SOUTHEAST ASIA
From prehistory to history

Edited by Ian Glover and Peter Bellwood
PRE-ANGKORIAN AND ANGKORIAN CAMBODIA
Miriam T. Stark

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 is Cambodia resumed in the mid-1990s.

This chapter reviews key cultural developments in pre-Angkorian and Angkorian Cambodia, and seeks to first the roots of the great Khmer empire that dominated much of mainland Southeast Asia from the ninth–fifteenth centuries AD. Figure 5.1 locates prehistoric, pre-Angkorian, and Angkorian archaeological sites. The temporal framework used in this summary tracks 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, from 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: there are the Mekong Delta of southern Vietnam and the Khmer 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 northeastern Cambodia has also long been contested and the provinces (Battambang, Surin, Si Sa Ket, and Nakhon Ratchasima) of northeastern Thailand (Lao) that border Cambodia retain sizable ethnic Khmer populations today. It is not surprising, thus, that these same provinces bear the archeological 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 Reclus (or Roques) discovered the archaeological site of Samrong Sen, along the Oun river in central Cambodia. The discoveries there and in other locales attracted some attention from
Figure 5.1 Archaeological sites in Cambodia, mentioned in the text.
Table 5.1 Temporal framework used in this chapter

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Date (BC/AD)</th>
<th>Cultural developments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late Hoabinhian and Early Neolithic</td>
<td>c.5200–2500 BC</td>
<td>Late Paleolithic, terminal and post-Pleistocene life based on mobile hunting and gathering with some more sedentary settlement along the coast. Introduction of agriculture and more settled village life, basically with a stone technology with bronze working developing from c.1500 BC.</td>
</tr>
<tr>
<td>Neolithic and Bronze Age</td>
<td>c.2500–500 BC</td>
<td>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.</td>
</tr>
<tr>
<td>Early Historic period</td>
<td>c.500 BC–AD 500</td>
<td></td>
</tr>
<tr>
<td>Pre-Angkor Period</td>
<td>AD 500–802</td>
<td>Appearance of writing using modified Indian scripts and Pāli Sāsākriti, then later Old Khmer language. Expansion of early states and inter-regional conflict.</td>
</tr>
<tr>
<td>Angkor, or Historic Period</td>
<td>AD 802–1431</td>
<td>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.</td>
</tr>
</tbody>
</table>

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. For a number of reasons, Cambodia’s neighbors, Vietnam and Thailand, have a much better documented archaeological record.

The Paleolithic to Hoabinhian, c.5200–3600 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 Mouter has dismissed these estimates on palaeontological and chronometric grounds. Jean-Pierre

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Carbonized also assigned a Paleolithic age to finds from Phnom Loun in Kampong Province, based on their association with Lower Pleistocene fauna. Our current knowledge of Cambodia's history thus begins in the Holocene epoch, (nearly 8,000 years ago) with a foraging and gathering way of life. This period is generally gloated as the "Holothinian" throughout Southeast Asia and is associated with a broad-spectrum diet and occupation of riverine areas and forest edges. Cambodia's only documented Holothinian site, Laang Spean, lies in a limestone hill in the Sangker river valley in Battambang province (Figure 5.2). French archaeologists Robert and Cecile Mouret excavated portions of this karst cave from 1966–68 with assistance from the Faculty of Archaeology of the Royal University of Fine Arts in Phnom Penh. 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 Holothinian period at sites throughout much of mainland Southeast Asia. Faunal remains recovered at the site suggest a broad diet of small animals (minks, rodents, birds and frogs), river resources (molluscs and turtles), and a variety of forest animals including deer and small bovids.

The Holothinian 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 axes and plant domestication. 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. Naurer.)
The province of Kampong Chhnok contains a series of circular earthwork sites that Bernard-Philippe Groslier and Louis Mallett assigned to the Neolithic period. Fieldwork at these "doughnut-like embankments", such as Krek and Minot (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 Minot 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 dates from Chambor-Anlong (1150 ± 100 BP, cal. AD 760-925; Gif-647) and Chup-Thmar Pich (2130 ± 100 BP, cal. 440-375 BC; Gif-1448). Vietnamese archaeologists surveyed the two sites. Mallett had noted in southern Vietnam and added four more to the list in Binh Phuoc province, which is adjacent to Kampong Chhnok. 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. 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 that began in the third millennium and continued into the mid-first millennium BC.

