

# SOUTHEAST ASIA

From prehistory to history

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# PRE-ANGKORIAN AND ANGKORIAN CAMBODIA

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## Introduction

Cambodia's past has left the world a rich archaeological heritage. The country is best known for the many temples that marked the apex of the Khmer Empire, leaving a lasting monumental legacy in stone. To Southeast Asian archaeologists, however, Cambodia is also known as the locus of some of the earliest archaeological work in the region undertaken during the late nineteenth century. Unfortunately, this rich cultural heritage was severely damaged during the Indochinese wars and subsequent revolutions and field research virtually ceased between the mid-1960s and 1990s. Less than a decade after the end of its civil war, archaeological research in Cambodia resumed in the mid-1990s.

This chapter reviews key cultural developments in pre-Angkorian and Angkorian Cambodia, and seeks to find the roots of the great Khmer empire that dominated much of Mainland Southeast Asia from the ninth-fourteenth centuries AD. Figure 5.1 locates prehistoric, pre-Angkorian, and Angkorian archaeological sites. The temporal framework used in this summary tacks between a fine-grained approach and the more generalized sequence presented in Table 5.1. The time period described covers two-and-a-half millennia, to the fifteenth century AD.

The scope of this review of Cambodian archaeology is largely restricted to the country's present-day boundaries. However, some attention is paid to the archaeology of two areas that were ethnically Khmer in the recent past: these are the Mekong Delta of southern Vietnam, and the Khorat Plateau of northeastern Thailand. In the former area, starting in the seventeenth century, Vietnamese settlers and later French administrators wrested control of the delta from Cambodia, but a sizable population of ethnic Khmer who call themselves "Khmer Krom" still live there.

The boundary of northwestern Cambodia has also long been contested and the provinces (Buri Ram, Surin, Si Sa Ket, and Nakhon Ratchasima) of northeastern Thailand (*Isan*) that border Cambodia retain sizable ethnic Khmer populations today. It is not surprising, then, that these same provinces bear the archaeological signature of the Khmer civilization, from the late prehistoric period to the expansionist impulses of some Khmer rulers of the Angkor period.

Interest in Cambodian prehistory began in 1876, when Roque (or Roques) discovered the archaeological site of Samrong Sen, along the Chinit river in central Cambodia.<sup>1</sup> The discoveries there and in other localities attracted some attention from

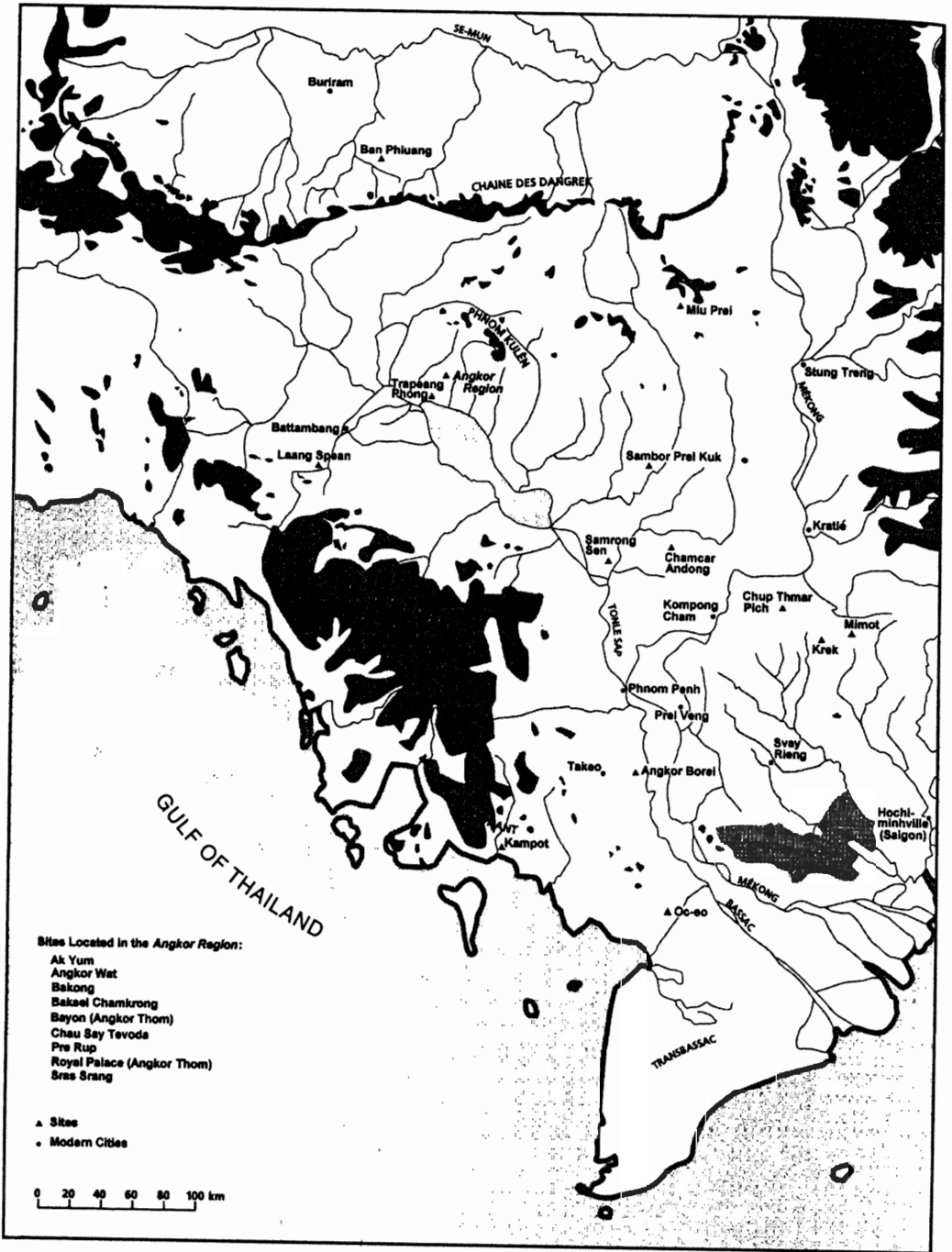


Figure 5.1 Archaeological sites in Cambodia, mentioned in the text.

Table 5.1 Temporal framework used in this chapter

<i>Southeast Asian time periods</i>	<i>Dates (BC/AD)</i>	<i>Cultural developments</i>
Late Hoabinhian and Early Neolithic	c.5200–2500 BC	Late Paleolithic, terminal and post-Pleistocene life based on a mobile hunting and gathering with some more sedentary settlement along the coasts
Neolithic and Bronze Age	c.2500–500 BC	Introduction of agriculture and more settled village life, basically with a stone technology with bronze working developing from c.1500 BC
Early Historic period	c.500 BC–AD 500	Arrival and local development of iron tools and weapons, development of international maritime trade especially with South Asia. Increasing evidence for warfare and tools and the development of early states
Pre-Angkor Period	c. AD 500–802	Appearance of writing using modified Indian scripts and first Sanskrit, then later old Khmer language. Expansion of early states and inter-regional conflict
Angkor, or Historic Period	AD 802–1431	Consolidation and expansion Khmer empire into much of present-day Thailand, Laos and southern Vietnam before fragmentation and withdrawal during conflict with emerging Thai kingdoms.

European prehistorians. Later, the French turned their attention to studying and restoring the great temples of Angkor, north of Tonle Sap – the Great Lake. During the colonial period the French rulers wanted to associate themselves with Cambodia’s former greatness through studies of its architecture, art, and ancient language. The emphasis of most archaeological research at this time was given to the Angkor period from the ninth to the fifteenth centuries and very substantial achievements were made there under the leadership of the scholars of the *École Française d’Extrême-Orient* (EFEO).

### Prehistoric Cambodia

This section draws primarily on well-dated archaeological sites; these have been dated using available radiocarbon dates, or absolute dates from Khmer or Sanskrit inscriptions which used a standardized Indic calendar.<sup>2</sup> For a number of reasons, Cambodia’s neighbors, Vietnam and Thailand, have a much better documented archaeological record.

#### *The Paleolithic to Hoabinhian, c.5200–3000 BC*

Little reliable evidence currently exists for a Pleistocene occupation of Cambodia, despite various efforts to find it. The French geologist Edmond Saurin described quartz and quartzite pebble tools from the Mekong River terraces in the area between Stung Treng and Kratie provinces in eastern Cambodia that might date to the Pleistocene. He argued that they resemble Pleistocene assemblages in Vietnam and may have been associated with a Pleistocene fauna. However, such material cannot easily be dated and Mourer has dismissed these estimates on paleontological and chronometric grounds. Jean-Pierre

Carbonnel also assigned a Paleolithic age to finds from Phnom Loang in Kampot Province, based on their association with Lower Pleistocene fauna.<sup>3</sup>

Our current knowledge of Cambodia's history thus begins in the Holocene epoch (nearly 8,000 years ago) with a hunting and gathering way of life. This period is generally glossed as the "Hoabinhian" throughout Southeast Asia and is associated with a broad-spectrum diet and occupation of riverine areas and forest edges. Cambodia's only documented Hoabinhian site, Laang Spean, lies in a limestone hill in the Sangker river valley in Battambang province (Figure 5.2). French archaeologists Roland and Cecile Mourer excavated portions of this karst cave from 1966–68 with students from the Faculty of Archaeology of the Royal University of Fine Arts in Phnom Penh.<sup>4</sup> Their excavations produced a series of reliable radiocarbon dates that began in the sixth millennium BC, and a collection of flaked stone tools that characterize the Hoabinhian period at sites throughout much of Mainland Southeast Asia. Faunal remains recovered at the site suggest a broad diet of small animals (bats, rodents, birds and frogs), river resources (molluscs and turtles), and a variety of forest animals including deer and small bovids.

#### *The Hoabinhian to Neolithic transition*

The cave of Laang Spean also contained an upper "Neolithic" component that is associated with the earliest dated earthenware ceramics in Cambodia (Figure 5.3). Archaeologists agree on little about the Neolithic period across Mainland Southeast Asia beyond its general, but not exclusive association with earthenware pottery, polished stone adzes and plant domestication.<sup>5</sup> While our knowledge of the Southeast Asian Neolithic has increased substantially in the last 50 years, the Cambodian archaeological record for this phase remains limited.



Figure 5.2 Excavation in progress at Laang Spean in 1969. (Photograph courtesy of R. Mourer.)

The province of Kampong Cham contains a series of circular earthwork sites that Bernard-Philippe Groslier and Louis Malleret assigned to the Neolithic period. Fieldwork at these “doughnut-like embankments”, such as Krek and Mimot (Figure 5.4), has consistently produced flaked and polished stone tools, stone bracelets and pottery (Figure 5.5) that we tend to associate stylistically with the Neolithic and Bronze Age. Groslier undertook excavations at a site in Mimot District and produced a ceramic collection now held at the National Museum in Phnom Penh. A few years later, Carbonnel also documented circular structures and tumuli in the region and obtained chronometric samples from Chamcar-Andong ( $1150 \pm 100$  BP, cal. AD 760–925; Gif-447) and Chup-Thmar Pich ( $2130 \pm 100$  BP, cal. 440–375 BC; Gif-1448). Vietnamese archaeologists surveyed the twelve sites Malleret had noted in southern Vietnam and added four more to the list in Binh Phuoc province, which is adjacent to Kampong Cham.<sup>6</sup>

Recent excavations by international archaeological teams, working in collaboration with Cambodia’s Ministry of Culture and Fine Arts, have provided a more detailed view of the distribution, morphology and material culture of these sites.<sup>7</sup> By May 2000, members of the Memot Research Center team had identified a total of 23 circular earthworks within Cambodia and researchers estimate that there are at least 50 such sites in Cambodia and Vietnam. That these circular earthwork sites display marked similarities to each other is indisputable, but their age and function are currently under debate. The earthworks may have been constructed for defense against other human populations or wild animals, to pen domestic cattle at night, or possibly for other reasons. It remains unclear whether these sites date exclusively to the Neolithic period, or whether they represent a settlement type began in the third millennium and continued into the mid-first millennium BC.

