



Pre-Angkorian cities:
Ishanapura and Mahendraparvata

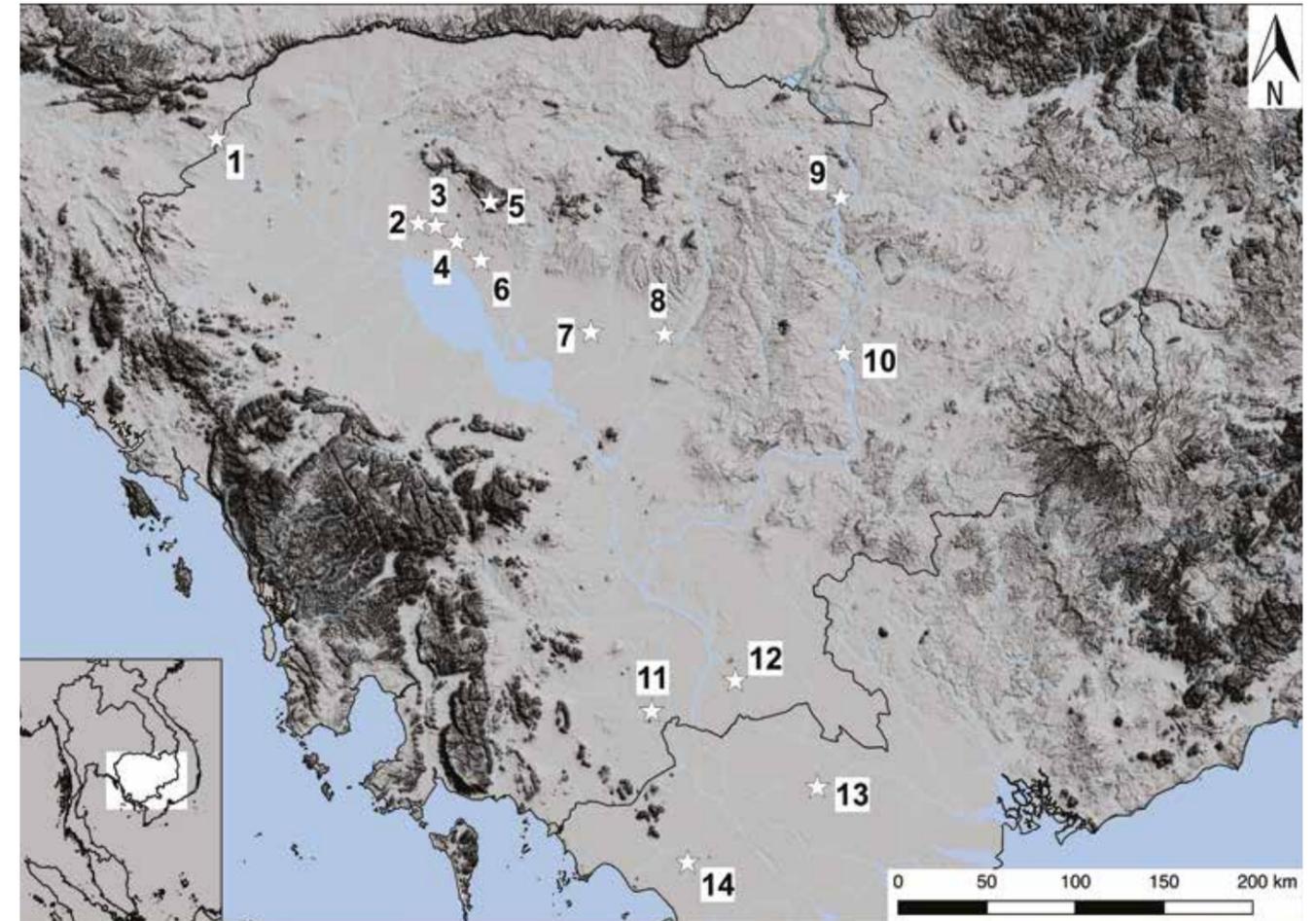
RECONSTRUCTING THE PRE-ANGKORIAN CITIES

Archaeologists use the terms “cities” and “urban centres” to refer to areas: (1) with a large population compared to surrounding settlements; (2) that are inhabited by diverse sociopolitical and economic classes; (3) that contain ceremonial and secular architecture (temples, fortified moats, and/or walls).¹ Some of these centres were capital cities, the seats of political power, where rulers and their entourages resided and where large monumental architecture was erected. This essay examines the archaeological and art historical evidence for two early Khmer urban centres that likely served as political capitals. The information associated with these sites sheds light on the pre-Angkorian period (around 7th–8th century) and provides valuable insight into the foundations of Angkor.

The early Southeast Asian city can be generally characterised as an “exemplary centre” that served political, economic, and social functions while simultaneously representing an “embodiment” of power and a model “microcosm of the supernatural order”.² Contrasting with densely populated modern cities, early Southeast Asian cities, which occurred in various configurations, were examples of “low-density urbanism”, and comprised dispersed settlements intermixed with agricultural lands and ceremonial centres.³ The prehistoric, moated settlements of northeastern Thailand and northwestern Cambodia may have been the earliest cities of mainland Southeast Asia.⁴ These were followed by the Mekong River Delta communities associated with Funan, which, according to fifth-century Chinese accounts, were oriented around communal ponds.⁵ Similar patterns are implied by seventh-century pre-Angkorian inscriptions that state that ponds belonged to the local elites.⁶ Archaeological research in the Mekong Delta and in the Stung Treng area of Cambodia indicates that pre-Angkorian settlements were composed of mounds and/or moat-mounds, some of which contained temples and ponds.⁷ The pre-Angkorian political centres that are the focus of this essay consist of these same features but on a larger scale.

PRE-ANGKORIAN CITIES AND PURA

The most common territorial unit recorded in the pre-Angkorian inscriptions of the seventh and eighth centuries is *pura*.⁸ The more well-known use of the term *nagara* (the origin of the term “Angkor”) to refer to a political centre occurs only in Angkorian-period inscriptions, for example, in reference to *nagara Hariharalaya* and *nagara Mahendraparvata*. The pre-Angkorian *pura* are commonly recorded with the names of rulers or governors, bearing Khmer and Sanskrit titles, who appear to have held political power over a large area; and some of them paid allegiance to pre-Angkorian kings (fig. 1).⁹



There are, however, no internal records specifying the similarities or differences in the political or economic status or function between capital cities and other regional cities. Chinese accounts of this period refer to the Khmer lands as “Zhenla”, and one of them, *History of the Sui*, associates the pre-Angkorian King *Y-che-na-sien-tai* (spelled in local inscriptions as Ishanavarman I, reigned around 616–637) and his royal palace with the capital city of *Y-che-na* (Ishanapura), which, as indicated by a contemporaneous inscription (K. 438), corresponds to the site of Sambor Prei Kuk, in Kampong Thom province.¹⁰ The same Chinese account also specifies that Zhenla had more than thirty populous cities, each ruled by a governor; they likely correspond to the *pura* governors mentioned in the local inscriptions.¹¹

The pre-Angkorian inscriptions rarely link kings directly with cities, but a few inscriptions dating to the first half of the seventh century refer to rulers in association with the principal gods of the capital city of Ishanapura. The earliest inscription linking a pre-Angkorian ruler directly to his capital city is on a gold medallion (or coin) reportedly found at

¹ Sites mentioned in this essay.

Map key

1. Sdok Kak Thom (K.235)
2. Ak Yum (Purandarapura)
3. Angkor
4. Roluos/Bakong (Hariharalaya)
5. Phnom Kulen (Mahendraparvata)
6. Trapeang Run 1 (K.598)
7. Prasat Ampil Rolum
8. Sambor Prei Kuk (Ishanapura)
9. Thala Borivat
10. Sambor (Shambhupura)
11. Angkor Borei (Phnom Da)
12. Kdei Ang (K.53)
13. Go Thap Muoi (aka Go Thap or Prasat Pram Loveng)
14. Oc Eo

Angkor Borei, which bears the reconstructed inscription “Ishanapura” on one side and “Ishanavarman” on the other.¹² This evidence reinforces our perceptions of the relationship between this early capital city and its ruler, as well as the sociopolitical role of the capital city as an exemplary centre.

