Before Siam: Essays in Art and Archaeology

Nicolas Revire, Stephen A. Murphy

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The birth of Siam has been traditionally marked by the founding of the great city-states of Sukhothai and Ayutthaya respectively. These civilisations, however, grew out of a rich milieu of cultures and traditions in the region present from as far back as prehistoric times. Whether the Mon Buddhism that flourished during the so-called Dvāravatī period, the architectural heritage of the Khmers or the Brahmanical and Mahāyāna stimuli of the Malay Peninsula, these varied aspects and influences came together to shape what became early Siam and today modern Thailand.

The aim of this peer-reviewed publication is to present new research and discoveries to reconstruct the cultures, religious persuasions and artistic traditions in pre-modern Thailand and its neighbouring regions. Through a large array of contributions by renowned experts, the public and academics alike will gain a richer and more multifaceted appreciation of this early history which played such a formative role in the birth of Siam.

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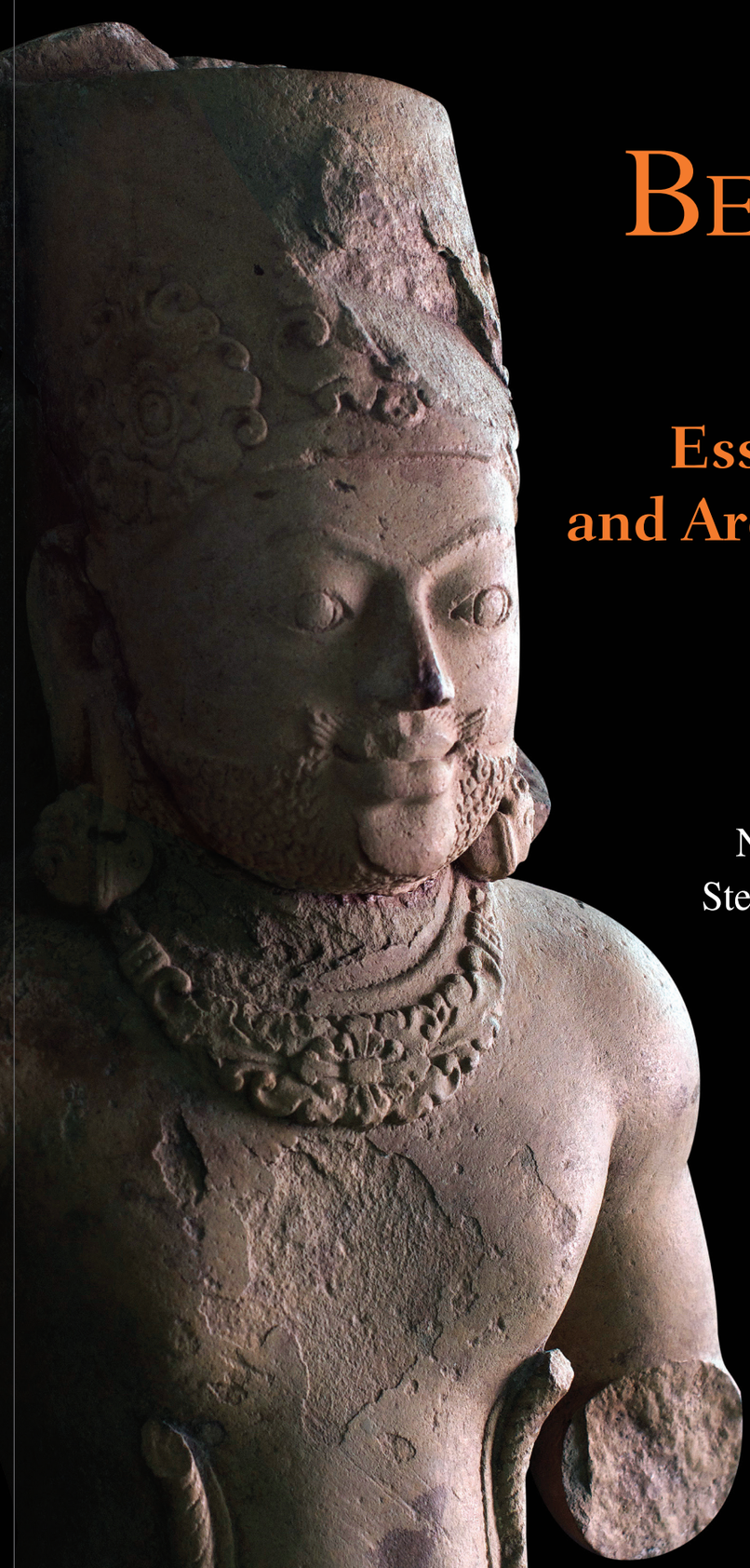
RIVER BOOKS



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Before Siam

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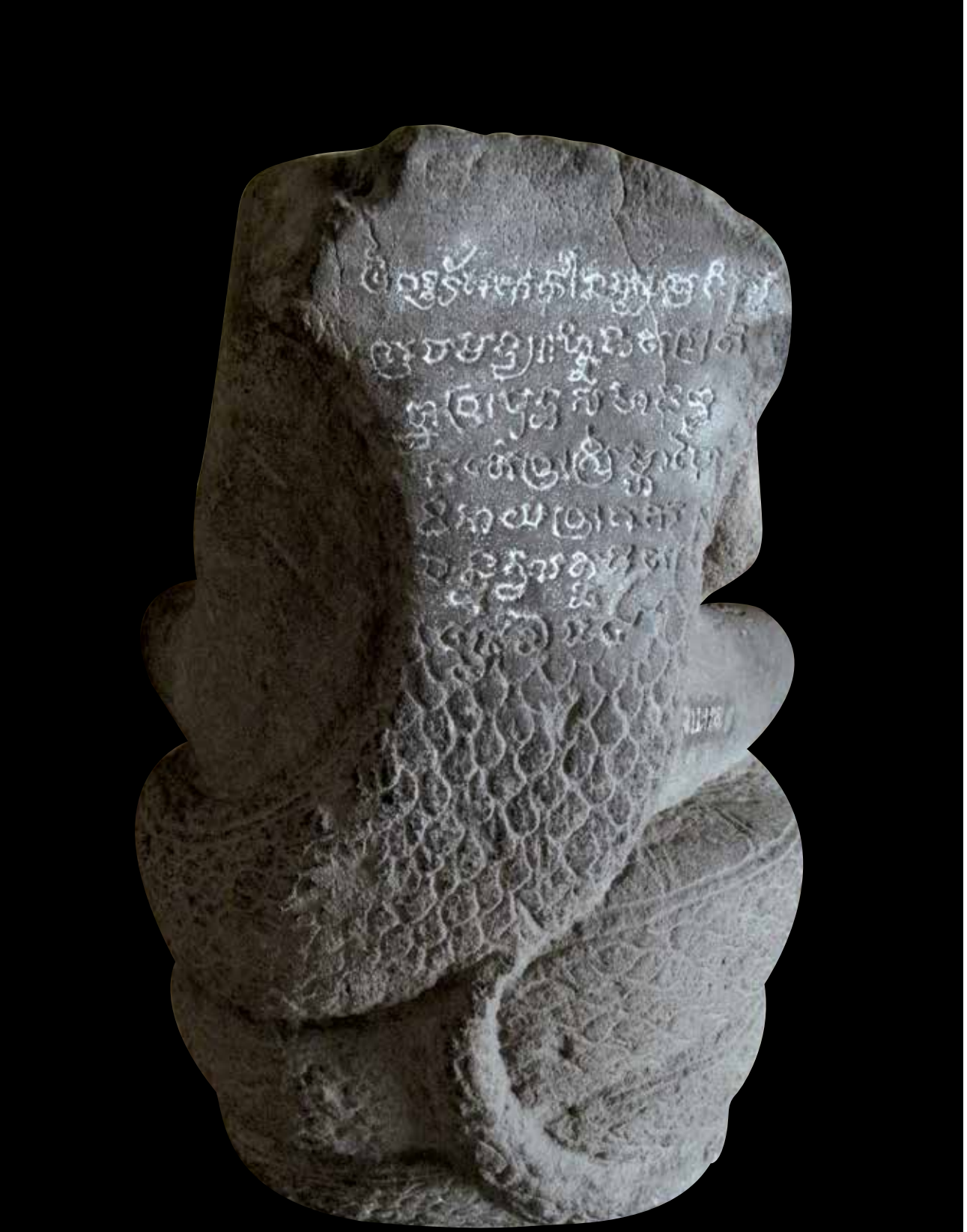

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Front cover: Image of Sūrya (the Sun God) found in Si Thep, Phetchabun province, 6th-8th c. Currently in the Bangkok National Museum, stone, ca 80 cm. high, inv. no. 01.292/2549 [Photograph courtesy of Paisarn Piemmettawat].

Frontispiece: An inscribed *nāga*-Buddha found in Lop Buri province. Currently in the Phra Narai National Museum, Lop Buri, sandstone, 55 cm. high, inv. no. LB 126. The inscription registered as LB 13 (K. 995), and possibly dated (1)135 *śaka* (= 1213 CE), is in Old Khmer script and language [Photograph by Nicolas Revire].

Back cover: French archaeologist George Cœdès in Siam in the late 1920s. The photograph was probably taken in Chaiya where the Sūrya image of Cōḷa style next to him, now in the Bangkok National Museum, inv. no. SV 16, was discovered [Photograph courtesy of EFEO photographic archives, Fonds Cœdès COE00003].

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Foreword

The history of the region that became Siam and then Thailand has developed tremendously over the last 150 years. The first collections of inscriptions were made in the late nineteenth century, and the first archaeological digs in the early twentieth. The pace quickened after the Second World War with the expansion of Thai universities, more activity by the Fine Arts Department, and the interest of many foreign scholars.

The Siam Society has contributed to this development from its very first day. The *Journal of the Siam Society* has published many pioneering works, such as the series of epigraphic studies by Prasert na Nagara and Alexander B. Griswold, and hosted countless lectures and conferences, including the symposium on the Ramkhamhaeng stele controversy.

This book presents exciting new work which promises to revolutionise the history of this area in the first millennium CE prior to the establishment of Thai kingdoms. The Siam Society is proud to be a partner in bringing this work to publication.

I would like personally to thank all the authors for their exceptional contributions; the editors, Nicolas Revire and Stephen A. Murphy, for their effort in bringing this collection together; the James H.W. Thompson Foundation for its support; and River Books for producing such a beautiful volume. I am confident this book will be recognised as a landmark in the discipline.

Bilaibhan Sampatisiri
President
The Siam Society under Royal Patronage
October 2013

Preface

Until a few decades ago, the early history of the regions that became Siam and then Thailand was a very sketchy affair. W.A.R. Wood's *A History of Siam* (1924) devoted only three pages to the subject. In David Wyatt's long-run summary, *Thailand: A Short History*, first published in 1984, everything prior to the eleventh century is accomplished in 18 pages, with only four on events within the region. It is not hard to see why. The source data was limited. Rather little earth had been moved in archaeological digs; rather few inscriptions had been found, or properly edited and published; only a handful of sites had been subject to intense analysis. Pioneer interpretations of this data often incorporated a great amount of ingenuity and imagination, commanded respect because of the extraordinary status of their authors (such as Prince Damrong and George Cœdès), and proved difficult to challenge for the same reasons. The historical approach was fascinated with the idea of empires (Śrīvijaya, Khmer, Dvāravatī), a concept not found in the data but dominant in the historians' own era. The plot of this history ended with the emergence of a state that was Thai by ethnic affiliation, Theravāda Buddhist by religious faith, and politically unified around a monarchy, and all the strands of the plot tended to lead towards this ending.

Over the intervening decades, the prehistory part of this tale has changed quite remarkably. We now have a relatively well-accepted chronology of the coming of bronze and iron, a detailed picture of metalworking industries, and some appreciation of their impact on society (rather distinctive from that in other areas of the world). The emergence of settled agriculture is becoming clearer. The extent of settlement is now known to be much more widespread than once thought. Exotic artefacts found in burial sites or ancient trading posts are testament to early commercial links and cultural transfer.

This transformation of the prehistory has resulted from more digging and newer technologies applied in major sites, but also from new access to satellite data, and more surface archaeology that has carried study into new geographical areas. One striking finding of this work has been the sheer variety (across space and across time) of the burial practices, pottery, and other artefacts found at various sites across the region.

The transition from prehistory to history over the course of the first millennium CE has remained more of a puzzle. The changes are striking. Proto-cities appear along with large religious constructions. Written sources also emerge in the form of inscriptions, foreign accounts (especially Chinese), and *tamnan* chronicles (referring to this era though surviving only in manuscripts from later eras). Yet the writings and monuments offered only limited help in understanding the social and political changes of this era. The early inscriptions found so far are often brief and fragmentary, while the *tamnan*-style chronicles offer legendary accounts that may have been rewritten many times in intervening centuries. Physical sites offer limited information because so few structures (mostly religious and defensive) were built of durable materials. Records kept by the Chinese imperial court have the enormous benefit of being securely dated, but the enormous disadvantage that the data have been translated or transcribed into Chinese language and filtered through the Chinese imperial worldview. It has proved

frustratingly difficult to cross-reference between these different types of information: Chinese records, physical remains, epigraphy, and legends. Only rarely can key toponyms from the Chinese record be securely located on the map and securely identified with physical remains. Several towns or states mentioned in inscriptions are still a mystery. The exact significance of "Dvāravatī," perhaps the most important proper name in this area and era, remains enigmatic.

The research presented in this book form the bow of a wave that is about to crash over the history of this transitional era. With a few exceptions written by well-established scholars, the majority of the work comes from doctoral theses and postdoctoral projects either recently completed or still in progress. In five key ways, this work builds on earlier study but moves decisively beyond it.

First, the work is technically more sophisticated than earlier efforts. Dating methods, aerial imagery, and laboratory analyses have become more sophisticated and more accessible. Epigraphic and philological skills have also developed.

Second, the research herein bring into historical focus geographical areas which were overlooked because they are not the political centres of the present day but were of special importance in their own period. The early Indian influences on the mid reaches of the Thai-Malay Peninsula have been known for a long time from both sites and inscriptions. But new research shows that this area was a major centre of craft production, a meeting place of Chinese and Indic cultural influences, and a key point in trade routes stretching from China to the Mediterranean world. Similarly, the importance of the middle Mekong can be assumed on geographical grounds, but now is proved by research made possible after the ending of the Cold War.

Third, these researchers are ready to challenge and revise work by the pioneers, often by painstaking re-reading of old data in the light of new techniques and perspectives.

Fourth, they are working with much larger datasets: more inscriptions that have come to light over recent years, more *cakra*s and *sema*s that have been found, more sites identified from the sky, and more monuments that have been rescued from the undergrowth.

Fifth, researchers are more open and better equipped to break through the Chinese walls that divide disciplines. The best work draws on techniques from archaeology, art history, religious studies, and other approaches.

In the picture that is now emerging, settlements spread throughout the upper Chao Phraya Delta, Mun valley, and middle Mekong. The people seemed to prefer a certain distance between settlements rather than clustering, which perhaps indicates the continued importance of hunting and gathering. In the few places where long-range data are available, sites were occupied over a long period, and perhaps this was more generally true. The emergence of larger settlements, early towns, especially in the west of this region, may then have been a consequence of gradual development rather than the intrusion of some shock element such as new migrants or developments in long-distance trade.

These larger places adopted ideas and practices from India where proto-urbanisation had occurred at least a millennium earlier and where social practices had been developed for living in these larger, denser communities. In particular, gods and goddesses, beliefs, and forms of worship arrived. However, new research warns us against applying modern labels for religious affiliations to this early period, and against imagining that these gods and practices were in competition or conflict. As today, Buddhism, Brahmanical deities, and animism could coexist, serving different purposes.

Most importantly, these deities, beliefs, and forms of worship were everywhere adapted to local circumstances, creating new practices and forms. Possibly the *cakra* symbol was married with some local idea of a stele or hero stone to create the distinctive monumental pillars which may have been the flagstaffs of a new Buddhist kingship. Similarly, and with even more complexity, the idea of bounding sacred space seems to have been combined with a stone-carving culture and the idea of publicly illustrating the didactic *jātaka* stories to create distinctive *sema* stones. What is more, this same combination was achieved with great local differences of style in different parts of the region.

In this changing religious milieu, the idea that may have had the most impact was the concept of making merit, perhaps because of its many functions in societies of growing complexity: inducing moral behaviour, funding public goods, and constraining the powerful.

In the epigraphy, we find local rulers boasting Indic royal titles, powerful lineages, and political capitals. But on current evidence, political structures seem to have been small scale, multiple, and often fleeting. "Dvāravatī" may yet turn out to be something larger and more lasting, but the evidence is still moot. Even when Khmer influence spreads over a wide area of present-day Thailand, it spreads in the form of temple architecture, roads, fire-houses, hospitals, and royal or divine images, not conquering armies and imperial mandarins.

The variety of local tradition found in the late prehistory is sustained into this era, but is gradually overlain by some common cultural practice. Two cultural zones gradually emerge which can be labeled as Mon or Dvāravatī and Khmer respectively, with the important caveat that we know little about their mix of ethnicity or everyday language use. In the absence of any political consolidation, these zones seem to have been formed by sharing and copying, probably along routes of trade and pilgrimage. As the geographical spread of the research increases, we more and more see that these zones overlap and interpenetrate. In architecture, iconography, and decorative design, we see exchange between the zones and the development of hybrid forms. Local preference seems more important than political fiat. No two places build a "Khmer temple" in exactly the same way. Strikingly, there is as yet no evidence of major conflict in this era.

In sum, the general picture emerging from these new researches is characterised by slow and steady evolution, rather than dramatic change. Yet the picture is still rather unclear and can still be changed by new evidence. Only recently, stripping the cover from a large grassy knoll in Si Thep revealed an unusually complete monument built using techniques and design that seem unique.

In this volume, history "before Siam" comes into much clearer focus, but there is still room for surprise.

Chris Baker
Honorary editor
Journal of the Siam Society
October 2013

Acknowledgements

The idea for this book originally arose in a panel organised by Nicolas Revire, the first editor of this volume, at the 11th International Conference on Thai Studies, held by the Research Institute for Languages and Cultures of Asia, Mahidol University, at Bangkok, 26-28 July 2011. Stephen Murphy came on board as co-editor later that year and contributions began to come from the panellists and other scholars. The scope of the collected papers and the high calibre of the work far exceeded our expectations. *Before Siam* became an anthology of 18 essays written by established as well as by young researchers in the field, presenting new and exciting discussions on the origins of Siam, now Thailand, and its neighbouring regions.

We are happy to acknowledge first and foremost the support of the Siam Society for our endeavour from the beginning as a partner in producing the present volume. We deeply appreciate the Society's extensive activities in promoting Thailand's cultural heritage and encouraging scholarly initiatives.

We also wish to express our sincere gratitude to the James H.W. Thompson Foundation for their generous financial assistance for the publication of this book. The Foundation is likewise dedicated to promoting public understanding and appreciation of Thailand's cultural past. We hope that the analyses of the art and archaeology of pre-modern Thailand in this volume will help fulfil both the Siam Society's and James H.W. Thompson Foundation's objectives of defining and disseminating information about the evolution of the rich cultural developments in the Kingdom.

We particularly appreciate Chris Baker's preface and his very helpful role in liaising with the Siam Society Council on this project. Jane Purananda similarly supported us in her advisory capacity with the James H.W. Thompson Foundation. Without the personal involvement of Chris and Jane, it is fair to say that our project would not have come to fruition.

Narisa Chakrabongse and Paisarn Piemmettawat, as well as Reutairat Nanta from River Books, have taken great pains in producing the book and deserve our credit for their professionalism and patience.

Last but not least, special thanks are due to the contributors for their meticulous work and collegial cooperation, to the external reviewers who – often anonymously – offered helpful comments and suggestions on the various essays, and to all those who supplemented various photographs and maps for the book.

In investigating Thailand's remote past and the many influences that melded to create the kingdom of Thailand, we have wanted to make *Before Siam* a significant contribution to knowledge of this particular field and to spur further interest in its research.

The Editors

Technical Notes

Country Names

The name Thailand (or pre-modern Thailand) and the adjective Thai in the collected essays of this volume refer to the area of the current Kingdom, although Siam was its official name until 1939. Similarly, the contemporary names of Cambodia, Vietnam, Laos, Malaysia, and Myanmar (instead of Burma) are used for its present-day neighbours. However, since these nation states are creations of the nineteenth and twentieth centuries, such concepts as Thailand and "Thainess" have no historical relevance in the first millennium CE and prior to the rise of Thai kingdoms in the thirteenth century. Hence the present authors have tended to favour use of the indigenous and original names of the entities or polities of the past – if known – which they describe in their essays.

Transliterations

The use of local scripts (Thai, Myanmar, Lao, Khmer) is avoided and restricted solely to certain etymological cases. While there are several systems for transliterating Thai into the Latin alphabet, that of the Royal Institute of Thailand (Ratchabanditsathan) has been adopted in this volume, despite its imperfections and inconsistencies, since it is widely accepted in Thailand. Likewise, romanised Chinese transliterations follow the Pinyin system. But where no universally accepted system exists for transliterating a language (e.g. Myanmar, Cambodian), spellings preferred by individual authors or commonly used forms have been followed.

The spelling of Thai geographical names (provinces and districts) similarly follows the official list given by the Royal Institute despite certain inconsistencies regarding word separation. According to this official list, for example, the cities and provinces of Phetchaburi, Ratchaburi, and Kanchanaburi are spelled as one word but Lop Buri, Suphan Buri or Chon Buri spelled as two.

Local References

In citations of Thai bibliographic references, common local usage is followed here; that is, the given (first) name is cited as the key reference and not the surname of the authors, as is the practice elsewhere. The given name is listed alphabetically in the reference list; e.g. the entry for Damrong Rajanubhab is to be found under D. The spelling of Thai proper names generally follows the rules of the Royal Institute except when the preference of the author is known; as for example, Phasook Indrawooth is the author's own spelling and used here, and not Phasuk Inthrawut as might be the case under Royal Institute rules. Full transliterations are given for references and titles published in Thai and Myanmar, followed by an English translation. Since dates in Thailand and Myanmar generally follow the Buddhist Era (BE) beginning in 543/544 BCE, Thai and Myanmar publications are given and listed in BE with an equivalent given in CE.

Pāli and Sanskrit

References to Pāli texts are made to Pali Text Society publications for the most part, in which case publication details are not included in the list of references. All Pāli references have been assigned a unique abbreviation by the Critical Pali Dictionary, which is recognised and adopted internationally. For convenience in reading, a list of such abbreviations related to specific essays appears at the end of the concerned essay.

In the case of a prose Pāli text, the volume number, if any, is followed by the page number(s). For instance, a reference to *Dīghanikāya*, volume II, page 35, would be shown as D II 35. In the case of a text in verse, the number of the verse(s) alone is given (e.g. Dhp 67 for *Dhammapada*, verse 67). In the case of a text containing both prose and verse, the page number(s) of the original (if prose text is referred to) or number of the verse (if one or more verses are referred to) is given; for example, Sn p. 107 or Sn 635 refers to *Suttanipāta*, page 107 or verse 635. If reference is made to a translation or an edition that has been published by a body other than the Pali Text Society, that reference is treated in the same manner as any regular book, following the author/date system.

References to Pāli and Sanskrit terms, texts or names are treated as compounds; that is, without a space or hyphen, such as in *Dīghanikāya*, not *Dīgha Nikāya* or *Dīgha-nikāya*, and *dharmacakramudrā*, not *dharmacakra mudrā* or *dharma-cakra-mudrā*, to mention just a few examples.

Abbreviations

Common abbreviations and acronyms cited in this volume include the following.

AMS	Accelerator Mass Spectrometry
BCE	Before the Common Era, equivalent to BC: Before Christ
BE	Buddhist Era
BP	Before the Present
CE	[Modern] Common Era, equivalent to AD: Anno Domini
CNRS	Centre National de la Recherche Scientifique
EFEO	École française d'Extrême-Orient
FAD	Fine Arts Department of Thailand
IK.	Inventory indicator for Khmer monuments
K.	Inventory indicator for Khmer inscriptions
MSL	Mean Sea Level
PTS	Pali Text Society
P.	Pāli
Skt	Sanskrit
SOAS	School of Oriental and African Studies
T.	Thai

Major places cited in the volume [Map drawn by Nicolas Revire].