Several historic sites may overlie prehistoric occupation layers in several parts of Cambodia. In northwestern Cambodia, for example, Groslier reported that stone adzes were recovered during excavations and architectural restoration of eighth–fourteenth-century monuments around Angkor. These sites include Ak Yum, Baksei Chamkrong,

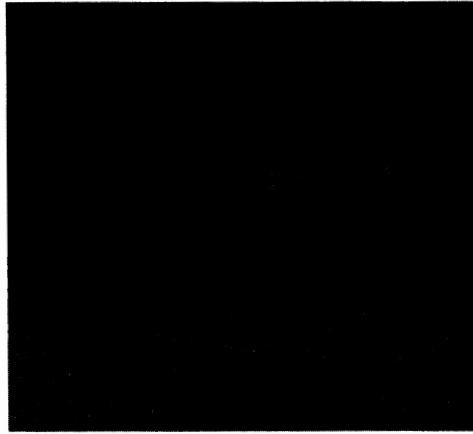


Figure 5.3 Pedestal vessel with impressed decoration found during excavation at Laang Spean. (Photograph courtesy of R. Mourer.)

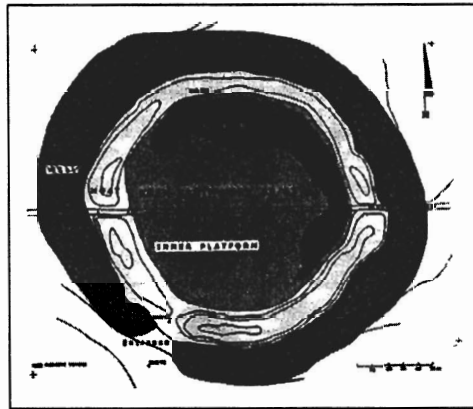


Figure 5.4 Plan of the Krek earthwork. (Courtesy of G. Albrecht and M. Haidle.)

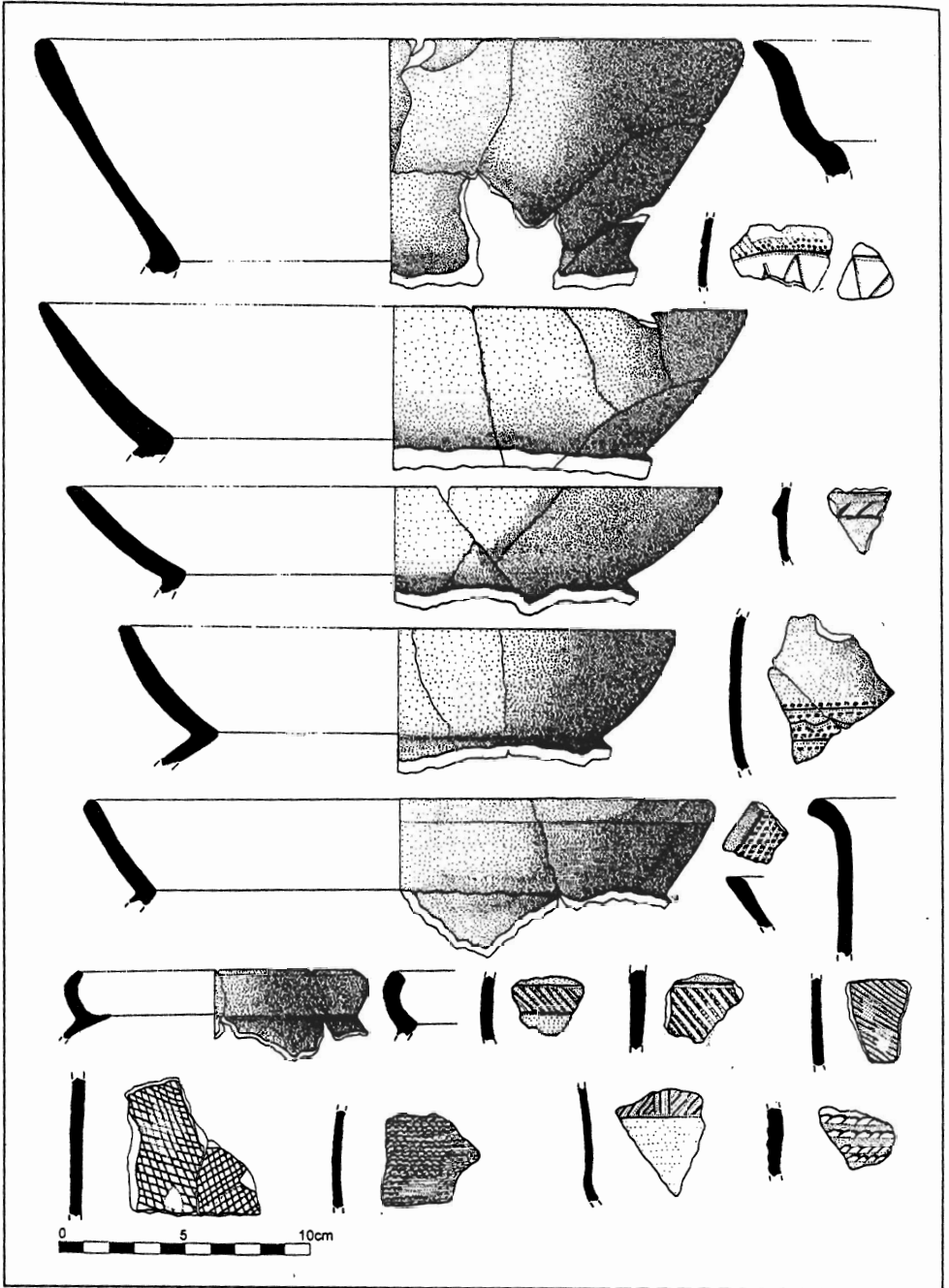


Figure 5.5 Drawings of Krek pottery. (Courtesy of G. Albrecht and M. Haidle.)

Chau Say Tevoda and Trapeang Phong.<sup>8</sup> Even the sixth–eighth-century site of Sambor Prei Kuk (Kompong Thom Province) may sit atop a Neolithic foundation<sup>9</sup> (Figure 5.6), although no one has yet conducted excavations that might provide empirical support for this claim.

***The Neolithic-Bronze Age (c.1500–500 BC)***

The Neolithic-Bronze Age transition is also poorly known in Cambodian archaeology. Few such sites are known and none have been excavated since the Pacific War. Samrong Sen,<sup>10</sup> perhaps the best-known site, lies in Kompong Chhnang Province. Similarities between the finds made there (Figure 5.7) and those from Bronze Age sites in Thailand and Vietnam have led some archaeologists to assign Samrong Sen to the Bronze Age, but the age of the occupation is far from resolved. During the nineteenth century, the Somrong Sen prehistoric shell midden attracted notice from early colonial administrators and European prehistorians for its wealth of artifacts that included ceramics, stone tools and small amounts of bronze. Collecting expeditions



Figure 5.6 Sambor Prei Kuk. (Photograph by P. Bion Griffin.)

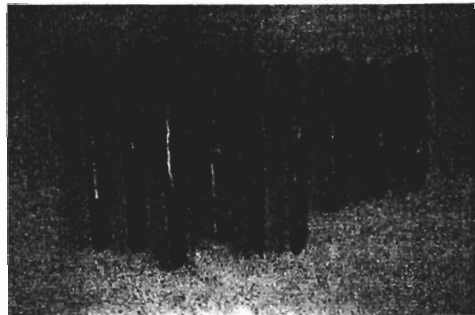
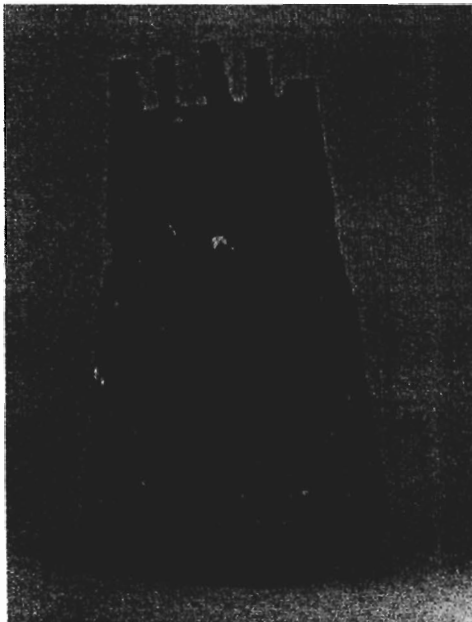


Figure 5.7 Left: Bronze bell from Samrong Sen, decorated with spiral motifs, 19.7 cm in height. Above: Bone spear or harpoon shafts. Both in the Museum of Natural History, Lyon. (Photographs courtesy of R. Mourer.)



and excavations at the site occurred throughout the late nineteenth century but lacked the scientific rigor and expertise necessary to understand the site's occupational sequence. Henri Mansuy recovered a collection of stone adzes, bronze objects and human remains that suggested a Bronze Age occupation. The Swedish archaeologist Olov Janse subsequently tested the site and purchased from villagers bronze artifacts that included bracelets, socketed spearheads, axes and a bell. The lack of scientific dating techniques available at the time of Mansuy's research, however, limited the utility of these findings.

Paul Lévy<sup>11</sup> subsequently examined open-air sites around Mlu Prei (Preah Vihear Province) that also contributed to our meager knowledge of the Cambodian Bronze Age. Lévy's more systematic excavations recovered not only bronze implements, including fragments of a socketed axe and a bronze sickle, but also moulds used to cast bronzes. These included portions of a sandstone bivalve mould and of a ceramic crucible for bronze casting with metal dross still adhering to its surface. The site of O Yak also contained human burials adorned with bronze bracelets, but this site had been previously disturbed.

#### *Other prehistoric sites*

Two other regions of Cambodia have produced what may be prehistoric archaeological sites: Rattanakiri in the northeast and Banteay Mean Chay in the north. The province of Rattanakiri is famous for its gem-mining industry, and local miners often encounter prehistoric artifacts during their mining activities. Archaeological reconnaissance at sites in the central part of Rattanakiri Province during 1995 recovered evidence of shouldered stone axes and earthenware ceramics, suggestive of either Neolithic or Bronze Age occupation.<sup>12</sup>

In May 2000, authorities were alerted to looting at a prehistoric mortuary site known locally as Phum Snay, located north of Siem Reap in the Preah Net Preah district of Banteay Mean Chey Province. Among the archaeological materials revealed were human burials, numerous pottery sherds (primarily earthenware, with some celadon), various bronze fragments, nearly intact but oxidized, as well as iron tools, and beads of glass, quartz and carnelian. This site has provisionally been dated to the Iron Age, with a possible extension into the Early Historic period.<sup>13</sup>

Systematic archaeological investigations at Phum Snay were undertaken in February 2001 under the direction of Dougald O'Reilly for the Royal University of Fine Arts (with assistance from Charles Higham). Excavation of a 5 meter by 15 meter unit reached a depth of 1.5 meters, uncovering nine intact human burials and a limited number of tools. The site may cover an area as large as 50 hectares.<sup>14</sup>

### **The protohistoric period in Cambodia**

In Mainland Southeast Asia, the transition from the prehistoric period to the historic period, sometimes called the protohistoric period, falls approximately between 200 BC and AD 500. During this period, Southeast Asians first settled in large nucleated communities, organizing themselves into small warring polities whose political structure has been described by Wolters<sup>15</sup> as of *mandala* type in terms of their alliance-based spheres of influence focused on a ruler. They also became engaged in international maritime trade.<sup>16</sup> The organizational changes at this time were marked by greater social stratification

and, ultimately, emergent states. Earlier historians like Coedès suggested that such changes must have been brought about by Indian settlement, and the “Indianization” hypothesis colored most interpretations of the region until the last few decades. Archaeological research on the late prehistoric period, which chronicles a gradual, indigenous trend toward sociopolitical complexity, has compelled most historians to revise their frameworks and assign more agency to indigenous Southeast Asians in the process of early state formation.<sup>17</sup>

It is likely that this process occurred separately in northwestern and southeastern Cambodia.<sup>18</sup> Archaeological excavations at sites in northeast Thailand, which was at various times Khmer-dominated, has begun to document these organizational shifts. Moore’s research<sup>19</sup> using the UNESCO ZEMP data base has identified more than 60 probably prehistoric habitation mounds, whose forms and distribution parallel prehistoric earthworks in northeast Thailand.