The earliest stone inscriptions connecting a pre-Angkorian ruler with a palace, corresponding capital city, and, therefore, political power, date to the second half of the seventh century under Jayavarman I (around 657–681) and his daughter Jayadevi (around 681–after 713). Political centralisation can be inferred from the royal edicts issued by the court located at the capital city of Purandarapura, associated with the area around the temple of Ak Yum in the Angkor region.¹³ No records of cities exist from the time after Queen Jayadevi until Hariharalaya appears in an inscription (K. 848) dated to 969. Hariharalaya (Roluos) and Mahendraparvata (Phnom Kulen), both in Siem Reap province, are the two centres dated closest to the rise of Angkor. Later inscriptions of the eleventh century (K. 598 dated 1006 and K. 235 dated 1052) credit Mahendraparvata as the location where Jayavarman II (around 790–835?) performed his Devaraja ceremonies in 802, the date conventionally associated with the beginning of the Angkorian period.¹⁴ Together, Mahendraparvata and Hariharalaya are therefore associated with the transition from the pre-Angkorian to the Angkorian period, and with the beginning of Angkor’s architectural and sculptural traditions.

IDENTIFICATION OF PRE-ANGKORIAN CITIES

References to early capital cities first appear in Chinese accounts of Funan around the sixth or seventh century.¹⁵ The earliest capital of Funan, said to have been located approximately 200 kilometres inland, is recorded in Chinese as *T’o-mou*.¹⁶ By the seventh century, the capital was moved southward to *Na-fou-na*. Angkor Borei, a fortified 300-hectare settlement dated by recent archaeological research to the period 500 BC–AD 500, is the most likely candidate to have been one of these capital cities. The largest settlement in the Mekong Delta region, it consisted of both ceremonial and residential districts (mounds, moat-mounds, brick temples, and ponds), and was part of a network of canals linking to other regional settlements, including the important site of Oc Eo in what is today southern Vietnam.¹⁷ The canals, as well as the moat and ponds around Angkor Borei, provide strong evidence of the importance of water and landscape management during the pre-Angkorian period. Historical documents and archaeological data furthermore indicate that Angkor Borei was connected to the maritime trade network that linked the South China Sea and the Indian Ocean.¹⁸

The earliest epigraphic evidence from the Mekong Delta region suggests that rulers may have adopted localised forms of Brahmanism into their sociopolitical system as early as the fifth century. The earliest evidence of Brahmanical (or “Hindu”) shrines may date to approximately the same time, around the fifth or sixth century,¹⁹ with locally produced stone statuary, both Buddhist (Cat. 87) and Brahmanical (Cat. 93), probably first appearing during the sixth century.²⁰ The Vaishnava tradition, which associated Vishnu with cosmic kingship and water management, was a prominent aspect of the pre-Angkorian period in the southern Khmer lands generally associated with the polity of Funan.²¹ For example, an inscription (K. 5) dated to around the fifth century from Thap Muoi in present-day Vietnam, records the foundation of a Vishnu temple on lands reclaimed from the mud.²² The sixth- and seventh-century Vaishnava orientation of the coastal regions of southern Cambodia and southern Vietnam is furthermore revealed by the artistic tradition of four-armed, mitred Vishnu statuary (Cat. 100) and, most spectacularly, by the large stone sculptures of Vishnu and his avatars from Phnom Da, a site in the immediate vicinity of Angkor Borei (fig. 2).²³ By the early seventh century, however, pre-Angkorian political power shifted inland to Ishanapura, a development contemporaneous with the rising importance in Khmer culture of another Brahmanical deity, Shiva, and associated forms of Shaiva devotionism (Cats. 94, 95).²⁴

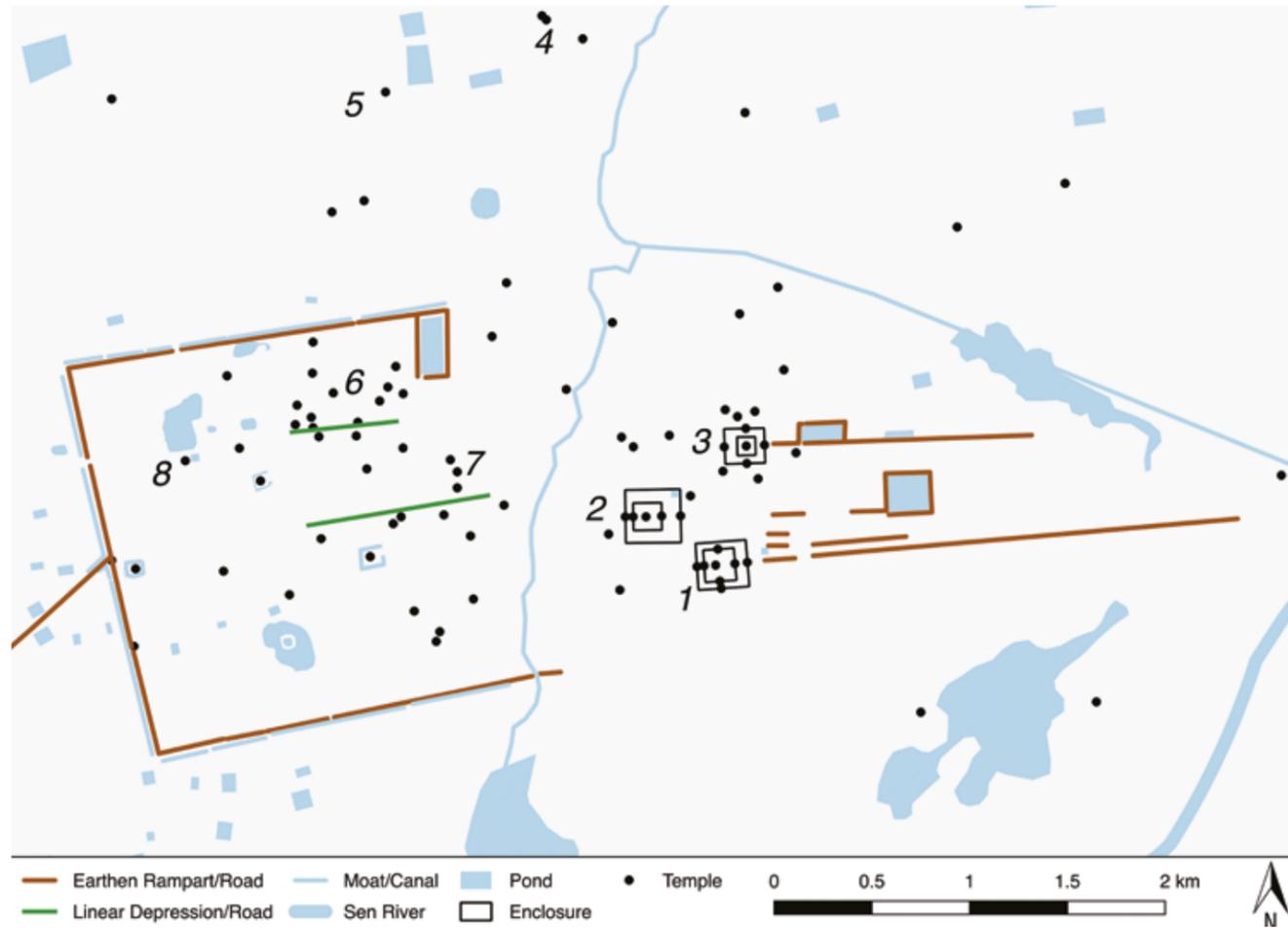
ISHANAPURA (SAMBOR PREI KUK)

In addition to the aforementioned gold medallion, Chinese accounts, inscriptions, and archaeology provide evidence that King Ishanavarman’s capital was Ishanapura, a political centre that can be identified with the site of Sambor Prei Kuk, located along the northern bank of the Sen River in what is now Kampong Thom province in central Cambodia. Then, as now, the river provided the population of this region access to both communication routes and inundated agricultural lands.²⁵

The remains of the Sambor Prei Kuk urban complex consist of a large ceremonial core, around 20 square kilometres in area, surrounded by a sprawling residential district dispersed across about 70 square kilometres. The impressive ceremonial district comprises over one hundred temple structures, in various states of ruin and preservation, primarily clustered in three main complexes—the South (S), Central (C), and North (N) groups. Each of the three groups, which can be approximately dated, is surrounded by two walled, but non-concentric, rectangular enclosures with structures located both within and outside the walls (“satellite temples”). Located to the west and north of the three main complexes are other temples, some standing in isolation and others clustered in small groups. The western portion of the ceremonial district exhibits a mixed pattern of ponds, mounds,



2 **Eight-armed Vishnu**
Phnom Da, around late 6th or 7th century.
Sandstone, height 270 cm.
National Museum of Cambodia, Phnom Penh.
[Ka.1639].