PROLOGUE

What There Was before Siam: Traditional Views

What There Was before Siam: Traditional Views

Hiram Woodward

Back to the Buddha's Lifetime

Although a narrative history extending back for more than two thousand years and providing the names of kings, queens, and Buddhist monuments has been preserved in Sri Lanka, no such history exists today in Thailand, which also professes Theravāda Buddhism. One reason is the fact that the population of Thai speakers became established only around the thirteenth century; in the first millennium, Mon was the predominant language. If vernacular Mon histories once existed, they have been irretrievably lost. Nonetheless, Thai-language (and in some cases, Pāli) texts give us insight into how people have regarded the distant past, and some knowledge of the sorts of legends that have been preserved provide a kind of ground upon which the studies in *Before Siam*, which utilise the skills archaeology, epigraphy, art history, and other modern approaches can provide, might be said to stand. In some cases, moreover, these texts provide genuine historical insights.

The stories in the old texts arise from various concerns. One is the nature of Buddhist identity and whether there is a need to demonstrate that Buddhism had been implanted in the very soil upon which people live as long ago as the Buddha's lifetime. Another is the presence of ancient monuments, whose existence calls for historical explanation. Then there might be mere curiosity about what life may have been like in the distant past. The kinds of stories that are invented or appropriated are modified and linked in a variety of ways, depending upon whether the stress is upon continuity or upon social and political rupture, or, as will be seen, upon a kind of continuity that endures despite the ruptures. The texts are relatively limited in number, and among the ones chosen here, dealing with Haripuñjaya, Phra That Phanom, Nakhon Si Thammarat, and Nakhon Pathom, most can be read in English translation.

Previous pages:
*Footprints of the four Buddhas which have appeared in this "Auspicious Era" [*bhaddakappa*], Wat Phra That Haripunchai, Lamphun [Photograph courtesy of Nicolas Revire].*

Haripuñjaya

Haripuñjaya (the modern Lamphun) is the one site where there is a record of historical continuity, where a dynasty of late-Dvāravatī Mon speakers is transformed into the Thai kingdom of Chiang Mai. There are two well-known historical accounts, both written in Pāli, the first, the *Cāmadevīvaṃsa*, composed by the monk Bodhiraṃsi in 1410, the second, the *Jinakālamālī*, about a hundred years later. Queen Cāmadevī, who grew up near Lop Buri, is said in the *Jinakālamālī* to have moved north at a date equivalent to 662 CE. If she is understood to have been a more or less historical figure, the date is likely to have been the tenth century,

Opposite Figure 1:
Phra That Haripunchai at Wat Phra That Haripunchai, Lamphun [Photograph courtesy of Nicolas Revire].

following the absorption of some of the old Dvāravatī polities by the Khmer empire. Her behaviour, in the *Cāmadevīvaṃsa*, does not differ from that of an ideal contemporary monarch. "Everyone, the royal ministers and the people, both town and village dwellers, followed the example of Cāmadevī and her sons in supporting a flourishing Buddhism" (Swearer & Sommai 1998: 80). Historical distance is created not with her but with the inhabitants of the North prior to the coming of the queen. They were ruled by *isi*, hermits or sages (Skt, *ṛṣi*). These hermits had the ability to fly through the air and to have offspring whose mothers were deer, and they were able to create the city of Haripuñjaya before Queen Cāmadevī arrived. They were mythical figures. Four key sages had once been Buddhist monks, but they left the monkhood and acquired higher knowledges in the Himavanta forest, a land that figures in numerous *jātaka* tales and provided a model for the world of the hermits. In fact, hermits may have had a significant role historically in the centuries of "Indianisation;" they were presumably descendants of village shamans, and, in one of the handful of Dvāravatī inscriptions, a *ṛṣi* was credited with the establishment of a carving of the seated Buddha in one of the Khao Ngu caves near Ratchaburi in the seventh-eighth century.[1]

Although there were no such early Buddhist dedications in northern Thailand, Buddhism had nevertheless been implanted there during the lifetime of the Buddha, according to the *Cāmadevīvaṃsa*. He had come to Thailand, stood on a stone platform (P. *silāpaṭṭa*), and made a prediction – not concerning Queen Cāmadevī but her successor King Adittarāja, who would later discover a relic of the Buddha and enshrine it at Phra That Haripunchai **[Figure 1]**.[2] A model for the Buddha's prediction of much later historical events was provided by inscriptions of the Burmese king Kyanzittha, in the late eleventh century, and the physical presence of the Buddha was sanctioned by the Sri Lankan chronicle, the *Mahāvaṃsa*, which describes visits made by Gotama to Sri Lanka. The stone platform echoes the *manosilātala* ("red-arsenic plateau") in the Himavanta, which also inspired King Ramkhamhaeng of Sukhothai (r. 1279?-1298), who established a similarly named stone throne for his own authoritative speech.

Phra That Phanom

The historical circumstances at Phra That Phanom **[Figure 2]**, a reliquary tower near the banks of the Mekong river in Nakhon Phanom province, are quite different (Pruess 1976). Some of the elements in the local legend, however, parallel those in the *Cāmadevīvaṃsa*. At Haripuñjaya, the *stūpa* built by King Ādittarāja to house the relic he discovered (in 1063 CE, according to the *Jinakālamālī*; actually, probably, in the twelfth century CE) still stands, its appearance altered by subsequent re-buildings **[Figure 1]**.[3] At Phra That Phanom, on the other hand, the monument dates (probably) from the tenth century, was abandoned, and then re-dedicated in the seventeenth century, at which time the supporting myth was composed.[4] In this text, the *Urāṅganidāna* ("Tale of the Breastbone"), as in the *Cāmadevīvaṃsa*, the Buddha pays a visit, but his tasks are expanded: he makes a prediction, that his disciple Mahākassapa will bring a relic to this spot, and leaves three footprints, in different places. In Sri Lanka, on the other hand, the Buddha had left only a single footprint. Time shrinks. Mahākassapa soon arrives

Figure 2: *Phra That Phanom, Nakhon Phanom province [Photograph courtesy of Nicolas Revire].*

with the relic, and it is encased in a vaulted chamber by the ruler, with the cooperation of the leaders of four neighbouring kingdoms, each working on one of the four faces and subsequently making offerings there (Pruess 1976: 34-35). An analysis of the names of the kings would probably show that they allude to the Angkorian period, as well as to legendary Lao rulers, but it may also be that the point was to establish a model of ideal behaviour, dating from the distant past, that would be relevant to the political rivalries of the seventeenth century.

An image of a thoroughbred horse was constructed to the north, "meant to signify that the Breast-bone Relic of the Buddha had emerged to demonstrate its miraculous powers" (Pruess 1976: 36). This appears to allude to an episode described at greater length in a poem from Nakhon Si Thammarat, concerning the uncovering of a relic by King Asoka:

> Men and women of every age went and looked; big and small, they flooded the area. They saw the radiant image of a *deva* riding a caparisoned horse, from which he dismounted.

Figure 3: *Detail of Phra That Phanom. Carved brick panel showing horse with rider, before the collapse of the monument [Photograph courtesy of Srisakra Vallibhotama].*

> They saw the relic just as they had hoped; it was in a golden casket and was beautifully radiant. The king took the relic from the back of the horse, and people jammed together in order to see.
>
> The statue of the royal horse would obey only the *deva*. Some people got up on each other's shoulders. Others stetched their necks in order to see the beautiful sight.
>
> Beautiful lanterns and candles dispelled all gloom; they glowed radiantly, and flowers blossomed all around. (FAD 2504: 10; my translation)

Then, later, the tower was built over the vaulted chamber – not by humans but by Viśvakarman, the architect of the gods. On its exterior walls, Phra That Phanom has décor of carved brick, featuring in each panel horses and elephants with riders, surrounded by foliage **[Figure 3]**. Their original meaning is not known, but the *Urāṅganidāna* describes them as portraits of the same rulers who had constructed the reliquary chamber (Pruess 1976: 40). This would be a case, therefore, of an interpretation of sculptural relief turning into legend.

Nakhon Si Thammarat

The poem just quoted, which relates the history of the "Supreme Reliquary" (T. *bgrommathat* = P. *paramadhātu*), or *stūpa*, of Nakhon Si Thammarat, is not well known, but two prose chronicles from Nakhon Si Thammarat with related content were exhaustively analysed by David Wyatt (1975), and another Thai Buddhist treatise was among the earliest to be described in English (Low 1843). Wyatt's texts are found in nineteenth-century manuscripts that were compiled at a time when it was thought important to establish regional identity. The Phra Borommathat was very likely built in the twelfth century and then renovated in about the fifteenth **[Figure 4]**, but there were gaps in its support, gaps brought about by plague and political upheaval. The earlier history of the enshrined relic was constructed with the help of the *Dāṭhāvaṃsa*, the "History of the Tooth Relic," and of one or more texts describing the recovery by King Asoka (third century BCE) of the relics deposited by King Ajātasatru (fifth century BCE), who had received one of the original eight measures of ashes following the Buddha's cremation. This recovery involved the neutralisation of a guarding device John Strong called the "Roman robots" (2007: 132-136). This particular episode is described in a Chinese translation of 306 CE (Strong 1983: 302) and then in several Pāli texts of considerably later date, including the *Thūpavaṃsa* and the *Lokapaññati*, a cosmography composed in Myanmar, based on Sanskrit as well as Pāli sources (Denis 1977). The *Dāṭhāvaṃsa*, the *Lokapaññati*, and the *Thūpavaṃsa* were arguably the product of the same milieu, the interlinked Buddhist communities around the edges of the Bay of Bengal and the Indian Ocean – Bodhgayā, Pagan, the Thai-Malay Peninsula, and Sri Lanka – in the eleventh-thirteenth centuries.

According to the *Dāṭhāvaṃsa*, one of the tooth relics of the Buddha was installed in a *stūpa* in Kalinga, on the northeastern coast of India, but warfare erupted over it, and eventually the king's daughter and her husband were entrusted to carry it to Sri Lanka, where it would be safer. On the way, the couple deposited it temporarily in the middle of a "heap of sand" (P. *vālukā-rāsi-majjha*), where its presence was detected by a flying monk, a *mahāthera*, and then by a *nāga*-king, who seized it (Law 1925: 34-40).[5] Returned to the couple through the powers of the *mahāthera*, it eventually safely reached Sri Lanka. It was the heap of sand that captured the imagination of the people of the peninsula; it became the Hat Sai Kaeo, the "crystal sands," surrounded by the sea, and the *mahāthera* who had saved it made a prediction, that at this site a king named Thammasokarat would rule over a city called Nakhon Si Thammarat, where a "Great Reliquary" would be built (Wyatt 1975: 66, 70).

Thammasokarat (Dharmāsokarāja) is the Thai name for King Asoka of India, and it became a local dynastic title, used by historical rulers in the twelfth-thirteenth century. The first local Asoka, according to the chronicle, was a contemporary of King Asoka, and his behaviour may have been partly modeled on that of King Devānampiyatissa of Sri Lanka, another contemporary, who, similarly, had decided to build a *stūpa* before actually knowing where any relics could be found (Geiger 1960: 78, 116). The story of the discovery of the relics deposited by King Ajātasatru, properly an accomplishment of the Indian

Figure 4: *Phra Borommathat (the "Supreme Reliquary* Stūpa*"), Wat Phra Borommathat, Nakhon Si Thammarat [Photograph courtesy of Nicolas Revire].*

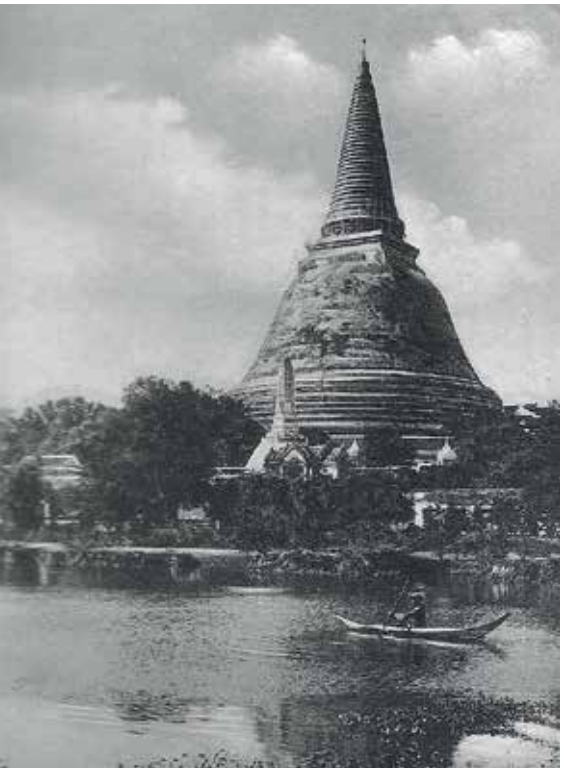

Figure 5: *Phra Pathom Chedi, early twentieth century, Nakhon Pathom [After Karl Döhring,* Buddhistische Tempelanlagen in Siam*, Siam: Asia Publishing House, 1920, first plate volume, pl. 14].*

Asoka, was appropriated and assigned to the local Thammasokarat. In the words of the poem quoted above, the "People began to dig. Men and women were everywhere, and they interfered with each other. Fighting with each other as they dug, some fell down and couldn't manage to stand up again" (FAD 2504: 6). But an obstacle is encountered, a *phapphayon* (in Indic spelling, *bhābayanta*, i.e. *bhāvayantra*, a magical diagram of images) that emerges and slashes off people's heads.

> "Don't dig any more or you'll die, your life will be at an end." The king was downcast and angered at this obstacle, this thing which wouldn't yield and which was still there after all these years.
>
> "You elders, chiefs, and ministers, have you seen this before?" he said. "Has this ever happened? Councilors and wise men, tell me now."
>
> Astrologers and citizens, councilors and ministers, made the obeisances and said, "According to the texts, this is a warning. What has occurred is called a *bhāvayantra*." (FAD 2504: 7; my translation)

Eventually the god Indra dispatches Viśvakarma (spelled Beśṇukarrm in the printed text), who with a magic arrow neutralises the *bhāvayantra*. This version of the story accords in general with that in the *Thūpavaṃsa*, where the protective device is more specifically described as a rapidly turning wheel, with automatons brandishing swords on the edge (the Roman robots). There, it is called a *vāḷa-saṅghāṭa-yanta*, presumably a device of arrayed wild beasts (FAD 2511: 47, 165). In the *Lokapaññati*, it is also a kind of *yantra*, a *bhūta-vāhana-yanta*, that is, vehicle-for-spirits machine (Denis 1977: I, 141).

The magical qualities of these machines distinguish them from the "great wheel armed with sharp swords that spun with the force of the river" in the Chinese text of 306 CE (Strong 1983: 302). The wheel was placed in the swiftly flowing Ganges river and operated on scientific principles. Still, since this wheel is in Chinese a *lun*, the same word used to translate *cakra* and is later applied to *yantra*s in the shape of circles of letters, it is possible to imagine it turning into something magical.[6] In the Chinese text it is halted, following the advice of a monk, by the application of quantities of plums that gum up the works. Although in one of the Nakhon Si Thammarat versions the application of medicinal leaves neutralises the *bhāvayantra* prior to the descent of Viśvakarma (Wyatt 1975: 82), it is hard, when comparing these texts, to find any firm ground that would enable us to conclude that at one or another point we can attribute a particular belief to the Mahāyāna phase of the peninsula's past, prior to the spread of Pāli texts in the eleventh-thirteenth centuries.

Nakhon Pathom

The case of Nakhon Pathom is for various reasons more intriguing than are Haripuñjaya, Phra That Phanom, or Nakhon Si Thammarat. There are competing legends, and they cannot be understood merely by consulting English-language studies or translations. Somewhat complicating the situation is the existence of two ancient sites with rather similar names, which are easy to confuse and doubtless have been mixed up in the past. One is Phra Pathom Chedi, the great tiled *stūpa* restored by King Mongkut (r. 1851-1868), today the memorable focal point of the modern town **[Figure 5]**. The other is Phra Prathon Chedi, the site of which marks the centre of the ancient Dvāravatī city. Prior to King Mongkut's reconstruction, the original *stūpa* of Phra Pathom Chedi was surmounted by a *prang* (a Khmer-type tower), of uncertain date. A *prang* was also constructed at some point atop the *chedi* at Wat Phra Prathon (i.e., Phra Prathon Chedi), and it was left standing in the recent clearing of the monument **[Figure 6]**.

Figure 6: *Phra Prathon Chedi, Nakhon Pathom [Photograph courtesy of Nicolas Revire].*

Furthermore, the names of the two monuments have complicated histories. In older texts, such as a legend recorded in 1807 (Wichianpricha 2506: 69) and a *nirat* by the poet Sunthon Phu (2508 and 1986), Phra Pathom Chedi is called "Phra Prathom," spelled Braḥ Praḥdham (พระประธม). This "*dham*" is like the *thom* of Angkor Thom at Angkor, a Khmer word meaning "great," and this part of the name may have considerable antiquity. In Inscription no. 2 of Sukhothai, of the fourteenth century, there is a passage that has been translated "The cetiya, [including] the new construction as well as the old, reached a height of a hundred and two fathoms. The Khòm call it 'Braḥ Dhaṃ.' It is built in the middle of Lord Kris's city" (Griswold & Prasert 1972: 121-122).[7] The interpretation of this section of Inscription no. 2 is one of the most contested issues in Thai epigraphy, but the view that the *stūpa* in question is Phra Pathom Chedi (Wright 1985: 231) is entirely reasonable.[8] It was evidently located in a place where there were speakers of Khmer (Khòm), and the Hindu god Kṛṣṇa's (Lord Kris's) city was Dvāravatī (Jacques 2009: 27). If the identification is correct, it incidentally provides additional information: that by the fourteenth century the monument was no longer known by its original Mon or Indic name but by the name given by the recent overlords, the Khmers.

At this point the analysis of names becomes even more complicated. There is another Khmer word, *daṃ*, "to perch," which would in Thai be pronounced *thom*, and it is the root of a derivative, *phdaṃ*, "to sleep" (restricted to royalty), which eventually became the words *parrdam* (บรรทม, pronounced *banthom*) and *praḥdam* (ประทม, pronounced *prathom*), with the same meaning in modern Thai (Uraisi 2553: 298). Phra Prathom, according to manuscripts recorded in Nakhon Pathom in the nineteenth century, was built at the site of a place where the Buddha had for a period come to lie down (Thiphakorawong 2469: 31). Phra Prathom Chedi was therefore, traditionally, "the *stūpa* (built at the place where the Buddha) reclined."

Figure 7: *Head of a crowned figure, probably the Buddha,* circa *late 13th cent. Stucco, H. 11 cm. Currently in the Phra Pathom Chedi National Museum [Photograph by Hiram Woodward].*

Figure 8: *Mural in the eastern* wihan *at Phra Pathom Chedi, showing the older monument encased by the* stūpa *built by King Mongkut [Photograph courtesy of Nicolas Revire].*

This did not accord at all well with the beliefs of King Mongkut, who told his chronicler Chao Phraya Thiphakorawong (2469: 1) that he had seen the spelling *paṭhama* (ปฐม), pronounced *pathom*, in old manuscripts. *Paṭhama* is the Pāli word for "first," and it is the word King Mongkut designated as the official name for the monument. Mongkut's views about the great antiquity of the *stūpa* also depended on historical and archaeological evidence (Thiphakorawong 2469: 1, 3). The "historical evidence" was the information in the *Mahāvaṃsa* (Geiger 1960: 86) about the missionaries sent by King Asoka to various countries (Soṇa and Uttara were sent to Suvaṇṇabhūmi) − "evidence" not previously encountered in this survey.[9] On the archaeological side, Mongkut was able to deduce from the size of the bricks that the structure was surely very old.

The name *prathon* (spelled ประโทน, *praḥdōna*) seems to be somewhat less complicated. Manuscripts seen by Chao Phraya Thiphakorawong in the nineteenth century (2469: 17-19) quite explicitly connect it with Doṇa (Skt, Droṇa), the Brahmin who measured the Buddha's relics with a cup that was also called a *doṇa* (Strong 2007: 116-123). Just before battle was about to break out among eight armies intent on acquiring the Buddha's relics, the Brahmin Doṇa stepped forward and offered to parcel out eight portions equally. At a moment when no one was watching, Doṇa sneaked a tooth relic under his turban. He was seen, however, by the god Indra, who swooped down, snatched away the relic unnoticed, and carried it back to the Heaven of the Thirty-three for installation in the Cūḷāmaṇi Cetiya. Doṇa, when he discovered the relic missing, could not very well ask who had stolen it, and so he made a request for the measuring cup itself, which was granted. It is this measuring cup that is said to be installed at Phra Prathon Chedi. The prefix *pra-* is linguistically Khmer; according to Philip Jenner and Saveros Pou (1980-81: xxxvi), it "retains the causative and factive ideas of simple /p-/." *Praḥdōna*, therefore, might mean "caused (i.e., built) by Doṇa." Given this straightforward etymology, it could be that the name Prathon is the oldest, that the name *pra-* plus *dham* (great) was subsequently coined following the same pattern, and that eventually *pra-dham* (pronounced *prathom*), whatever it may have originally meant, acquired the meaning of its homophone *pra-dam* (recline).

Before returning to the Brahmin Doṇa, it is worth taking up both the best-known legend concerning Phra Prathom and the experiences of Sunthon Phu, as recorded in his poem (2508 and 1986). The legend is quite different in character from any of those encountered so far. It is found in a collection of historical tales compiled in 1807, in the early Bangkok period (Notton 1939: 82-96), and in variant form in the manuscripts viewed by Chao Phraya Thiphakorawong.[10] The ruler of Kanchanaburi, Phraya Kong, was told by astrologers that his son would later kill his own father. Phraya Kong sent his son away to live with an old woman called Yai Hom, and she raised him as her own. Later this prince joined the army of the Phraya of Ratchaburi, and he encouraged the Phraya to stop sending tribute to Phraya Kong of Kanchanaburi. War ensued, and the prince, ignorant of his father's identity, at last faced Phraya Kong himself in elephant combat. Phraya Kong fell, the prince entered Kanchanaburi in triumph, and he was consecrated as Phraya Phan. Phan then entered the women's apartments, where he heard a cat say, "Look at this son who's searching for his mother!" Phan was startled, and when he met his real mother, she was able to identify him on account of a scar he had had on his forehead since he had been an infant. She revealed his parentage to him. His first action was to put his foster mother, Yai Hom, to death for having kept his identity to herself. Subsequently Phraya Phan was told by monks that he could cleanse his *karma* (T. *lang kam*) by building a *chedi*. Phra Prathom Chedi was the result.

Looking into Indian literature for a counterpart to this myth does not appear to bring positive results. Rather obviously, it seems like a parable of ethnic change, and one of the variants reported by Chao Phraya Thiphakorawong (2469: 27) supports this interpretation. There, Kong is the ruler of Śrīvijaya, that is, Nakhon Chaisi (Nagara Jaiyaśrī), the ancient site of Nakhon Pathom itself, and the prince is raised by the king of Sukhothai as if he were his own son. Returning south, he kills his father and subsequently builds Phra Prathom Chedi. Looked at this way, the myth cannot have had anything to do with the original foundation of the monument but would have been much tied up with its renovation. Unfortunately, it is not yet possible to use art historical evidence to anchor these events. The Phra Pathom Chedi National Museum houses a number of stucco heads that can be dated to about the late thirteenth century, indicating activity in this period **[Figure 7]**. The exact date of the *prang*, or Khmer-type tower, that was built surmounting the bell-shaped *stūpa* has not, however, been determined. Its proportions, according to the depiction in a mural in the eastern *wihan* at the site **[Figure 8]**, appear too slender for the late thirteenth or the fourteenth century and suggest it may not have been constructed until the sixteenth century, during the Ayutthaya period. In another depiction **[Figure 9]**, however, the fatter proportions are compatible with the earlier date.

