600 AD	Proto Three Kingdoms 300 BC to 300 AD Ko Choson ?108 BC to 300 AD Chinese Commanderies c. 108 BC to 313 AD Koguryo 37 BC ? to 668 AD Paekche 18 BC ? to 660 AD Silla 57 BC ? to 935 AD	Zhou 1045 to 256 BC Qin 221 to 206 BC Han 206 BC to 220 AD Three Kingdoms 220 to 280 AD Jin 265 to 420 AD Southern and Northern 420 to 589 AD
Kodai	Asuka 600 to 710 AD Nara 710 to 794 AD Heian 794 to 1185 AD	Kaya Confederacy 42 to 562 AD	Sui 581 to 618 AD Tang 618 to 907 AD
Chūsei	Kamakura 1185 to 1333 AD Muromachi 1333 to 1568 AD Azuchi Momoyama 1568 to 1603 AD	Koryo 918 to 1392 AD Choson 1392 to 1897 AD	Song 960 to 1279 AD Yuan 1271 to 1368AD Ming 1368 to 1644 AD
Kinsei	Tokugawa 1603 to 1868 AD		Qing 1644 to 1911 AD

FIGURE 1.2. ARCHAEOLOGICAL CHRONOLOGY OF JAPAN, KOREA, AND CHINA.

Tombs” which have no public access. To their credit, local governments have created many museums to commemorate the vanished archaeological sites. Some of these museums, and the general problems of heritage management and public archaeology, are introduced in Appendix C. A regional approach to archaeology will hopefully link sites to their landscapes and to each other, balancing the treatment of artifacts and stratigraphy with human communities and environment. My work is partially based on invaluable Japanese compilations such as those provided in Ōsaka Shi Bunkazai Kyōkai (2008) and Higashi (2009) that provide site summaries and descriptions of the most important finds.

Drastic changes to the shoreline of Ōsaka Bay, and the demolition of the Senboku upland to provide fill for the Kansai Airport have obliterated the original landscape. Smaller burial sites have been destroyed and the region has become completely built over. To show how the buried history of the region is maintained and interpreted, I have selected case studies for each period, describing the most dramatic discoveries and pointing out their significance. Figure 1.3 lists the major sites discussed in each chapter.

**A brief summary of Japanese archaeology**

In assessing the contribution of archaeology to understanding Ōsaka, it is important to set the region in the context of Japanese archaeology.

The archaeological framework consists of seven broad cultural periods, Palaeolithic, Jōmon, Yayoi, Kofun, Kodai, Chūsei, and Kinsei. Since many readers will prefer to link archaeological discoveries to familiar historical periods these are also included. I employ a mix of two chronological frameworks (Figure 1.4).

Japan was first occupied around 30,000 to 40,000 years ago. By around 5000 BC the Jōmon people reached a level of social complexity known as complex hunting and gathering, distinguished by social ranking (but not stratification into classes) and production of elaborate crafts, including fine pottery and lacquer covered objects. They began to experiment with horticulture of native plants. Around 1000 BC immigrants from the Korean peninsula moved into Kyūshū Island, bringing new ideas and artifacts that initiated the Yayoi Culture. This new culture spread to the Kinai and Kantō

Cultural Period	Sub Period or Historical Period	Dates
Palaeolithic	Late	30,000+ to 14,000 BC
Jōmon	6 periods	14,000 to 950 BC
Yayoi	Initial Early Middle Late	950 to 780 BC 780 to 380 BC 380 BC to 1 AD 1 to 240 AD
Kofun	Early Middle Late	240 to 400 AD 400 to 500 AD 500 to 600 AD
Kodai	Asuka Nara Heian	600 to 710 AD 710 to 794 AD 794 to 1185 AD
Chūsei	Kamakura Muromachi Azuchi Momoyama	1185 to 1333 AD 1333 to 1568 AD 1568 to 1603 AD
Kinsei	Tokugawa	1603 to 1868 AD