3 Sambor Prei Kuk core (Ishanapura).

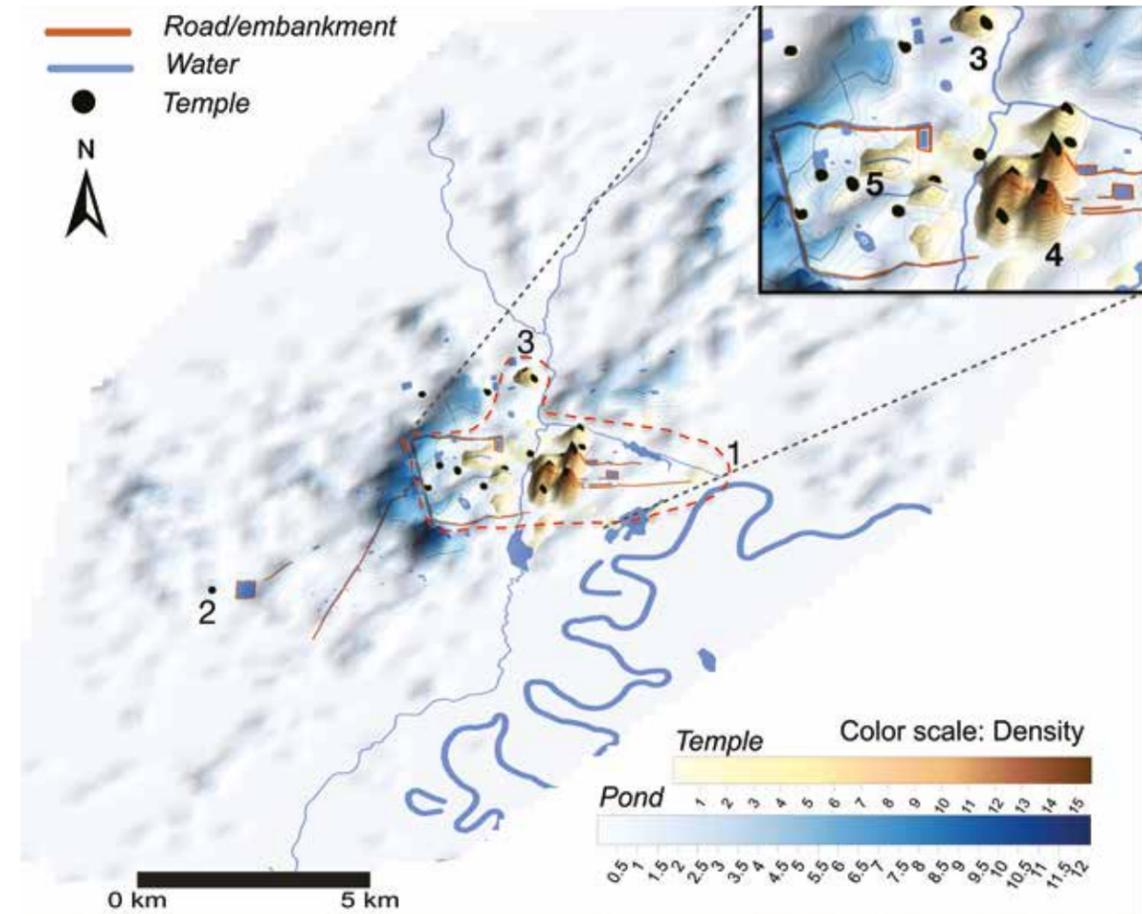
Map key

- 1. Southern Complex (Prasat Yeay Poan)
- 2. Central Complex (Prasat Toa)
- 3. Northern Complex (Prasat Sambor)
- 4. Robang Romeas Complex
- 5. Leang Preah
- 6. Thkas (group)
- 7. Don Mong (group)
- 8. Khnach Tol

and temples, and is partially surrounded by a moat and a low earthen wall. The residential district expands from and envelops the ceremonial district, and is marked by more than 1500 ponds and mounds interspersed with smaller temples, as well as roads and canals (fig. 3).

SETTLEMENTS AND ECONOMIC ACTIVITIES

While most inscriptions from Sambor Prei Kuk mention Ishanavarman, only one pre-Angkorian inscription refers to the city by the name Ishanapura. This inscription (K. 438) commemorates the marriage of one of Ishanavarman's daughters and religious dedications made by her husband. Based on this direct link, as well as on Chinese documents, historians argue that the city was founded by Ishanavarman. Other inscriptions (e.g., K. 151, K. 53, K. 439), however, imply that the foundation of this city should perhaps be associated with Bhavavarman I (reigned around 550–600).



For pragmatic reasons, research in Sambor Prei Kuk has mainly concentrated on history, art history, and urban planning. Archaeological research in the region is still in its infancy, and this limits our understanding of the sociopolitical and economic role played by Ishanapura/Sambor Prei Kuk during the pre-Angkorian period. Despite these limitations, the currently available evidence—which includes data from historical and art historical sources, remote-sensing, and some archaeology—provides a glimpse into the sociopolitical aspects of this early capital city.

The Chinese accounts claim that this city was inhabited by more than 20,000 families, or between 100,000 to 200,000 people. Even though numerous ponds and mounds may relate to the large population of this account, their association with the pre-Angkorian period settlements is uncertain apart from the datable temples. This is because the area continued to be occupied during the Angkorian period and a small section in the post-Angkorian period. Nevertheless, the pre-Angkorian settlement template—a combination of mounds, ponds, and temples—occurs here at a much larger scale, and can be remotely identified from aerial photos and satellite images. The core area with pre-Angkorian temples is about

4 Pond and temple density in Sambor Prei Kuk (Ishanapura). The topographic contours represent the point density of ponds (shaded blue) and temples (shaded yellow to brown) per a 250-metre radius area (19.635 hectares). Both features form two separate high density areas corresponding to the Ceremonial District core surrounded by the Residential District.

Map key

- 1. Ceremonial District
- 2. Wat Maha
- 3. Robang Romeas
- 4. Main temple complex (North, Central, South)
- 5. Western ceremonial district cluster around Thkas and Don Mong and bracketed by a moat

ten times the size of Angkor Borei. Despite its large size, however, there is no discernable pattern of centralised urban development structured by grid patterns comparable to the linear roads, canals, and walls that characterised the late Angkorian period.²⁷ The pattern of Ishanapura's urbanism is instead similar to other pre-Angkorian centres and exhibits an organic expansion of continuous settlements around the ceremonial district and outside the moated area. Ishanapura therefore probably represents the largest urbanism of the known pre-Angkorian cities (fig. 4).

B. P. Groslier's large-scale excavation within the ceremonial district in the 1960s revealed artefacts associated with ritual activities and a metallurgical workshop. Fine ceramics decorated with white and red paint, as well as utilitarian cooking ware and buffware crucibles were found during this excavation.²⁸ Similar ceramics have been reported from recent excavations in the same ceremonial district.²⁹ Activities related to trade, habitation, and the palace described in the Chinese accounts all remain to be studied.