In 1842, Sunthon Phu (1786-1855), the greatest poet of the period, visited Phra Pathom Chedi (which was not yet known by that name), and his trip became the basis for his 895-line poem, *Nirat Phra Prathom*. A *nirat* is a travel poem filled with expressions of longing for an absent

Figure 9: *Modern mural in the southern* wihan *at Phra Pathom Chedi, showing the older monument as found in ruin by Prince Mongkut, then in the monkhood [Photograph courtesy of Nicolas Revire].*

Figure 10: *Modern sculpture of Yai Hom with the prince, Phra Prathon Chedi, Nakhon Pathom [Photograph courtesy of Nicolas Revire].*

loved one, and with sadness at the recollection of past loves. Place names play an important part in evoking these feelings, and what might sound in translation like a litany of the names of former girlfriends is lightened in Thai by the musicality of the sounds of the words. The view of "Phra Prathom" presented in the *nirat* is simultaneously determined by the poet's sensibility and by experiences that would have been shared by any tourist from the city.

Sunthon Phu finds the base of the *stūpa* surrounded by vegetation, although there are some structures where wandering monks may stay. He is able to look up and discern the architectural features of the surmounting *prang*, its gables and the re-entrant angles of its plan (line 596). He finds the staircase and ascends to an upper level, where he carries out a ritual triple circumambulation and makes offerings (some entrusted to him by others). The poet calls "Phra Prathom" a *paramadhātu* (*bɒrommathat*, like the *stūpa* at Nakhon Si Thammarat), meaning that it houses a relic, but he does not record any information about the relic's identity, or speculate concerning its origin. He turns to subjective experience, hoping that his poems will last forever and that the merit earned by his pilgrimage will enable him to join his deceased loved one in the Heaven of the Thirty-three. On the way down, still apparently self-absorbed, he picks up a loose brick and flings it, but the monument is so broad that the brick does not land beyond the base (line 749).

Having descended (walking backwards down the steep staircase), Sunthon Phu finds image halls (T. *bot* and *wihan*) and a large sculpture of a reclining Buddha. He meets up with villagers, who point out the portrait and commemorative stone sculptures of Phraya Kong, Phraya Phan, and Phraya Phan's mother (lines 810-811). He briefly recounts their story. Phra Prathon Chedi **[Figure 6]**, he writes (actually he describes it as "Phra Prang Prathon"), was built by Phraya Phan in recognition of the love bestowed by Yai Hom, his foster mother, whom he had been fated to kill. He cremated his mother and father and installed the remains in a cave (*tham*), over which the golden "Phra Prathom" (i.e., Phra Pathom Chedi) was built. According to Erik Seidenfaden's 1929 *Guide*, at that time, the images of Phraya Kong and Phraya Phan, both in actuality Dvāravatī stone sculptures of the Buddha or of a disciple, were installed outside the northern and southern *wihan*, respectively (1929: 26, 33). The statue known as Yai Hom, placed in the gallery, was in form a Bodhisattva, whose head had been stolen (1929: 39). Today the sculpture of Yai Hom that receives reverence is not at Phra Pathom Chedi but at Wat Phra Prathon, in accordance with what Sunthon Phu wrote about her connection with the monument there **[Figure 10]**.

The Question of Historical Evidence

This account of the various legends and linguistic mazes appears to have taken us back a certain distance in time – to the period of Khmer domination – but not beyond. Let us look closely, however, at a statement that appears at the beginning of Chao Phraya Thiphakorawong's account of one of the manuscripts, that of Mr Thong.

> In the time before the capital city of Jaiyaśrī had been established, there was a *brāhmaṇa* village, called the home of Doṇabrāhmaṇa [an alternative translation is "called Doṇabrāhmaṇa village"], who took the *doṇa*, which is the golden coconut-shell cup [*thanan*] that had measured the relics of the lord Buddha, to install there in a stone chamber [*ruean*], at the time when, it is said, the Buddhist Era had reached 1,133 years [= 690 CE]. (Thiphakorawong 2469: 17; my translation)

Parts of this passage recall the words of Doṇa, when he made his plea for the measuring cup, as found in the vernacular Thai life of the Buddha, the *Pathom Somphothikatha* (P., *Paṭhamasambodhi*). "This golden coconut-shell cup that measured the relics I shall take, build a *chedi* for, and install, making it an object of reverence and worship" (Paramanuchit 2505: 516). The interesting detail – though it is somewhat ambiguous – is that the village should be connected with the name Doṇa. In the Pāli texts, no information is given about Doṇa's home village. In Sanskrit and Chinese texts connected with the Sarvāstivādin and Mūlasarvāstivādin schools of Buddhism, however, the Brahmin's village is called Droṇagrāmaka (Bareau 1971: 290). There is a possibility, therefore, that the statement in Mr Thong's manuscript reflects a tradition that originated in Dvāravatī times, and that this little tidbit is a legitimate piece of evidence in the ongoing controversy about the nature of Dvāravatī Buddhism.

Perhaps buried in other manuscript sources there are similar nuggets offering revelations about early Thailand. It would be a mistake, however, to think that this sort of research is only worthwhile when it leads to such discoveries. Surely, as new vistas unfold, we gain in breadth of understanding by knowing how people of recent centuries have managed to construct a meaningful ancient past.

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Endnotes

1 At least according to the reading of Cœdès (1961: 19), although the word *ṛṣi* is not really clear in this inscription (Revire, this volume).

2 *Silāpatta* according to the Swearer and Sommai English translation of Bodhiraṃsi (1998: 49), but the correct form is *silāpaṭṭa*. There are two distinct Pāli words, *patta* (alms bowl; Skt, *pātra*) and *paṭṭa* (slab; Skt, *paṭṭa*). The late Michael Wright asked (2004-05) why King Ramkhamhaeng's stone platform (in Inscription no. 1) is called a *pātra* (when one would have expected *paṭṭa*). Perhaps it was because of confusion between the two Pāli words.

3 In this introductory essay, the terms *stūpa*, *cetiya*, and *chedi* (or *čhedi*) are considered interchangeable.

4 In 1975, the tower collapsed but was then re-built.

5 For the Pāli text, see: http://www.buddhanet-de.net/ancient-buddhist-texts/Buddhist-Texts/X2-Dathavamsa/Dathavamsa.pdf.

6 The *Ayuwang Zhuan*, T. 2042.50.0131a05 (Taishō reference). I thank Dr Hui-Wen Lu for confirming the accuracy of the translation in Strong (1983: 302).

7 *Thom* in the inscription is not spelled ธม but ธ์, i.e. with a little circle over the consonant to denote *anusvāra*, as in modern Khmer.

8 Winai (2000: 156) also raised the possibility of a connection with Inscription no. 2. It has been pointed out that the career of Si Sattha in Inscription no. 2 is paralleled in one of the legends of Nakhon Pathom by that of Maha Lai Lai ("Tatooed Shoulders"). See Woodward (1975: I, 157-158) and Winai (2000: 157). Winai's short article was composed as an introduction to Boisselier (2000), which was a re-publication of a book that appeared in 1978.

9 A translation of the first thirty-six chapters of the *Mahāvaṃsa* into Thai was made by Phraya Thammaparohit in 1796 CE. For the Thai translation of this passage, see FAD (2534: 186). Revire (2011: 99) has argued that the reference of King Mongkut was possibly based on a local adapted Pāli version such as the "Extended *Mahāvaṃsa*," or else the *Vaṃsamālinī* composed during the reign of Rama I.

10 Early printings of this book are hard to come by and have been little noticed. More recently the book was issued in pamphlet form by the Samnak-ngan Chat Prayot lae Raksa Ong Phra Pathom Chedi in 1979, and in 1985 the Fine Arts Department published *Rueang phra pathom čhedi: krom sinlapakǫn truat sop chamra mai* (The Story of Phra Pathom Chedi, re-edited and corrected by the Fine Arts Department), cited by Winai (2000: 158), which I have not seen. I do not know whether it indicates if any of the original manuscripts are still in existence. The narrative account by Chao Phraya Thiphakorawong (2469: 1-16) parallels his account in the royal chronicle of the reign of King Mongkut, translated by Flood (Thiphakorawong 1965-74: II, 499-519), which was the primary source for Boisselier (2000). The sections on the manuscripts (2469: 17-26 and 27-32) are briefly summarised in Woodward (1975: I, 152-158). Some parts of these texts were utilised by Prince Dhani (1956) and Winai (2000).

References

Bareau, André
1971 *Recherches sur la biographie du Buddha dans les Sūtrapiṭaka et les Vinayapiṭaka anciens : II. Les derniers mois, le parinirvāṇa et les funérailles*. Volume 2. Paris: École française d'Extrême-Orient.

Boisselier, Jean
2000 La reconstruction de Phra Pathom Chedi : quelques précisions sur le site de Nakhon Pathom. *Aséanie* 6: 159-189. [Originally published in 1978]

Cœdès, George
1961 *Recueil des inscriptions du Siam. Pt. II. Inscriptions de Dvāravati, de Çrīvijaya et Lāvo*. Bangkok: Fine Arts Department. [Second Revised Edition; First Edition 1924. In Thai and French]

Denis, Eugène
1977 *La Lokapaññati et les idées cosmologiques du bouddhisme ancien*. Three Volumes. Lille: Reproductions des thèses, Université de Lille III.

Dhani Nivat
1956 Phra Pathom in Mediaeval Tradition. *Artibus Asiae* 19: 227-229.

Fine Arts Department (FAD)
2504 *Tamnan phra bǫrommathat nakhǫn si thammarat klǫn suat* (History of the Great Reliquary *Stūpa* of Nakhon Si Thammarat, a Poem for Chanting). Bangkok: Fine Arts Department. [In Thai; 1961 CE]

2511 *Phra khamphi thupawong tamnan wa duai kansang phra sathupčhedi* (The Scripture *Thūpavaṃsa*, a History Concerning the Building of *Stūpa*s). Bangkok: Fine Arts Department. [In Thai; 1968 CE]

2534 *Wannakam samai rattanakosin lem 1 (muat sasanačhak) khamphi mahawong* (Bangkok-period Literature, vol. 1 (Religion Section): the *Mahāvaṃsa*). Bangkok: Fine Arts Department. [In Thai; 1991 CE]

Geiger, Wilhelm (trans.)
1960 *The Mahāvaṃsa or the Great Chronicle of Ceylon*. Colombo: Ceylon Government Information Department.

Griswold, Alexander B. & Prasert na Nagara
1972 King Lödaiya of Sukhodaya and his Contemporaries. Epigraphic and Historical Studies, No. 10. *Journal of the Siam Society* 60(1): 21-152.

Jacques, Claude
2009 Dvāravatī, un royaume sans histoire. In Baptiste, Pierre & Zéphir, Thierry (eds), *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Musée Guimet, pp. 27-29.

Jenner, Philip N. & Saveros Pou
1980-81 *A Lexicon of Khmer Morphology*. Mon-Khmer Studies Volumes IX-X. Manoa: University Press of Hawai'i.

Law, Bimala Charan (ed. & trans.)
1925 *The Dāṭhāvaṁsa (A History of the Tooth-relic of the Buddha)*. Lahore: Motilal Banarsidass.

Low, Lt.-Col. James
1843 Gleanings in Buddhism; or Translations of Passages from a Siamese Version of a Pali Work, Termed in Siamese 'Phra Pat'hom.' *Journal of the Asiatic Society of Bengal* 12(2): 72-98.

Notton, Camille (trans.)
1939 *Légendes sur le Siam et le Cambodge*. Bangkok: Imprimerie de l'Assomption. [Translation of Wichianpricha 2506]

Paramanuchit Chinorot, Krom Somdet Phra (trans.)
2505 *Phra pathom somphothikatha* (The *Paṭhamasambodhi*). Bangkok: Department of Religion. [In Thai; 1962 CE]

Pruess, James B.
1976 *The Thāt Phanom Chronicle: A Shrine History and Its Interpretation*. Data Paper Number 104. Ithaca, New York: Southeast Asia Program, Cornell University.

Revire, Nicolas
2011 Facts and Fiction: The Myth of Suvaṇṇabhūmi through the Thai and Burmese Looking Glass. *Mahachulalongkorn Journal of Buddhist Studies* 4: 79-114.

Seidenfaden, Erik
1929 *Guide to Nakon Patom*. Bangkok: Royal State Railways of Siam.

Strong, John S.
1983 *The Legend of King Aśoka: A Study and Translation of the Aśokāvadāna*. Princeton: Princeton University Press.

2007 *Relics of the Buddha*. Delhi: Motilal Banarsidass.

Sunthon Phu
2508 *Prachum nirat sunthǫn phu* (Collected *Nirat*s of Sunthon Phu). Bangkok: Fine Arts Department. [In Thai; 1965 CE]

1986 *Nirat phra prathom*. English Translation by Montri Umavijani. Bangkok: Private Publisher.

Swearer, Donald K. & Sommai Premchit (trans.)
1998 *The Legend of Queen Cāma: Bodhiraṃsi's* Cāmadevīvaṃsa. *A Translation and Commentary*. Albany: State University of New York Press.

Thiphakorawong, Chao Phraya (ed.)
2469 *Rueang phra pathom čhedi* (The Story of Phra Pathom Chedi). Bangkok: National Library. [In Thai; 1926 CE]

1965-74 *The Dynastic Chronicles, Bangkok Era, The Fourth Reign B.E. 2394-2411. (A.D. 1851-1868)*. English Translation by Chadin (Kanjanavanit) Flood. Five Volumes. Tokyo: Centre for East Asian Cultural Studies.

Uraisi Varasarin
2553 *Rǫngrǫi phasa khamen nai phasa thai*. Bangkok: Silpakorn University. [Originally published in 1984 as *Les élements khmers dans la formation de la langue siamoise*; In Thai; 2010 CE]

Wichianpricha
2506 Phongsawadan nuea (Chronicle of the North). In *Prachum phongsawadan lem 1*. Bangkok: Khurusapha, pp. 1-127. [In Thai; 1963 CE]

Winai Pongsripian
2000 Présentation et commentaire. *Aséanie* 6: 155-158. [Introduction to Boisselier 2000]

Woodward, Hiram W., Jr
1975 *Studies in the Art of Central Siam, 950-1350*. Doctoral Dissertation. New Haven: Yale University. [Unpublished]

Wright, Michael
1985 Note on Betty Gosling's Article: Why Were the Jatakas "Hidden Away" at Wat Si Chum (*JSS* Vol. 72). *Journal of the Siam Society* 73: 226-234.

2004-05 Language Anomalies in Inscription One. *Journal of the Thai Khadi Research Institute* 2(1): 173-187.

Wyatt, David K.
1975 *The Crystal Sands: The Chronicles of Nagara Śrī Dharrmarāja*. Data Paper Number 98. Ithaca, New York: Southeast Asia Program, Cornell University.

PART I
Transitions from Late Prehistory to Early History

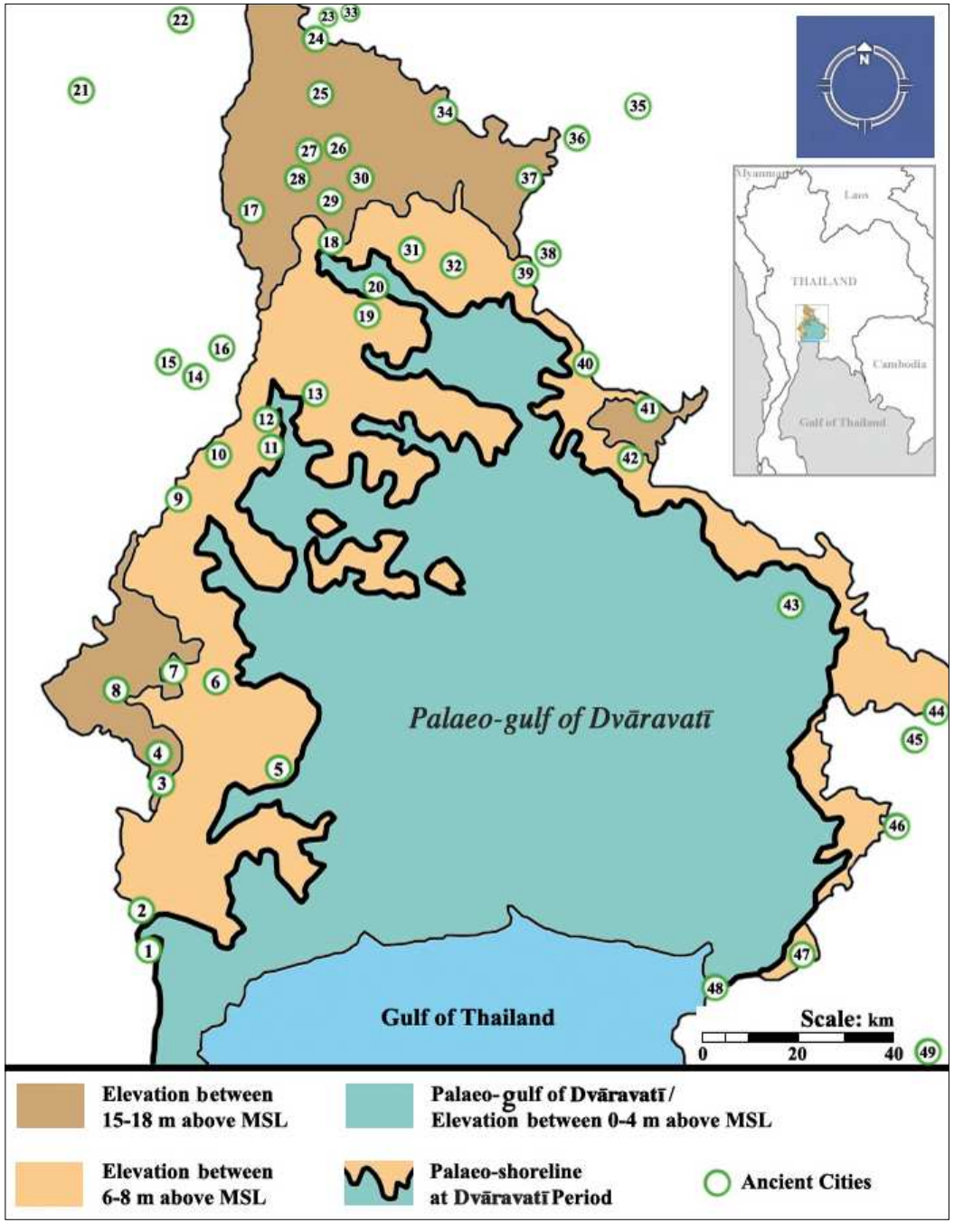


Figure 1: *A conceptual illustration of the relationship between the positions of ancient cities and the palaeo-shoreline during the Dvāravatī period based on topographic elevation [Drawing by Trongjai Hutangkura, modified from Phongsi & Thiwa 2524].*

Reconsidering the Palaeo-shoreline in the Lower Central Plain of Thailand

Trongjai Hutangkura

Previous pages: *Pottery lamp from the ancient city of Mueang Bon, Nakhon Sawan province, ca 5th-6th century, 9 cm. high. Bangkok National Museum, inv. no. 1/9 [Photograph courtesy of Paisarn Piemmettawat].*

Introduction

Archaeologists who in recent decades have studied the transition between protohistory and early Thai history have often noted that the entire area of the present-day Lower Central Plain of Thailand was covered by seawater that formed a palaeo-gulf up to the period of *circa* 600-700 CE. According to this scheme, its northernmost shoreline was supposedly located in the area of Ang Thong province **[Figure 1]**.

Phytogeography, that is, geomorphological and palynological studies, together with a range of relative calibrated ages of new radiocarbon dates from sedimentary sequences of the Lower Central Plain, form the basis of the present essay.[1] The findings tend to temper and even scientifically disprove the model described above by archaeologists, at least for the first-millennium CE palaeo-shoreline of the Gulf of Thailand. The study reveals that landform of the Lower Central Plain developed from a palaeo-gulf during the Holocene Maximum Transgression from 8,400 calendar years before the present (cal BP; or ca 6,400 BCE) and that its shoreline has been characterised by mangrove forest located in the area of present-day Suphan Buri and Ang Thong provinces. This palaeo-shoreline has moved continuously southward over the centuries under the influence of the Holocene Regression. Dated evidence of mangrove remains found in a sedimentary sequence suggests that the palaeo-shoreline was actually located in the vicinity of present-day northern Bangkok around 600-700 CE.

Geographical Setting

The strategic location of the Lower Central Plain for economic and political activity makes it one of the most geographically attractive regions of Thailand. The deltaic sediment that carpets the basin is nutrient-rich and appropriate for growing rice – hence, the area is known as the "rice bowl of Thailand" (Fukui 1971: 371). The main Siamese political powers emerged in this region, during the Ayutthaya period (1350-1767 CE) and in the more recent Thon Buri (1767-1782 CE) and Bangkok periods (1782-present CE).

The Central Plain is located in the middle of the kingdom of Thailand. Its primary features are a fluvial plain to the north, a deltaic plain to the south and the coastal area at its southernmost reach (DMR 2544). In the past, the Central Plain was topographically divided into three parts: the northern basin, the Nakhon Sawan area, and the southern basin (Alekseev & Takaya 1967; Takaya 1968, 1969 and 1972). According to the most recent geological study, the northern basin and Nakhon Sawan area are considered to be a single region, namely

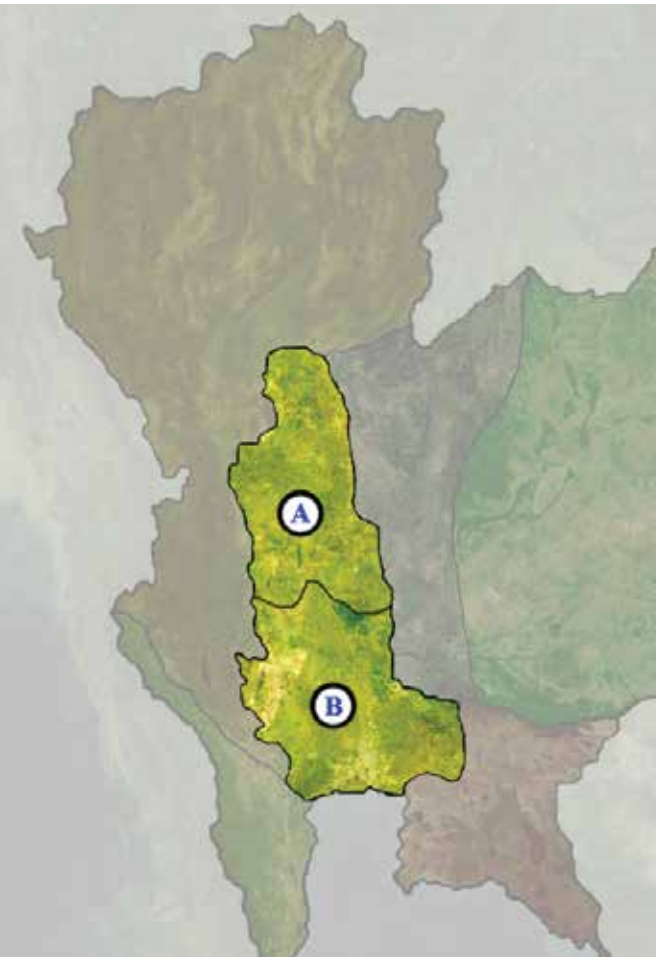


Figure 2: *Location of the Central Plain of Thailand; A: The Upper Central Plain, B: The Lower Central Plain [Drawing by Trongjai Hutangkura, modified from Sin 2000].*

the Upper Central Plain, while the southern basin is alternatively called the Lower Central Plain (Phisit 1995; Sin 2000) **[Figure 2]**. The Upper Central Plain receives fluvial sedimentation only from northern Thailand. The Lower Central Plain receives fluvial sedimentation from three directions which has been deposited over the marine clay stratigraphy of Early to Middle Holocene from approximately 7,000 to 3,000 BCE.

The Upper Central Plain is where the Ping, Wang, Yom, and Nan rivers join to become the Chao Phraya river in the area of Pak Nam Pho at Nakhon Sawan. Sedimentation of the plain originates from the erosion and weathering process of the fluvial action and provides a diverse fluvial topography of floodplains, terraces, and freshwater swamps.