Several historic sites may overlap 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 5.5 Drawings of Kirk potteries (Courtesy of G. Albrecht and M. Haddie.)
Chau Say Tevoda and Trapeang Phong. Even the sixth-eighth-century site of Samboe Prei Kuk (Kompong Thom Province) may sit atop a Neolithic foundation (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, 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 Samrong 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...
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 Massay recovered a collection of stone adzes, bronze objects and human remains that suggested a Breton Age occupation. The Swedish archaelogist Clas Jonne subsequently tested the site and purchased from villagers bronze artifacts that included bracelets, socketed spearheads, axes and a hoe. The lack of scientific dating techniques available at the time of Massay's research, however, limited the utility of these findings.

Paul Levy subsequently examined open-air sites around Mua Tevi (Peteh Vibar Province) that also contributed to our meager knowledge of the Cambodian Bronze Age. Levy'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 mould and of a ceramic crucible for bronze casting with metal dust still adhering to its surface. The site of O Yack 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 Banlung Mean Chey 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 other Neolithic or Bronze Age occupations.12

In May 2000, authorities were alerted to looting at a prehistoric mortuary site known locally as Phnum Snyay, located north of Stung Reap in the Preah Net Preah district of Batou 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.13

Systematic archaeological investigations at Phnum Snyay were undertaken in February 2001 under the direction of Douglas O'Keefe for the Royal University of Fine Arts (with assistance from Charles Higham). Excavation of a 5-meter by 50-meter area 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.4

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 Asia first settled in large nucleated communities, organizing themselves into small warring polities whose political structure has been described by Wolters as 18 as of munda-type in terms of their illustrative-based spheres of influence fluctuated on a ruler. They also became engaged in international maritime trade. The organizational changes at this time were marked by greater social stratification
Pre-Angkorian and Angkorian Cambodia

and, ultimately, emergent states. Earlier historians like Coedes 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.17

It is likely that this process occurred separately in northwestern and southeastern Cambodia. Archaeological excavations at sites in northeast Thailand, which was at various times Khmer-dominated, has begun to document these organizational shifts. More's research 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 (LOMA?).

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 neighbors 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. 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. 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 Angkor period.22

In the third century AD, the Kingdom of Ves, the southermost state in post-Har. China, sent a number of envoys into mainland Southeast Asia to establish trading partners. The great French historian Paul Pelliot translated the accounts of these missions which referred to a "Kingdom of Funan", a polity that flourished between the second and sixth centuries AD.23 Archaeological research at 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 thousand 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 Fais used aerial photographs to argue

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

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, stone (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 Pre Rup in the Prey Veng province may have been founded during this time, and still others await identification in southern Cambodia. Vast areas excavations at more than 70 "Old Kingdom" 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.25

The Pre-Angkorian Period and "Champa"

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 the change in the regional trade networks accompanying the rise of Siamhis in southern Siam. 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,26 may also have played a role.

Evidence for this power shift derives from documentary and archaeological data. Chinese accounts describe the "Kingdom of Champa" that wrested power first from Funan and indigenes inscriptions describe a series of individuals who conquered their enemies by military might. Our knowledge of "Champa" derives largely from Kmer and Sanskrit inscriptions27 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 Champa lay north at Wre Phu in southern Laos, near the confluence of the Mekong and Mun Rivers. More recent scholars suggest that the capital of Champa lay in what is now east-central Cambodia, in the province of Kampong Thom. Foremost among these pre-Angkorian settlements is Sambor Prei Kuk in Kampong Thom Province, known, in the inscription as Lasapura.

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 degree 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 state control.28 Analysis of inscriptions identifies three possible Champa rulers: Bhavavarman in the late eighth century; his successor Girapatha, who called himself Mahendravarman; and Isaravarman, 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 protagonism had diminished by the late eighth century AD, when Jayavarman II established a new capital that he called Lasapura. Today, we know that site as Banteay Prei Kek, in Kampong Thom Province. Aerial reconnaissance there in the mid-1930s29 revealed a large, square-ruised and walled settlement. Outside the enclosed area were five reservoirs aligned on the same
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 on 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 plains. Scholars often use the term Angkor to describe the complex of archaeological sites found between the Tonle Sap and the Kulen Hills to the northwest.