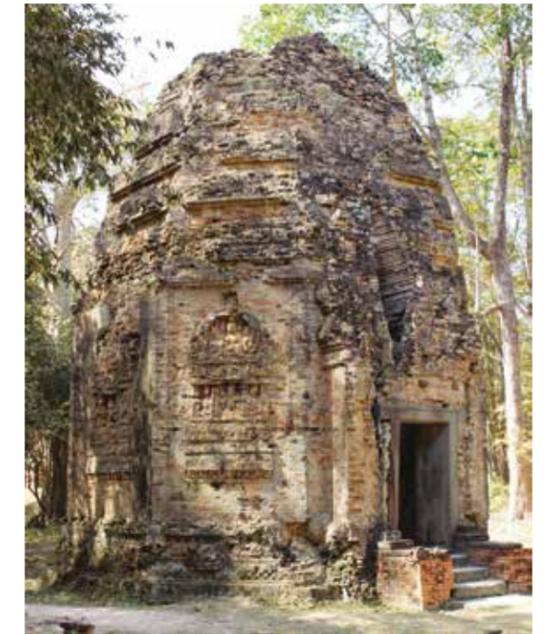
Nevertheless, the inscriptions from this area indicate that temples had access to rice, rice fields, draft animals, and a workforce to perform various tasks. Whether these agricultural fields were interspersed with the temples and habitation areas or were located in the surrounding areas is not yet understood. The surrounding landscape is capable of supporting one cycle of rain-dependent rice cultivation, particularly in the flooded lands along the rivers.³⁰ Because there is no evidence of branching canals to distribute water into the surrounding fields, the canals found in this area were likely a water diversion mechanism rather than an irrigation network. Additionally, apart from the Sen River, there is no evidence of transportation canal networks, as seen at Angkor Borei. A series of undated, small size (2–4 hectares) reservoirs (*baray*) do, however, occur around Sambor Prei Kuk. Some of these may have been contemporary with the seventh-century temple complexes since they were built adjacent to the temples and to the roads that linked the complexes. These *barays*, the canals, and the moat represent water management projects associated with pre-Angkorian urbanism.

CEREMONIAL CENTRE AND STATE POWER

To date, the best evidence supporting the sociopolitical role of Ishanapura has come mainly from inscriptions, temples, and statuary. For example, inscriptions (K. 151, K. 439, K. 604, K. 1250) indicate that four regional governors, who claimed to be vassals or servants of the kings, endowed smaller temples in Ishanapura under the reigns of Bhavavarman I and Ishanavarman.



5 Temple S1. Sambor Prei Kuk, about 7th century.



6 Temple N7. Sambor Prei Kuk, about 7th century.



7 Stucco remains on carvings at Prasat Trapeang Ropreak. Sambor Prei Kuk, about 7th century.



8 "Flying palace" decoration on Temple N15, Sambor Prei Kuk, about 7th century.

Like most pre-Angkorian architecture, Sambor Prei Kuk's temples are constructed primarily of brick with a binder, not of concrete, but rather of vegetal sap.³² The structures are either rectangular (fig. 5) or octagonal (fig. 6), and were probably originally covered in a lime stucco (fig. 7) consisting of ground shells and sand, which may have been further embellished with paint, lacquer, and/or gilding. Wall surfaces are also enlivened by a projecting cornice, base mouldings, and pilasters, which, on the exterior, often frame detailed compositions carved directly in the brick. These scenes depict groups of elite male and female figures occupying palatial structures borne aloft by birds and hybrid forms of birds, humans, and animals. Typically described as "flying palaces" (fig. 8), they seem to represent the assimilation of an idealised human realm with a celestial model, and perhaps also the conflation of royal families with forms of divinity. In contrast to the extensive use of bricks, sandstone was usually used sparingly, for structural support and for the door frames, including jambs, colonettes, and lintels. The distinctive style of Sambor Prei Kuk lintels (fig. 9) typically consists of inward facing *makara*, who disgorge a long, intricately decorated garland segmented into four arches. These segmentations are often emphasised by three oval medallions. *Makara* are auspicious mythological creatures representing water, which are variably comprised of characteristics of elephants, crocodiles, fish, and foliage. The garlands they emit refer to natural abundance and fecundity; they may also be regarded as both a blessing from heaven as well as a permanent form of offering to the divinity enshrined within the temple.

The chronology of Sambor Prei Kuk's three main temple groups is generally understood, but many questions about precise dates and sequence remain unresolved. Epigraphic evidence (including K. 439) indicates that the principal deity of the northern group (Group N) was a form of Shiva named Gambhiresvara ("Lord of the Depths"), a god that seems to have been particularly associated with King Bhavavarman I. This has led some scholars to associate the northern group with this king's capital, and, if this is true, it might indicate that the earliest building phases of the northern group correspond to some of the earliest monumental construction at Sambor Prei Kuk.³³

That the northern group remained in worship through at least the tenth century, or perhaps was revived at that time, is indicated by two inscriptions (K. 436, K. 148), as well as by a sculpture, now in the Guimet Museum, probably depicting the Vishnu avatar Hayagriva, rendered in the style of Pre Rup, and which dates approximately to the reign of King Rajendrarvarman (around 944–968). Nevertheless, the majority of monuments in the northern group probably date to the first three quarters of the seventh century, and to the reigns of Ishanavarman I (around 616–637) and his successors, Bhavavarman II (around late 630s–650s?) and Jayavarman I (around 657–681).³⁴ The central group (Group C) is later, with estimates ranging from the late seventh century to the late eighth or early ninth century.³⁵



9 Sambor Prei Kuk-style lintel at Prasat Trapeang Ropeak, Sambor Prei Kuk, about 7th century.

The southern group (Group S) exhibits the most internal consistency and poses the fewest challenges for dating the structures; most scholars associate Group S with the reign of Ishanavarman I and his capital Ishanapura.³⁶ Two almost identical inscriptions from the southern group—one (K. 440) from the door jamb of the external enclosure's eastern entrance pavilion, and the other (K. 442) from the beautifully carved stone pavilion (*mandapa*) surmounted by brick tower S2 (fig. 10)—contain lengthy panegyrics to King Ishanavarman and commemorate Prahastishvara ("Smiling Lord" or "Lord of Laughter"), a form of Shiva who seems to be ambiguously conflated with the king.³⁷ The form of this god may have been a gold linga (representation of Shiva as a phallic pillar, see Cat. 95) mentioned in the inscriptions, and quite possibly was a linga inscribed with a face (*mukhalinga*). The king is also said to have installed a number of other images (*pratima*), including several other forms of Shiva (among them perhaps Harihara), Brahma, Sarasvati, and a silver sculpture of Shiva's bull mount, probably enshrined in the very pavilion where inscription K. 442 was found.

None of these images mentioned in the inscriptions have been found, or can be associated with known sculptures. But three important stone figures, now housed in the National Museum of Cambodia, Phnom Penh, were found in or around Sambor Prei Kuk's northern group: a Durga Mahishasuramardini ("Slayer of the Buffalo Demon") and a Harihara, both recovered from shrines within the central enclosure; and a four-



10 Sandstone *mandapa*, Temple S2, Sambor Prei Kuk, about 7th century.



11 Durga, found at Temples N1 and N9, Sambor Prei Kuk, about first half 7th century. Sandstone, height 165 cm. National Museum of Cambodia, Phnom Penh [Ka.1593].



12 Harihara, found at Temple N10, Sambor Prei Kuk, about first half 7th century. Sandstone, height 166 cm. National Museum of Cambodia, Phnom Penh [Ka.1607].

headed image of Brahma from Prasat Sreng Treach (N22), a Group N satellite temple. The Durga and Harihara likely date to the first half of the seventh century, and probably to the reign of either Ishanavarman I or Bhavavarman II.³⁸ The Brahma may date slightly later in the seventh century than the other two images.³⁹