The Lower Central Plain is a depression area that extends approximately north-south from Ang Thong to Samut Prakan and east-west from Chachoengsao to Nakhon Pathom. Its topography is characterised by a large deltaic plain, which originated by sediment discharge of the Chao Phraya river flowing from Nakhon Sawan in the Upper Central Plain southerly to the Gulf of Thailand at Samut Prakan. Besides the influence of the river system from the north, other influences emanate from the eastern and western sides of the deltaic plain. Flowing from the west are the Mae Klong, the Sakae Krang, and the Tha Chin rivers, while those from the east are the Pasak, the Lop Buri, and the Bang Pakong rivers. However, only four rivers (the Chao Phraya, the Tha Chin, the Mae Klong, and the Bang Pakong) empty into the Gulf of Thailand.

The term Lower Central Plain has been employed in recent geological work to describe the zone which was influenced by the Holocene sea-level change and resulted in traces of a palaeo-gulf, brackish/old marine clays, fragments of sea shells, and palaeo-mangrove occupation. However, the term Chao Phraya Delta is also equally used (Umitsu *et al.* 2002). A number of alternative names were used for the Lower Central Plain in previous work, such as the "Southern Basin of the Central Plain" (Takaya 1969), the "Bangkok Plain" (Hattori 1972b), the "Chao Phraya Depression" (Charan 1975), the "Chao Phraya-Mae Klong Basins" (Selvakumar 1977), the "Lower Chao Phraya Basin" (Sangad & Vella 1983), and the "Southern Central Plain" (Rau & Prinya 1983).

State of Problems

Standardised Radiocarbon Dates as Cal BP

Geologists have from late in the 1960s recognised traces of marine transgression during the Holocene period (Pons & Kevie 1969; Takaya 1968, 1969, 1971a, 1971b, and 1972; Hattori 1972a and 1972b). Plant and animal remains that are associated with marine conditions have been studied continuously since the 1980s (Chongpan *et al.* 1983; Somboon 1987 and 1988; Chutamat *et al.* 1987). A geomorphological study has revealed that the marine transgression, the result of the sea-level rise, began during the transitional period approximately between 10,000 and 6,000 BCE, covering the terminal Late Pleistocene and Early Holocene. Accordingly, the sea level reached its maximum point or the so-called Mid-Holocene Highstand around 6,000 uncalibrated BP (Somboon & Narong 1992). From then onward, the sea level decreased gradually along with marine regression. All studies have indicated that the geological structure of the Lower Central Plain is a result of landform changes from shallow sea to floodplain environments.

Studies before the year 2002, however, only used radiometric ages (i.e. uncalibrated BP) in their discussion. So far no calibrated ages have been discussed. The first two studies to use calibrated ages (Saito *et al.* 2002; Umitsu *et al.* 2002) pinned the maximum transgression between 8,000 and 7,000 cal BP (or ca 6,000-5,000 BCE). The following year, Tanabe *et al.* (2003) improved the palaeo-shoreline concept of Umitsu *et al.* (2002). Mauro Negri (2009), however, who used molluscan remains as a sea-level indicator, proposed that the maximum position of palaeo-shoreline stood at 5,500 ± 50 cal BP (or ca 3,500 BCE). Unfortunately, the present author has also found that the result "5,500 ± 50" is actually not a calibrated age. Negri (2009) in fact only referred to the date given in the earlier work of Chongpan *et al.* (1983), which is reported as a radiometric age.

To date, most radiocarbon ages in the Lower Central Plain have been dated by radiometric or radioactive methods while only a few have been dated by accelerator mass spectrometry (AMS). Moreover, some have been calibrated and some others not. The results are therefore difficult to use in determining positions of the palaeo-shorelines to a reliable standard. Therefore, the present author herewith proposes that all radiocarbon ages for the Lower Central Plain be standardised by recalibration with the most up-to-date calibration program, such as CALIB 6.0.[2]

Phytogeographical Changes

Traces of plant communities in sedimentary sequences of the Lower Central Plain can be investigated by using palynology. Previous palynological investigation in the sedimentary sequences has, however, been limited to the Bangkok clay horizon. The upper horizons, i.e. the weathered clay and covered soil horizons, were reported as non-productive sediments for pollen analysis and mostly neglected by previous researchers (Somboon 1988; Chutamat *et al.* 1987; Paramita 2550). It is fair to say that a complete palynological study in sedimentary

sequences of the Lower Central Plain has never yet been undertaken. The present study was based on the author's doctoral research. It presents results extracted from palynofloral remains in the sedimentary horizons of the Lower Central Plain of Thailand, with the aim of obtaining as complete information as possible on ancient plant communities of the Holocene sedimentary sequences.

Landform Changes and Archaeology in the Lower Central Plain

The absence of prehistoric evidence in the Lower Central Plain has been noted from the beginning of prehistoric studies in Thailand (Seidenfaden & Kerr 1930; Sarasin 1933). Most parts of the plain were covered by seawater during the Early to Middle Holocene, approximately 7,000-3,000 BCE, as is confirmed with the occurrence of acid sulphate in surface soil layers which developed under brackish conditions (Pons & Kevie 1969; Kevie & Banchong 1972; ISM 1981) and with the discovery of brackish and marine sediments in deeper layers (Alekseev & Takaya 1967; Takaya 1968, 1971a-b; Hattori 1972a-b). The geological evidence, however, has not been corroborated or exploited by historians and archaeologists until recently. At the beginning of the 1980s, some Thai scholars (Phongsi & Thiwa 2524; Thiwa 2526) attempted to estimate the position of the palaeo-shoreline during the so-called Dvāravatī period (ca the second half of the first millennium CE) by using data from Takaya's (1969) topographical analysis and location of the ancient cities of the first millennium. The concept was used again by Karen Mudar (1999) in order to analyse the administrative moated settlements of the Dvāravatī culture in the Central Plain of Thailand. The following pages briefly review this literature, which has had a profound impact on ancient historical studies for the region.

The so-called Holocene Maximum Transgression occurred at 6,000 uncalibrated BP (Somboon & Narong 1992) or during 8,000-7,000 cal BP (Umitsu *et al.* 2002; Tanabe *et al.* 2003), corresponding to 6,000-5,000 BCE, resulting in a vast shallow sea that covered most parts of the plain. At that time, archaeological sites of pre-Neolithic or Hobinhian cultures were distributed mainly in limestone caves of mountainous complexes such as cave sites in Kanchanaburi (Rasmi 2000). It is obvious that the shallow sea environment was not congruent with pre-Neolithic settlement patterns that relied on limestone cave sites. For that reason, there is no evidence for pre-Neolithic settlements on the alluvial fans of the palaeo-gulf during the Maximum Transgression phase.

After the Maximum Transgression phase, the sea level has continuously regressed until the present level; this phase is called the "Holocene Regression" (Somboon & Narong 1992; Umitsu *et al.* 2002; Tanabe *et al.* 2003). For this phase, land progradation has been activated to form new areas behind mangroves, i.e. a floodplain environment. Subsequently, the mangroves moved southward under the influence of sea-level fall and freshwater sedimentation in the areas behind the mangroves. This phase corresponds to the Neolithic culture (ca 4,000-2,000 BCE) and Metal Age (ca 2,000 BCE-1,000 CE) (Suraphol 2550: 16-17). The new floodplain areas were not, apparently, yet ready for either Neolithic or Metal Age settlements because no archaeological sites have been observed in those areas. In contrast, Metal Age settlements were abundant on the undulated terraces covering an area from Nakhon Sawan to Lop Buri (Suraphol 2550: 65-97), approximately 100 km. north of Ayutthaya. During the transition period between protohistory and history around the middle of the first millennium, moated settlements of Dvāravatī culture started to emerge and were distributed throughout the old alluvial fans and terraces of the Lower Central Plain, except in the new areas of progradation.

The application of such topographic information to archaeology since the early 1980s has, however, led to a very different interpretation. The absence of Dvāravatī cultural evidence in the new areas of progradation led Phongsi and Thiwa (2524) to interpret alternatively that the moated settlements of the mid-to-late first millennium CE could have been located near to the sea. Furthermore, that would explain why there was no settlement on the lowlands of the Lower Central Plain, but only on old deltaic plain and terraces at elevations of higher than 4 m. above the recent mean sea level (MSL). The hypothesised palaeo-shoreline was therefore clearly drawn by the suggested topographic contour line of 4 m. above MSL **[Figure 1]** and defined the coastal zone during the so-called Dvāravatī period. It was also associated with the positions of ancient cities, which were considered de facto "ancient ports." The concept of such a "palaeo-gulf of Dvāravatī" has been adopted by many archaeologists since then. Mudar (1999), for example, used the model designed by Phongsi and Thiwa (2524) to propose a new distribution of Dvāravatī-period moated settlements on the Central Plain **[Figure 3]**.

Conflicting interpretations have, however, arisen between recent geological information and archaeological applications since the 1980s regarding the age of the maximum size of the palaeo-gulf of Thailand. The concept of the "palaeo-gulf of Dvāravatī" has been widely accepted and used in archaeological publications and in information distributed to Thai National museums. For example, the information is reproduced for showing in the Phra Pathom Chedi National Museum **[Figure 4]**. This author's doctoral research (Trongjai 2012) is aimed at improving the picture of the transition period and explaining the relation between the Holocene sea-level changes and the ancient topography of the Dvāravatī cultural period.

Methodology

Eight geological cores have been extracted from the Lower Central Plain in order to provide information on sedimentary sequences, ancient plant communities and radiocarbon dates. The cores were labelled with provincial names as follows: SR (Saraburi), AT (Ang Thong), SB (Suphan Buri), AY2 (Ayutthaya site 2), PT (Pathum Thani), NN (Nakhon Nayok), NP1 (Nakhon Pathom site 1) and SS (Samut Sakhon) **[Figure 5]**. Sedimentary sequences have been described according to such physical properties as texture, colour and materials in the sequences and associated with the results of previous studies (Somphat *et al.* 2530; Sin 2000; Tanabe *et al.* 2003). Information on ancient plant communities was obtained from analysis of extracted pollen samples at the CEPAM laboratory of the University of Nice-Sophia Antipolis

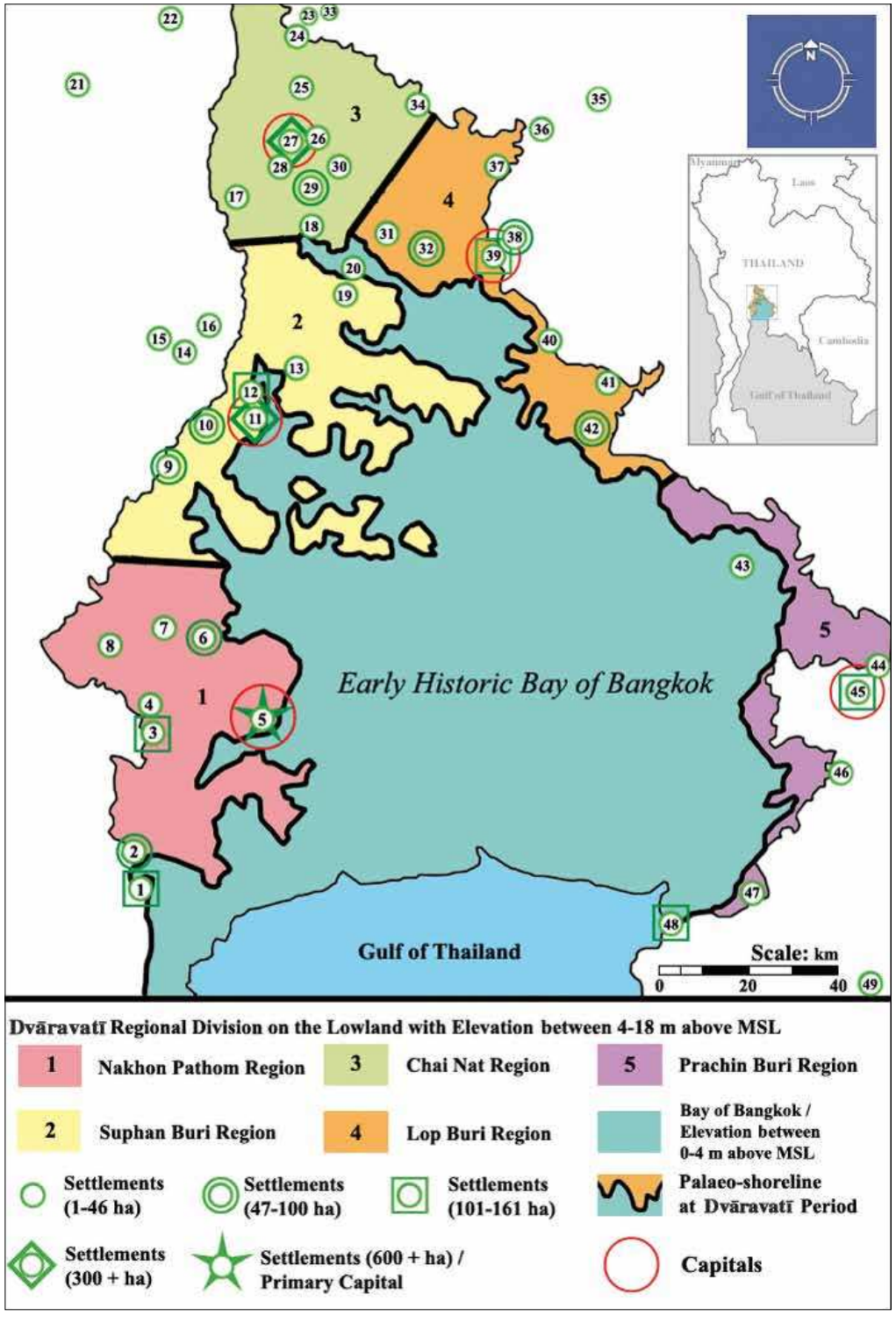


Figure 3: *Moated settlements in the Lower Central Plain during the mid-to-late first millennium CE [Drawing by Trongjai Hutangkura, modified from Mudar 1999].*

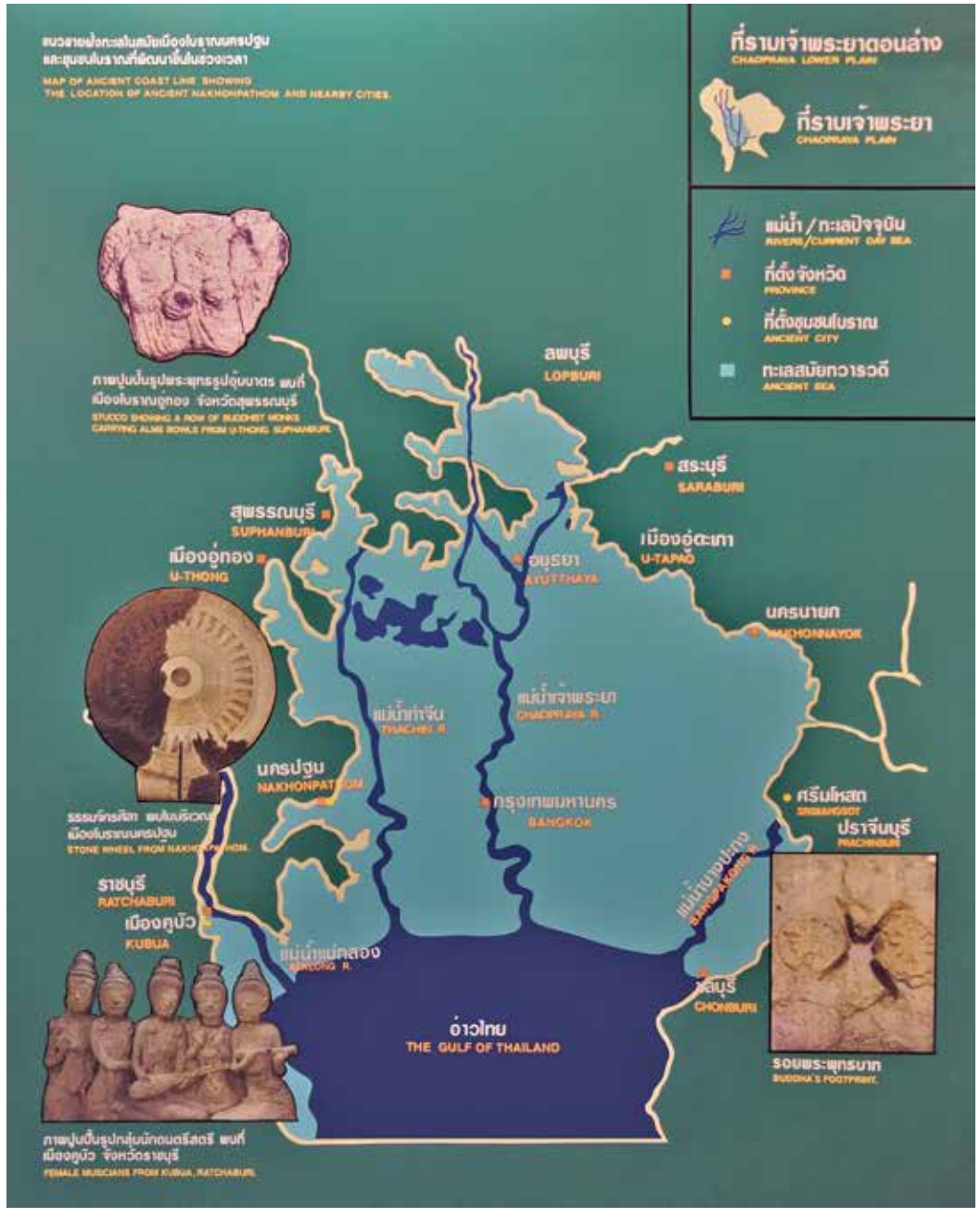


Figure 4: *Concept of the palaeo-shoreline during the Dvāravatī period, based on Phongsi & Thiwa 2524, on displays at the Phra Pathom Chedi National Museum, Nakhon Pathom [Photograph by Trongjai Hutangkura].*

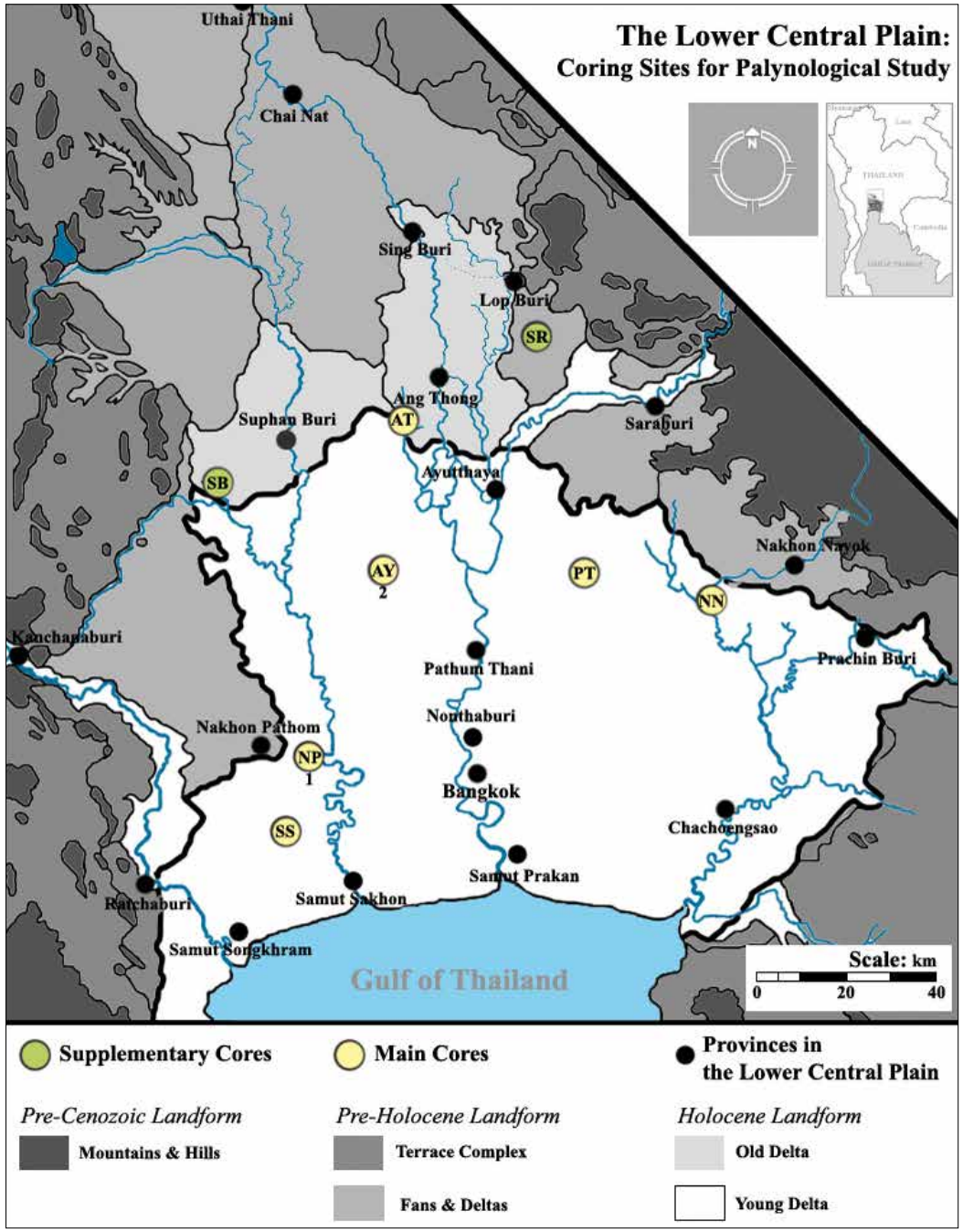


Figure 5: *Coring sites for palynological study in the Lower Central Plain [Drawing by Trongjai Hutangkura].*

(UNSA) in France. Pollen identification was based on pollen types in the "Modern Pollen Collection of the Indochinese Peninsula" of CEPAM (Bui Thi Mai *et al.* 2005) and other photographic publications of Asian pollen and spore morphology (Academia Sinica 1982; Huang 1972; Thanikaimoni 1987; Zhang *et al.* 1990). Radiocarbon dates obtained from this research and previous work have been calibrated using CALIB 6.0 with 95.4% confidence (2 sigma) in order to standardise the dates in discussing the relation between calibrated ages and the maximum extension of the palaeo-gulf of Thailand.

Research Results

Sedimentary Sequences of the Lower Central Plain

Figure 6 displays the geomorphology of the Lower Central Plain that is based on existing studies of the region and shows many kinds of landform according to period of sedimentation and flood condition. Five types of Holocene landforms outlined: old deltaic plain (no. 8), old lagoon (no. 9), young lagoon (no. 10), tidal flat (no. 11) and natural levee and back marsh (no. 12).

Sedimentary sequences in the sampled cores may be classified in two groups according to Holocene sea-level changes: marine-influenced and non-marine-influenced sequences. Marine influence were found in sedimentary sequences of the cores NN, AT, AY2, NP1, PT, SB and SS, which were extracted in the vicinity of the Holocene deltaic plain. Non-marine-influenced sequences, or the so-called freshwater/floodplain sediments, occurred in the core SR. Marine influences in the sedimentary cores indicate that the locations of sampling sites were located in the boundary limit of the Holocene Maximum Transgression onto the Lower Central Plain. The core that contains only non-marine-influenced sequences was located beyond the reach of the transgressive sea level.

Marine-influenced Cores

Sedimentary sequences of the marine-influenced cores contain both freshwater and brackish-marine sediments that can be classified as four geological horizons from bottom to top (Somboon 1987; Somphat *et al.* 2530):

(a) The "stiff clay horizon" is generally characterised by freshwater/fluvial sediments consisting of various types of particles from clay, silty clay to sandy-silty clay or sandy clay. This horizon is the base of Holocene sedimentary sequences. It is always overlain by soft clay sequences, the so-called "Bangkok clay horizon."

(b) The "soft clay horizon," or Bangkok clay horizon, is characterised by marine-influenced deposition, i.e. brackish and marine sediments. The sediment particles mainly consist of clay with a high organic content of very fine

plant remains and are occasionally interbedded with peat layers. The thickness of this horizon differs from place to place, e.g. NN (8.7 m.), AY2 (7.1 m.), AT (2.9 m.), NP1 (> 6.4 m.), NP2 (7.4 m.), and PT (7.7 m.). Jarosite (yellow mottles) and gypsum needles are occasionally found throughout the horizon. The occurrence of jarosite may reflect brackish conditions during deposition.