While our knowledge of this period remains limited in the Tonle Sap region, documentary sources suggest that the lower Mekong and its delta served as a central node for international and regional exchange networks in the early centuries of the Christian Era, housing major population centers that formed organized polities. In Cambodia, the archaeological record of this transition has been illuminated by current research at the site of Angkor Borei (Takeo Province) by the Lower Mekong Archaeological Project (LOMAP).

### *The transition to history in the Lower Mekong Basin*

By the end of the prehistoric period, complex societies arose in the Mekong Delta of southern Cambodia that participated in international maritime trade and vied for power with each other. These delta-based polities established many of the rules which the Khmer empire used to dominate its neighbours in later centuries. The period of the first to eighth centuries AD witnessed the emergence of the earliest states in Cambodia, with an indigenous writing system, monumental architecture, and shifting power centers that moved ever northward through central to northwestern Cambodia. In AD 802, Jayavarman II established his kingdom in the Tonle Sap region. In so doing, he launched a six-century Khmer empire that, at its peak, dominated much of what is now Mainland Southeast Asia. Architecture, inscriptions and art tell a tale of Cambodia’s ancient elites, while the humble remains of the common people – from their tableware to their bones – inform about changes in the local population of Cambodia through time.

Information sources used in this summary include archaeological and documentary data. Documentary data include descriptions from visiting Chinese dignitaries and inscriptions in Khmer and Sanskrit.<sup>20</sup> Each source has its strengths and weaknesses. Moving between these sources, however, provides a workable framework for understanding changes in Cambodian history and emergence of its great empire.

### **The early historic period, or pre-Angkorian Cambodia and “Funan”**

Historians and archaeologists have long looked to the Mekong Delta to study the transition to history that began at some point in the early centuries of the Christian Era.<sup>21</sup> Chinese documentary evidence described walled and moated cities that probably were located in this region, which today includes several provinces in southern Cambodia and

Vietnam (Figure 5.1). The largest collection of pre-Angkorian Khmer and Sanskrit inscriptions derive from this region. Many images of the earliest Khmer art also derive from the delta, and French reconnaissance in the area identified a series of archaeological sites that appeared to belong to the Angkorian period.<sup>22</sup>

In the third century AD, the Kingdom of Wu, the southernmost state in post-Han China, sent a number of emissaries into Mainland Southeast Asia to establish trading partners. The great French historian Paul Pelliot translated the accounts of these mission which referred to a "Kingdom of Funan", a polity that flourished between the second and sixth centuries AD.<sup>23</sup> Archaeological research in both Vietnam and Cambodia has begun to provide a substantive basis to these historical sources.

One of the most prominent sites in Cambodia's Mekong Delta is Angkor Borei, Takeo Province. Today, Angkor Borei is a small town within a large walled settlement that covers an area of 300 hectares (Figure 5.8) and contains more than one dozen collapsed brick monuments, most associated with artificial ponds of various sizes. A 4-meter high wall capped with brick masonry still encircles much of the site. Angkor Borei lies immediately north of the hill of Phnom Da, which has produced some of the finest examples of early Khmer art. Geographer Pierre Paris used aerial photographs to argue

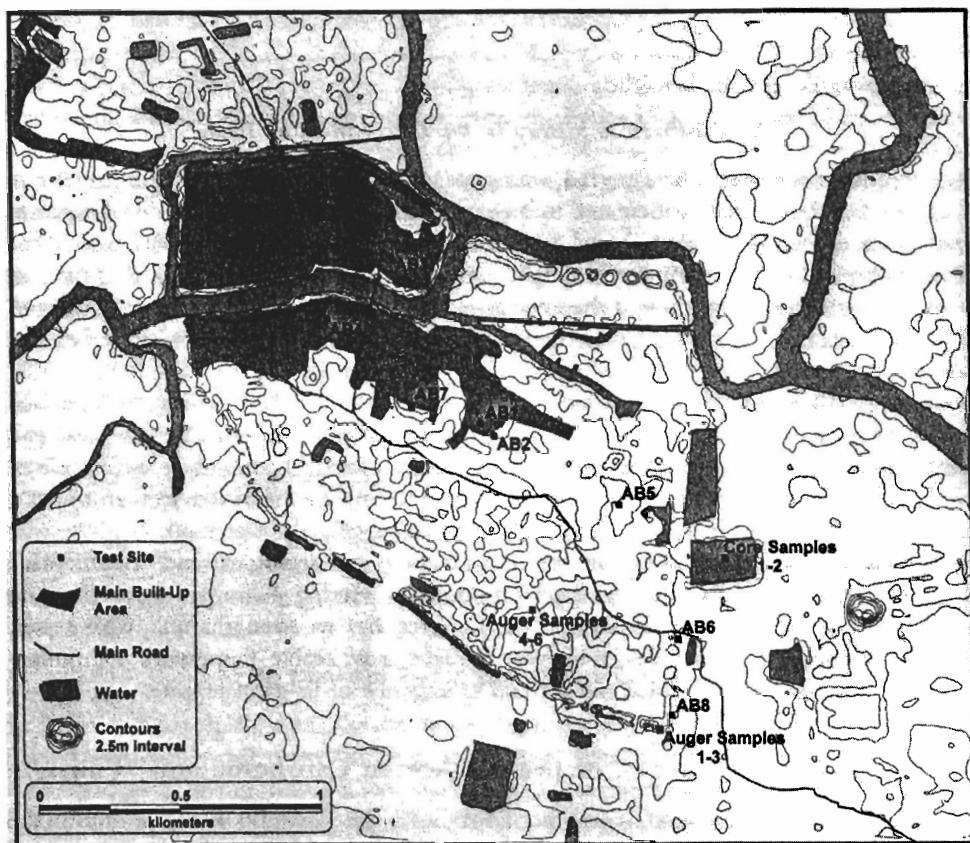


Figure 5.8 Angkor Borei digital elevation map. (Reprinted with permission of Wylie Science Publishers.)

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that canals linked Angkor Borei to the Vietnamese site of Oc Eo. These features of Angkor Borei persuaded some scholars that the site was an inland capital of Funan linked to trading ports like Oc Eo, occupied primarily during the second to sixth centuries AD.<sup>24</sup>

Recent excavations at Angkor Borei by the Lower Mekong Archaeological Project have begun to outline its occupational history and to disentangle the collection of brick structures, *baray* (reservoirs) and artifacts that accrued during more than two millennia of occupation. This research at Angkor Borei provides the largest collection of radiocarbon dates yet published for a pre-Angkorian site in Cambodia. These extend the site's occupational sequence back to the fifth or fourth century BC, and ongoing research suggests that Angkor Borei may have been occupied continuously up to the present. Excavations in 1999 and 2000 revealed portions of an ancient cemetery in the center of the site (Figure 5.9) whose dates range from c.200 BC-AD 200 and provide a rare mortuary sample from this transitional period.

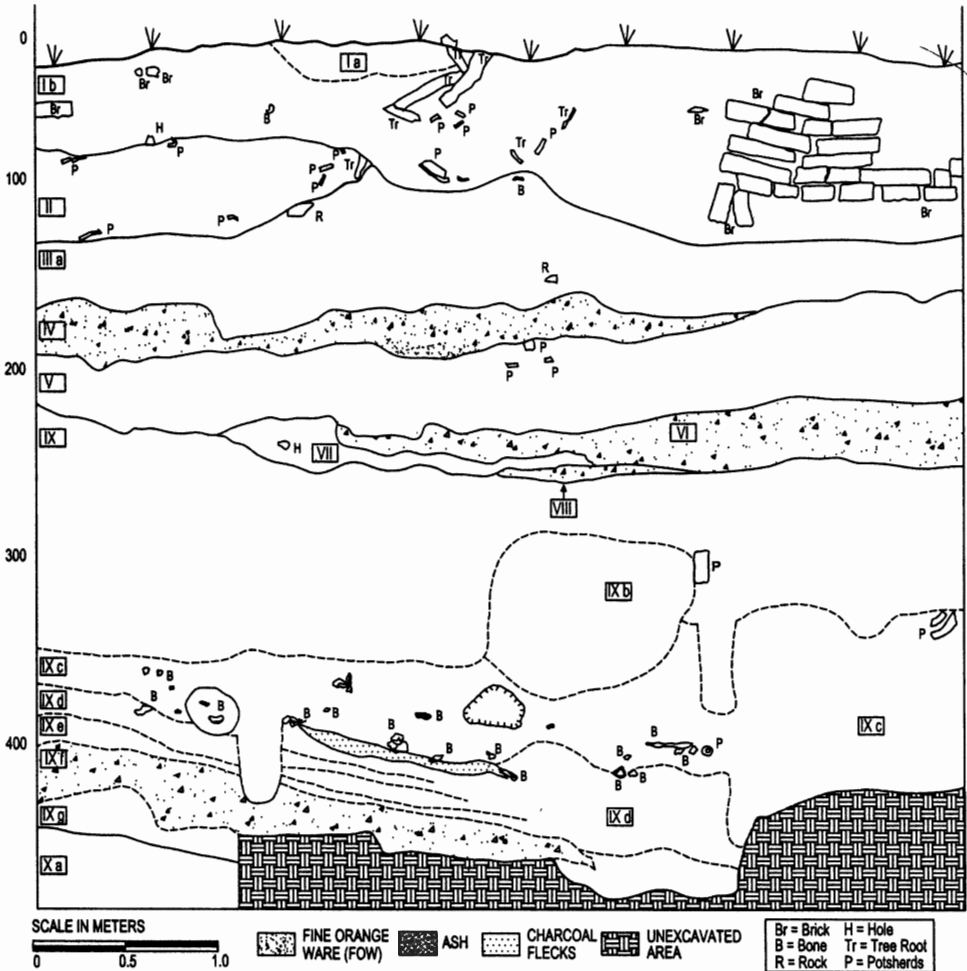


Figure 5.9 Stratigraphic profile at Angkor Borei. (Miriam T. Stark.)

So little archaeological research has been done on this time period in Cambodia that we are only beginning to see the outline of the region's settlement pattern during the early first millennium AD. The site of Ba Phnom in Prey Veng province may have been founded during this time, and still others await identification in southern Cambodia. Vietnamese excavations at more than 70 "Oc Eo culture" sites in their portion of the Mekong Delta reinforce the idea that the delta was a central hub during this time. Analysis of seventh–eighth-century inscriptions suggests that the region contained multiple rather than a single political structure.<sup>25</sup>

### *The Pre-Angkorian Period and "Chenla"*

Historians refer to the sixth–eighth centuries AD as the "Pre-Angkorian Period", signaled by a shift of the power base out of the delta and a movement further up the Mekong River. By the seventh–eighth centuries AD an important center emerged in what is now central Cambodia, whence it came to dominate Cambodia's political landscape for at least two centuries. One reason behind this shift perhaps lay in a change in the regional trade networks accompanying the rise of Srivijaya in southern Sumatra. The Mekong Delta may have lost its significance in international maritime trade networks by this time. The rise of powerful and enterprising leaders of inland agricultural communities, detailed recently in Michael Vickery's study of Khmer inscriptions,<sup>26</sup> may also have played a role.

Evidence for this power shift derives from documentary and archaeological data. Chinese accounts describe the "Kingdom of Chenla" that wrested power from Funan and indigenous inscriptions describe a series of individuals who conquered their enemies by military might. Our knowledge of "Chenla" derives largely from Khmer and Sanskrit inscriptions<sup>27</sup> and largely undocumented finds of sculpture, rather than field archaeology. These are too numerous and the issues too complex to describe here. Earlier scholars like Briggs believed the capital of Chenla lay north at Wat Phu in southern Laos, near the confluence of the Mekong and Mun Rivers. More recent scholars suggest that the capitals of Chenla lay in what is now east-central Cambodia, in the province of Kompong Thom. Foremost among these pre-Angkorian settlements is Sambor Prei Kuk in Kompong Thom Province, known in the inscriptions as Isanapura.