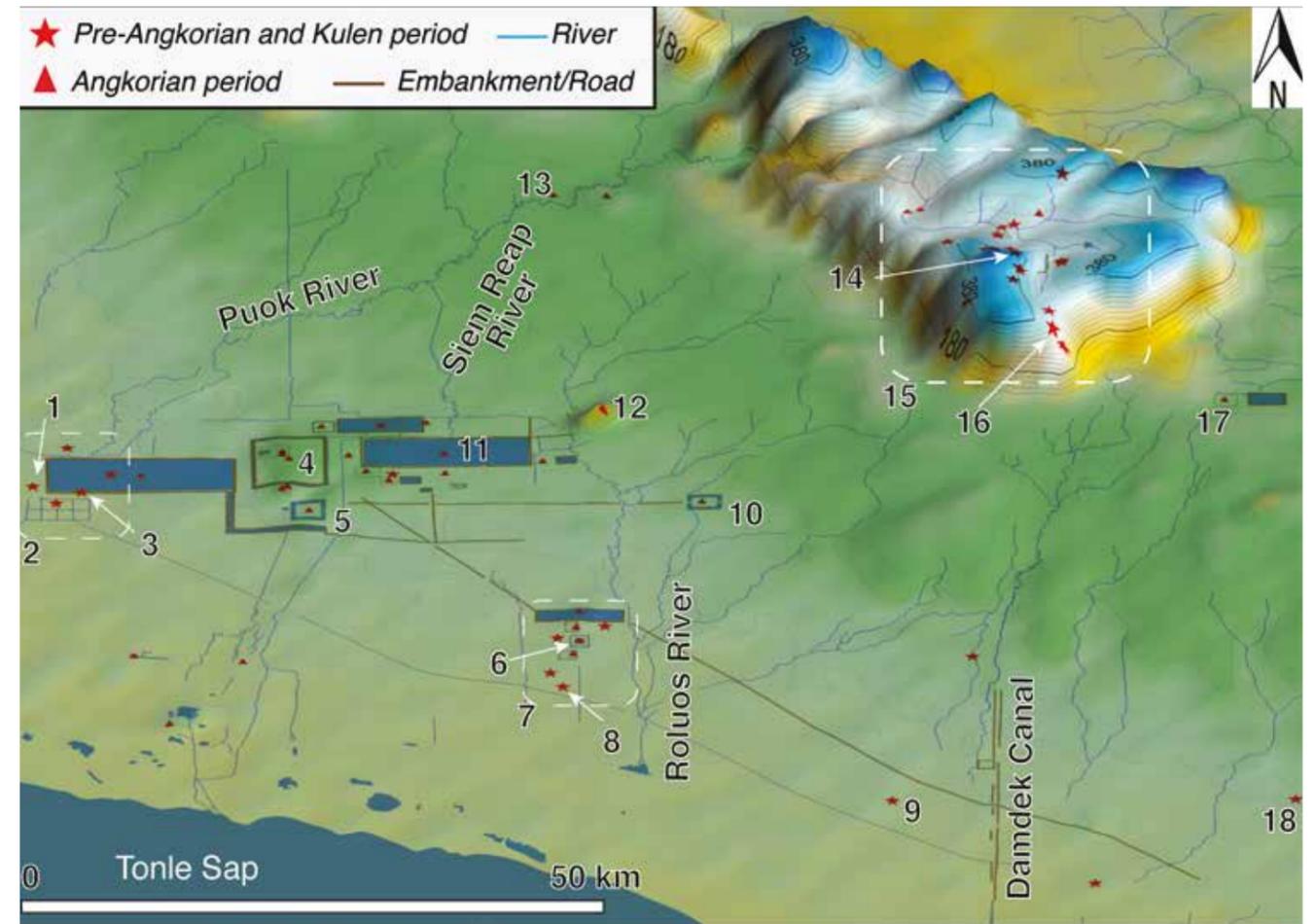
Portions of the Durga (fig. 11) were found in the main temple (N1) and in a nearby shrine (N9). In spite of the fact that the head of the goddess has not been recovered and the pedestal depicting the severed head of the buffalo demon she has defeated is badly damaged, this remains one of most impressive examples of pre-Angkorian sculpture. While perhaps unrelated to the Durga image, it is worth noting that temple N14, located just outside the enclosure surrounding the main temple group, yielded an inscription (K. 437) that commemorates the foundation of an image, probably a statue of a goddess, by King Ishanavarman's wife Sakaramanjari.⁴⁰

In the vicinity of temple N10 was found an image of Harihara (fig. 12) broken into some sixty fragments (now restored). Harihara is a composite deity portrayed consistently in Khmer art with a bilateral division between the proper left side, with the attributes of Vishnu (Hari), and the hierarchically superior, proper right side with the attributes of Shiva (Hara). In Khmer culture, Harihara came to prominence during the seventh century as a component of the rising popularity of Shaivism. But there is also evidence to suggest that Shaiva elites dedicated images of Harihara, not only as acts of devotion but also as a visual expression of their efforts to control the coastal regions to the south, including the Angkor Borei area, which had been predominantly Vaishnava in elite religious orientation for perhaps two centuries. Northern kings based at Sambor Prei Kuk may have deployed an icon that represented the union of both deities, and their associated symbolism, in order to help accomplish and legitimise their territorial and political aspirations.⁴¹

TRANSITIONAL PERIOD CITIES

After the reign of Ishanavarman, there are few surviving pre-Angkorian records regarding Khmer capital cities. One inscription (C. 96 dated to 658), issued by the Cham King Prakashadharm, claimed that his father went to the city of Bhava[pura] and married his mother, a daughter of Ishanavarman. The identification of this Bhavapura varies from Thala Borivat in Stung Treng, further south in Ta Keo, Ampil Rolum near Sambor Prei Kuk, and Sambor Prei Kuk itself.⁴²

Beginning in the second-half of the seventh century, the city of Purandarapura, likely associated with the capital of King Jayavarman I, appears in the epigraphic records. Recent studies place Purandarapura



in the vicinity of Prei Khmeng, Wat Khnat, and Ak Yum, in the part of the Angkor region where pre-Angkorian temples are primarily located.⁴³ The capital city and the seat of political power were initially moved to the Angkor region as early as 657 (according to inscription K. 493 from Prei Veng), when Jayavarman I began to issue his royal edicts from the palace located at Purandarapura. Jayadevi, daughter of Jayavarman I, continued to be based in the same area but with a different palace, Kamyarama, as recorded in an inscription (K. 904) dated to 713. The area of Ak Yum bordered by known pre-Angkorian temples is about 16 square kilometres; yet, the settlement patterns remain obscure because the majority of this area was covered by the West Baray (reservoir) during the eleventh century.

After Jayadevi, the epigraphic records remain mute about the capital city during much of the eighth century, and through the ninth century until the reign of the Angkorian king Indravarman I (878–90), when the capital city was at Hariharalaya (Roluos) near Angkor. Eighth- and ninth-century Cambodia possibly consisted of multiple political centres including the areas that would become Angkor and Shambhupura on the Mekong River.⁴⁴

13 Siem Reap region and its major Pre-Angkorian and Angkorian temples.

- Map key**
- 1. Prei Khmeng
 - 2. Extent of Ak Yum-Wat Khnat area (Purandarapura)
 - 3. Ak Yum
 - 4. Angkor Thom
 - 5. Angkor Wat
 - 6. Bakong
 - 7. Extent of Hariharalaya
 - 8. Trapeang Phong
 - 9. Trapeang Run 1
 - 10. Chau Srei Vibol (Wat Trach)
 - 11. East Mebon
 - 12. Phnom Bok
 - 13. Banteay Srei
 - 14. Aram Rong Chen
 - 15. Extent of Mahendraparvata
 - 16. Thma Dap
 - 17. Beng Mealea
 - 18. Trapeang Run 2 (pre-Angkorian temple)