(c) The "weathered clay horizon" is normally characterised by a very thin layer (0.75 m. to 1.75 m. thick) interbedded between "Bangkok clay" and "covered soil horizons." Sediment particles consist of clay or silty clay. Various mottle colours, mainly yellow, red, brown, black and white, occur throughout the horizon along with gypsum needles and, occasionally, pisolitic iron oxide concretions.

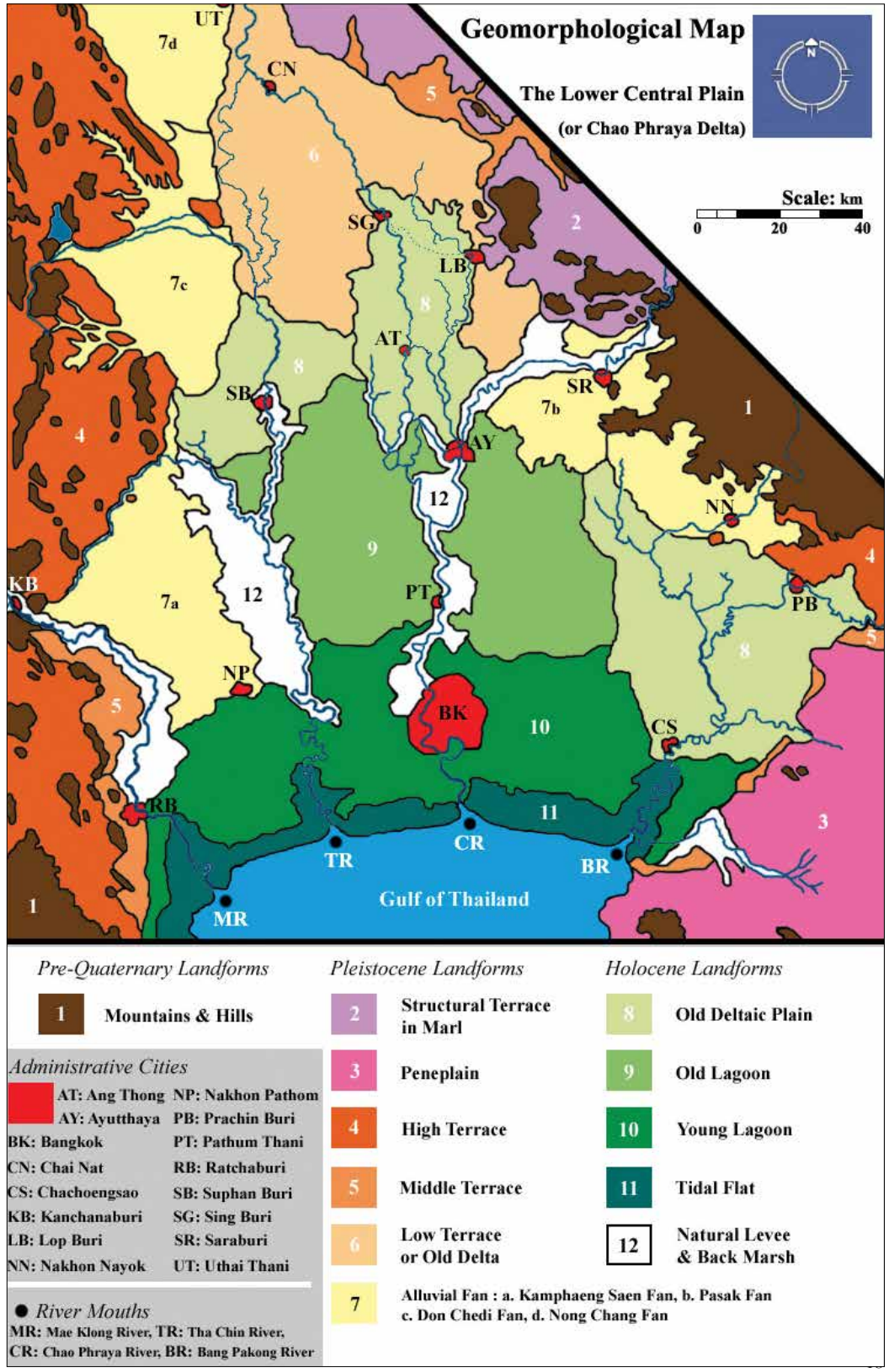
(d) The "covered soil horizon" is very thin humic soil deposits with thickness ranging from 0.30 to 0.50 m. Mottles, both in cloudy and concentric form, commonly occur throughout the horizon, especially in red, brown and yellow colours. This horizon was deposited under floodplain conditions.

The overall characteristics of the marine-influenced sequences are comparable to previous works on stratigraphic classification (Somphat *et al.* 2530; Sin 2000; Tanabe *et al.* 2003). Previous studies have also reported occurrence of sand ridge sequences in many parts of the Lower Central Plain (Prinya *et al.* 1984; Narong 1984).

Furthermore, the SB core contains only thin layers of brackish sediments indicated by the presence of jarosite in dry peaty clay samples. The brackish sediments are overlain by a long sequence of freshwater sediments. Therefore, this core is situated on the marginal limit of the Holocene Maximum Transgression in the Lower Central Plain. The geomorphological map **[Figure 6]** shows that the location of the SB core, which is the old deltaic plain, corresponds with the palaeo-environment of sub-lagoons with back mangrove flora at the time of the Holocene Maximum Transgression, *circa* 6,000 BCE, as presented in a palaeo-geographical map created by Somboon & Narong (1992: 59, fig. 8).

Non-marine-influenced Core

The SR core was extracted to a depth of 15 m. and it contained only freshwater sedimentary sequences. Absence of brackish/marine sediments in the core indicates that the sampling site was never impacted by the Holocene Maximum Transgression. The sedimentary sequences of the SR core consisted of four horizons, from the bottom to the top: stiff clay, soft clay, weathered clay and covered soil horizons. Characteristics of the sequences indicate that the core was derived from fluvial/floodplain sediments that have accumulated since the end of Late Pleistocene, from approximately 10,000 BCE to the present day.



Opposite Figure 6:
Geomorphological map of the Lower Central Plain based on flood condition [Drawing by Trongjai Hutangkura, based on Narong 1984, Haruyama 1993, and Tanabe et al. *2003].*

Palynofloral Records of the Lower Central Plain

Palynomorphs in sedimentary sequences of the Lower Central Plain in this study were obtained from the eight core samples mentioned above. According to the pollen analysis, the palynomorphs were divided according to "pollen and fern spores" and "non-pollen palynomorphs" (NPP), in which 190 types of pollen and fern spores were identified. Unidentified pollen and fern spores were divided into three sub-groups: (1) recognisable pollen morphology, (2) recognisable fern spore morphology and (3) amorphous pollen grains. The NPP group was morphologically analysed into two categories, algal and fungal remains.

Palynomorphs and Environmental Types

Identifiable palynofloral remains of the sedimentary sequences consisted of 167 pollen types and 23 fern spore types. The remains reflect palaeo-vegetation habitats and may be described according to nine types of environment: (1) swampy mangrove, (2) landward mangrove, (3) back mangrove, (4) landward edge of back mangrove, (5) fern marsh, (6) wetland, (7) swamp forest/lowland vegetation, (8) highland vegetation, and (9) tropical ferns. These nine environmental types may be grouped into three kinds of palaeo-environments: (1) mangrove ecology, (2) transitional swamp and (3) floodplain environment.

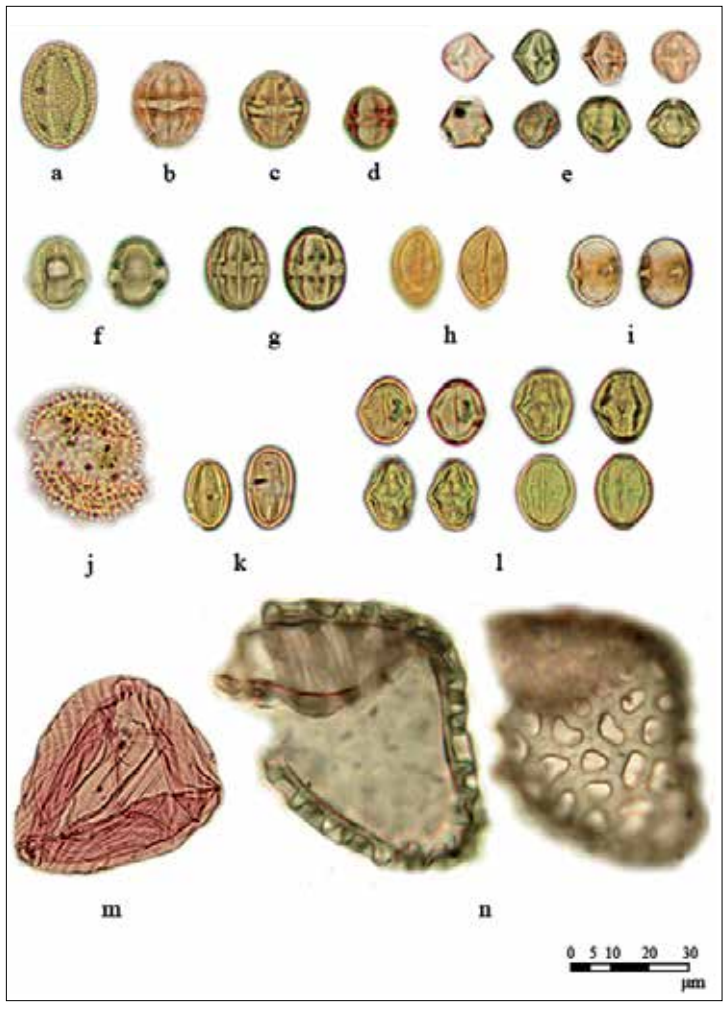


Figure 7: *Mangrove ecology: a.* Avicennia *sp., b.* Rhizophora *sp. (type P22), c.* Rhizophora *sp. (type P19), d.* Rhizophora *sp. (type P16), e.* Ceriops tagal/ Bruguiera *sp. (type P13), f.* Bruguiera gymnorrhiza *type, g.* Kandalia candel *type; Transitional swamp: h.* Phoenix paludosa, *i.* Aglaia cucullata, *j.* Oncosperma tigillarium, *k.* Cynometra ramiflora *type, l.* Derris indica *type, m.* Ceratopteris thalictroides *(not to scale), n.* Lygodium microphyllum *[Photographs by Trongjai Hutangkura].*

The mangroves are characterised by three types of environment: swamp mangrove, landward mangrove and back mangrove. Assemblage of *Rhizophoraceae* pollen types –, for example, *Rhizophora mucronata* type (P22), *Rhizophora mucronata/Rhizophora apiculata* type (P19), *Rhizophora apiculata* type (P16), *Ceriops tagal/Bruguiera* species (sp.) type (P13), and *Bruguiera gymnorrhiza* type – indicates the existence of a swampy mangrove area. Assemblage of brackish pollen types – for example, *Nypa fruticans*, *Ceriops decandra* type, *Lumnitzera racemosa*, *Xylocarpus* sp., and *Excoecaria agallocha* – indicates the presence of landward mangrove ecology. Examples of pollen types in mangroves are shown in **Figure 7**.

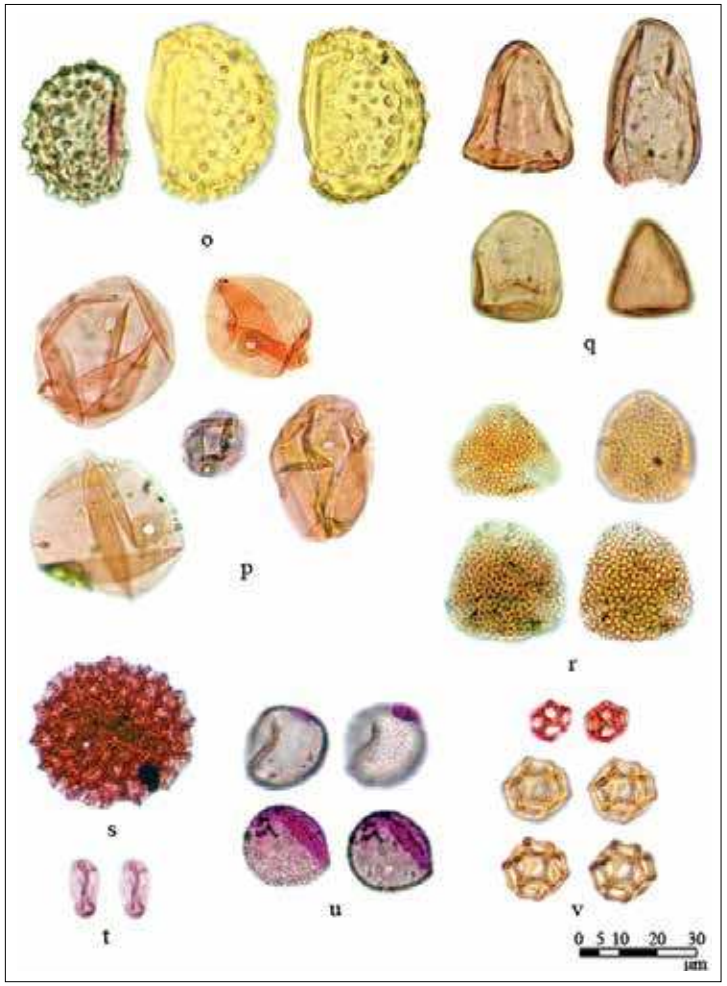
The transitional swamp consisted of two environmental types: landward edge of back mangrove and fern marsh. The transitional swamp was a palaeo-environment located between two different environmental conditions, that is "saline" and "freshwater." Remarkable pollen types consist of *Oncosperma tigillarium*, *Phoenix paludosa*, *Aglaia cucullata*, *Barringtonia* sp., *Derris indica*, *Pandanus odoratissimus*, *Suaeda maritima*, *Sesuvium/Trianthema*, and *Flagellaria indica*. Fern spore types of the fern marsh environment may be divided into three kinds based on the following life forms: (1) aquatic fern (e.g. *Acrostichum* sp., *Ceratopteris thalictroides*, and *Azolla/Salvinia* types), (2) climber fern (e.g. *Stenochlaena palustris* and *Lygodium microphyllum*), and fern (e.g. *Pteris* sp.). Example of palynofloral remains of the transitional swamp are shown in **Figures 7-8**.

The floodplain environment was interpreted by the occurrence of 101 wetland and swamp forest pollen types. The most abundant types in this environment are *Gramineae* and *Cyperaraceae*. Other remarkable wetland pollen types consist of *Typha angustifolia*, *Alternanthera* sp., *Araceae* type, *Lemna* sp., *Potamogeton* sp., *Utricularia bifida* type, and *Ipomoea* sp. Remarkable swamp forest pollen types consist of *Borassus flabellifer*, *Elaeocarpus* sp., *Ficus* sp., *Moraceae/Ulmaceae* type, *Myrtaceae, Combretaceae/ Melastomataceae* type, *Randia* sp., *Leguminosae* type, *Amaranthus/Achyranthus* type, *Compositae* and *Dendrophthoe* sp. Samples of the pollen types are shown in **Figure 8**.

Furthermore, there were two minor groups of pollen grains: highland vegetation and tropical ferns. Pollen grains of the highland vegetation that were occasionally found in mangrove environments were considered to be allochthonous pollen grains – for example, *Castanea/ Lithocarpus* type, *Hopea/Shorea* type, *Pinus* sp., and *Quercus* type. Fern spores were also occasionally found in the pollen content. Generally, fern spores can be found in various environments from mean sea level to higher mountaintops. Therefore, it is difficult to specify their host environments. In a broad sense, the occurrence of fern spores in pollen contents is considered as an indicator of humidity. Remarkable fern spore types obtained from the pollen analysis consisted of, for example, *Angiopteris evecta*, *Selaginellaceae* type, and *Davalliaceae/Polypodiaceae* type.

The group of non-pollen palynomorphs (NPP) obtained from the pollen analysis was mainly divided into two sub-groups: algal remains, which indicate aquatic or swampy condition, and fungal remains,

Figure 8: *Transitional swamp:* *o.* Stenochlaena palustris*; Floodplain environment:* *p.* Gramineae, *q.* Cyperaceae, *r.* Hydrocera triflora, *s.* Polygonaceae, *t.* Araceae *type*, *u.* Typha angustifolia, *v.* Alternanthera *sp. [Photographs by Trongjai Hutangkura].*

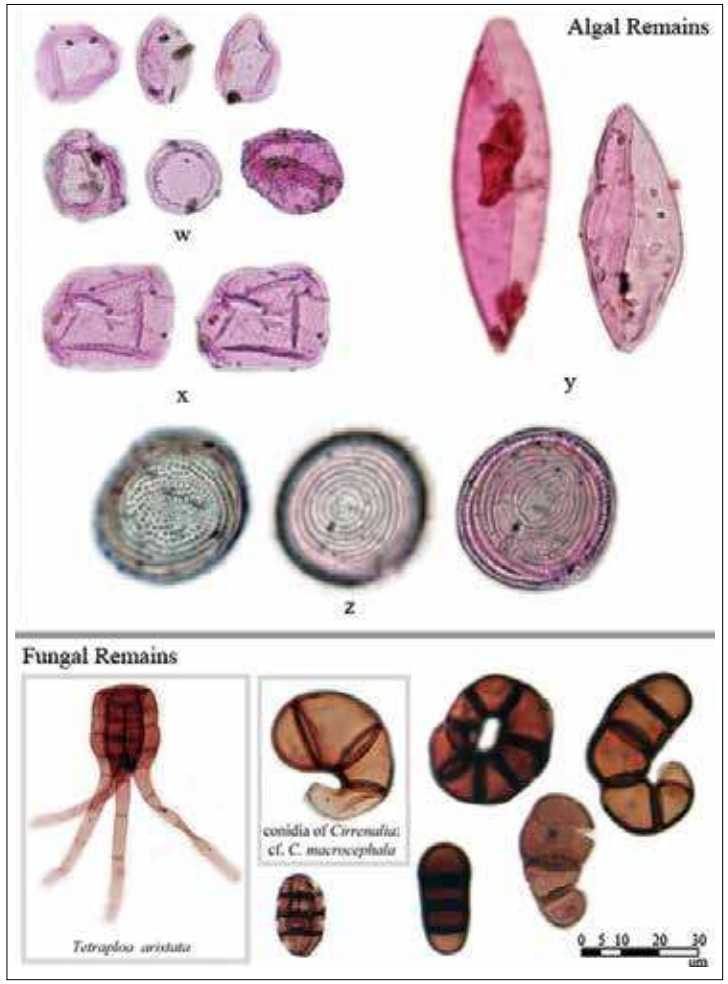


which imply humid and wet conditions. Algal remains were abundantly found in the weathered clay horizon of the transitional swampy section, but they were rare in the palaeo-mangrove sedimentary section. In contrast, the fungal remains were often found in the palaeo-mangrove sedimentary section, sometimes their percentage values were higher than 30 % in the palynomorph sum in some certain layers of the palaeo-mangrove. Some interesting NPP remains are shown in **Figure 9**.

Pollen Diagrams and Pollen Zonation

The pollen diagrams of the main studied cores are composed of 12 groups of palynomorphs: (1) swampy mangrove, (2) landward mangrove, (3) back mangrove, (4) landward edge of back mangrove, (5) fern marsh, (6) ricefields, (7) wetland/floodplain, (8) swamp forest/lowland vegetation, (9) highland vegetation, (10) tropical ferns, (11) unidentified pollen and fern spores and (12) non-pollen palynomorphs (NPP). These groups were reclassified to obtain synthetic data of palaeo-environments which were presented by two types of synthetic pollen

Figure 9: *Algal remains:* *w.* Zygnema *type*, *x.* Mougeotia *sp.*, *y.* Spirogyra *sp.*, *z.* Pseudoschizeae *sp.; Fungal remains [Photographs by Trongjai Hutangkura].*



diagrams: "environmental classification" and "environmental changes" (Trongjai 2012: figs 6.5h-6.5v).

In the synthesis of environmental classification, the diagrams presented pollen sum of each environmental type of the standard pollen diagrams, except that the ricefield group was added to the wetland/floodplain group because it was considered part of the floodplain environment since rice is a *Gramineae* and grows naturally in such environment. The NPP group from the standard pollen diagram was presented as two kinds in the synthetic diagram of environmental classification, i.e. fungal remains and freshwater NPP (algal remains) in order to show their percentage values relating to the changes of pollen percentage values in each environmental type.

Environmental types from the diagram of environmental classification were grouped into three major environments: (1) mangrove ecology, (2) transitional swamp and (3) floodplain environment, in order to demonstrate obvious changes between different phytogeographical zones. The percentage values of the mangrove ecology group were created by adding the values of the swampy mangrove, landward

mangrove and back mangrove groups. The values of the transitional swamp were created by adding the values of the landward edge of back mangrove and fern marsh groups. Lastly, the values of the floodplain environment were created by adding values of the wetland/floodplain and swamp forest/lowland vegetation groups. The remaining groups – i.e. the highland vegetation, tropical fern, fungal remains and algal remains – were excluded from the synthetic diagram of environmental changes.

Radiocarbon Dating Calibration

All radiocarbon ages obtained from sedimentary sequences of the Lower Central Plain were converted to the calibrated calendar years calculated by CALIB 6.0 with the datasets of intcal09.14C for terrestrial materials and the marine09.14C for marine materials considering the marine reservoir correction, Delta R = -19 ± 70 (Southon *et al.* 2002). Details of the calibration method have already been described in the present author's dissertation (Trongjai 2012). Provenance of all radiocarbon samples in the Lower Central Plain are shown in **Figure 10** and in **Table 1**.

Furthermore, to estimate the past sea level of the Lower Central Plain, two sets of oyster shell samples on rock and one set of corals on intertidal reef-flats were considered and calibrated. Locations of the sites are shown in **Figure 11**. The first sample set, reported by Narong Thiramongkol (1984), was tested on oyster shell colonies from a cliff in Prachuap Kiri Khan province (site no. 77). Since the cliff is located on the side of the Gulf of Thailand, the calibration used the Delta R value of -19 ± 70. The second sample set, reported by Sin Sinsakul (1990), was tested on oyster shell colonies from a cliff in Phang-nga province (site no. 78), and the third sample set, reported by Scoffin & Le Tissier (1998), was massive fossil corals on reef-flats at Ko Taphao Yai, east of Phuket island (site no. 79). Since the cliff and the reef-flats are located on coastal side of the Andaman Sea, the calibration used the Delta R value of +32 ±70 (Southon *et al*. 2002).

The calibrated ages revealed that these organic materials obtained from the Bangkok clay horizon were dated in the Holocene period ranging approximately 8,000-1,000 cal BP, or 6,000 BCE-1,000 CE. The dates found in the northern part of the Holocene deltaic plain, interestingly, gave an estimated range of 7,000-3,000 BCE, while that of the southern part gave a wider range of 7,000 BCE-1,000 CE. For the reference point of the sea-level changes from southern Thailand, the oldest dates of the sites nos. 77, 78 and 79 were approximately 5,200-4,500 BCE (at 2 m. above MSL), 4,700-4,000 BCE (at 2 m. above MSL) and 4,500-4,100 BCE (at 0.97 m. above MSL), respectively. All mentioned calibrated age ranges from the Lower Central Plain and the peninsula are shown in **Tables 2-3**.

New Interpretation and Discussion

In archaeological applications of the above results, the time of the Holocene Maximum Transgression must be accurately determined and aligned against the timeline of the Lower Central Plain of Thailand.