The walled complex of Sambor Prei Kuk encloses an area of at least 400 hectares, and contains three separate precincts, each of which is surrounded by a wall. Standing brick architecture, in varying degrees of preservation (Figure 5.6), dots the landscape of this large site. Outside the external city wall is a reservoir, and the water control system at Sambor Prei Kuk has sparked interest regarding the relationship between water management and elite control.<sup>28</sup> Analysis of inscriptions identifies three possible Chenla rulers: Bhavavarman in the late eighth century; his successor Citrasena, who called himself Mahendravarman; and Isanavarman, who ruled during the early seventh century AD and extended his control to the Thai coast.

Although settlement at Sambor Prei Kuk continued into the Angkorian period – as did sites in the delta like Angkor Borei – its political prominence had diminished by the late eighth century AD, when Jayavarman II established a new capital that he called Isanapura. Today, we know that site as Banteay Prei Nokor, in Kompong Thom Province. Aerial reconnaissance there in the mid-1930s<sup>29</sup> revealed a large, square-moated and walled settlement. Outside the enclosed area were five reservoirs aligned on the same

axis, one measuring 200 by 250 meters in size. Two roads radiate outward from Banteay Prei Nokor: one to the north, traceable for 20–25 kilometers, and one to the northwest, to the Mekong River. It is thought that Jayavarman II moved from this capital to the northwest within a few decades, to found his next capital at Hariharalaya north of Tonle Sap, near present-day Siem Reap. However, although several other pre-Angkorian sites have now been identified through their inscriptions and art styles, little systematic archaeological research has been undertaken to resolve their chronology and relative importance.

Northwestern Cambodia's developmental trajectory from the late prehistoric period appears to have had more in common with northeast Thailand than with central and southern Cambodia, and it is likely that the region witnessed a substantial pre-Angkorian period of settlement. At least one ruler emerged in the Tonle Sap region during the pre-Angkorian period: Jayavarman I, who established himself at Ak Yum (just west of Phnom Bakheng, Siem Reap Province) during the seventh–eighth centuries. It is also possible that the Angkorian period monuments have covered and perhaps, in some cases, obliterated earlier settlements.

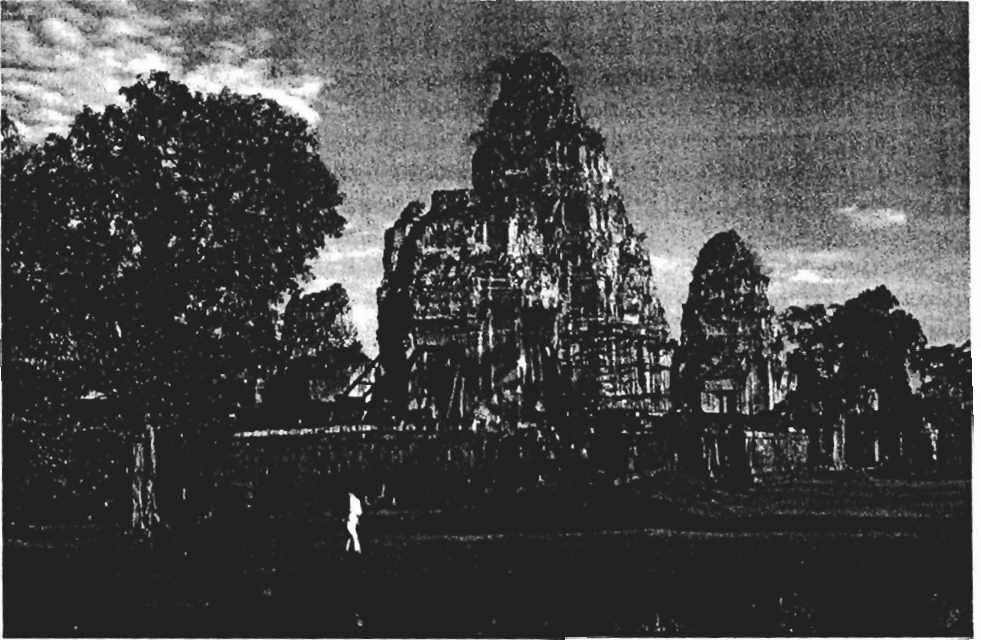
### **The historic, or Angkor period – the Khmer Empire**

Most accounts of the pre-Angkorian period describe a decentralized collection of polities that vied with each other for power from the sixth–eighth centuries AD. In the ninth century a powerful Khmer state emerged in an area in the lower Mekong River Basin that included the Tonle Sap. Perennial rivers and annual flooding, in addition to access to the lake, facilitated rice agriculture and fishing. The Tonle Sap is one of the most productive freshwater fisheries in the world. In addition, substantial areas in this region remain free from wet-season flooding and are ideal for settlement. More than 50 major monuments and dozens of smaller buildings are found on the Tonle Sap plain. Scholars often use the term “Angkor” to describe the complex of archaeological sites found between the Tonle Sap and the Kulen hills to the northeast.

Cambodia is perhaps most famous for the great ceremonial center of Angkor Wat (Plate 4), built in the twelfth century in an area which served as the imperial capital from the tenth century. At its peak in the twelfth–thirteenth centuries the Khmer Empire was far larger than the present-day kingdom of Cambodia and included large areas of Vietnam, Laos and Thailand. The expansionistic impulse drove the Khmer rulers eastward and into conflict with the Cham principalities of the central coast of Vietnam, and westwards almost to the borders of Burma to gain control over people and for access to maritime commerce via the Malay Peninsula. The archaeological record of this history consists largely of monumental constructions (Figure 5.10) in laterite, sandstone and brick that mark the ancient boundaries and provincial capitals of the Khmer Empire. This summary focuses on sociopolitical and economic trends during the Angkorian period, and how these trends are reflected in the material record.

Information on ancient Khmer history comes from four primary sources:

- 1 archaeological remains;
- 2 Khmer and Sanskrit inscriptions;
- 3 bas-relief iconography and statues; and
- 4 Chinese historical accounts.



*Figure 5.10* Pre Rup: Mid-10th century temple built by Rajendravarman. (Photography courtesy of P. Bion Griffin.)

Historians and archaeologists have used the foregoing sources to reconstruct the royal succession, the temple-based economy, and state ideology of the Khmer Empire.

Most archaeological research during the French colonial period focused on the restoration and study of the great monuments, while art historical work was dominated by studies of style and chronology. Even today, field research currently underway in the Angkor area usually takes place within larger restoration projects for specific monuments. However, Moore's use of remote sensing to locate moated sites in the Siem Reap region and Groslier's excavations at the Royal Palace and at the cemetery of Sras Srang are two examples of research-oriented field projects in the region.<sup>30</sup> In addition, researchers of the *École Française d'Extrême-Orient* since 1992 have produced an archaeological map that sheds light on urban and rural patterning during the Khmer empire.<sup>31</sup> Archaeological survey and excavation in northeast Thailand has also contributed to our knowledge of regional settlement variability and economy throughout the Angkorian period.<sup>32</sup> In recent decades, art historians and archaeologists have also turned to the study of Khmer ceramics and their production localities (Figures 5.11 and 5.12).<sup>33</sup>

Translations of Khmer and Sanskrit inscriptions on stelae in temples or other sacred areas yield information on economy and society, as well as on royal lineages and religious affairs.<sup>34</sup> The Sanskrit inscriptions are concerned directly with the gods while Khmer inscriptions largely deal with the administration of the temple properties. References to commoners in these inscriptions are limited, but the inscriptions hold some information on the Khmer non-elite and the environment in which they lived. Additionally, Chou Ta-Kuan, a Chinese emissary who visited Angkor during 1295–6, wrote on his return to China a fascinating report which we know as "Notes on the Customs of Cambodia", following its

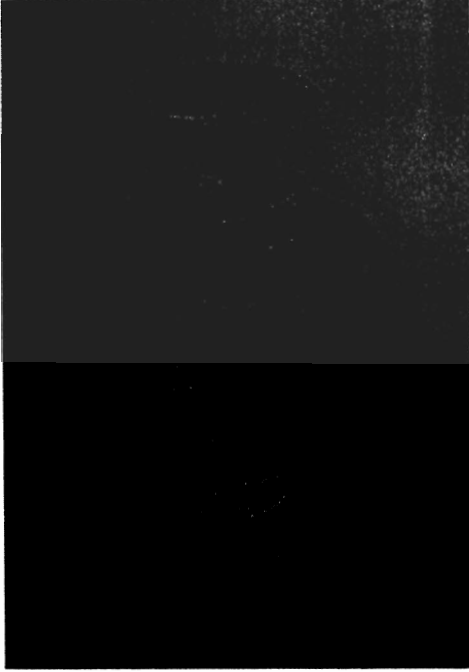


Figure 5.11 Khmer brown glazed footed jar with a form derived from metal vessels. Late twelfth to thirteenth century. Height 39 cm. (Photograph courtesy of Dawn Rooney.)



Figure 5.12 Khmer green glazed jar and cover, ninth or tenth century. Height 18 cm. (Photograph courtesy of Dawn Rooney.)

translation by the French sinologist Pelliot.<sup>35</sup> Drawing on these sources, Khmer scholars have tended to emphasize historical rather than purely archaeological perspectives.

The following sections provide a chronological framework and general background to the sociopolitical organization of the Angkorian period, and concentrate on two subjects to which archaeological and geographic research have made major contributions. The first concerns archaeological evidence for economic organization. The second examines the debate over the role that water control played in the Khmer Empire from the ninth to the fifteenth centuries AD.

### *Chronology and political history*

Khmer inscriptions tell us that the imperial kingdom was founded *c.* AD 802 by Jayavarman II through pacification and unification of the Cambodian countryside. This established the foundations for the supra-regional power that would dominate an enormous area for several hundred years, only to decline during the first part of the fifteenth century. Newly published translations of inscriptions are compelling historians to alter their chronological framework, but an outline of royal succession as it now seems more or less accepted is provided in Table 5.2.

Some of the longer reigns were notable for their construction of monumental temples and palaces or the construction of waterworks, while others were marked by internal and



Table 5.2 Royal succession in the Khmer Empire.