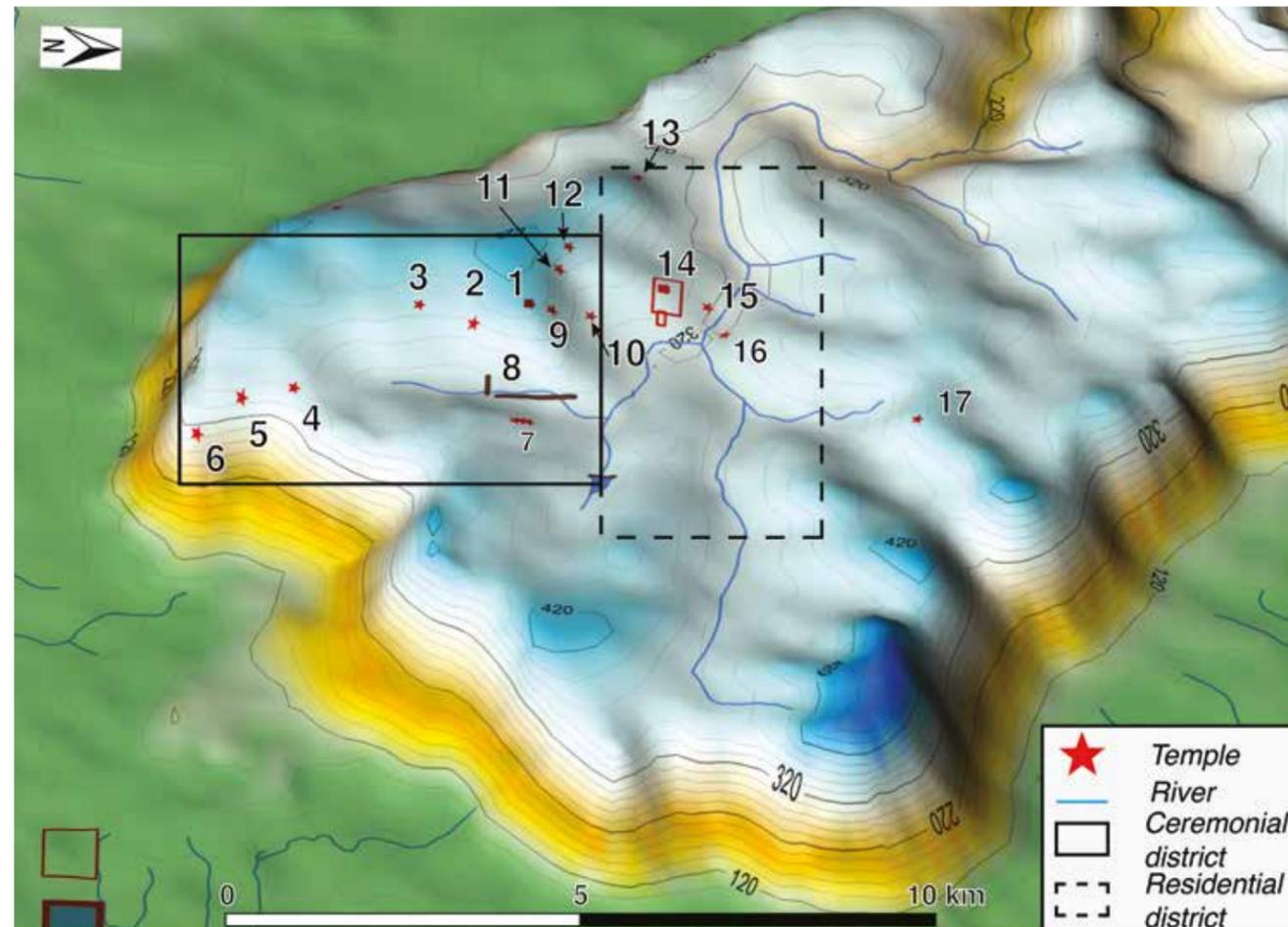
MAHENDRAPARVATA (PHNOM KULEN)

It is not until the eleventh century that an Angkorian inscription (K. 598 dated to 1006) informs us that Jayavarman II (around 790–835?) had established his capital on Mount Mahendra.⁴⁵ Another eleventh-century inscription from Sdok Kak Thom (K. 235 dated to 1052) recounts the historical events associated with Jayavarman II's political career and lists the cities where he ruled, including Hariharalaya (Roluos), before he established himself at Mahendraparvata. There in 802 Jayavarman II initiated the Devaraja rituals that made him a sovereign *chakravartin* (universal monarch). Despite the absence of contemporary epigraphic reference to the location of Mahendraparvata, Phnom Kulen is the best candidate because the temples and sculpture there are transitional in style (called the "Kulen style") and because the name Mahendradri (a variant of Mount Mahendra) was recorded in an inscription (K. 176 dated to 1074) that came from there.⁴⁶

The small plateau of Phnom Kulen is located about 40 kilometres northeast of Angkor and north of Hariharalaya. Compared to Ishanapura, Mahendraparvata is far less understood, and what is known primarily pertains to: Kulen-style temples and statuary of the first three quarters of the ninth century; Buddhist *sema* stones, probably dating from the ninth century and later; eleventh- or twelfth-century carvings of lingas and reclining Vishnus at the sites of Kbal Spean and Anlong Pong Phkay; and ceramic kilns dated to the ninth through thirteenth century.⁴⁷ Recent research reveals an expansive 40- to 50-square-kilometre area marked by temples, temple complexes, rock-sheltered shrines, boulders carved with depictions of animals associated with spring-fed ponds, networks of linear roads, and *barays* (reservoirs).⁴⁸ Most of the known Kulen-style temples are concentrated in the south-eastern portion of the plateau.

The distribution of temples and shrines of different periods (8th–13th century) suggests that the main ceremonial district (around 3 square kilometres) was located between Prasat O Paong to the north and Prasat Damrei Krap to the south, with the centre at Prasat Aram Rong Chen, one of the earliest temple-pyramids in Khmer history. The residential district (around 10 square kilometres), which we know little about, was located to the north and east of the ceremonial district (fig. 14).⁴⁹

While the Kulen settlement pattern continues the pre-Angkorian template of ponds, mounds, and temples, the high-density pond patterns of Ishanapura are absent. There is little evidence associated with the residential district, but the linear road networks of this district are only comparable to twelfth- and thirteenth-century urban planning in Angkor.⁵⁰ Recent excavations in the large enclosure of Banteay (615 by 400 metres) revealed some evidence of occupations, including a series of brick and laterite structures, as well as linear earthwork features arranged into a



geometric pattern.⁵¹ Ceramics reported from this site are predominantly pre-Angkorian earthenware and date to around 700 to 900.⁵² Whether the enclosure of Banteay was the ninth-century royal palace of Jayavarman II remains speculative, however, because there is no comparable example of the geometric mound patterns from the pre-Angkorian and early Angkorian period centres, including Ishanapura and Hariharalaya.

TEMPLES AND STATUARY OF THE CEREMONIAL CENTRE

Due to the nature of research and for pragmatic reasons, most data come from the ceremonial district. The Kulen-style temples account for approximately two-thirds of the temples and shrines on Phnom Kulen. Prasat Aram Rong Chen marks the focal point of this ceremonial district, and it is typically identified as Jayavarman II's political and religious centre. It is also believed to have been the location of the inaugural rituals

14 Phnom Kulen (Mahendraparvata) and its major sites.

Map key

1. Aram Rong Chen
2. Peung Eisei
3. Damrei Krap
4. Chup Chrei
5. Khting Slap
6. Thma Dap and Phnom Sruoch
7. West-facing temples from north to south:
Anlong Thom, Neak Ta, Prasat Chrei,
Prasat Bos Neak
8. Baray Thnal Mrech
9. Koki
10. O Paong
11. Rup Arak
12. Prasat Pram
13. Don Meas
14. Banteay
15. Sema Peam Kre
16. Peam Kre
17. Prasat Kraham



15 Prasat Aram Rong Chen. Phnom Kulen, about 9th century.



16 Pedestal on Prasat Aram Rong Chen. Phnom Kulen, about 9th century. Sandstone.



17 Prasat Damrei Krap. Phnom Kulen, about 9th century.

constituting the Devaraja, a royal Shiva cult tied to the foundation of Angkor and to the maintenance of a united Khmer kingdom. As perhaps the “prototypical” Khmer temple-mountain, the possible association of Prasat Aram Rong Chen with the Devaraja, and therefore the linkage of the pyramidal temple form with Shaiva-oriented state power, may have established a pattern that persisted at Angkor for centuries.