FIGURE 1.3. ARCHAEOLOGICAL CHRONOLOGY OF JAPAN.

regions. Yayoi people began intensive irrigated rice cultivation in lowland valleys and were organized into confederacies in some areas. Continental methods of cultivation, pottery making, weaving, and metallurgy were adopted through contacts with the adjacent Asian continent. In the subsequent Kofun Period, complex chiefdoms, characterized by paramounts that controlled subject chiefdoms, ruled with the help of immigrant clans who brought all kinds of new knowledge with them. These paramounts controlled the flow of iron and other valuable materials. Central authority shifted among several power groups in the Kinai region. In the sixth century AD Buddhism was introduced, and new forms of Chinese governance were adopted. In the Asuka and Nara Periods, the early part of the Kodai Period (see Figure 1.2), a Chinese bureaucratic model of a centralized state was introduced along with Tang Chinese civil and penal codes. Although it was based on Chinese forms, the actual operation of the model in Japan was less centralized and less coercive. It has been termed a galactic polity (Piggott 1997); the surrounding chiefdoms were loosely federated with a central cultural and ritual court. By the Heian Period the Chinese model, which had been imposed over an earlier form of familial authority (Hall 1966, Hurst 2009), lost its power. This familial authority can be seen in the growth of the estate (*shōen*) system, indirect rule by regents of the powerful Fujiwara Clan and retired sovereigns, and the rise of feudal warrior bands of *samurai* who were bound by patron client relations to royal and noble houses (Hurst 2009: 33). The Chūsei or “Mediaeval” period extends from the late Heian Period to the late Muromachi Period. During this period military rulers (*shōgun*) assumed

political leadership. They first ruled in Kamakura, in the Kamakura Period (1185 to 1333 AD), and later in Kyōto in the Muromachi Period. Muromachi Period society has been described as capitalist-agrarian (Grossberg 1981: 14), in which the predominant activity was agriculture but cash crops, beyond the requirements for local consumption, were produced for markets. Beginning in the Yamato area in the fourteenth century and spreading throughout central Japan thereafter, concentrated, compact settlements developed; these have continued until the present day. Many villages established between the tenth and thirteenth centuries AD were extinct by 1300 AD, while those established in the fourteenth century and later coincide with present villages. In the late fourteenth century double cropping and conversion of dry fields was active, as small independent farmers appeared and the role of *shōen* manors declined (Troost 1997: 94-98). In the sixteenth century AD de facto power was held by the *shōgun*'s deputy (*kanrei*), until the warrior Nobunaga usurped the power of the *shōgun*'s office in 1573 AD.

From 1568 to 1598 AD, warring factions were pacified and political consolidation occurred. In the Kinsei or Pre Modern Period (1603 to 1867 AD) Japan became a network of feudal polities tightly controlled by the Tokugawa Clan, who fostered a vigorous domestic commercial sector.

### The Contributions of Archaeology

What are the distinctive contributions of archaeology to the understanding of the past of Ōsaka and Japan in