<i>Time Period</i>	<i>Ruler</i>	<i>Selected Developments</i>
c.770–c.834	Jayavarman II	Founded kingdom by building Harihāralaya; established cult of the royal <i>linga</i>
c.834–c.870	Jayavarman III	Son of Jayavarman II
c.877–889	Indravarman I	Built two portions of Roluos group (Preah Koh, Lolei and Bakong) and <i>baray</i> called <i>Indratataka</i>
c.889/890– c.910/912	Yaśovarman I	Built Phnom Bakheng as new capital (called Yaśodharapura), the Eastern Baray ( <i>Yasodharatataka</i> ); introduced Nagari alphabet of North India
c.910/ 912–c.923	Harsavarman I	Built Baksei Chamkrong
c.923–c.928	Isanavarman II	– no major constructions –
928–c.941	Jayavarman IV	Moved royal residence away from Angkor to Koh Ker; begins Phimeanakas and Ta Keo.
c.941–944	Harsavarman II	– no major constructions –
944–c.968	Rājendrarvarman II	Restored capital at Yasodharapura and built temples of East Mebon and Pre Rup; raided Champa, Dvaravati, and Sukothai areas
c.968–c.1000	Jayavarman V	Consolidated Rajendravaman's conquests; constructed and dedicated Banteay Srei (Fortress of Women) in AD 968; built Ta Keo
1002–1002	Udayādityavarman I	Disappeared after one year as king
1003–1010	Jayavīravarman	Civil war rages: battle for sovereignty between Jayavīravarman and Sūryavarman. (Not usually in king lists.)
1002–1050	Sūryavarman I	Sūryavarman became king after civil war; built Phimeanakas and Western Baray; expands territory to southwest toward Gulf of Thailand and established Khmer center at Louvo (Lopburi).
1050–c.1066	Udayadityavarman II	Built Baphuon, West Mebon
1066/ 1077–1080	Harsavarman III	– no major constructions –
1080–c.1107	Jayavarman VI	Beginning of Mahīdhara dynasty; built Phimai.
1107–1112	Dharanīndrarvarman I	– no major constructions –
1113–c.1150	Suryavarman II	Established relations with China and fought the Chams and the Dai Viet; constructed Angkor Thom and portions of Angkor Wat, Beng Mealea and Chausay Tevoda
c.1150–c.1165	Yasovarman II	– no major constructions –
c.1165–1177	Tribhuvanadityavarman	Cham invasion (and Khmer defeat) ended his reign in 1177
1181–c.1218	Jayavarman VII	Expanded Khmer empire on the east to the South China sea, on the northeast far into Champa, and west to the borders of Pagan; built roads, bridges, hospitals and resthouses across kingdom; strengthened centralized bureaucracy; built more than 10 major monuments, including Angkor Thom and most of its contents (e.g. Bayon, Preah Khan, Ta Prohm) and Banteay Kdei and Sras Srang

PRE-ANGKORIAN AND ANGKORIAN CAMBODIA

<i>Time Period</i>	<i>Ruler</i>	<i>Selected Developments</i>
1218–1243	Indravarman II	– no major constructions –
1243–1295	Jayavarman VIII (abdicated)	May have sponsored the last known royally endowed temple
c.1295–1308	Indravarman III	Theravāda Buddhism became state religion; Chinese emissary Chou Ta-Kuan spends year at Angkor Wat
1300–1307*	Srindravarman (abdicated)	– no major constructions –
1308–1327*	Indrajayavarman	– no major constructions –
1330–1353*	Paramathakemaraja	– no major constructions –
1371–?*	Hou-eul-na	– no major constructions –
1404*	Samtac Pra Phaya	– no major constructions –
1405*	Samtac Pra Phaya, Phing-ya	– no major constructions –
1405–1409*	Nippean-bat	– no major constructions –
1409–1416*	Lampong or Lampang Paramaja	– no major constructions –
1416–1425*	Sorijovong, Sorijong, or Lambang	– no major constructions –
1425–1429*	Barom Racha, or Gamkhat Ramadhapati	– no major constructions –
1429–1431*	Thommo-Soccorach, or Dharmasoka	– no major constructions –
1432–?*	Ponha Yat, or Gam Yat	– no major constructions –

*Note:* This chronology follows the chronology presented in Mabbett and Chandler (1995: 261–68). Those marked with “\*” designate contested rulers, offered by contradictory Cambodian and Thai court chronicles; these were taken from chronology in Jessup and Zephir (1997).

international warfare. Military conquest characterized Khmer rulers throughout the first three centuries of their rule. The empire of the ninth–twelfth centuries appears to have derived from a simple quest for power supported by the preceding Hindu cult. In the late twelfth century, the Khmer ruler Jayavarman VII patronized Buddhism (arguably less expansionist in ideology than Saivism) with its outward focus on commercial enterprise rather than military expansion.

Jayavarman II established his rule at Hariharalaya in the early ninth century and his successors ruled at this capital for much the remainder of the century. Indravarman I dedicated a tower of shrines (Preah Koh) to his immediate ancestors, and built the step-temple called Bakong (Figure 5.13). Yasovarman I gained the throne after battles with his brother which may have destroyed much of the royal city and built his capital city of Yasodharapura with its Eastern baray. This walled city, measuring 4 kilometres on each side, housed Phnom Bakheng as the capital.

Several decades of political fragmentation characterized the period after Yasovarman, and it took Rajendravarman to reunify the polity and restore Yashodhapura as his capital. This king’s building program included several major shrines: Pre Rup (Figure 5.10), the East Mebon (built on an artificial island in the center of the Eastern Baray) and also perhaps Banteay Srei, a construction attributed to both Rajendravarman and Jayavarman

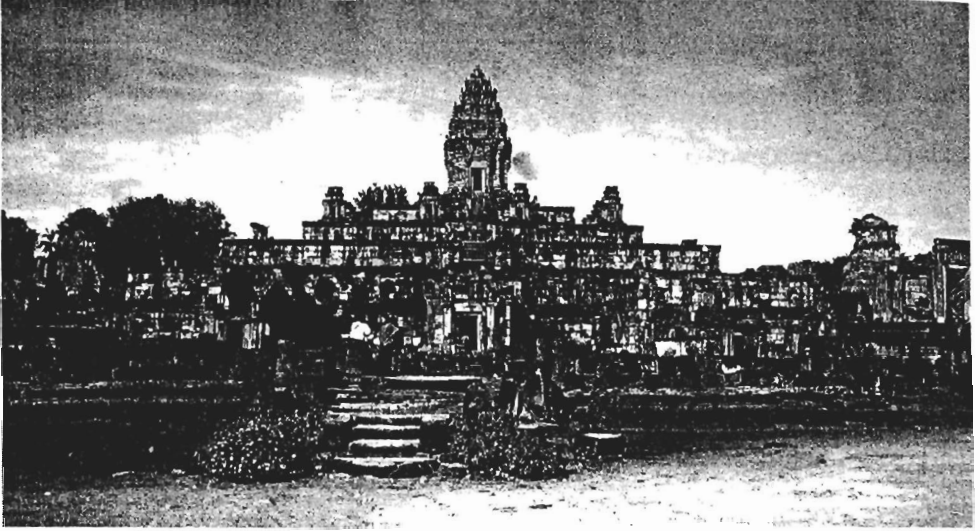


Figure 5.13 Bakong step-temple built in the ninth century by Indravarman I. (Photography courtesy of P. Bion Griffin.)

V. Rajendravarman's conquests, from the borders of Burma to Champa, brought wealth and power to his empire. In so doing, he also centralized power at Angkor and sent out groups of officials to administrate newly conquered territories.

Following Rajendravarman's reign there was a struggle for power that culminated in the ascendance of Suryavarman I, about AD 1011. Although the extent of his empire fell short of his predecessors, Suryavarman I ordered the construction of the Western Baray, which measured 8 kilometres in length and 2.1 kilometres in width. Recent estimates suggest that it held 156,240,000 cubic meters of water each year.<sup>36</sup> Suryavarman I also encouraged the growth of a commercial economy, along major river networks and overland routes, that connected the Khmers to Vietnam, China and to international maritime trade through the South China Sea.

The Khmer empire reached its apogee during the eleventh century. Following a series of other rulers (see Table 5.2) came Suryavarman II (AD 1113–c.1150), who oversaw the construction of Angkor's most famous monument, Angkor Wat, thought to be a funerary temple to his deified ancestors. The walls of this great religious monument's galleries, considered to be one of the largest religious shrines of the ancient world, are adorned with bas-relief scenes that chronicle the history and glory of the Khmer Empire. Suryavarman II also waged war against the Chams of Vietnam and sent embassies to China. Yasovarman, one of the rulers who followed Suryavarman II, was overthrown after a short reign and his successor, Tribhuvanaditya, was defeated by the Chams, weakening the Khmer empire.

*Political and economic organization from the ninth to the late twelfth century*

Religion and society were intimately linked throughout the Angkorian period. The ninth to the twelfth centuries were dominated by the rulers' Shaivite cults in the most

common reconstructions of this period. At the top of the cosmic order were the gods and their human emissary, the king, who, by virtue of his position, was associated with divine power. The prosperity of the kingdom was bound up with the welfare of the royal *lingam*, a phallic-shaped stone that was the physical manifestation of the Hindu god Siva and also of the royal lineage.<sup>37</sup> Khmer rulers erected temples to house the *lingam* at the center of the current capital.

The king and his court resided in his palace in the imperial *nagara* (later corrupted to *nokor* and to Angkor under the French). The ceremonial center was an economic and social institution with a centralized administration and abundant temple complexes, under direct control of the king. It was also the physical embodiment of the heavens.<sup>38</sup> Aided by their Brahman priests, the Khmer kings embodied the concept of royal divinity and dedicated numerous temples to their divine ancestors.

Most historical studies of the Angkorian period have emphasized divine kingship and the structuring role of Indic ideologies rather than examining the economic infrastructure of the empire. Yet some research suggests that the Khmer state was based on an agrarian infrastructure which future archaeological research has great potential to illuminate.<sup>39</sup>

#### *Socioeconomic structure*

A fundamental class distinction divided Khmers into elites versus commoners, with gradations in each group.<sup>40</sup> Elites included royalty, bureaucrats, and wealthy landowners – some of whose names are inscribed and acts of beneficence recorded in the stone stelae erected in religious monuments. These elites, referred to as “mandarins” (or *mai-chieh*) in Chou Ta-Kuan’s thirteenth-century memoirs, were found in more than 90 provinces throughout the countryside. The secular, landed elite-controlled temples throughout the empire managed irrigation systems and channeled the distribution of agricultural surpluses.

The commoner population consisted of free people, including small landholders, and slaves, most of whom lived in villages associated with particular temple complexes. Others may have lived within the walls of the Khmer ceremonial centers. Commoners plied non-agricultural professions that included artisans, traders, religious personnel, and administrative officials.<sup>41</sup> Documentary accounts and bas-reliefs from the Bayon suggest that male commoners were likely to be farmers, hunters, metal workers, and craftsmen. Female commoners engaged in agriculture, market trade, diplomacy, warfare, and the performing arts. Slaves comprised a large proportion of the commoner population and worked for temples, wealthy families and small farmers.

#### *The Khmer Economy*

The Khmer Empire depended on an infrastructure of wet-rice agriculture, fishing, trade tribute, taxation and corvée labor. Since most archaeological work in the Angkor region has concentrated on historic preservation and restoration rather than on research, little is yet known about the pattern of land use beyond the temple complexes. What seems clear, however, is that agricultural surpluses, gleaned from efficient rice farming, underwrote the Angkor economy. Chou Ta-Kuan reported that farmers could harvest up to four crops a year, but this is unlikely to be from the same fields but rather from cultivation of successive fields behind the receding flood from the Tonle Sap. Remote sensing techniques have identified ancient field systems throughout portions of the Angkor region today, and Van

Liere estimated that more than 50 million banded fields were cultivated between the ninth and fifteenth centuries, using a combination of floating rice and flood recession techniques.<sup>42</sup>

Integral to this economy were the water control systems that facilitated settlement and farming throughout the Angkor region. The Khmers were consummate hydraulic engineers: they cut canals, dredged and straightened rivers, built dikes into the floodplain to deflect and hold back floodwaters, dug moats around their temples and some residential areas, and built countless small reservoirs to tap the high water-table found in the region. The precise role of water control systems in the historical trajectory of the Khmer Empire and of its agrarian systems, however, remains unclear. Several prominent Khmer kings also engaged in large-scale public works projects to build enormous *baray*, so large that they are visible from space by satellite.<sup>43</sup> The Indratataka (or Lolei *baray*), built between c. AD 877–890, was 3 kilometres long while the Yasodharatataka, or East Baray, constructed during the reign of Yasovarman, was 7 kilometres long.

The role of these giant reservoirs for subsistence continues to be a source of debate, and the issue is sometimes glossed as the “hydraulic paradigm”.<sup>44</sup> For a long time it was held that the agrarian economy of Angkor rested on irrigation.<sup>45</sup> This has been challenged through the analysis of aerial and satellite imagery. Work by van Liere and Acker suggests that the total irrigable land available was far smaller than Groslier calculated. And they argued that the ancient Khmers relied on the traditional rain-fed techniques of floating-rice and recession agriculture that are still in use in the region today, rather than on irrigation. Khmer-built dams may have functioned as flood retardation devices rather than for irrigation and the ponded water was primarily intended for the temples.