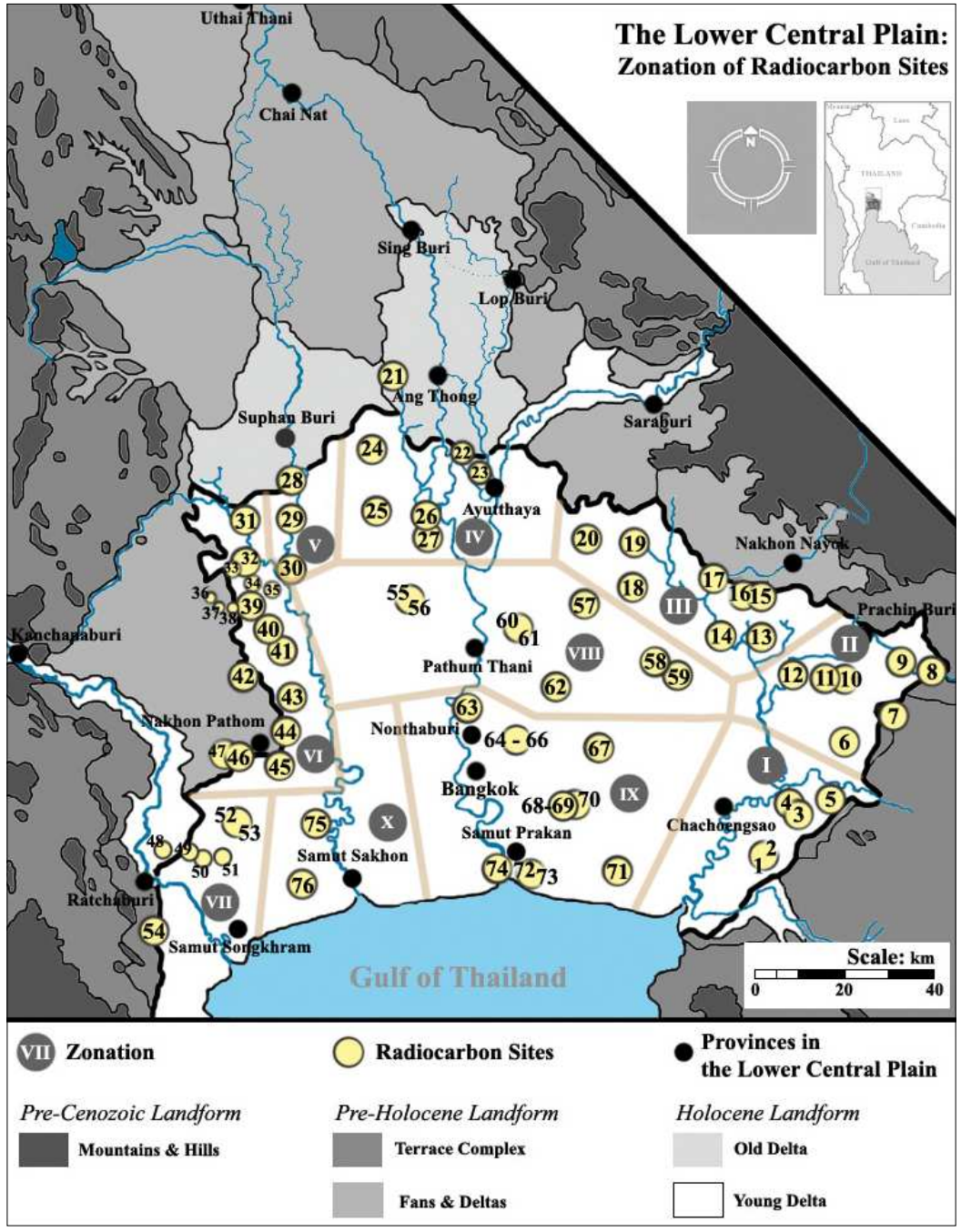


Figure 10: *Zonation for radiocarbon sites in the Lower Central Plain sampled during the year 1971 to 2009 [Drawing by Trongjai Hutangkura].*

Table 1: Selected References of Radiocarbon Age Dating (Uncalibrated)

Site number (as coded in this research)	Province	Original location code	References
Radiocarbon Sample Zone I: Southeastern Part			
1	Chon Buri	KL2	Maloney 1991
2	Chon Buri	BML2	Maloney 1991
4	Chachoengsao	980302-1	Umitsu *et al.* 1999 & 2002
5	Chachoengsao	Loc.163	Takaya 1972
Radiocarbon Sample Zone II: Eastern Part			
6	Chachoengsao	S18	Somboon & Narong 1992
12	Prachin Buri	S24	Somboon & Narong 1992
Radiocarbon Sample Zone III: Northeastern Part			
13	Nakhon Nayok	S38	Somboon & Narong 1992
14	Nakhon Nayok	NY48 (Ongkharak)	Sin 2539
18	Pathum Thani	S56	Somboon & Narong 1992
20	Ayutthaya	S55	Somboon & Narong 1992
Radiocarbon Sample Zone IV: Northern Part			
23	Ayutthaya	971215-6	Umitsu *et al.* 2002
24	Ayutthaya	S74	Somboon & Narong 1992
25	Ayutthaya	S69	Somboon & Narong 1992
27	Ayutthaya	971215-5	Umitsu *et al.* 2002
Radiocarbon Sample Zone V: Northwestern Part			
30	Suphan Buri	Locality 3	Narong 1984
Radiocarbon Sample Zone VI: Western Part			
40	Nakhon Pathom	NP_{23}	Phisit *et al.* 2529
Radiocarbon Sample Zone VII: Southwestern Part			
50	Ratchaburi	Locality 10	Narong 1984
52	Ratchaburi	BTD (Ban Tak Daet)	Negri 2009
53	Ratchaburi	BPL/BTD2RM	Negri 2009
54	Ratchaburi	990108-3	Umitsu *et al.* 2002
Radiocarbon Sample Zone VIII: Upper Central Part			
55	Pathum Thani	Wat Hoi	Chongpan *et al.* 1983
60	Pathum Thani	Locality 5	Narong 1984
62	Pathum Thani	990114-2	Umitsu *et al.* 2002
Radiocarbon Sample Zone IX: Lower Central Part (Chao Phraya River)			
63	Nonthaburi	PK (Ban Don Tan)	Negri 2009
64	Bangkok	Senanivate	Somboon 1987
67	Bangkok	NC1 (Ban Ko)	Negri 2009
68	Samut Prakan	CD (King Kaeo)	Wickanet *et al.* 1999
71	Samut Prakan	980302-3	Umitsu *et al.* 2002
73	Samut Prakan	Pit 1 (Ban Praeksa)	Tanabe *et al.* 2003
Radiocarbon Sample Zone X: Lower Central Part (Tha Chin River)			
76	Samut Sakhon	Pit 2	Tanabe *et al.* 2003

Note: Radiocarbon sample zonation is shown here as in Figure 10. Samples were dated in earlier research work.

Table 2: Calibrated Age Ranges of Radiocarbon Samples from the Research Sites

Site: Province name	Sample & depth (m.)	Material	Radiocarbon age: uncalibrated BP	Selected calibrated age range (cal BP)
Ang Thong (AT)	AT 3.40	Wood fragment	6,830 ± 40 BP	7,957-7,785 cal BP
	AT 5.20	Wood fragment	6,795 ± 45 BP	7,936-7,714 cal BP
	AT 7.40	Micro-charcoal	6,735 ± 45 BP	7,862-7,675 cal BP
Ayutthaya (AY2)	AY2 7.50	Wood fragment	6,020 ± 40 BP	7,133-7,005 cal BP
	AY2 8.50	Wood fragment	6,170 ± 40 BP	7,421-7,246 cal BP
	AY2 9.10	Wood fragment	6,220 ± 35 BP	7,422-7,277 cal BP
	AY2 9.90	Wood fragment	6,940 ± 40 BP	8,029-7,923 cal BP
Nakhon Nayok (NN)	NN 3.10	Wood fragment	6,750 ± 40 BP	7,864-7,685 cal BP
	NN 5.60	Wood fragment	7,355 ± 40 BP	8,428-8,304 cal BP
	NN 6.70	Micro-charcoal	7,360 ± 50 BP	8,453-8,291 cal BP
Nakhon Pathom (NP1)	NP1 3.50	Micro-charcoal	5,425 ± 35 BP	6,484-6,314 cal BP
	NP1 4.20	Micro-charcoal	5,970 ± 40 BP	7,175-6,946 cal BP
	NP1 7.30	Charcoal	6,075 ± 35 BP	7,295-7,156 cal BP
	NP1 7.80	Wood fragment	6,940 ± 40 BP	8,029-7,923 cal BP
	NP1 8.60	Wood fragment	7,030 ± 40 BP	8,161-7,971 cal BP
Pathum Thani (PT)	PT 3.90	Charcoal	4,390 ± 35 BP	5,332-5,267 cal BP
	PT 7.00	Wood fragment	4,745 ± 35 BP	5,747-5,597 cal BP
	PT 9.00	Charcoal	5,545 ± 40 BP	6,655-6,445 cal BP
Suphan Buri (SB)	SB 6.80	Wood fragment	7,425 ± 45 BP	8,524-8,369 cal BP
Samut Sakhon (SS)	SS 4.00	Wood fragment	modern	modern
	SS 5.70	Wood fragment	2,270 ± 30	2,623-2,433 cal BP
	SS 5.75	Wood fragment	2,260 ± 30	2,619-2,427 cal BP
	SS 7.50	Wood fragment	7,710 ± 40	8,809-8,600 cal BP

Note: The calibrated age ranges were provided by Trongjai (2012: 212-214) using the program CALIB 6.0 and were selected with a 95.4% confidence level (2 sigma) with relative area under distribution of 1 or nearest 1. For other ranges in each sample, see Trongjai (2012: Tables 6.3a-6.4l).

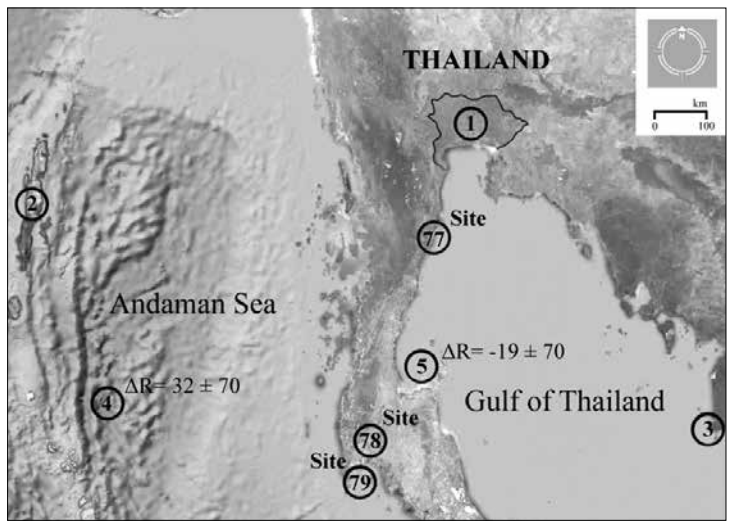


Figure 11: *Locations of the sites nos. 77 (Prachuap Khiri Khan), 78 (Phang-nga), and 79 (Phuket) and other relative locations: 1) The Lower Central Plain, 2) Andaman islands, 3) Ca Mau Cape, 4) Marine Reservoir Correction Site for the Andaman Sea: Nicobar islands (ΔR = 32 ±70) and 5) Marine Reservoir Correction Site for the Gulf of Thailand: Ko Ang Trang (ΔR = -19 ±70) [Drawing by Trongjai Hutangkura].*

Table 3: Selected Calibrated Age Ranges of Radiocarbon Samples

Site number	Province	Depth (m.)	Radiocarbon age : uncalibrated BP	Selected calibrated age range (cal BP)
1. Selected Samples Used in Estimating the First Stage (8,000-7,000 cal BP or 6,000-5,000 BCE)				
40	Nakhon Pathom	3.50-4.50 m.	6,380 ± 90 BP	7,438-7,002 cal BP
30	Suphan Buri	2.00 m.	6,830 ± 140 BP	7,939-7,458 cal BP
25	Ayutthaya	2.00-3.50 m.	6,990 ± 300 BP	8,382-7,270 cal BP
27	Ayutthaya	4.00 m.	6,180 ± 110 BP	7,467-6,995 cal BP
24	Ayutthaya	1.45-1.80 m.	7,600 ± 190 BP	8,784-7,972 cal BP
23	Ayutthaya	2.50 m.	6,950 ± 110 BP	8,170-7,719 cal BP
60	Pathum Thani	2.00 m.	6,490 ± 135 BP	7,657-7,156 cal BP
20	Ayutthaya	0.25-1.30 m.	6,800 ± 260 BP	8,176-7,157 cal BP
18	Pathum Thani	1.50-3.00 m.	6,690 ± 280 BP	8,043-6,893 cal BP
13	Nakhon Nayok	4.47-6.00 m.	7,020 ± 180 BP	8,177-7,507 cal BP
12	Prachin Buri	3.00-4.30 m	7,570 ± 170 BP	8,725-7,964 cal BP
6	Chachoengsao	2.40-3.90 m.	7,310 ± 100 BP	8,343-7,930 cal BP
5	Chachoengsao	2.80 m.	7,440 ± 150 BP	8,522-7,968 cal BP
4	Chachoengsao	4.90 m.	6,410 ± 90 BP	7,613-7,313 cal BP
2. Selected Samples Used in Estimating the Second Stage (7,000-5,000 cal BP or 5,000-3,000 BCE)				
55	Pathum Thani	3.00-4.00 m.	5,500 ± 50 BP	6,562-6,182 cal BP
14	Nakhon Nayok	3.00-4.00 m.	6,330 ± 90 BP	7,504-7,031 cal BP
1	Chon Buri	2.25-2.29 m.	5,560 ± 160 BP	7,030-6,182 cal BP
2	Chon Buri	3.96-4.00 m.	6,560 ± 100 BP	7,794-7,436 cal BP
3. Selected Samples Used in Estimating the Third Stage (5,000-3,000 cal BP or 3,000-1,000 BCE)				
54	Ratchaburi	1.30 m.	3,420 ± 170 BP	4,280-3,339 cal BP
50	Ratchaburi	1.30 m.	3,670 ± 125 BP	4,557-3,768 cal BP
52	Ratchaburi	1.40 m.	4,450 ± 65 BP	4,859-4,398 cal BP
53	Ratchaburi	2.00 m.	3,670 ± 50 BP	3,826-3,393 cal BP
63	Nonthaburi	2.50 m.	4,785 ± 70 BP	5,313-4,826 cal BP
62	Ayutthaya	4.00 m.	6,410 ± 70 BP	7,467-6,995 cal BP
67	Bangkok	1.50 m.	3,995 ± 60 BP	4,428-4,064 cal BP
4. Selected Samples Used in Estimating the Fourth Stage (3,000-2,000 cal BP or 1,000-1 BCE)				
64	Bangkok	1.50 m.	2,250 ± 120 BP*	2,544-1,949 cal BP (wood)
				2,735-2,057 cal BP (shell)
68a	Samut Prakan	1.25 m.	2,000 ± 240 BP	2,710-1,520 cal BP
5. Selected Samples Used in Estimating the Fifth Stage (2,000-1,000 cal BP or 1-1,000 CE)				
76	Samut Sakhon	4.00 m.	2,210 ± 60 BP	2,062-1,595 cal BP (= 113 BCE-355 CE)
73	Samut Prakan	3.25 m.	2,070 ± 40 BP	1,868-1,477 cal BP (= 82-473 CE)
71	Samut Prakan	1.63 m.	940 ± 120 BP	1,165-626 cal BP (= 785-1,324 CE)

Notes: The calibrated age ranges were provided by Trongjai (2012: 211-214) using the program CALIB 6.0 and were selected with a 95.4% confidence level (2 sigma) with relative area under distribution of 1 or nearest 1. For other ranges in each sample, see Trongjai (2012: Tables 6.3a-6.4l).

* Somboon (1987: 113, fig. 4.3) did not report uncalibrated material appropriate for such radiocarbon dating. Using CALIB 6.0, a wood sample could range between 2,544 and 1,949 cal BP. A shell sample could range between 2,735 and 2,057 cal BP.

Results from the author's doctoral research indicate that the Holocene Maximum Transgression completely changed the topography of the Lower Central Plain from a floodplain environment of the Late Pleistocene at 10,000 cal BP to a complete shallow sea environment at 8,400 cal BP (ca 6,550 BCE), with reference to the age of a charcoal sample from the SB site. Archaeologically speaking, the Holocene Maximum Transgression, therefore, occurred in the prehistoric period of Hoabinhian culture and provided a vast shallow sea area covering most parts of the Lower Central Plain at that time.

The Holocene Maximum Transgression resulted in the maximum size of the palaeo-gulf of the Lower Central Plain. This is more or less comparable to previous geological estimates by Takaya (1969), Somboon (1987), Somboon and Narong (1992), Umitsu *et al.* (2002) and Tanabe *et al.* (2003). The age of the Holocene Maximum Transgression has been estimated by some (Somboon 1987; Somboon & Narong 1992) as 6,000 BP or *circa* 4,000 BCE and by others (Umitsu *et al.* 2002; Tanabe *et al.* 2003) at between 8,000 and 7,000 cal BP or *circa* 6,050 to 5,050 BCE. This maximum size is also comparable to the size of the palaeo-gulf proposed by Phongsi and Thiwa (2524) during the Dvāravatī period (ca mid-to-late first millennium CE).

Pollen evidence indicates that the palaeo-environment of this region was a marine environment of mangrove ecology. According to radiocarbon dates obtained from the Bangkok clay horizon, the palaeo-shoreline dominated by the *Rhizophora* mangrove community clearly played an important ecological role in the region since at least 7,000 BCE. Today, the descendants of this palaeo-mangrove community is still important in preventing coastal areas of the Lower Central Plain from erosions caused by storms, although it has gradually decreased through deforestation.

Furthermore, *Rhizophora* pollen evidence together with new standardised radiocarbon dates **[Tables 2-3]** give a more accurate idea of the palaeo-shoreline evolution from *circa* 6,550 BCE to the first millennium CE. Because *Rhizophora* pollen grains only occur in the Bangkok clay horizon, the age range of this horizon also reflects the age of the palaeo-mangrove community at each site. The age of the upper part of the Bangkok clay horizon coincides with the age of the last palaeo-mangrove community. For example, the upper parts of the Bangkok clay horizon in the vicinity of Suphan Buri (SB site) and Ang Thong (AT site) provide age ranges of approximately 6,550 to 5,800 BCE. This evidence implies that marine environment disappeared from the region around Suphan Buri and Ang Thong at least after 5,800 BCE and after the mean sea level entered its marine regression phase. The Holocene Maximum Transgression is considered the first stage of the palaeo-gulf evolution occurring between *circa* 6,000-5,000 BCE **[Figure 12]**.

The upper parts of the Bangkok Clay Horizon in the vicinity of Pathum Thani (sites nos. 55 and 56) provide age ranges from *circa* 4,600-4,200 BCE. In the vicinity of Nonthaburi (site no. 63), the upper part gives an age range from *circa* 3,300-2,800 BCE. These two age ranges suggest that the mangrove community palaeo-shoreline had gradually moved southward. These movements could be considered respectively as the second stage (ca 5,000-3,000 BCE) **[Figure 13]** and the third stage (ca 3,000-1,000 BCE) **[Figure 14]** of the palaeo-gulf evolution.

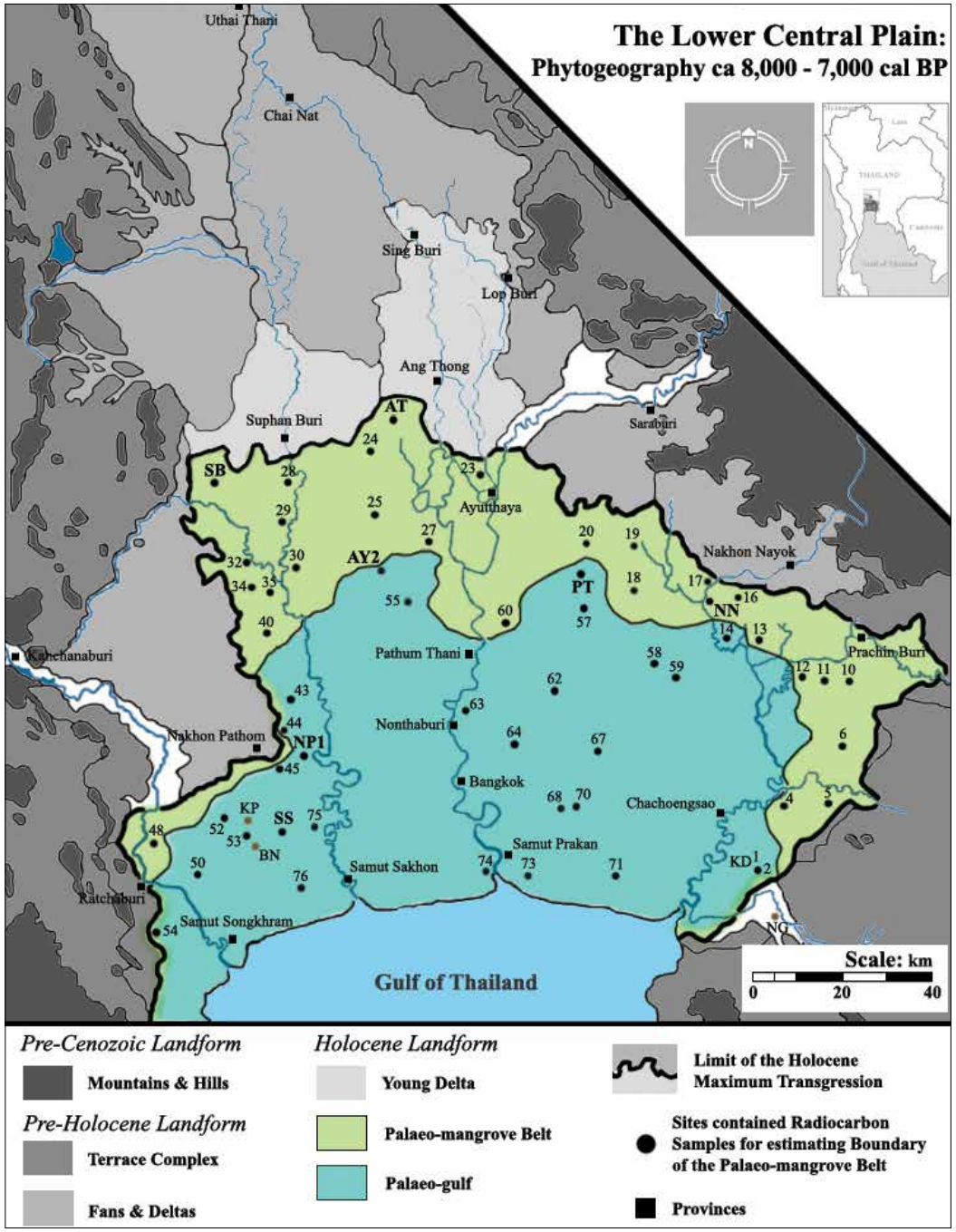


Figure 12: *Phytogeography of the Lower Central Plain, Stage 1 [Drawing by Trongjai Hutangkura].*