Sites	Links to historical documents/events
<p>Chapter 2  Morinomiwa, Final Jōmon to Early Yayoi  Furuike, Final Jōmon  Kitoragawa, Yayoi to Chusei  Uriūdō, Yayoi to Kodai  Kamei, Yayoi to Muromachi  Uriwari, Palaeolithic to Muromachi  Onchi, Yayoi</p>	
<p>Chapter 3  Kō  Nagayoshi Kawanabe, Final Jomon  Ikegami Sone, Early to Late Yayoi  Higashi Nara, Yayoi to Kofun  Ikeshima Fukumanji,  Karako Kagi, Yayoi to Kofun  Makimuku, Yayoi  Ama, Yayoi</p>	<p>Chinese <i>Wei Zhi</i>, written c. 265 AD  (Himiko account)</p>
<p>Chapter 4  Tamateyama Kofun Group, 4th cent AD  Furuichi, Mozu Groups, mostly 5th cent AD  Takaيدا Corridor Tombs, late 6<sup>th</sup> cent AD  Suemura Kiln Group, 5<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup> cent AD  Furu, 5<sup>th</sup> cent AD  Nangō, 5<sup>th</sup> cent AD  Haji no Sato, Palaeolithic to Nara AD  Ōgata, 5<sup>th</sup> to 8<sup>th</sup> cent AD  Tanabe, 7<sup>th</sup> to 8<sup>th</sup> cent AD  Hōenzaka, 5<sup>th</sup> cent AD  Narutaki, 5<sup>th</sup> cent AD  Ōtsu, Nankai, Nagasone Ditches, 5<sup>th</sup> cent AD and later</p>	<p>Chinese <i>Song Shu</i>, written c. 492 AD  (Five Kings of Wa)</p> <p>Adoption of Buddhism, c. 538 AD</p> <p>Construction of Shitennōji, c. 588 AD</p>
<p>Chapter 5  Early Naniwa Palace, 652 to 686 AD  Late Naniwa Palace, 726 to 784 AD  Sayama Reservoir, 7<sup>th</sup> century AD  Senpukuji Sutra Mounds, 10<sup>th</sup> to 11<sup>th</sup> cent AD  Dotō, 8<sup>th</sup> century AD</p>	<p>Taika Reforms, 646 AD  <i>Kojiki</i>, written c. 712 AD  <i>Nihon Shoki</i>, written c. 720 AD</p>
<p>Chapter 6  Shinpukuji Metal Casting Site, 13<sup>th</sup> cent AD  Hiki Shōen sites  Hine Shōen sites 13<sup>th</sup> to 15<sup>th</sup> cent. AD  Sakai Moated City, 13<sup>th</sup> cent. AD to present  Ishiyama Honganji, 1532 to 1580 AD  Ōsaka Castle, 1583 to 1615 AD, later rebuilt</p>	<p><i>Engishiki</i>, written c. 927 AD  Defeat of Heike (Taira) Clan, 1185 AD  Refurbishing of Tōdaiji, Chōgen, c 1200  Onin Wars, 1476-1477 AD  Portugese arrive Tanegashima, 1543 AD  Death of Oda Nobunaga, 1582 AD  Death of Toyotomi Hideyoshi, 1598 AD</p>
	<p>Burning of Osaka, Sakai, 1615 AD  Beginning of Sakoku Exclusion 1639 AD</p>

Table 1.2. Major sites mentioned in the text, in relation to important historical documents and events.

general? The strongest contributions of archaeology concern environment, land use, economy, and spatial organization.

1. Archaeological excavation has uncovered stratigraphic and sedimentary data used by palynologists and geomorphologists to discover changes in landscape, vegetation, sea level, drainage patterns earthquakes and subsidence.
2. The interaction of Jōmon and Yayoi populations can be documented through the study of spatial patterning of distinctive artifacts such as pottery and stone tools. Social organization and patterns of authority can be inferred from village layout. The ditches discovered at Yayoi sites form the basis of speculation on defense and inter village relations, and the discovery of unusual large buildings has generated new theories on collective rituals and power. Buried field systems of Yayoi sites illuminate agricultural practices and technology.
3. The nature of prestige systems and economic exchange can be studied through changes in the types of artifacts and from spatial patterns of the distribution of artifacts in village sites and burials; for example, bronze mirrors and stone ritual ornaments gave way to armor and weapons on the Kofun Period.
4. Burial mounds of the Kofun Period provide rich data for inferring social organization and belief systems. Relative mound size and location show both social hierarchy and heterarchy, and the discovery of formulae concerning proportions reveals codes of construction shared by confederates and subordinates. The nature and placement of grave goods and tomb furnishings such as *haniwa* show religious beliefs (Wada 2014), while the uncovering and mapping of ancient roads and ditches illuminates the nature of the regional infrastructure, commerce, and communication. Studies of the chronology, manufacturing technology, and distribution in sites and regions of new forms of ceramics and metal objects show the key role played by immigrants, whose settlements can be documented by distinctive architecture and imported ceramics.
5. Exploration of ancient port areas of the Kodai Period shows the roles of foreigners and domestic power groups who sponsored temple construction. Evidence of coinage production in foreign enclaves suggests that foreigners played key roles in the economy, and excavations of ditches and reservoirs give an indication of improvements in engineering.
6. In the Chūsei Period abundant sherds of exotic ceramics graphically document the expansion of commerce, both domestic and foreign, plus the