No evidence has yet been found for a centralized system of water control and it is possible that water control for farming was organized at the local level administered by the temples. Documentary evidence suggests that the temple functioned as a center for administration and for the collection of tributes and gifts for redistribution, and this pattern may have begun during the pre-Angkorian period. Careful records were maintained of gifts to the temple, both in terms of human labor – commonly through gifts of slaves – and goods. Business transactions that occurred at the temple were also recorded, and the temple served as a type of “bank” for the harvests and seed stores of commoners.

### *Regional economic and political organization*

Regional and possibly international trade had become important by the eleventh–twelfth centuries, yet we still know little about intra- and inter-regional trade networks at this time. Across the Khmer Empire, a series of local systems were controlled by a provincial elite, appointed by the rulers. Government officials comprised at least some portion of this provincial elite, and the wealth they collected from the countryside was channeled to the center to support temple construction and the range of attached specialists who worked for the ruler. These elites formed a caste-like group, occasionally referred to as a *varna*<sup>46</sup>, and who were obligated to provide duties, rather than simply tribute, to their king. Markets were focal points for local systems, and temples were located near these markets served to link the Khmer center to its periphery through a series of mutual dependencies.

Research on both production localities and on the goods that artisans produced at these places sheds some light on aspects of the economy. Art historians have produced

extremely useful studies on the chronology and function of Khmer glazed ceramics.<sup>47</sup> Brown's chronology for Khmer glazed wares (Figures 5.11 and 5.12) helps archaeologists to date a series of kiln sites that have been discovered recently both in northeastern Thailand and in the Angkor region. These kiln sites contain firing installations and a variety of ceramic wares, including jars, bowls, and roof tiles. Brown<sup>48</sup> suggests that these glazed wares emulated metal and Chinese containers used by the ruling elite in the Khmer capital, and were also a provincial substitute for these imported vessels. Khmer glazed wares were not intended for export and few are found beyond the boundaries of the former empire. Glazed ceramics did, however, circulate within Khmer territory, and ceramic studies indicate that artisans in the central area (Angkor and Phnom Kulen) manufactured green glazed wares primarily from the late ninth to mid-eleventh centuries, and introduced two-color glazed wares by the mid-eleventh century. Provincial potters in Buriram Province of Thailand also made green and a variety of brown glaze wares that are known as "*lie-de-vin*".<sup>49</sup>

Archaeological settlement survey and research on Khmer kiln sites in northeast Thailand suggests the development of regional and markets that may have preceded the founding of the Khmer state in this region. Such data, coupled with the known transportation system with its bridges and 7 meter-wide laterite roads,<sup>50</sup> supplement historical evidence for the economic structure of the Khmer empire. Analysis of documentary data suggests that the seventh–eighth century pre-Angkorian economy was monetized and relied on a value system with widely recognized exchange media and measures of value.<sup>51</sup> No convincing evidence of currency has been found, however, in either the material culture inventory (e.g. coinage) or in documentary evidence of the Angkorian period. The Khmer economy, between the ninth and twelfth centuries, relied on tribute, taxation, and corvée labor which enabled each new ruler to construct public works (usually large reservoirs) and build temples to honor his ancestors. This surplus also supported attached specialists who worked for the ruler and his entourage.

The fact that the state was based on a network of dependence in addition to economic tribute, as in many other ancient states in Southeast Asia, may be one reason why the Khmer kings pursued military expansion to finance the activities of the court. The limiting resource in the expanding Khmer empire was labor: for hydraulic works, for monumental construction and for war. Rain-fed agriculture created the surplus that could release labor for state-financed projects such as monumental construction and water engineering. While the practical function of these great water works is a matter of dispute, the Khmer state's ability to harness labor to create such works is not.

#### *Political and economic organization in the thirteenth century*

Jayavarman VII (AD 1181–1218) gave the Khmer Empire its last burst of glory. He conquered the Chams, extended Khmer dominion from Thailand into Laos, south throughout much of the Mekong Basin and west to the borders of Burma with the uncompleted city Prasat Muang Singh near Kanchanaburi on the Kwae Noi River. For Jayavarman VII, imperial expansion meant monumental construction: great stone temples and their *baray*, resthouses, hospitals, and raised roadways and stone bridges to link the provinces to the capital. Portions of the road between Angkor and Phimai, which stretched at least 225 kilometres, are visible by remote sensing today; other roads radiated west, east and southeast. Jayavarman VII also made his mark in the capital with

the 3 square kilometres' walled city of Angkor Thom and its dominating Buddhist shrine, the Bayon, and two temple monasteries dedicated to his parents: Ta Prohm (to his mother) and Preah Khan (to his father). He celebrated both Hindu and Buddhist ideologies, and the four-faced towers that epitomize the Bayon are said to reflect the Buddhist incarnation of the *Bodhisattva* known as *Avalokitesvara* (Figure 5.14).

The nature of the Khmer state – and of state ideology – changed at some point in the thirteenth century, when Theravada Buddhism replaced the earlier syncretic form of Hinduism. One major reason for these changes may lie in the increased interaction between Khmers and Mon-speaking residents of Thailand's central plain,<sup>52</sup> where Theravada Buddhism, introduced from Sri Lanka, was widely practised during this time. Theravada Buddhism encouraged a more egalitarian structure replacing the divine cult of kings (*devaraja*) with a national religion by the end of the thirteenth century. Chou



Figure 5.14 Face towers in the Bayon temple. (Miriam T. Stark.)

Ta-Kuan's description of the court emphasizes the accessibility of the king, who held audiences at least twice a day for "functionaries and ordinary people".<sup>53</sup> At approximately the same time, the Khmer economy moved away from militarism and towards international commerce. Cambodia, like other regions in Mainland Southeast Asia, entered the China-based maritime trade network by the early 15th century. As happened in Thailand and Burma, Cambodia's center of power shifted southward to Udong and ultimately to the intersection of the "*quatres bras*" that we now call Phnom Penh.

The end of the reign of Jayavarman VII signaled the beginning of the Khmer empire's two-century decline. Subsequent kings continued their lives of pomp and grandeur, which Chou Ta-Kuan recorded during his visit at the end of the thirteenth century. The Khmer kings also continued to send embassies to China during this time. Yet after Jayavarman's reign, the monumental construction projects that celebrated the Khmer rulers ceased, and Khmer political control weakened with the rise of Thai states such as Sukhothai. When Thai neighbors overwhelmed Angkor in the fifteenth century AD, the era of Angkor's greatness had ended.

Several other reasons have been offered, in addition to macroeconomic reasons, to explain the decline and collapse of the Khmer Empire; among these, ecological factors related to water control technology remain popular. Use of remote sensing data from the Angkor region illuminates environmental changes that are likely to have affected the economy and society. Groslier's "hydraulic city" model, for example, linked Angkor's decline directly to siltation in the massive *baray* that ostensibly fed a complex of irrigation canals. As noted previously, whether these *baray* played an important role in providing food for the 1.9 million Angkor inhabitants that Groslier estimated remains a matter of some debate. What seems clear is that ecological factors played some role, and Heng Thung's geological analysis suggests that the region experienced significant geological uplift that caused downcutting and erosion in the rivers that fed the giant reservoirs.<sup>54</sup>

Economic overshoot through the massive building campaigns of the twelfth and thirteenth centuries under Jayavarman VII has also been suggested as a cause for Angkor's demise.<sup>55</sup> This argument, while attractive, cannot yet explain the relationship between Angkor's collapse during a period in which the first classical states<sup>56</sup> developed in Vietnam (Champa), Thailand (Sukhothai) and Burma (Pagan). Ecological factors like the reduction in control over the water regime may have been "more a symptom than a cause" of Angkor's decline. Social and ideological factors played a key role in the process, including the structural instability in relations between kings and officials, the growing self-sufficiency of the periphery – particular with its growing incorporation into a commercial economy – and the influence of Buddhist values on a Hindu-Saivite community.

## Conclusions

The preceding journey through seven millennia of Cambodian history, from its earliest foraging origins to its period of Angkor's glory, has emphasized the high points as these are illuminated from the archaeological record. Cambodia's recent history of war and political instability have limited our knowledge of Cambodia's prehistoric past, which remains shadowy at best. Decades of concentrated research are necessary to fill the gaps in our knowledge of when and where populations became dependent on food production, and of how changes in production strategies precipitated the adoption of metal working



in the region. What was the role of the Great Lake (Tonle Sap) in the process of agricultural intensification? Did foragers first experiment with domesticating plants at the lake's margins, or do we see the beginning of agricultural experimentation elsewhere, like in the Mekong Delta? Might studying the metallurgical tradition of prehistoric Cambodia – a country deficient in copper and tin – hold clues for understanding the sources of technological change that are so evident in both Thailand and Vietnam, and that take such different forms? Cambodia's location and its unique geography make it an important locus of research on these topics, and findings from such research will doubtless force revisions in our understanding of the archaeology of Mainland Southeast Asia.

The foregoing summary has sought to illustrate how the balance of knowledge regarding the Cambodian archaeological record has overwhelmingly emphasized the great monuments of the Angkorian period. Key questions concerning urban settlement and growth, provincial organization *vis-à-vis* the political center, and the operation of regional economic networks remain to be explored. Future archaeological research holds great potential to enlarge our understanding of Cambodian archaeology and thus to expand our knowledge of the archaeology of Mainland Southeast Asia.

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Note on sources for the history and archaeology of Cambodia:

Scholarly research on Cambodia started in the late nineteenth century and the overwhelming bulk of published material is in French with lesser amounts in English, German and Japanese. For this essay, primarily French and English sources have been used and only writings in western languages are cited below.

Research on the inscriptions and art history of Cambodia was quite intensive between about 1900 and 1940 before being interrupted by the Second World War. Research

resumed after the war; archaeological research and architectural conservation then continued until the early 1970s when insurgency, revolution and war brought a halt to all fieldwork. From the early 1990s Indian, French and many foreign scholars have taken up active research in Cambodian archaeology; a few scholars currently work on the earlier prehistory of the country.

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### Notes

- 1 Mourer 1986: 72–5, 1994: 143–6; Worman 1949: 321–2.
- 2 Dates using surface finds, freshwater or marine shell, or bone collagen, were excluded from the sample because of methodological problems with dating these materials.
- 3 See Saurin 1963, 1966; Mourer 1994: 165–8; Carbonnel 1970.
- 4 Mourer 1977, 1986, 1988, Mourer and Mourer 1970, 1973.
- 5 White 1995.
- 6 On these sites see Groslier 1966: 193; Malleret 1959; Kojo and Pheng 1997: 181; Carbonnel 1979.
- 7 Albrecht *et al.* 2000; Dega 1999; Kojo and Pheng 1997, 1998; Thung 2002.
- 8 Groslier 1979: 165; Mourer 1977: 52.
- 9 Mourer 1977: 52, 1994: 172.
- 10 On Samrong Sen, see Cartailhac 1890; Janse 1951; Mansuy 1902, 1923: 2–8; Mourer 1986: 94–7; Worman 1949.
- 11 Lévy 1943.
- 12 Kojo 1998.
- 13 Pottier 2000.
- 14 O'Reilly and Pheng 2001.
- 15 Wolters 1999.
- 16 Glover 1998; Ray 1989.
- 17 Coedès 1968; Kulke 1990.
- 18 Higham 1989: 245–54, 279–87.
- 19 Moore 1992, 1998.
- 20 Several historians, most notably Georges Coedès (1937, 1942, 1951, 1952, 1953, 1954, 1964, 1966), have devoted their scholarly careers to translating inscriptions. Interpretations of this corpus of documentary data, by Coedès (1968), Claude Jacques (e.g. 1979, 1986, 1990, 1995) and Michael Vickery (1986, 1994, 1998), provide an indispensable data source for studying pre-Angkorian and Angkorian Cambodia (see also Ishizawa 1995; Jacob 1978, 1979; Mabbett 1969, 1977, 1983; Wheatley 1983). See also Stark 1998.
- 21 Pelliot 1903; Wheatley 1983.
- 22 Aymonier 1900; Malleret 1959–1962; Parmentier 1927.
- 23 Pelliot 1903.
- 24 On Angkor Borei, see Stark *et al.* 1999; Stark and Bong 2001; Paris 1931, 1941; Bishop *et al.* 2003.
- 25 Jacques 1990; Vickery 1998; see Stark 2001 for dating of Angkor Borei cemetery.
- 26 Vickery 1998.
- 27 Vickery 1994.
- 28 Groslier 1979; van Liere 1980.
- 29 Goloubew 1936.
- 30 Moore 1992, 1998; Courbin 1998.
- 31 Pottier 1998, 1999.