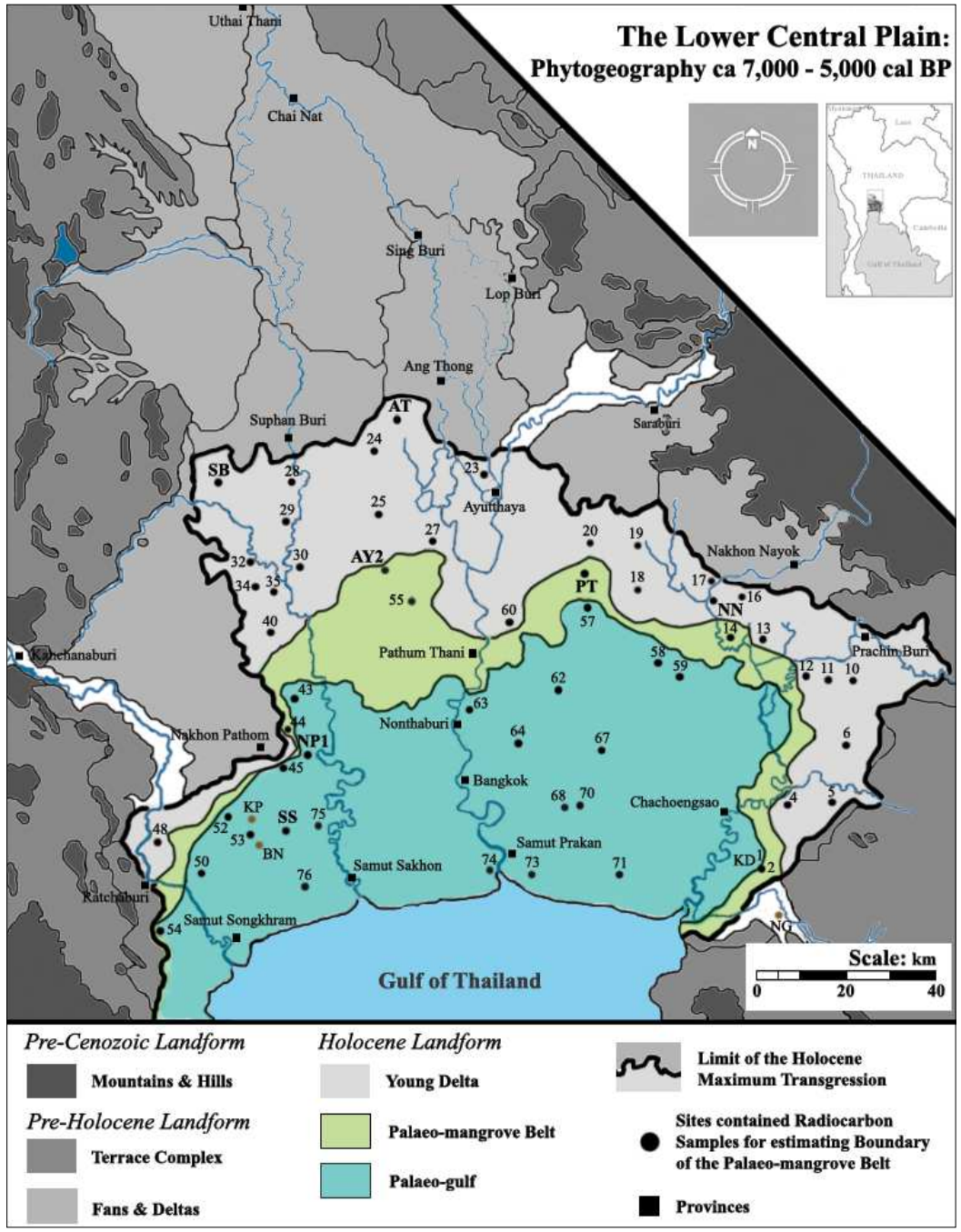


Figure 13: *Phytogeography of the Lower Central Plain, Stage 2 [Drawing by Trongjai Hutangkura].*

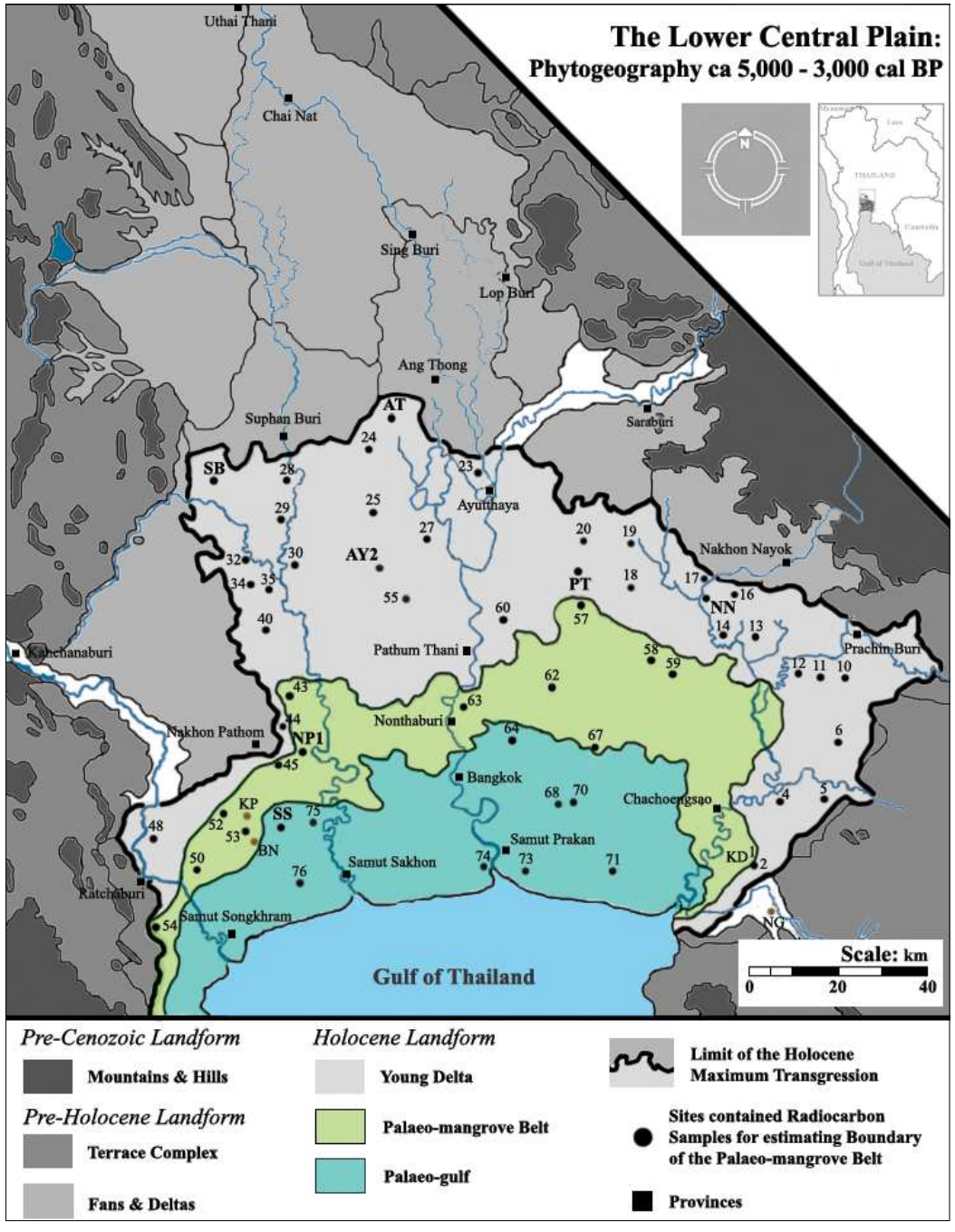


Figure 14: *Phytogeography of the Lower Central Plain, Stage 3 [Drawing by Trongjai Hutangkura].*

The palaeo-shoreline of the next stage (ca 1,000-1 BCE), is attested by the presence of the last mangrove community in Bangkok (site no. 64) providing an age range of between *circa* 700 BCE and 1 CE. Furthermore, the appearance of two Metal Age archaeological sites at the western side of the palaeo-gulf has to be considered. The sites are Khok Phlap (KP) located in Ratchaburi and Ban Nong Song Hong (BN) located in Samut Sakhon **[Figure 14]**. The existence of these two Metal Age sites, which are relatively dated to *circa* 500 BCE, confirms that prehistoric people dwelled on the young Delta in the area between Ratchaburi and the western side of Samut Sakhon. Moreover, according to a study of fossil coral reef in Phuket (Scoffin & Le Tissier 1998: 274), the fossils found at the level of 0.45 m. above recent MSL gave a calibrated age range of 929 BCE-126 CE. Therefore, the past sea level of the Lower Central Plain during the first millennium BCE may have been comparably situated at approximately 0.45 m. above the recent MSL.

Finally, the fifth stage of the palaeo-gulf evolution occurred in the first millennium CE. Radiocarbon samples from the upper layers of areas in Samut Sakhon (site no. 76: 113 BCE-355 CE) and Samut Prakan (site no. 71: 785-1324 CE and site no. 73: 935-1395 CE) indicate that those areas may have been mangrove forest and shallow sea. Phytogeography of this stage also seems to be contemporary with the expansion of the Dvāravatī culture, *circa* mid-to-late first millennium CE **[Figure 15]**.

Palaeo-shorelines in the Archaeological Context of the Lower Central Plain

Landform evolution data can be applied in archaeological research as a means of reaching an understanding of the impact of landform changes on human settlements. In the case of the Lower Central Plain, no Palaeolithic sites that date roughly from 30,000 to 10,000 BP have been found in the plain, although some have been identified near mountainous complex zones of pre-Quaternary and Pleistocene landforms, which are older than 10,000 BP. The above results and analysis clearly indicate that the Lower Central Plain was flooded by a rising sea level since the Early Holocene and that the Holocene Maximum Transgression occurred around 6,500-6,400 BCE. The pollen analysis indicates that pollen grains of *Rhizophora* sp. were the dominant vegetation in the vicinity of the palaeo-gulf of Thailand. Therefore, the palaeo-shoreline of 6,500 BCE may have hosted a mangrove belt covering the shore of the palaeo-gulf.

All the evidence shows that the shoreline around 6,500-6,400 BCE was located in the area between modern-day Suphan Buri and Ang Thong and that most parts of the Lower Central Plain was flooded by the sea. People were unable to inhabit such an environment **[Figure 12: Stage 1]**. The sediments of the palaeo-mangrove belt between 6,000 and 5,000 BCE might correspond to palaeo-brackish sediments of the SB core and palaeo-mangrove sediments of the cores AT and NN, and other radiocarbon sampled sites in the vicinity of the belt.

From 5,000 to 3,000 BCE, the shoreline was probably located in the upper part of Nakhon Pathom,and areas of Pathum Thani, and

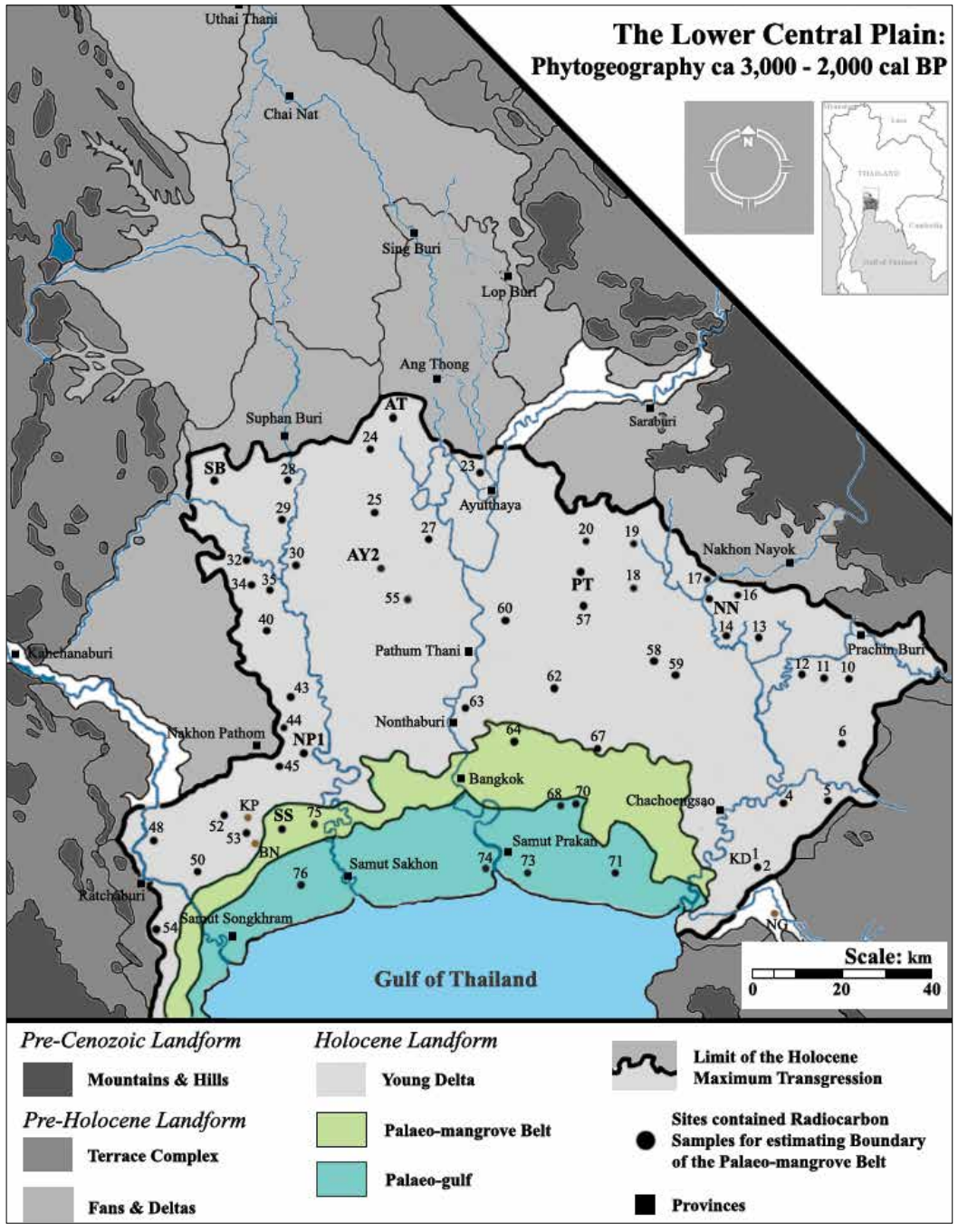


Figure 15: *Phytogeography of the Lower Central Plain, Stage 4 [Drawing by Trongjai Hutangkura].*

Nakhon Nayok **[Figure 13: Stage 2]**. The area of the Lower Central Plain was still unavailable for settlement because the area between Ang Thong and Pathum Thani might have been a young deltaic plain, possibly a wetland zone. Sediments of this young deltaic plain might correspond to the weathered clay horizon of cores AT and NN. The palaeo-mangrove sediments of this mangrove belt might correspond to the upper part of the Bangkok clay horizon belonging to cores AY2 and PT, and sites nos. 1, 2, 44 and 55.

Between 3,000 and 1,000 BCE, the shoreline moved southerly to the areas of Nonthaburi **[Figure 14: Stage 3]**. The Palaeo-mangrove sediments of this belt might correspond with the age of the upper part of the Bangkok clay horizon in the NP1 core and other nearby sites of radiocarbon sampling. This period corresponds archeologically to the Neolithic culture of Thailand which is generally given as *circa* 4,000-2,000 BCE (Suraphol 2550). While most prehistoric sites of the Neolithic culture were still located on terraces of the Pleistocene landform, two sites were located on the Holocene deposits in the eastern side of Bang Pakong river. They are Khok Phanom Di (KD) and Nong No (NG) in Chon Buri province (Higham & Rachanie 2012: 46-69) dated around 2,000 BCE. The existence of Khok Phanom Di implies that Neolithic people had settled down on the young deltaic plain since at least the second millennium BCE. Therefore, the position of the site could be used as a marker for estimating the palaeo-shoreline position in this period. The locations of two other archaeological sites on the western side of the plain, Khok Phlap (KP) and Ban Nong Song Hong (BN), correspond to the mangrove belt in this stage. Naturally, it was impossible for prehistoric people to settle in such swampy mangrove area. Therefore, the settlement must have been occupied after 1,000 BCE.

Between 2,000 and 1,000 BCE, the shoreline moved southerly to the areas of southern Nakhon Pathom and most parts of Bangkok and Chachoengsao **[Figure 15: Stage 4]**. The sediments of the mangrove belt might correspond with the upper parts of the Bangkok clay horizon in the SS core and the radiocarbon sampled sites nos. 64 and 75. This period correspond to the Metal Age in Thailand which is generally given as *circa* 2,000 BCE-1 CE (Suraphol 2550). In the Lower Central Plain, most Metal Age villages were still located on Pleistocene landforms. However, several Metal Age sites have been discovered on Holocene deposits of Ratchaburi and Samut Sakhon. On the western side of the plain, there was a group of Metal Age villages in Pho Hak sub-district, Bang Phae district of Ratchaburi province of which the most prominent is Khok Phlap (KP) (Sot 1978a-b). A radiocarbon date is unavailable for this site, but a relative chronology of archaeological evidence suggests that Khok Phlap had been a Metal Age village in the first millennium BCE. Approximately 7 km. southward from the site, another Metal Age site, namely Ban Nong Song Hong (BN), was discovered in the vicinity of Samut Sakhon (FAD 2553). Unfortunately, only a preliminary report is available with no radiocarbon dates. The chronology of the site was gauged by the occurrence of metal artefacts, probably appearing at least in the first century CE. The Ban Nong Song Hong site, therefore, might have been contemporary with the Khok Phlap site and these two archaeological sites are considered as the fixed point for estimating the boundary of the palaeo-shoreline in its fourth stage.

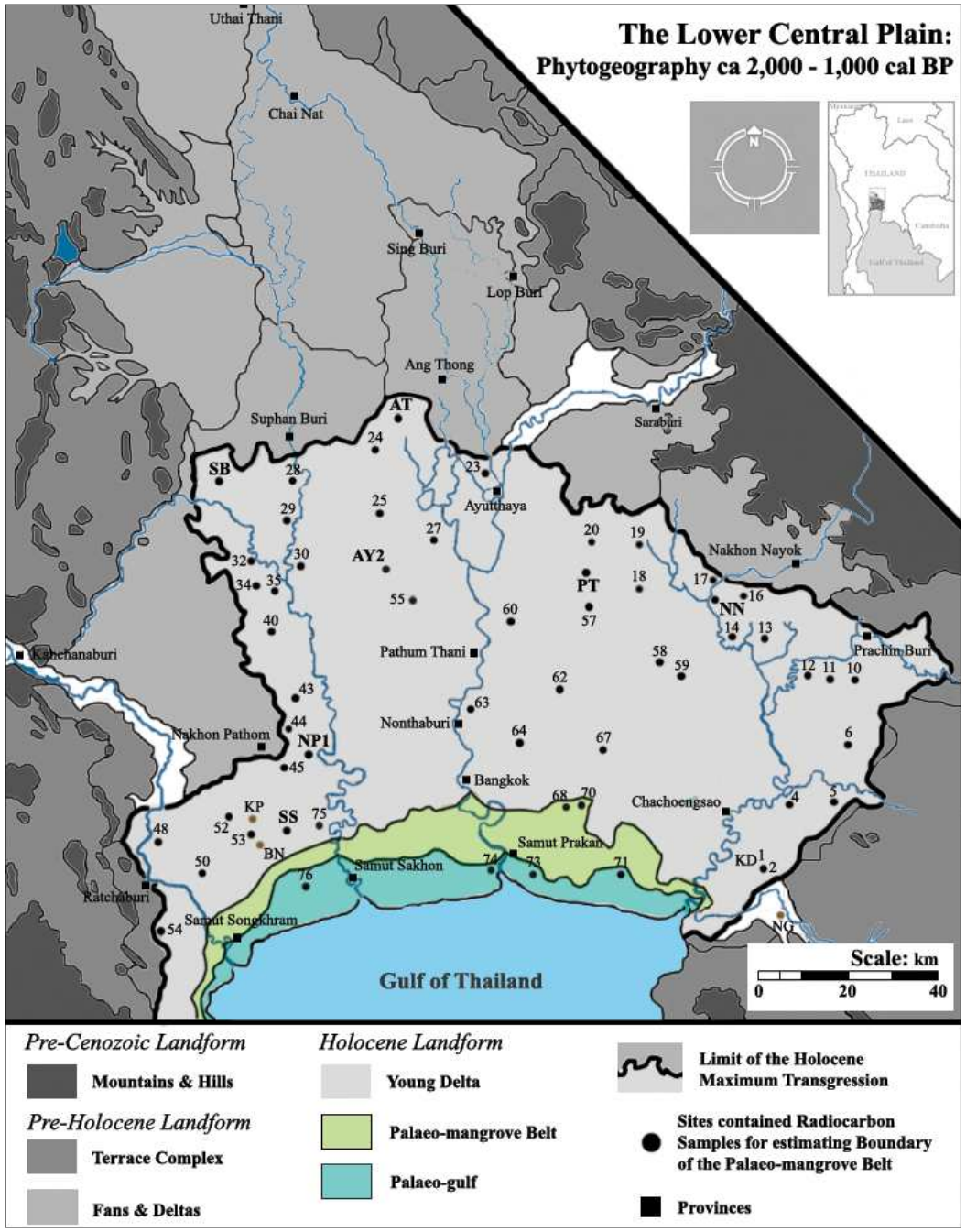


Figure 16: *Phytogeography of the Lower Central Plain, Stage 5 [Drawing by Trongjai Hutangkura].*

In the first millennium CE, the shoreline moved further southward to southern Nakhon Pathom and most parts of Bangkok and Chachoengsao **[Figure 16: Stage 5]**. The sediments of the mangrove belt at this stage might correspond with the upper parts of the Bangkok clay horizon in the radiocarbon sampled sites nos. 68 and 70. The upper parts of the Bangkok clay horizon, i.e. sites nos. 71, 73, 74 and 76, were used in estimating the boundary of the shallow sea area. This stage corresponds with the Dvāravatī historical period, the first "indianised" culture of people who settled in ancient central Thailand (Clarke, Gallon, Indorf, Revire and Thanik, this volume). The culture is variously dated between the sixth and the eleventh centuries CE. Even in that period of time, no Dvāravatī sites have been found in the areas of the Lower Central Plain. The absence of ancient archaeological sites or cities from this period implies that the vast area between Ang Thong and present-day Bangkok was still inadequate for city construction. The area might have been occasionally flooded and might be described as a young floodplain **[Figure 17]**.

The absence of ancient cities in the area of the Lower Central Plain has led to misunderstanding about the form of the Dvāravatī-era palaeo-gulf of Thailand. Without applying geomorphological information and radiocarbon dates, previous studies on the palaeo-topography of the first millennium CE initially suggested that these Dvāravatī cities had been located close to the palaeo-shoreline and that the plain was a large palaeo-gulf (Phongsi & Thiwa 2524; Thiwa 2526; Mudar 1999). Based on recent information on landform evolution and radiocarbon dates, it appears that the alleged "large palaeo-gulf" of previous studies actually correspond with the palaeo-gulf of the Holocene Maximum Transgression at *circa* 6,400 BCE.

Radiocarbon dates of giant oyster assemblages confirm that the palaeo-shoreline had moved southerly to Pathum Thani (site no. 55) between 4,600 and 4,200 BCE and to Nonthaburi (site no. 63) between 3,300 and 2,800 BCE. The radiocarbon sample from northern Bangkok (site no. 64) that provides the calibrated age range of 700 BCE to 100 CE also indicates that the last mangrove forest had already existed in northern Bangkok before the rise of the Dvāravatī culture, around 600 CE. Therefore, the northern limit of the palaeo-gulf during the Dvāravatī period could not exceed the vicinity of Bangkok.

Historical documents attest that the first city in the Lower Central Plain was only constructed in the fourteenth century CE. The oldest document that refers to the existence of an urban site in the area is the *Royal Chronicle of the Old City of Ayutthaya* (Anonymous 2547: 3). It describes Wat Phanan Choeng as the oldest temple of Ayutthaya, built in the year 1324 CE. The first generation of people in Ayutthaya had thus established themselves in the Lower Central Plain since at least the early fourteenth century, before the city was proclaimed the new capital of the Ayutthaya kingdom in 1350 CE.

Evidence from other indirect historical documents suggests that urban construction in the floodplain area of the Lower Central Plain had begun at least by the early fourteenth century, but perhaps not before the thirteenth. Moreover, the position of the recent shoreline has not changed since the fifteenth century.

Conclusion and an Afterword

Sedimentary sequences of the Lower Central Plain contain three palaeo-environments: mangrove ecology, transitional zone and floodplain environment. The mangrove ecology is indicated by the dominance of *Rhizophora* pollen assemblage; the transitional zone by dominance of pollen types of *Derris indica*, *Acrostichum aureum*, *Stenochlaena palustris*, *Ceratopteris thalictroides*, *Pteris* sp., and *Azolla/Salvinia*; and the floodplain environment by the dominance of *Gramineae* and *Cyperaceae*.