Prasat Aram Rong Chen is a five-tiered pyramid located on one of the plateau’s highest elevations (420 metres), much higher than the average elevation (20 metres) of the Siem Reap plain (fig. 15). The sandstone bedrock was modified to become the first terrace of around 200 square metres (examples of similar engineering came a century later in the Angkor area at Phnom Bakheng and Phnom Krom). The four upper terraces, which progressively diminish in size, were built mainly of laterite masonry. A large sandstone pedestal sits atop the uppermost terrace, but there is no evidence that it was ever housed within a brick or stone tower (fig. 16). Postholes found on the third and fifth terraces suggest that parts of this pyramid were once covered by wooden structures.⁵³

The other temples on Phnom Kulen that can be associated with the late eighth or early ninth century, and therefore to the period either prior to or during the reign of Jayavarman II, exhibit a range of architectural and decorative features that indicate a transitional phase from the pre-Angkorian to Angkorian period. The diversity has also been attributed to influence from Cham and Javanese architecture, but this is a subject in need of further research (fig. 17).⁵⁴

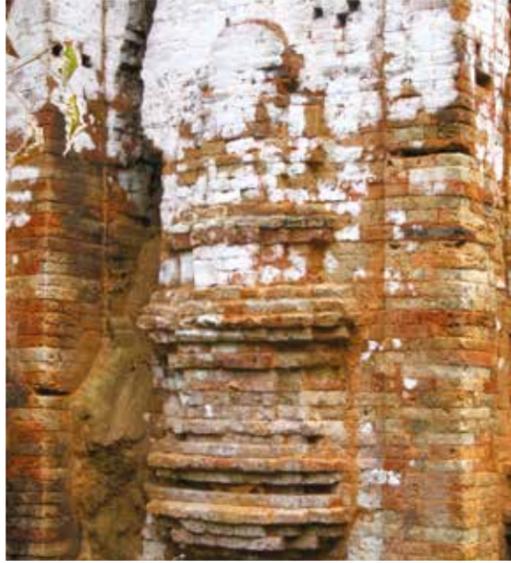
Like the great majority of pre-Angkorian temples, most of Phnom Kulen’s temples were made predominantly of brick, with stucco decoration, while sandstone was reserved for the elements of the doorways (lintels, colonettes, etc.), including decorative “false doors” (fig. 18). None bear the typical pre-Angkorian styles of lintels, but several do exhibit features with close pre-Angkorian affinities.⁵⁵ For example, like the temples of Sambor Prei Kuk, and typical of the pre-Angkorian period in general, the inter-pilasters of Prasat Neak Ta on Phnom Kulen are adorned with “flying palaces” (fig. 19). In contrast to the pre-Angkorian characteristics of Prasat Neak Ta,⁵⁶ however, the architectural features of Prasat Thma Dap, which relate to the late ninth-century style of Preah Ko at Hariharalaya, suggest a later date of construction.⁵⁷ Recent archaeology supports this, confirming an occupation period for the temple of around the ninth to eleventh century.⁵⁸ Indeed, Phnom Kulen’s wide range of archaeologically derived dates (570–1166) and the sparse epigraphic records (dated between 700 and 850) render the association of these temples with Jayavarman II elusive, since some might pre- or post-date his reign.



18 False door on Prasat Thma Dap. Phnom Kulen, about 9th century.

The most noteworthy sculptures from Phnom Kulen are seven stone Vishnu figures, probably from the ninth century, that were recovered at the temples of Rup Arak, Damrei Krap, and Thma Dap.⁵⁹ The earliest of the group may be the Vishnu from Prasat Rup Arak (Cat. 100), which retains structural reinforcements similar to pre-Angkorian statuary. However, like the other Kulen-style Vishnu images, it exhibits a heavier body and details of dress and anatomy that herald the Angkor-period sculpture of the late ninth and early tenth centuries (see Cats. 96, 101).

Alongside the Shaiva orientation that probably characterised Prasat Aram Rong Chen, the association of Phnom Kulen with Vishnu continued well into the eleventh and twelfth centuries. A Baphuon-style Vishnu of the eleventh century was found in Prasat Neak Ta, and Vishnu, perhaps together with Shiva, features prominently among the rock-cut images at Peung Kumnu dating to approximately the same period.⁶⁰ Similarly, both Shiva lingas and images of Vishnu reclining on the serpent Ananta were carved in the so-called “River of a thousand lingas” at the famous site of Kbal Spean (fig. 20). Such images may underscore the continuing



19 "Flying Palace" on Prasat Neak Ta. Phnom Kulen, about 9th century.



20 "River of a thousand lingas". Phnom Kulen, about 11th or 12th century.

importance of Vishnu for water management in Khmer culture. Moreover, carved into the riverbeds and riverbanks, the combined presence of Shiva and Vishnu atop the holy mountain of Mahendraparvata sanctified the waters that originated on Phnom Kulen and flowed with the blessings of heaven to the capital at Angkor on the plains below.

THE CEREMONIAL CENTRE AND WATER MANAGEMENT

Most of Phnom Kulen's temples are located within the ceremonial district encircling the Thnal Mrech Valley. This valley forms one of the headwaters feeding into the Puok, Siem Reap, and Roluos river systems. The associated water management system consisted of a series of spring-fed dams and *barays* of various sizes. The large Thnal Mrech *baray* (300 by 1000 metres) consists of two embankments (east and south) that were placed within a natural valley (around 2500 by 1500 metres) to trap spring water and rainwater. The centrality of the pyramid temple Prasat Aram Rong Chen in this ceremonial district seems clear based on its position on the highest point overlooking this *baray*, which sits on the same east-west axis. Studies of environmental impacts associated with soil erosion and sedimentation within this reservoir suggest that the valley was flooded sometime between the sixth and eighth century.⁶¹ The stoneware ceramic kilns built on the slope of the eastern embankment place the construction of the *baray* between the sixth and tenth century.⁶²

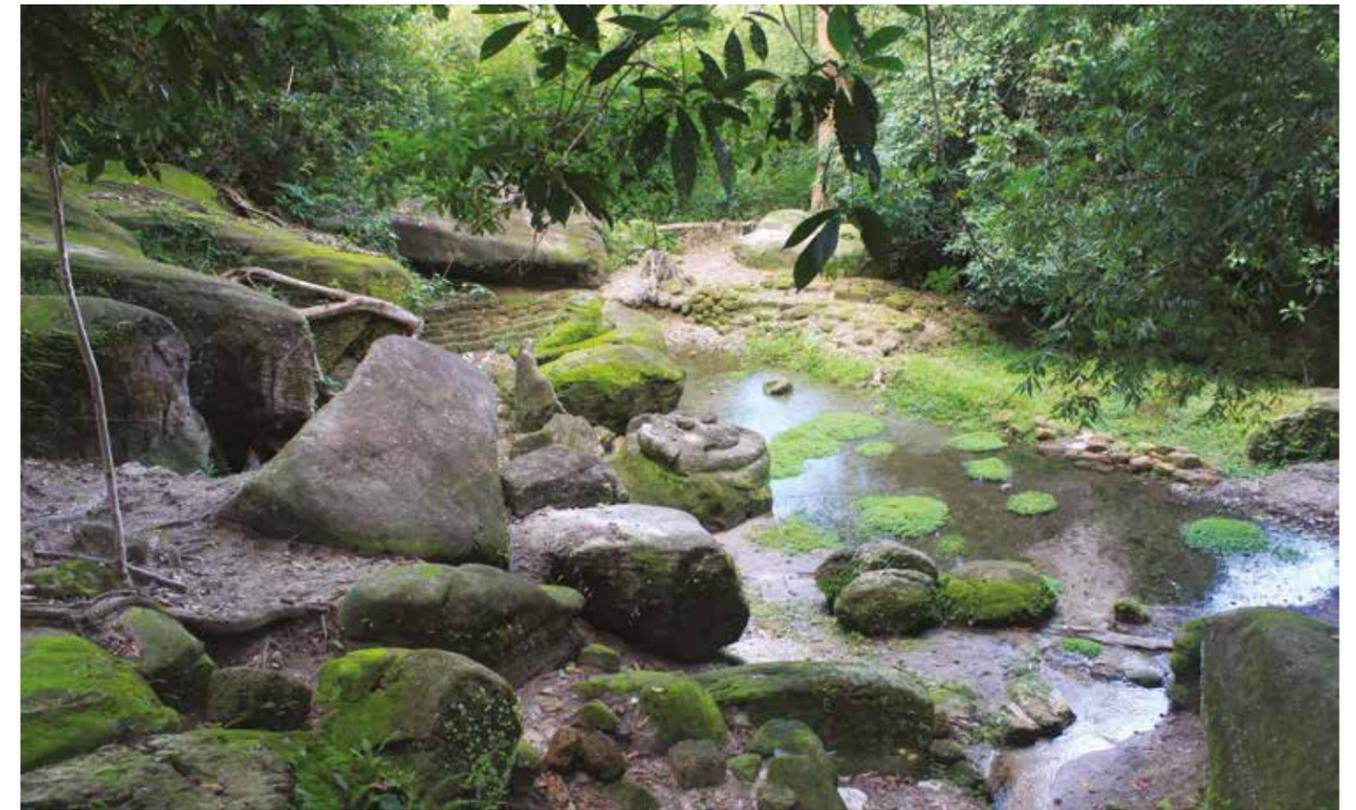
Peung Eisei, located at the western cliff of this valley, is a spring-fed pond with boulders bearing carved depictions of mythical creatures, including a Garuda, a *nagaraja* (serpent-king), an elephant, a bull, and a miniature cave temple (figs. 21–23). They are typically dated to the Angkorian period, but it is possible that some of the images date back to the pre-Angkorian period.⁶³ Depiction of these mythical creatures underscores the supernatural quality of the spring water.