- 32 Welch 1989.  
 33 Brown 1988; Rooney 1981, 1984.  
 34 Coedès 1968; Jacques 1986, 1990; Jacob 1978, 1979; Mabbett 1969, 1977, 1983; Ricklefs 1967: 418.  
 35 Pelliot 1951.  
 36 Acker 1998.  
 37 Aeusrivognse 1976; Mabbett 1969.  
 38 Wheatley 1983; Mabbett 1969: 211; Mannikka 1996.  
 39 Wheatley 1975. Research recently started by Pottier (EFEO) and Fletcher and Barbetti (University of Sydney) promises to shed new light on domestic settlement and the Angkor agricultural economy.  
 40 Jacques 1986: 331.  
 41 Jacob 1979: 407–8.  
 42 Acker 1998; van Liere 1980.  
 43 Parry 1996.  
 44 Acker 1998; Groslier 1979; Moore 1989; Pottier 1998; Stott 1992; van Liere 1980.  
 45 Groslier 1956, 1966b, 1979.  
 46 Mabbett 1977.  
 47 Brown 1988; Rooney 1981, 1984; Aoyagi *et al.* 2000.  
 48 Brown 1988: 47.  
 49 Brown 1988.  
 50 Parry 1996: 29–30.  
 51 Wicks 1992: 186–93.  
 52 Briggs 1951: 242, 259.  
 53 Chou Ta-Kuan 1987: 40.  
 54 Thung 2002.  
 55 Giteau 1976.  
 56 Southeast Asian historians customarily refer to the thirteenth–fifteenth century polities as “the Classical States”, and the term is used in that sense here.

## Select Bibliography

### General books and articles

- Aymonier, E. (1900) *Le Cambodge. Le Royaume Actuel*, Paris: Ernest Leroux.  
 Boisselier, J. (1966) *Asie du Sud-Est. Tome I, Le Cambodge*, Tome I. Paris: Picard et C<sup>ie</sup>.  
 Briggs, L. P. (1951) *The Ancient Khmer Empire*, Philadelphia: Transactions of the American Philosophical Society, New Series vol. 41(1), Part I.  
 Chou Ta-Kuan (1987) *The Customs of Cambodia* (translated from the French by Paul Pelliot), Bangkok: Siam Society.  
 Coe, M. (2003) *Angkor and the Khmer Civilization*, London: Thames & Hudson.  
 Coedès, G. (1968) *The Indianized States of Southeast Asia* (translated by S. B. Cowing), Honolulu: University of Hawai'i Press.  
 Freeman, M. and Jacques, C. (1999) *Ancient Angkor*, Bangkok: Asia Books.  
 Groslier, B-P. (1956) *Angkor, hommes et pierres*, Arthaud, Paris (revised 1966; English edition published as *Angkor, Art and Civilization*, New York: F. A. Praeger.  
 Groslier, B-P. (1966b) *Indochine*, Archaeologia Mundi. Geneva, Paris, and Munich: Nagel (English edition, *Indochina*, London: F. Muller Ltd.  
 Groslier, B-P. (1979) “La cité hydraulique angkoriennne: exploitation ou surexploitation du sol?” *Bulletin de l'École Française d'Extrême-Orient* 66: 181–202.  
 Ishizawa, Y. (1995) “Chinese chronicles of 1st–5th century AD Funan, Southern Cambodia”, in R. Scott and J. Guy (eds) *South East Asia & China: Art, Interaction & Commerce, Colloquies on Art and Archaeology in Asia* 17: 11–31, London: Percival David Foundation of Chinese Art, School of Oriental and African Studies.  
 Jacques, C. (1990) *Angkor*, Paris: Bordas.

- Jacques, C. (1995) "China and ancient Khmer history". in R. Scot and J. Guy (eds) *South East Asia & China: Art, Interaction & Commerce, Colloquies on Art and Archaeology in Asia* 17: 32-40, London: Percival David Foundation of Chinese Art, School of Oriental and African Studies.
- Janse, O. R. T. (1951) *Archaeological Research in Indo-China. Volume I*, Boston: Harvard-Menching Monograph Series 2, Harvard University Press.
- Kulke, H. (1990) "Indian Colonies, Indianization or Cultural Convergence? Reflections on the changing image of India's role in South-East Asia", in H. Schulte Norholt (ed.) *Onderzoek In Zuidoost-Asië*, pp. 8-32, Leiden: Vakgroep Talen en Culturen van Zuidoost-Asië en Oceanië, Rijksuniversiteit te Leiden.
- Mabbett, I. and Chandler, D. (1995) *The Khmers*, Oxford: Blackwell.
- Pelliot, P. (1903) "Le Fou-nan", *Bulletin de l'École Française de l'Extrême Orient*, 3: 248-303.
- Pelliot, P. (1951) *Mémoires sur les Coutumes du Cambodge de Tchou Ta-Kouan*, (version nouvelle, suivie d'un commentaire inachevé), Paris: Librairie d'Amérique et d'Orient, Adrien-Maisonneuve.
- Ray, H. P. (1989) "Early maritime contacts between South and Southeast Asia", *Journal of Southeast Asian Studies* 10(1): 42-54.
- Stark, M. T. (1998) "The transition to history in the Mekong Delta: a view from Cambodia", *International Journal of Historic Archaeology* 2(3): 175-204.
- Wheatley, P. (1975) "Satyanrta in Suvarnadvipa: from reciprocity to redistribution in ancient Southeast Asia", pp. 227-83, in J. A. Sabloff and C. C. Lamberg-Karlovsky, (eds). *Ancient Civilization and Trade*, Albuquerque: University of New Mexico Press.
- Wheatley, P. (1983) "Nagara and Commandery: Origins of the Southeast Asian Urban Traditions", research papers Nos 207-8, Chicago: Department of Geography, University of Chicago.
- Wolters, O. W. (1999) *History, Culture, and Region in Southeast Asian Perspectives* (revised edn) Southeast Asia Program, New York: Cornell University, Ithaca (in cooperation with the Institute for Southeast Asian Studies, Singapore).

### Archaeology

- Albrecht, G., Haidle, M. N., Sivleng, C., Hong, H. L., Sophady, H., Than, H., Someaphyvath, M., Kada, S., Sopahl, S., Chanthourn, T. and Laychour, V. (2000) "Circular earthwork Krek 52/62, recent research on the prehistory of Cambodia", *Asian Perspectives* 39(1-2): 20-46.
- Bruguier, B. (1998) "L'organisation spatial des sanctuaires Khmers: plan axé ou concentrique?", in P.-Y. Manguin (ed.) *Southeast Asian Archaeology 1994*, pp. 173-8. Hull: Centre for Southeast Asian Studies, University of Hull.
- Carbonnel, J.-P. (1979) "Recent data on the Cambodian Neolithic; the problem of cultural continuity in southern Indochina", in R. B. Smith and W. Watson (eds) *Early South-East Asia: Essays in Archaeology, History and Historical Geography*, pp. 223-226. Oxford: Oxford University Press.
- Cartailhac, É. (1890) "Les bronzes préhistoriques du Cambodge et les recherches de M. Ludovic Jammes", *L'Anthropologie* 6: 641-50.
- Courbin, P. (1988) *La Fouille du Sras-Srang*, Collection de Textes et Documents Sur L'Indochine, XVII. Paris: École Française d'Extrême-Orient.
- Dega, M. F. (1999) "Circular settlements within Eastern Cambodia", *Bulletin of the Indo-Pacific Prehistory Association* 18: 181-90.
- Dega, M. F. (2002) *Prehistoric Circular Earthworks*, Oxford: Archaeopress.
- Glover, I. C. (1998) "The role of India in the later prehistory of Southeast Asia", *Journal of Southeast Asian Archaeology* 18: 21-49.
- Goloubew, V. (1936) "Reconnaissances aériennes au Cambodge I. Survol de Bantay Prei Nokor dans la Province de Kompon Cam", *Bulletin de l'École Française d'Extrême-Orient* 36: 465-9.
- Groslier, B.-P. (1966a) "Découvertes archéologiques récentes au Cambodge", *Kambuja* 16: 76-81. Phnom Penh.
- Higham, C. F. W. (2002) *The Early Cultures of Mainland Southeast Asia*, Bangkok: River Books.
- Higham, C. F. W. (2002) *The Civilization of Angkor*, Berkeley: University of California Press.
- Kojo, Y. and Pheng, S. (1997) "A newly discovered circular earthwork in Southeastern Cambodia", *Anthropological Science* 105(3): 181-7.

- Kojo, Y. and Pheng, S. (1998) "A preliminary investigation of a circular earthwork at Krek, southeastern Cambodia", *Anthropological Science* 106(3): 229-44.
- Lévy, P. (1943) *Recherches Préhistoriques dans la Région de Mlu Prei*, Hanoi: Imprimerie d'Extrême-Orient.
- Ly, Vanna (2001) "Recent archaeological research in the floodplain of the Tonle Sap River: the Shell Midden site of Samrong Sen and its pottery characteristics", *Journal of Southeast Asian Archaeology* 21: 47-81.
- Malleret, L. (1959) "Ouvrages circulaires en terre dans l'Indochine meridionale", *Bulletin de l'École Française d'Extrême-Orient* 59(2): 409-34.
- Malleret, L. (1959-62) *L'Archéologie du Delta du Mékong, Parts 1-3*, Paris: Publication de l'École Française d'Extrême-Orient.
- Mansuy, H. (1902) *Stations Préhistoriques de Somrong-Seng de Long Prao (Cambodge)*, Hanoi: F. H. Schneider.
- Mansuy, H. (1923) "Contribution à l'étude de la préhistoire de l'Indochine, III. Résultats de nouvelles recherches effectuées dans le gisement préhistorique de Somrong Sen (Cambodge). Suivi d'un résumé de l'état de nos connaissances sur la préhistoire et sur l'ethnologie des races anciennes dans l'Extrême-Orient méridional", Hanoi: Mémoires du Service Géologique de l'Indochine, 10.
- Moore, E. H. (1998) "The prehistoric habitation of Angkor", in Pierre-Yves Manguin (ed.) *Southeast Asian Archaeology 1994, Volume 1*, pp. 27-36, Hull: Centre for Southeast Asian Studies, University of Hull.
- Mourer, R. (1977) "Laang Spean and the prehistory of Cambodia", *Modern Quaternary Research in Southeast Asia* 3: 29-56.
- Mourer, R. (1986) "La Poterie au Cambodge: histoire et developpement. Essai d'ethnotechnologie", PhD thesis, Paris: École des Hautes Études en Sciences Sociales.
- Mourer, R. (1994) "Contribution a l'étude de la préhistoire du Cambodge", in F. Bizot (ed.) *Récherches Nouvelles sur le Cambodge*, pp. 143-87, Paris: L'École Française d'Extrême Orient.
- Mourer, R. and Mourer, C. (1970) "The prehistoric industry of Laang Spean, Province of Battambang, Cambodia", *Archaeology and Physical Anthropology in Oceania* 5(2): 128-46.
- Mourer, R. and Mourer, C. (1973) "Prehistoric research in Cambodia during the last ten years", *Asian Perspectives* 14: 35-42.
- Murowchick, R. E. (1988) "The development of early bronze metallurgy in Vietnam and Kampuchea: a re-examination of recent work", in R. Maddin (ed.) *The Beginning of the Use of Metals and Alloys*, pp. 175-81, Boston: Massachusetts Institute of Technology.
- O'Reilly, D. and Peng Sytha (2001) "Recent excavations in Northwest Cambodia", *Antiquity* 75: 265-66.
- Pottier, C. (1998) "Elaboration d'une carte archéologique de la region d'Angkor: l'organisation du territoire Angkorien", in Pierre-Yves Manguin (ed.) *Southeast Asian Archaeology 1994*, pp. 179-94. Hull: Centre for Southeast Asian Studies, University of Hull.
- Pottier, C. (1999) "Carte archéologique de la région d'Angkor: Zone Sud", PhD thesis, 3 vols. Université Paris III-Sorbonne Nouvelle (UFR Orient et Monde Arabe).
- Pottier, C. (2000) "Rapport sur la visite d'une nécropole de l'âge du fer", report submitted to the Ministry of Culture and Fine Arts, Cambodia: École Française d'Extrême-Orient, Centre de Siemreap-Angkor.
- Qiao Liang and Li Yu-Qun (2000) "Report on archaeological research at Chao Say Tevoda Temple, Angkor", *Udaya* 1: 255-94.
- Saurin, E. (1963) "Premiers éléments sur la présence de galets aménagés et de vieux paléolithiques au Cambodge", *Comptes-Rendus Sommaires de la Société Géologique de France* 259-60.
- Saurin, E. (1966) "Le Paléolithique du Cambodge Oriental", *Asian Perspectives* IX: 96-110.
- Saurin, E. (1969) "Les recherches préhistoriques au Cambodge, Laos, et Vietnam (1877-1966)", *Asian Perspectives* 12: 27-41.
- Stark, M. T. (2001) "Some preliminary results of the 1999-2000 archaeological field excavations at Angkor Borei, Takeo Province", *Udaya* 2: 19-36.
- Stark, M. T. and Sovath, B. (2001) "Recent research on the emergence of early historic states in Cambodia's Lower Mekong Delta", *Bulletin of the Indo-Pacific Prehistory Association* 19: 85-98.