growth of social activities such as tea consumption. Changes in the composition of ceramic assemblages reflect changes in the source areas of ceramics and imported goods such as China or Vietnam, and the rise of local Japanese ceramic production.

7. Archaeology of the Kinsei Period contributes to knowledge of the layout and construction of industrial, administrative and residential sites.

### Theoretical Orientation

What conditions led to the preeminent position of Ōsaka? A central location within the Japanese Islands, a rich river delta and ancient lagoon, and a busy port were important prerequisites. However, the Ōsaka region became pre eminent through the mobilization of social capital. Informed by the contributions of North (1981), Earle (1997), Robb (2010), (Campbell 2009), Schram (2010), and Schortman (2014), I propose that increases in productivity, power, and social complexity were achieved by entrepreneurs who participated in and mobilized social networks to initiate and execute projects which expanded the economy and contributed to the rise of the region.

An entrepreneur may be defined as a business leader, an innovator of new ideas and business processes, characterized by risk taking. Entrepreneurs act as catalysts for economic change. They introduce new technologies, increase efficiency or productivity and generate new products or services. For the purposes of this book, “business” may be considered broadly to be the realm of social and economic exchange. Schramm (2010: viii) distinguished productive entrepreneurship that enhances the growth of the economy from unproductive entrepreneurship that exploits opportunities for personal gain. In my opinion, improvements to transportation, such as roads and canals, and expansion of agricultural land and irrigations systems, are productive, while the construction of monumental tombs is unproductive, taking resources out of circulation. Entrepreneurs act in social arrangements or institutions, finding opportunities for change. Broadly speaking, institutions are any structure or mechanism of social order or co-operation governing the behavior of a set of individuals within a given community. According to the economic historian Douglass North, “institutions are a set of rules, compliance procedures, and moral and ethical behavioral norms designed to constrain the behavior of individuals in the interest of maximizing the wealth or utility of individuals” (North 1981: 201). North (1981: 205) proposed that

“A political economy consists of a complex of interrelated institutions, specifying a pattern of wealth and income distribution and a system of protection among competing states, and a framework

of operating rules to reduce transaction costs in the economic sector.”

The activity of entrepreneurs is specific to a set of relations; it takes place within institutions. Entrepreneurs are effective because they mobilize those around them in ways specific to each culture and landscape. There is a dialectic relation between structure and action, and agency is defined within particular historical settings (Robb 2010: 498-500). People’s activities may be organized into projects. The concept of project is useful for the archaeological study of co-ordinated collective activities that leave sites such as remains of irrigation systems, large central dwellings, mausolea, capital complexes, etc, and is used in this book to explore the significance of archaeological sites. Industrial innovations such as metal working and coinage production leave distinctive physical sites; whereas trade missions and markets may be inferred from the distribution of goods changing hands under their auspices. In the following chapters I describe the major discoveries for each period, grouping them around the idea of projects, that expand the economy, extend trade and social networks, create new power systems, incorporate new social groups, and lead to new kinds of cultural expression. (I acknowledge that concept of ‘projects’ may difficult be difficult to apply to Palaeolithic and Jōmon activities but still propose that certain individuals were responsible for the invention and dissemination of new tool making tools and ritual objects.) The projects described in this book are listed in Figure 1.5.