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. As 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 expansive impulse drove the Khmer rulers eastward and into conflict with the Cham principalities of the central coast of Vietnam, and westward almost to the borders of Burma to gain control over people and for access to maritime commerce via the Malay Peninsula. This archaeological record of this history consists largely of monumental constructions (Figure 5.39) in laterite, sandstone and brick that mark the sacred 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 stoneworks; and
Historians and archaeologists have used the following 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 at the Angkor area usually takes place within larger restoration projects for specific monuments. However, Moore's use of remote sensing to locate mound sites in the Siem Reap region and Quilerio's excavations at the Royal Palace and in the city of Srok Srei are two examples of research-oriented field projects in the region. In addition, researchers of the Ecole Francaise d'Extreme-Orient since 1992 have produced an archaeological map that sheds light on urban and rural patterning during the Khmer empire. Archaeological survey and excavation in Northeast Thailand has also contributed to our knowledge of regional settlement variability and economy throughout the Angkorian period. 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). Translations of Khmer and Sanskrit inscriptions on reliefs in temples or other sacred areas yield information on economy and society, as well as on royal portraits and religious affairs. The Sanskrit inscriptions are conceived directly with the gods while Khmer inscriptions largely deal with the administration of the temple properties. References to comadrons in these inscriptions are limited, but the inscriptions hold some information on the Khmer non-elite and the environment in which they lived. Additionally, Chao Te-Kuon, 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 Countries of Cambodia", following it.
translation by the French sinologist Pelliot. 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 certain 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.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Ruler</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>c.779-c.834</td>
<td>Jayavarman II</td>
<td>Founded kingdom by building Hariharalaya, established cult of the trial king</td>
</tr>
<tr>
<td>c.834-c.879</td>
<td>Jayavarman III</td>
<td>Son of Jayavarman II</td>
</tr>
<tr>
<td>c.877-c.889</td>
<td>Indravarman I</td>
<td>Built ruins portion of Roluos group (Preah Ko, Lebei and Bokong) and built called Indravarman</td>
</tr>
<tr>
<td>c.889/890-c.910/912</td>
<td>ʻSailovarman I</td>
<td>Built Phnom Bakheng as new capital (called Vajrabhodhagiti), the Eastern Baray (daunghriwatapar); introduced Nagari inscriptions of North India</td>
</tr>
<tr>
<td>c.950/ 912-923</td>
<td>Hariharavarman I</td>
<td>Built Baksei Chamkrong</td>
</tr>
<tr>
<td>c.923-c.928</td>
<td>Jayavarman II</td>
<td>— no major construction —</td>
</tr>
<tr>
<td>928-945</td>
<td>Jayavarman IV</td>
<td>Moved royal residence away from Angkor to Koh Ker; begins Phimanteakas and Ta Keo</td>
</tr>
<tr>
<td>c.941-944</td>
<td>Hariharavarman II</td>
<td>— no major construction —</td>
</tr>
<tr>
<td>944–968</td>
<td>Rajendravarman II</td>
<td>Restored capital at Yasodharapura and built temples of East Mebon and Pre Rup; issued Champa, Dvaravati, and Sukhothai area</td>
</tr>
<tr>
<td>c.968–c.1000</td>
<td>Jayavarman V</td>
<td>Consolidated Rajendravaran’s conquests; constructed and dedicated Banteay Srei (Palace of Women) in 966; built Ta Keo</td>
</tr>
<tr>
<td>1002–1020</td>
<td>Udara Pravarman</td>
<td>Disappearance after one year as king</td>
</tr>
<tr>
<td>1020–1050</td>
<td>Jayavarman VI</td>
<td>Civil war raging; basis for sovereignty between Jayavarman and Srivijaya</td>
</tr>
<tr>
<td>1050–c.1066</td>
<td>Udara Pravarman</td>
<td>Civil war raging; basis for sovereignty between Jayavarman and Srivijaya</td>
</tr>
<tr>
<td>1066/ 1077–1080</td>
<td>Hariharavarman II</td>
<td>Built Baphuon, West Mebon</td>
</tr>
<tr>
<td>1080-1107</td>
<td>Jayavarman VII</td>
<td>Beginning of Mohistana dynasty; built Banteay Srei</td>
</tr>
<tr>
<td>1107–1112 Dharavtarman I</td>
<td>— no major construction —</td>
<td></td>
</tr>
<tr>
<td>1113–c.1150</td>
<td>Suryavarman II</td>
<td>Established relations with China and fought the Chams and the Dai Viet; constructed Angkor Thom and portions of Angkor Wat, Beng Mealea and Chnambor Tevoda</td>
</tr>
<tr>
<td>c.1136–c.1150</td>
<td>Yasovarman II</td>
<td>— no major construction —</td>
</tr>
<tr>
<td>c.1155–1177</td>
<td>Tribhuvanavarman II</td>
<td>Cham invasion (mini Khmer defeat) ended his reign in 1177</td>
</tr>
<tr>
<td>1181–c.1218</td>
<td>Jayavarman VII</td>
<td>Expanding Khmer empire on the east to the South China sea, on the northeast far to Champas, and east to the borders of Pegu; built roads, bridges, hospitals and p Ol-Chan a t Wilson's kingdom; strengthened centralized bureaucracy; built more than 15 major monuments, including Angkor Thom and most of the temples (e.g., Banteay, Preah Khan, Ta Prohm) and Banteay Kdei and Neak Pean</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Time Period</th>
<th>Rule</th>
<th>Selected Developments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1218-1243</td>
<td>Indravarman II</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1243-1295</td>
<td>Jayavarman VIII (abolished)</td>
<td>May have sponsored the last known royally endowed temple</td>
</tr>
<tr>
<td>c.1295-1308</td>
<td>Indravarman III</td>
<td>Theravada Buddhism became state religion; Chinese emissary Chou Ta-Kuan spends year at Angkor Wat</td>
</tr>
<tr>
<td>1300-1307*</td>
<td>Sridravarman (abolished)</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1308-1327*</td>
<td>Indravarman</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1330-1353*</td>
<td>Paramarshenujra</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1371-1*</td>
<td>Hous-eul-na</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1404*</td>
<td>Sambac Pra Phaya</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1405*</td>
<td>Sambac Pra Phaya, Phnom-Yas</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1405-1409*</td>
<td>Nippean-bat</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1409-1416*</td>
<td>Lampang or Lamphun</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1416-1425*</td>
<td>Sorjovong, Sorjiong, or Lamphung</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1425-1429*</td>
<td>Barun Cha, or Gamkhet Ramadhaputra</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1429-1431*</td>
<td>Thonnos-Sosonch, or Dharmanaka</td>
<td>no major constructions</td>
</tr>
<tr>
<td>1432-2*</td>
<td>Pothe Ya, or Yam Yat</td>
<td>no major constructions</td>
</tr>
</tbody>
</table>