That a series of west-facing temples located on the eastern rim of this valley was oriented toward Prasat Aram Rong Chen seems possible.⁶⁴ In fact, most of the main ceremonial district temples were built facing the Thnal Mrech Valley's watershed, which suggests that the overall site's ritual significance most likely related to the spring water. Efforts were made to channel this spring water into the Thnal Mrech *baray*, from which water was distributed to the Puok, Siem Reap, and Roluos river systems, which traverse through the Ak Yum region of Purandarapura, Angkor, and Hariharalaya. The water was also diverted southward via a rock-cut canal and flowed downstream over the escarpment (near Prasat O Thma Dap) toward the Damdek region, where some pre-Angkorian and Kulen-style temples are located.

The Angkorian Bat Chum inscription (K. 266 dated to 960) refers to the ritual significance of the water from Mahendraparvata.⁶⁵ Because this inscription dates long after Jayavarman II, however, the association between this king, the spring-fed hydraulic projects, and the urban planning of Mahendraparvata and Hariharalaya remains obscure. Nevertheless, there is no evidence that these hydraulic projects were intended for agriculture to sustain the population of Mahendraparvata. Rice pollens are absent (there are a few grains of sugar-palm pollen) from the sediment core sampled from the Thnal Mrech *baray*.⁶⁶

In fact, the modern villagers depend heavily on swidden agriculture of rice and taro due to the lack of water and adequate agricultural lands (sandstone outcrops dominate the surface of this plateau). Similar conditions may have applied in the seventh through twelfth century, when the limited agricultural lands on Phnom Kulen perhaps could not sustain a large population, which may have depended on staple food from the lowland. The impression produced by the eleventh-century epigraphic records is that Mahendraparvata was primarily a ceremonial centre for Jayavarman II. Toward the end of his life, he shifted the capital back to the strategic centre of Hariharalaya (Roluos), which he had occupied prior to his sojourn to Mahendraparvata, and which remained the capital until Yashovarman I (reigned 889–around 910) established Yashodharapura (Angkor).

21 Peung Eisei, spring-fed pond. Phnom Kulen, about 9th century.



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22
Nagaraja at Peung Eisei. Phnom Kulen, about 9th century. Sandstone boulder.



23
Garuda at Peung Eisei. Phnom Kulen, about 9th century. Sandstone boulder.

The pre-Angkorian cities presented in this paper were composed of similar features: settlement unit (mounds, ponds, and temples), water management (ponds, canals, mounds to avoid floods), and ceremonial centre. The scale and complexity of Sambor Prei Kuk (ancient Ishanapura) exceeded all other cities until the Angkor (Yashodharapura) of the twelfth and thirteenth centuries. At Sambor Prei Kuk, clusters of high-density ponds, associated with the residential district and predominantly located outside the ceremonial district, also enveloped the temple complexes. There is, however, no discernable pattern of linear or grid-like urban planning associated with the site. This suggests that the urban centre was the result of organic settlement growth spreading over 70 square kilometres.

Most of the pre-Angkorian cities, except Mahendraparvata, were located in the delta or wetlands, which provided their populations access to fertile agricultural land that was suitable for intensive wet rice cultivation. In Angkor Borei natural rivers were modified and straightened to become transportation networks. At Sambor Prei Kuk, where access was possible via the Sen River, the canal and moat systems functioned as a water diversion mechanism to prevent the ceremonial district from inundation by excess water. In the Angkor region, most pre-Angkorian and early Angkorian sites continued to be located within the annually inundated zone of the Tonle Sap Lake. Ak Yum (Purandarapura) and Hariharalaya had modified natural canals linked to the Tonle Sap Lake that imply the existence of river-based transportation routes. Some indication of far-flung trading contacts comes from the ninth- or tenth-century Tang-Chinese and Middle-Eastern ceramics that have been excavated at both Hariharalaya and Mahendraparvata.⁶⁷ These exciting archaeological discoveries, together with the monumental remains of temples and statuary, provide impressive testimony of the consolidation of wealth and power that culminated in the glorious period of Angkor.

NOTES

1. Stark et al. 2015.
2. Geertz 1980, p. 13.
3. Fletcher 2011.
4. Stark 2015.
5. Pelliot 1903.
6. Vickery 1998, pp. 299–310.
7. Stark et al. 2015.
8. Vickery 1998, p. 327.
9. Vickery 1998, p. 327.
10. In the inventory of Cambodian inscriptions first developed by the École française d'Extrême-Orient, each inscription is assigned a number preceded by the letter K.
11. Coédès 1968, p. 74.
12. Griffiths 2014, pp. 56–57. See fig. 45.
13. Soutif 2009; Vickery 1998.
14. Jacques 1972; Vickery 2004.
15. Vickery 2003.
16. Vickery 2003, pp. 125–32.
17. Sanderson et al. 2003; Stark 2015.
18. Stark 2015; Carter 2015.
19. Ślaczka 2011.
20. Brown 2011; Lavy 2014.
21. Lavy 2003.
22. Coédès 1931, pp. 2–7.
23. Dupont 1955; Czuma 2000; Porte 2006.
24. Sanderson 2003.
25. Heng 2012; Nagumo et al. 2010.
26. Kubo et al. 2012; Heng 2012; Shimoda and Shimanoto 2012.
27. Stark et al. in this volume; Evans 2016; Evans and Fletcher 2015; Stark et al. 2015.
28. Hay 2001; Guérine 2002; Groslier 1981, pp. 14–15.
29. Heng et al. 2012; Kubo et al. 2012.
30. Van Liere 1980.
31. Heng 2012.
32. Dumarçay and Royère 2001, pp. 39–47.
33. Jacques and Lafond 2007, pp. 81–85.
34. Coédès 1952, pp. 3–35; Dupont 1955, pp. 80–85.
35. Bénisti 1971, pp. 114–16; Stern 1938, pp. 139–41.
36. Bénisti 1977.
37. Coédès 1952, p. 6.
38. Boisselier 1955a; Dupont 1955, pp. 150–55.
39. Dupont 1955, p. 84.
40. Coédès 1952, pp. 24–25.
41. Lavy 2003.
42. Bénisti 1968, Jacques 1986, p.79; Vickery 1986; Vickery 1998: pp. 389–415.
43. Jacques and Freeman 1997, pp. 58–60; Soutif 2009. See also Pottier 2006; Pottier 2006a; and discussion in Vickery 1998, pp. 352–56.
44. Vickery 1998, pp. 379–93.
45. Jacques 1972, p. 206; Vickery 2004, p. 7.
46. Chevance et al. 2013; Polkinghorne 2013; Dupont 1936; Stern 1938.
47. Boulbet and Dagens 1973; Latinis and Murphy 2017; Chhay et al. 2013.
48. Chevance et al. 2013; Evans 2016.
49. See Evans 2016; Chevance 2014a.
50. Stark et al. 2015.
51. Chevance 2014; Latinis and Ea 2015.
52. Chevance 2014, pp. 317–21.
53. Chevance et al. 2013.
54. For example, Stern 1938a; Dumarçay and Royère 2001, pp. xx, 45.
55. Dupont 1936; 1938; Stern 1934; Stern 1938a.
56. Dupont 1938, pp. 204–6.
57. Stern 1938, pp. 141–47.
58. Chevance et al. 2013.
59. Dupont 1936; Stern 1938a; Baptiste and Zéphir 2008, pp. 90–95.
60. Jessup 2008.
61. Penny et al. 2014.
62. Chhay et al. 2013.
63. Boisselier 1966, p. 100; Chevance 2013.
64. Philippe Stern in Dupont 1938, p. 205.
65. Coédès 1908, p. 239.
66. Penny et al. 2014.
67. Chevance 2014a; Pottier et al. 2012.