- Stark, M. T., Bion Griffin, P., Phoeurn, C., Ledgerwood, J., Dega, M., Mortland, C., Dowling, N., Bayman, J., Sovath, B., Van, T., Chamroeun, C. and Latinis, K. (1999) "Results of the 1995–1996 field investigations at Angkor Borei, Cambodia", *Asian Perspectives*, 38(1): 7–36.
- Vickery, M. (1994) "Where and what was Chenla?", in F. Bizot (ed.) *Récherches Nouvelles sur le Cambodge*, pp. 197–212, Paris: L'École Française d'Extrême-Orient.
- Welch, D. J. (1989) "Late prehistoric and early historic exchange patterns in the Phimai region, Thailand", *Journal of Southeast Asian Studies* 10(1): 11–26.
- White, J. (1995) "Incorporating heterarchy into theory on socio-political development: the case from Southeast Asia", pp. 101–23, in R. M. Ehrenreich, C. L. Crumley and J. E. Levy (eds), *Heterarchy and the Analysis of Complex Societies*, Washington: Archaeological Papers of the American Anthropological Association, No. 6.
- Worman, E. C. (1949) "Samrong Sen and the reconstruction of prehistory in Indochina", *Southwestern Journal of Anthropology* 5(4): 318–29.

### Art history

- Boisselier, J (1989) *Trends in Khmer Art* (trans. and ed. N. Eilenberg), New York: Cornell University, Southeast Asia Program, Ithaca.
- Giteau, M. (1965) *Khmer Sculpture and the Angkor Civilization*, London: Thames and Hudson.
- Giteau, M. (1976) *The Civilization of Angkor*, New York: Rizzoli.
- Jessup, H. I. and Zephir, T. (eds) (1997) *Sculpture of Angkor and Ancient Cambodia*, Washington: National Gallery of Art.
- Parmentier, M. H. (1927) *L'Art Khmer Primitif*, Paris: Publications de l'École Française de l'Extrême-Orient.
- Rooney, D. F. (2000) *Angkor: An Introduction to the Temples*, Hong Kong: Odyssey.

### Ceramics

- Aoyagi, Y., Sasaki, T., Marui, M. and Miyata, E. (1998). "Investigation of Tani Kiln Site Group, Angkor". *Reconnaissance Culturelle de Cambodge* 15.
- Aoyagi, Y., Sasaki, T., Tanaka, K., Nogami, T., Marui, M. and Sumida, T. (2000) "Excavation of a Khmer Ceramic Kiln Site: Report of the Investigation of Kiln B1, Tani Kiln Complex", *Udaya* 1: 235–53.
- Brown, R. (1988) *The Ceramics of South-East Asia: Their Dating and Identification*, (2nd edn), Oxford and New York: Oxford University Press.
- Dumarçay, J. (1973) *Charpentes et Tuiles Khmères*, Paris: École Française d'Extrême-Orient.
- Franiatte, M. (2000) "Nouvelle Analyses de la céramique khmère du Palais Royal d'Angkor Thom: Etude préliminaire", *Udaya* 1: 91–124.
- Groslier, B-P. (1981) "Introduction to the ceramic wares of Angkor", in D. Stock (ed.) *Khmer Ceramics, 9th–14th Century*, pp. 9–40. Singapore: Southeast Asian Ceramic Society.
- Guy, J. (1996–1997) "A reassessment of Khmer ceramics", *Transactions of the Oriental Ceramic Society* 61: 39–63.
- Rooney, D. F. (1981) "Uses of Khmer ceramics", in D. Stock (ed.) *Khmer Ceramics, 9th–14th Century*, pp. 51–55, Singapore: Southeast Asian Ceramic Society.
- Rooney, D. F. (1984) *Khmer Ceramics*, Oxford: Oxford University Press.
- Stark, M. T. (2000) "Pre-Angkor earthenware: ceramics from Cambodia's Mekong Delta", *Udaya* 1: 69–90.
- Stock, D. (ed.) (1982) *Khmer Ceramics, 9th–14th Century*, Singapore: Southeast Asian Ceramic Society.

### Epigraphy

- Coedès, G. (1937–66) *Inscriptions du Cambodge*, vols. 1–8, École Française d'Extrême Orient, Collection de textes et documents sur l'Indochine III, Hanoi: Imprimerie d'Extrême Orient.

- Jacques, C. (1979) "Funan, Zhenla: The reality concealed by these Chinese views of Indochina", pp. 371-9, in R. Smith and W. Watson (eds) *Early South East Asia: Essays in Archaeology, History, and Historical Geography*, pp. 371-9, Oxford: Oxford University Press.
- Jacob, J. M. (1978) "The ecology of Angkor: evidence from the Khmer inscriptions", in P. A. Stott (ed.) *Nature and Man in South East Asia*, pp. 109-27, London: School of Oriental and African Studies, University of London.
- Jacob, J. M. (1979) "Pre-Angkor Cambodia: evidence from the inscriptions in Khmer concerning the common people and the environment", in R. B. Smith and W. Watson (eds) *Early South East Asia: Essays in Archaeology, History, and Historical Geography*, pp. 406-26. Oxford: Oxford University Press.

### ***Geology, ecology, hydrology, water management and land use***

- Acker, R. (1998) "New geographical tests of the hydraulic thesis at Angkor", *South East Asia Research* 6(1): 5-47.
- Bishop, P., Sanderson, D. C. W. and Stark M. T. (2003) "OSL and radiocarbon dating of a pre-Angkorian canal in the Mekong Delta, southern Cambodia", *Journal of Archaeological Science* 31 (3) 319-36.
- Carbonnel, J.-P. (1970) "Le Quaternaire cambodgien. Structure et stratigraphie", Doctorat d'Etat, University of Paris.
- Groslier, B-P. (1979) "La cité hydraulique angkorienne: exploitation ou surexploitation du sol?", *Bulletin de l'École Française d'Extrême Orient* 66: 161-202.
- Jacob, J. M. (1978) "The ecology of Angkor: evidence from the Khmer inscriptions", in P. A. Stott (ed.) *Nature and Man in South East Asia*, pp. 109-27, London: School of Oriental and African Studies, University of London.
- Moore, E. H. (1989) "Water management in Cambodia: evidence from aerial photography", *Geographical Journal* 155(2): 204-14.
- Moore, E. H. (1992) "Water enclosed sites: links between Ban Takhong, Northeast Thailand and Cambodia", in J. Rigg (ed.) *The Gift of Water: Water Management, Cosmology and the State in South East Asia*, pp. 26-46, London: School of Oriental and African Studies.
- Paris, P. (1931) "Anciens canaux reconnus sur photographies aeriennes dans les provinces de Ta-Keo et de Chau-doc", Paris: *Bulletin de l'École française d'Extrême-Orient* 31: 221-4.
- Paris, P. (1941a) "Anciens canaux reconnus sur photographies aeriennes dans les provinces de Ta-Keo, Chau-doc, Long Xuyen", Paris: *Bulletin de l'École française d'Extrême-Orient* 41: 365-70.
- Paris, P. (1941b) "Autres canaux à l'est du Mékong par examen d'autres photographies aeriennes provinces de Ta-Keo, Chau-doc et de Long Xuyen", Paris: *Bulletin de l'École Française d'Extrême-Orient* 41: 371-2.
- Parry, J. T. (1996) "A new perspective on Angkor - the spatial organization of an historical landscape viewed from Landsat", *Geocarto International* 11(2): 15-32.
- Stott, P. (1992) "Angkor: shifting the hydraulic paradigm", in J. Rigg (ed.) *The Gift of Water: Water Management, Cosmology and the State in South East Asia*, pp. 47-58, London: School of Oriental and African Studies.
- Thung, Heng (2002) "Angkor revisited: lessons to learn?" *SPAFSA Journal* 12(2): 5-17.
- Van Liere, W. J. (1980) "Traditional water management in the Lower Mekong Basin", *World Archaeology* 11(3): 265-80.

### ***Politics and economics***

- Jacques, C. (1986) "Sources on economic activities in Khmer and Cham Lands", in D. G. Marr and A. C. Milner (eds) *Southeast Asia in the 9th to 14th Centuries*, pp. 327-34, Singapore: Institute of Southeast Asian Studies and Research School of Pacific Studies, Australian National University.
- Vickers, M. (1986) "Some remarks on early state formation in Cambodia", in D. G. Marr and A. C. Milner (eds) *Southeast Asia in the 9th to 14th Centuries*, pp. 95-115, Singapore: Institute of Southeast Asian Studies.

- Vickery, M. (1998) *Society, Economics and Politics in pre-Angkor Cambodia: The 7th and 8th Centuries*, Tokyo: The Centre for East Asian Cultural Studies for Unesco, The Toyo Bunko.
- Wicks, R. L. (1992) "Money and society in ancient Cambodia and Champa", in *Money, Markets and Trade in Early Southeast Asia*, pp. 183–218. Ithaca: Southeast Asia Program, Cornell University.

### **Religion and iconography**

- Aeusrivognse, Nidhi (1976) "The *Devaraja* Cult and Khmer Kingship at Angkor", in K. R. Hall and J. K. Whitmore (eds) *Explorations in Early Southeast Asian History*, pp. 107–148, Ann Arbor: University of Michigan.
- Mabbett, I. W. (1969) *Devaraja*. *Journal of Southeast Asian History* 10(2): 202–23.
- Mabbett, I. W. (1977) "Varnas in Angkor and the Indian Caste System", *Journal of Asian Studies* 36(3): 429–42.
- Mannikka, E. (1996) *Angkor Wat: Time, Space, and Kingship*, Honolulu: University of Hawaii Press.

### **Social organization**

- Kirsch, A. T. (1976) "Kinship, genealogical claims, and societal integration in Ancient Khmer society: an interpretation", in C. D. Cowan and O. W. Wolters (eds) *Southeast Asian History and Historiography*, pp. 190–202, Ithaca: Cornell University Press.
- Mabbett, I. W. (1983) "Some remarks on the present state of knowledge about slavery in Angkor", in A. Reid (ed.) *Slavery, Bondage and Dependency in Southeast Asia*, pp. 44–63, New York: St. Martin's Press.
- Ricklefs, M. C. (1967) "Land and law in the epigraphy of tenth century Cambodia", *Journal of Asian Studies* 26(3): 411–20.