Note: This chronology follows the chronology presented in Mabbett and Chandler (1995: 261-68). Those marked with * indicate contested ruler, offered by contradictory Cambodian and Thai court chronicles; these were taken from chronology in Jmpop and Zaphia (1997).

international warfare. Military conquest characterized Khmer rulers throughout the first three centuries of their rule. The expiry 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 Sivaita) with its outward focus on commercial enterprises rather than military expansion.

Jayavarman II established his rule at Harishalayla in the early ninth century and his successors ruled at this capital for much of 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 which is Eastern Baray. This walled city, measuring 4 kilometres on each side, housed Phnom Bakong as the capital.

Several decades of political fragmentation characterized the period after Yasovarman, and it took Rajendravarman to reunify the polity and restore Yasodharapura 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.
V. Rajendraavarman's conquests, from the borders of Barma 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 administer newly conquered territories.

Following Rajendraavarman's reign there was a struggle for power that culminated in the ascendency 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. Suryavarman I also encouraged the growth of a commercial economy, along major river networks and overland routes, that connected the Khmer 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 1113–1150), who oversaw the construction of Angkor's most famous monument, Angkor Wat, though 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 Chao, 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 Chao, 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 ruler's Shivaite cult in the most
common reconstructions of this period. At the top of the cosmic order were the gods and their human emissaries, 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 lineage, a phallic-shaped stone that was the physical manifestation of the Hindu god Siva and also of the royal lineage. The 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 nagas (later corrupted to naga 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. Aided by their Brahman priests, the Khmer kings embodied the concepts of royal divinity and dedicated numerous temples to their divine ancestors.

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

Socioeconomic structure

A fundamental class distinction divided Khmers into elites versus commoners, with gradations in each group. Elite included royalty, bureaucracy, and wealthy landowners—some of whose names are inscribed and acts of beneficence recorded in the stone steles erected in religious monuments. These elites, referred to as "mandarins" (or mai-diw) in Chou Ti-Kian's thirteenth-century source, were found in more than 90 provinces throughout the countryside. The secular, landed elite-controlled temples throughout the empire managed irrigation systems and channelized 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 held non-agricultural professions that included artisans, traders, religious personnel, and administrative officials.