A focus on networks is useful because it stresses actual human action in social and political settings instead of debating the degree of evolutionary complexity or the suitability of labels such as state or early state. Campbell recommends recontextualizing ancient polities as bundles of relationships within fields of culture, economy, and power (2009: 823). While Ōsaka shared a cultural repertoire with the rest of Japan, it was the economic and political center in the Kofun, Kodai, and Chūsei Periods. The region’s economic systems extended to the Korean peninsula in a distinctive manner. Two perspectives have been identified by Schortman (2014: 167-168), one placing the emphasis on the pre-existing network, within which people take action, and the other on the actions of people, which create and change the network. People and groups used networks to build, maintain, and transform regional hierarchies. The study of how this was achieved is based on the identification of information, goods, and materials that were exchanged and their sources, changes in their volume and intensity, and the mechanisms of exchange.

**Summary of contents**

After this brief introduction in Chapter 1, I describe the environment of the Ōsaka Plain in Chapter 2. In

Palaeolithic Setouchi technique and Kō knife
Jomon Production of ritual objects Large Villages
Yayoi Adoption of wet rice cultivation Construction and expansion of irrigated field systems Construction of large villages, wells, ritual pits, ditches Centralization and co-ordination of rice storage Exchange of prestige goods Limited production of weapons and ritual items Construction of moated burial precincts
Kofun Monumental tomb construction Trade in iron ingots, weapons and armor Sponsorship of new technologies and craft production: ceramics, metal working, bead production Expansion of storage facilities Construction of roads and canals Construction of elite residential compounds
Kodai, Asuka Port construction in Naniwa area Construction of Naniwa capital Integration of foreign specialists into economic system Construction of first Buddhist temple, Shitennoji Reservoir construction, improvement of irrigation Construction of sutra mounds
Chūsei Craft production on estates Shift to commerce and diversification of economy Establishment of moated independent trading city Sakai Construction of religious center Ishiyama Honganji Construction of fortified political center Ōsaka Castle
Kinsei Promotion of new industrial techniques Warehousing

FIGURE 1.5. ANCIENT PROJECTS DESCRIBED IN THE TEXT.

Chapter 3 early hunter gatherers of the Palaeolithic and Jōmon Periods are introduced and their innovative lithic technologies and exchange systems are summarized. In Chapter 4, the adoption and expansion of irrigation technology and the rise of large central villages are described. In Chapter 5 the imposing tombs of Mozu and Furuichi are the main theme, but there are other sites that give an idea of the nature of power on the Ōsaka Plain in the Kofun Period. In Chapter 6 the main focus is the Naniwa Palace of the Kodai Period, with brief mention of early Buddhist sites. In Chapter 7, the scene shifts to the archaeology of production sites and the rise of mediaeval trading ports, particularly Sakai, a unique site which embodies the mentality of Ōsaka entrepreneurs and provides an introduction to the huge enterprise of

mediaeval archaeology in Japan. Historical background of Sakai is presented in Appendix B. In the late sixteenth and early seventeenth centuries, as Sakai reached the height of its prosperity, two enormous cultural centers were built in rapid succession, at a central location where the delta of the Yodo River meets the Uemachi Terrace. These two huge sites, the Ishiyama Honganji Buddhist center and Ōsaka Castle, were started and destroyed in less than a century: they typify Ōsaka as a powerful center in the decades leading up to the formation of pre modern Japan, in the Tokugawa Period (1603 to 1867

AD). In Chapter 8, remains of warehouses and industrial processes show that Ōsaka continued to play an important role after the political center shifted to Tōkyō. In Chapter 9 the interaction of entrepreneurs, institutions and environment in the rise of Ōsaka is discussed. Summaries of sixteen excavations discussed in the text are grouped together in Appendix A. In Appendix B, the historical background of the mediaeval moated city of Sakai is presented, and Appendix C contains a discussion of Ōsaka's cultural heritage and selected museums.