Documentary accounts and bas-reliefs from the Bayon suggest that male commoners were likely to be farmers, hunters, manual workers, and craftsmen. Female commoners engaged in agriculture, market trade, diplomacy, warfare, and the performance 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 rice agriculture, fishing, trade, tribute, taxation, and corvée labor. Since 1994 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 five 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 Tonlé Sap. Remote sensing techniques have identified ancient field systems throughout portions of the Angkor region today, and Van

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Lévi 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.

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 dike, and terraced the floodplain to drain and hold back floodwaters, dug moats around their temples and some residential areas, and built enormous small reservoirs to tap the high water table found in the region. The precise role of these 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 dikes, so large that they are visible from space by satellite. The Indradatap (or Lolei bonap), built between 1300-1320, was 3 kilometers long while the Yao-sar-hantapak, or East Baray, constructed during the reign of Yasovarman, was 7 kilometers long.

The role of these giant reservoirs for subsistence continues to be a source of debate, and the brute is sometimes glossed as the "hydraulic paradigm". For a long time it was held that the agrarian economy of Angkor rested on irrigation. This has been challenged through the analysis of aerial and satellite imagery. Work by van Lier and Zucker suggests that the total irrigable land available was far smaller than Grolier calculated. And they argued that the ancient Khmer 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 taxes and goods. Business transactions that occurred at the temple were also recorded, and the temple served as a type of "bank" for the farmers and seed streets of the community.

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 sawat, and who were obligated to provide labor, rather than simple 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 entered 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.4 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 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 potteries in Buri Ram Province of Thailand also made green and a variety of brown glaze wares that are known as "fire-decor".46

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,47 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.48 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 Cham, 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 Kwa Noi River. For Jayavarman VII, imperial expansion meant monumental construction: great stone temples and their heray, 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
Miriam T. Stark

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 edifices, and the four-faced robins that epitomize the Bayon are said to reflect the Buddhist incarnation of the Buddha known as Avalokiteshvara (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,52 where Theravada Buddhism, introduced from Sri Lanka, was widely practiced during this time. Theravada Buddhism encouraged a more egalitarian structure replacing the divine rule of kings (devapati) with a canonical religion by the end of the fourteenth century. Chao

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." 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 output of power shifted southwest to Cambodia and ultimately to the intersection of the "maritime lane" 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 envoys 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 reduced 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. Gosler's "hydraulic city" model for example, linked Angkor's decline directly to silting in the massive basin that ostensibly fed a complex of irrigation canals. As noted previously, whether these basin played an important role in providing food for the 1.9 million Angkor inhabitants that Gosler estimated remains a matter of some debate. What seems clear is that ecological factors played some role, and Heng Thong's geological analysis suggests that the region experienced significant geological uplift that caused downcutting and erosion in the rivers that fed the giant reservoir. 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. This argument, while attractive, cannot yet explain the relationship between Angkor's collapse during a period in which the first classical states 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-Sriite 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 commercial intensification? Did farmers first experiment with domesticating plants at the lake margins, or do we see the beginning of agricultural experimentation somewhere, 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 archeological change that are evident in both Thailand and Vietnam, and that take such different forms? Cambodia's location and its unique geography made it an important locus of research on these topics, and findings from such research will doubtless; free 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 Angkor period. Key questions concerning urban settlement and growth, provincial organization, the political centers, and the operation of regional economic networks remain to be explored. Future archeological 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 intense 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 insurrection, revolution and war brought a halt to all fieldwork. From the early 1990s Indians, 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
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.
5 White 1995.
8 Groslier 1979: 165; Mouer 1977: 52.
10 On Samrong Son, see Cartailhac 1890; Jamm 1951; Massuy 1902, 1925: 2-8; Mouer 1986: 94-7; Woerman 1949.
11 Lévy 1943.
12 Kojo 1998.
15 Witters 1999.
17 Coedes 1968; Kûker 1990.
21 Pelliot 1903, Whealey 1983.
22 Aymonin 1900; Mallerrat 1959-1962; Parmentier 1927.
23 Pelliot 1903.
24 On Angkor Borei, see Stark et al. 1999; Stuck and Bong 2001; Paris 1931, 1941; Bishop et al. 2003.
28 Grosler 1979; van Liere 1980.
29 Goloubew 1936.
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