Pollen evidence confirms that a mangrove belt covered most of the palaeo-shoreline of the Lower Central Plain. Radiocarbon dating of samples from the SB site yields estimates for the palaeo-shoreline of the Holocene Maximum Transgression of *circa* 8,500-8,400 cal BP or 6,500-6,400 BCE. Remote correlation of the past sea level based on the oyster assemblage suggests that the sea level of the Holocene Maximum Transgression must have been higher than 2 m. and the Holocene Regression began after approximately 5,000 BCE.

In addition, phytogeographical information indicates that prehistoric settlements were absent in the Lower Central Plain before *circa* 3,000 cal BP (Stage 3) because most parts of the plain had been covered by the young Delta, the palaeo-mangrove belt and the palaeo-gulf. In prehistoric sites published by Higham and Rachanie (2012), all Palaeolithic and Hobinhian culture sites, dated roughly from 10,000 to 5,000 BCE, disappeared from the Lower Central Plain during this period. However, some sites such as Khok Phanom Di, Khok Phlap and Ban Nong Song Hong were still found in low terrace areas around the Lower Central Plain. This seems to suggest that prehistoric people lived in mountainous and terrace areas at the period of the Holocene Maximum Transgression, *circa* 6,400 BCE. It is also possible that the Palaeolithic people of the Late Pleistocene period, dated 126,000-12,000 BCE, might have settled in palaeo-valleys corresponding to the ancient topography of the plain before the Holocene rise in sea level. Consequently, prehistoric people of the early to middle Holocene period, *circa* 10,000-5,000 BCE, could not have settled in most parts of the young deltaic plain because the land might have been occasionally inundated by seasonal floods.

Moreover, the above phytogeographical information also disproves the long-accepted theory that the boundary of the palaeo-gulf as proposed by Phongsi and Thiwa (2524) dates from the Dvāravatī period (ca mid-late first millennium CE). In all likelihood, that palaeo-gulf boundary belongs in fact to the Holocene Maximum Transgression (ca 8,500-8,400 cal BP, or 6,500-6,400 BCE). The northern boundary of the palaeo-gulf during the Dvāravatī period was probably in the vicinity of present-day Bangkok and Samut Prakan. In any case, during the early historical period (ca first millennium CE), people could not inhabit the young deltaic plain because sedimentation along the rivers, or the so-called natural embankments, might have been too low to avoid the seasonal floods. Dvāravatī cities were therefore only established on the terrace areas of the Lower Central Plain. The scenario of the vast seasonal flood plain of Dvāravatī, covering areas between the present Ayutthaya and Bangkok **[Figure 17]**, can be seen today along the local roads of Nakhon Pathom, Nonthaburi, Samut Sakhon and Samut Prakan. These areas are dry in summer, but they are full of freshwater

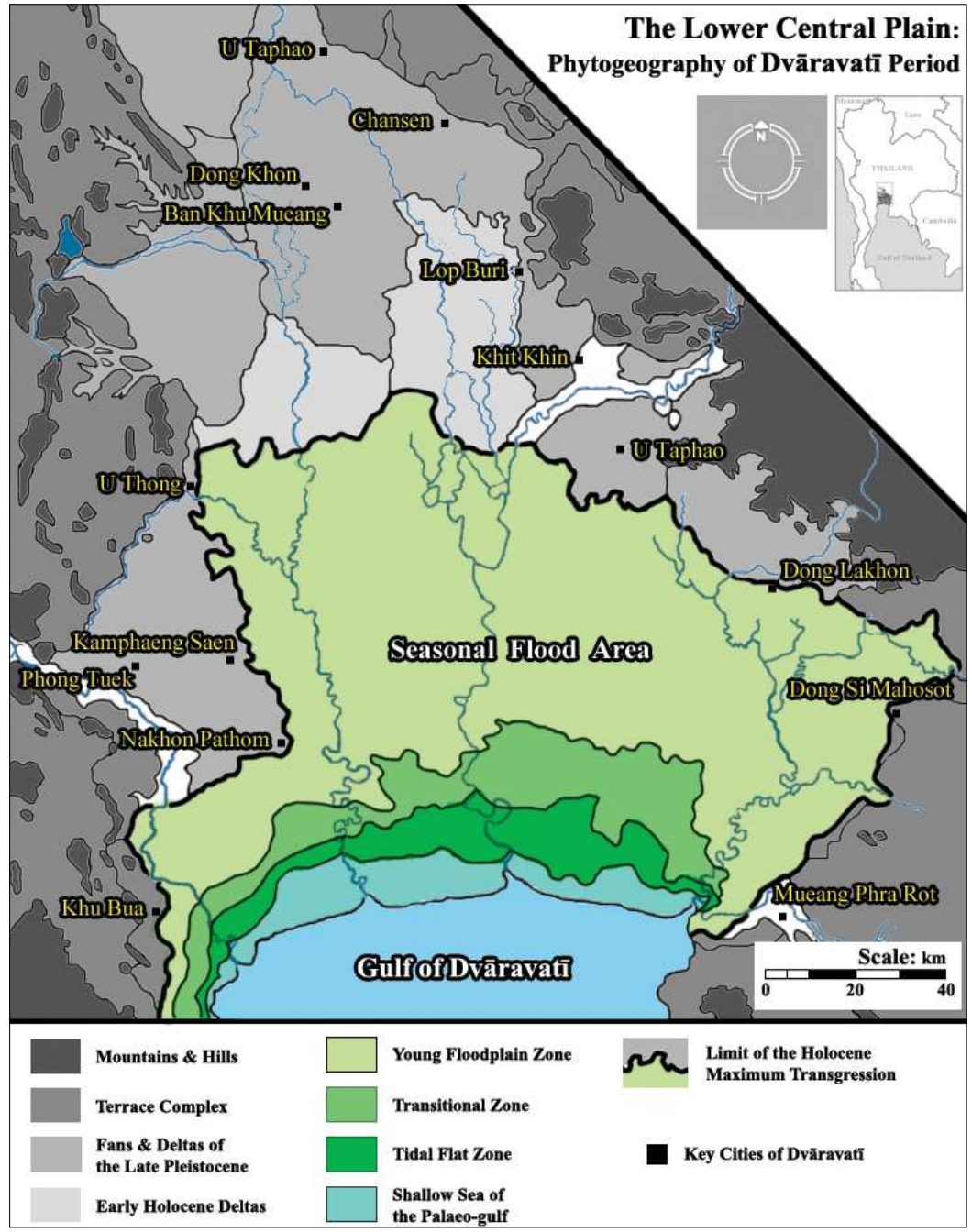


Figure 17: *Reconstructing map of the phytogeography during the first millennium together with locations of key Dvāravatī cities [Drawing by Trongjai Hutangkura].*

and weeds through the rainy season. The seasonal floodplain areas have, however, been encroached upon by rice agriculture and housing projects in ways ill adapted to the geography of the area. Chronic flood problems in the Lower Central Plain, especially the large 2011 flood, have been caused by land elevation for residential building projects that block natural floodways of the Lower Central Plain. In effect they form many small barrages in the flood plain area that has created a complex blockage. As a result, in the year 2011, a huge mass of floodwater was blocked and remained in most parts of the plain during September and November.

Historical documents (Anonymous 2479 and 2547) cite that the "Ayutthaya people" established the first cities in the Lower Central Plain. The absence of local archaeological evidence of city construction before the fourteenth century implies that this area had long been considered unfit for large settlements because of the seasonal floodplain topography. Wetland and marshy areas could have been the palaeo-environment of that early historical period as attested by the occurrence of sedimentary sequences containing high percentages of freshwater fern spores and *Gramineae* and *Cyperaceae* pollen grains in the weathered clay horizon.

While large settlements might not have been established in the Lower Central Plain up to the fourteenth century, small and temporary villages could, however, have flourished along the embankments of the main rivers and their branches. However, as yet no archaeological evidence confirms or supports such an hypothesis. Interestingly, some administrative towns such as Mae Klong (present-day Samut Songkhram city), Tha Chin (present-day Samut Sakhon city) or Pak Nam (present-day Samut Prakan city) of the latter period of the Ayutthaya kingdom (1350-1767) in the Lower Central Plain were located on natural embankments along the main rivers of the plain. As for Bangkok, it is likely that the first elements of this town were built on the western side of the Chao Phraya bank, which is the present Thon Buri. *The Ayutthaya Chronicle of Phanchanthanumat* (Choem version), makes first mention of Thon Buri giving the year 1555 CE (Anonymous 2479: 87). There is no trace of the name of Bangkok before then. Thon Buri could be said to have been built by at least the sixteenth century CE and the village of Bangkok, located on the other side of the bank, could have been settled at a later time. Thon Buri and Bangkok were mentioned together in the reign of King Narai the Great (1656-1688) by Simon de La Loubère (1700: 8) who recorded their names as Fon and Bancok.

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Endnotes

1 The substance of this essay formed the doctoral research of the author at the University of Nice-Sophia Antipolis (Trongjai 2012).

2 For the instruction manual in English, see: http://calib.qub.ac.uk/calib/manual/ (accessed on 7 March 2011).

References

Academia Sinica
1982 *Zhōngguó rèdài yàrèdài bèizǐzhíwù huāfěn* (*Angiosperm Pollen Flora of Tropic and Sub-tropic China*). Beijing: Institute of Botany & South China Institute of Botany, Academia Sinica. [In Chinese]

Alekseev, M.N. & Takaya Yoshikazu
1967 An Outline of the Upper Cenozoic Deposits in the Chao Phraya Basin, Central Thailand. *Southeast Asian Studies* 5(2): 334-352.

Anonymous
2479 *Prachum phongsawadan phak thi 64: phongsawadan krung si ayutthaya chabap phan chanthanumat (choem)* (*The Ayutthaya Chronicle of Phanchanthanumat: Choem Version*). Bangkok: Commemorative book for the cremation of Lady Patiphanphiset (Lamun Amatayakun) at Wat Prayunrawongsawat, Bangkok, on 9 March 2479. [In Thai; 1936 CE]

2547 *Praratchaphongsawadan krung kao chabap luang prasoet* (*The Royal Chronicle of the Old City of Ayutthaya: Luang Prasoet Version*). Nonthaburi: Sukhothai Thammathirat Open University. [In Thai; 2004 CE]

Bui Thi Mai, Trinh Thi Lâm, Hoang Viêt & Girard, Michel
2005 A Bank of Data on Pollens of References of the Indochinese Peninsula. In *The 2nd Conference of Asia Network (Réseau Asie) (28-30 September 2005): Workshop XXVI - The "civilisation du végétal" in Question*. Paris. [Unpublished]

Charan Achalabhuti
1975 *Petroleum Geology of the Gulf of Thailand*. Economic Geology Bulletin no.7. Bangkok: Economic Geology Division, Department of Mineral Resources, Thailand.

Chongpan Chonglakmani, Rucha Ingavat, Piccoli, Giulliano & Robba, Elio
1983 The Last Marine Submersion of the Bangkok Area in Thailand. *Memorie di Scienze Geologiche* 36: 343-352.

Chutamat Sangsuwan, Yaowalak Jongkanjanasoontorn & Hillen, Roeland
1987 A Palynological Study of the Bangkok Clay at Senanivate Pit, Bangkok, Thailand. In Wezel F.W. (ed.), *Proceedings of CCOP Symposium on "Developments in Quaternary Geological Research in East and Southeast Asia during the Last Decade" (27-30 October 1986)*. Bangkok: CCOP Technical Secretariat, pp. 197-205.

Department of Mineral Resources (DMR)
2544 *Thorani witthaya prathet thai* (*Geology of Thailand*). Bangkok: Department of Mineral Resources. [In Thai; 2003 CE]

Fine Arts Department (FAD)
2553 *Thabian borannasathan changwat samut sakhon* (*The List of Ancient Monuments and Archaeological Sites in Samut Sakhon Province*). Ratchaburi: Fine Arts Department, 1st Regional Office of Archaeology, pp. 147-151. [In Thai; 2010 CE]

Fukui Hayao
1971 Environmental Determinants Affecting the Potential dissemination of High Yielding Varieties of Rice – A Case Study of the Chao Phraya River Basin. *Southeast Asian Studies* 9(3): 348-374.

Hattori Tomoo
1972a Some Properties of Brackish Sediments along the Chao Phraya River of Thailand. *Southeast Asian Studies* 9(4): 522-532.

1972b Some Properties of Recent Sediments in the Bangkok Plain of Thailand. *Southeast Asian Studies* 10(2): 321-334.

Haruyama Shigeko
1993 Geomorphology of the Central Plain of Thailand and Its Relationship with Recent Flood Conditions. *GeoJournal* 31(4): 327-334.

Higham, Charles & Rachanie Thosarat
2012 *Early Thailand: From Prehistory to Sukhothai*. Bangkok: River Books.

Huang Tseng-Chieng
1972 *Pollen Flora of Taiwan*. Taipei: Department of Botany, National Taiwan University.

International Soil Museum (ISM)
1981 *Thionic Fluvisol (Sulfic Tropaquept), Central Plain Region, Thailand*. Soil Monolith Paper 1. Wageningen: International Soil Museum.

Kevie, W. van der & Banchong Yenmanas
1972 *Detailed Reconnaissance Soils Survey of Southern Central Plain Area*. Bangkok: Report SSR-89, Soil Survey Division, Department of Land Development. [Unpublished]

La Loubère, Simon, de
1700 *Description du Royaume de Siam (Tome premier)*. Amsterdam: Chez Henry & la Veuve de Theodore Boom.

Maloney, Bernard K.
1991 Palaeoenvironments of Khok Phanom Di: The Pollen, Pterdophyte Spore and Microscopic Charcoal Record. In Higham, Charles & Ratchanie Bannanurag (eds), *The Excavation of Khok Phanom Di: A Prehistoric Site in Central Thailand (Volume 2)*. London: Thames and Hudson, pp. 7-44.

Mudar, Karen M.
1999 How Many Dvaravati Kingdoms? Location Analysis of First Millennium A.D. Moated Settlements in Central Thailand. *Journal of Anthropological Archaeology* 18: 1-28.

Narong Thiramongkol
1984 Geomorphology of the Lower Central Plain, Thailand. In *Proceeding of the 3rd Meeting of the Working Group on Geomorphology of River and Coastal Plain (11-17 December 1983)*. Bangkok: Department of Geology, Chulalongkorn University, pp. 13-25. [Unpublished]

Negri, Mauro Pietro
2009 Fossil Mollusc-Faunas: Their Bearing on the Holocene Evolution of the Lower Central Plain of

Bangkok (Thailand). *Journal of Asian Earth Sciences* 35: 524-544.

Paramita Phanwong
2550 *Kansasom khong renu nai din niao krung thep chak amphoe ongkharak changwat nakhon nayok lae nai thi kiaonueang kap saphap phumisat phuet boran* (*Pollen Deposit in Bangkok Clay from Ongkharak District, Nakhon Nayok Province, and Their Implication on Paleo-phytogeography*). Master Thesis. Bangkok: Chulalongkorn University. [Unpublished in Thai; 2007 CE]

Phisit Dheeradilok
1995 Quaternary Coastal Morphology and Deposition in Thailand. *Quaternary International* 26: 49-54.

Phisit Dheeradilok, Niran Chaimani, Naramet Thirarangsikun
2529 *Raingan kansamruat thorani withaya chabap thi 0065: thorani withaya rawang changwat suphan buri lae rawang amphoe bang len* (*Geological Survey Report no.0065: Geology of Suphan Buri Province (5037 IV) and Bang Len District (5037 III) Map Sheets*). Bangkok: Department of Mineral Resources. [Unpublished in Thai; 1986 CE]

Phongsi Wanasin & Thiwa Suphachanya
2524 *Mueang boran boriwen chai fang thale doem khong thi rap phak klang prathet thai: kansueksa tamnaeng thi tang lae phumisat samphan* (*Ancient Cities on the Former Coastline in the Central Plain of Thailand: The Study of Sites and Geographical Correlation*). Bangkok: Chulalongkorn University Press. [In Thai; 1981 CE]

Pons, Leendert Japhet & Kevie, W. van der
1969 *Acid Sulphate Soils in Thailand*. Bangkok: Report SSR-81, Soil Survey Division, Land Development Department. [Unpublished]

Prinya Nutalaya, Rau, Jon L. & Sopit Sodsee
1984 Surficial Geology of the Lower Central Plain, Thailand. In *Conference of Applications of Geology and the National Development (19-22 November 1984)*. Bangkok: Chulalongkorn University, pp. 147-156. [Unpublished]

Rasmi Shoocongdej
2000 Forager Mobility Organization in Seasonal Tropical Environments of Western Thailand. *World Archaeology* 32(1): 14-40.

Rau, Jon L. & Prinya Nutalaya
1983 Geology of the Bangkok Clay. *Geological Society of Malaysia Bulletin* 16: 99-116.

Saito Yoshiki, Tanabe Susumu, Sato Yoshio & Suzuki Yuichiro
2002 Holocene Evolution of the Lower Central Plain of Thailand. In *Symposium on Geology of Thailand*, Bangkok, 26-31 August 2002, pp. 196-200. [Unpublished]

Sangad Bunopas & Vella, Paul
1983 Opening of the Gulf of Thailand – Rifting of Continental Southeast Asia, and Late Cenozoic Tectonics. *Journal of the Geological Society of Thailand* 6(1): 1-12.

Sarasin, Fritz
1933 Prehistorical Researches in Siam. *Journal of the Siam Society* 26(2): 171-202.

Scoffin, Terence P. & Le Tissier, Martin D.A.
1998 Late Holocene Sea Level and Reef Flat Progradation, Phuket, South Thailand. *Coral Reefs* 17: 273-276.

Seidenfaden, Erik & Kerr, Arthur F.G.
1930 Ethnology. In *Siam: Nature and Industry*. Bangkok: Ministry of Commerce and Communications, pp. 80-106.

Selvakumar, Sinnadurai
1977 *Analysis of Quaternary Terrace Levels of the Chao Phraya – Mae Klong Basins, Thailand*. Master Thesis. Bangkok: Asian Institute of Technology. [Unpublished]

Sin Sinsakul
1990 Evidence of Sea-level Changes in the Coastal Area of Thailand: A Review. Paper presented at the *CCOP-UNEP Workshop on Global Environmental Change*, Chiang Mai, 2-7 July 1990. [Unpublished]

2539 Takon puenphieo boriwen changwat nakhon nayok lae puenthi klai khiang (Surficial Sediments of Nakhon Nayok Province and Adjacent Areas). In Sin Sinsakul (ed.), *Thorani withaya singwaedlom changwat nakhon nayok lae phuenthi klai khiang* (*Environmental Geology of Nakhon Nayok Province and Adjacent Areas*). Bangkok: Fine Arts Department and Department of Mineral Resources, pp. 39-68. [In Thai; 1996 CE]

2000 Late Quaternary Geology of the Lower Central Plain, Thailand. *Journal of Asian Earth Sciences* 18: 415-426.

Somboon Jarupongsakul
1987 *Stratigraphy of Bangkok Clay and Holocene Transgression of the Chao Phraya Delta, Central Thailand*. Master Thesis. Kyoto: Graduate School of Agriculture, Kyoto Prefectural University. [Unpublished]

1988 Paleontological Study of the Recent Marine Sediments in the Lower Central Plain, Thailand. *Journal of Southeast Asian Earth Sciences* 2(3/4): 201-210.

Somboon Jarupongsakul & Narong Thiramongkol
1992 Holocene Highstand Shoreline of the Chao Phraya Delta, Thailand. *Journal of Southeast Asian Earth Sciences* 7(1): 53-60.

Somphat Wongsomsak, Soemsak Tiyaphan, Nukul Nusi & Charoen Inthasen
2530 *Raingan kansamruat thorani witthaya chabap thi 0086 thorani witthaya rawang amphoe phak hai (5037 I) lae rawang amphoe lat lum kaeo (5037 II) (Geological Survey Report no. 0086: Geology of Phak Hai District (5037 I) and Lat Lum Kaeo District (5037 II) Map Sheets)*. Bangkok: Department of Mineral Resources. [Unpublished in Thai; 1987 CE]

Sot Daeng-Iet
2521a Kanpathibat ngankhut samruat laeng borannakhadi khok phlap (Excavation of the Archaeological Site at Khok Phlap, Ratchaburi Province). *Silpakorn Journal* 22(4): 22-31. [In Thai; 1978 CE]

2521b Khok phlap: laeng borannakhadi kon prawatisat (Khok Phlap: A Newly Discovered Prehistoric Site). *Muang Boran* 4(3): 17-25.

Southon, John, Kashgarian, M., Fontugne, M., Metivier, B. & Yim, W.
2002 Marine Reservoir Corrections for the Indian Ocean and Southeast Asia. *Radiocarbon* 44: 167-180.

Suraphol Natapintu
2550 *Rakngao banphachon khon thai: phatthanakan thang watthanatham kon prawatisat* (*Origin of Thai People: Prehistoric Cultural Development in Thailand*). Bangkok: Matichon Publication House. [In Thai; 2007 CE]

Takaya Yoshikazu
1968 Quaternary Outcrops in the Central Plain of Thailand. In *Geology and Mineral Resources in Thailand and Malaya (Reports on Research in Southeast Asia, N-3)*. Kyoto: Kyoto University, pp.7-68.

1969 Topographical Analysis of the Southern Basin of the Central Plain, Thailand. *Southeast Asian Studies* 7(3): 293-300.

1971a Two Brackish Clay Beds along the Chao Phraya River of Thailand. *Southeast Asian Studies* 9(1): 46-57.

1971b Physiography of Rice Land in the Chao Phraya Basin of Thailand. *Southeast Asian Studies* 9(3): 375-397.

1972 Quaternary Outcrops of the Southern Part of the Central Plain of Thailand. *Southeast Asian Studies* 10(2): 298-320.

Tanabe Susumu, Saito Yoshiki, Sato Yoshio, Suzuki Yuichiro, Sin Sinsakul, Suwat Tiyapairach & Niran Chaimanee
2003 Stratigraphy and Holocene Evolution of the Mud-dominated Chao Phraya Delta, Thailand. *Quaternary Science Reviews* 22: 789-807.

Thanikaimoni, Ganapathi
1987 *Mangrove Palynology*. Pondicherry: The Sri Aurobindo Ashram Press.

Thiwa Suphachanya
2526 *kanchueamyong doi praman khong naeo chai fang thale doem rop ao thai* (*Tentative Correlation of Old Shorelines around the Gulf of Thailand*). In Narong Thiramongkol & Visut Pisutha-Arnond (eds), *First Symposium on Geomorphology and Quaternary Geology of Thailand (October 1983), Bangkok*. Bangkok: Department of Geology & Chulalongkorn University, Department of Mineral Resources, Geological Society of Thailand, pp. 96-105. [In Thai; 1983 CE]

Trongjai Hutangkura
2012 *Pollen Analysis of the Holocene Sedimentary Sequences from the Lower Central Plain of Thailand and Its Implications for Understanding Palaeo-environmental and Phytogeographical Changes*. Doctoral Dissertation. Nice: University of Nice-Sophia Antipolis. [Unpublished]

Umitsu Masatomo, Sin Sinsakul, Suwat Tiyapairach, Niran Chaimanee & Kumiko Kawase
1999 Late Holocene Sea-level Change and Evolution of the Central Plain, Thailand. In *Proceedings of the Comprehensive Assessments on Impacts of Sea-level Rise*, Bangkok, 1-4 December 1999, pp. 34-39. [Unpublished]

Umitsu Masatomo, Suwat Tiyapairach, Niran Chaimanee & Kawase Kumiko
2002 Late Holocene Sea-level Change and Evolution of the Central Plain, Thailand. In *Symposium on Geology of Thailand*, Bangkok, 26-31 August 2002, pp. 201-206. [Unpublished]

Wickanet Songtham, Manas Watanasak & Prakainetra Insai
1999 Holocene Marine Crabs and Further Evidence of a Sea-level Peak at ca 6,000 Years B.P. in Thailand. In *Proceedings of the Comprehensive Assessments on Impacts of Sea-level Rise*, Bangkok, 1-4 December 1999, pp. 222-230. [Unpublished]

Zhang Yulong, Xi Yizhen, Zhang Jintan, Gao Guizhen, Du Naiqiu, Sun Xiangjun, Kong Zhaochen
1990 *Spore Morphology of Chinese Pteridophytes*. Beijing: Science Press.

Website
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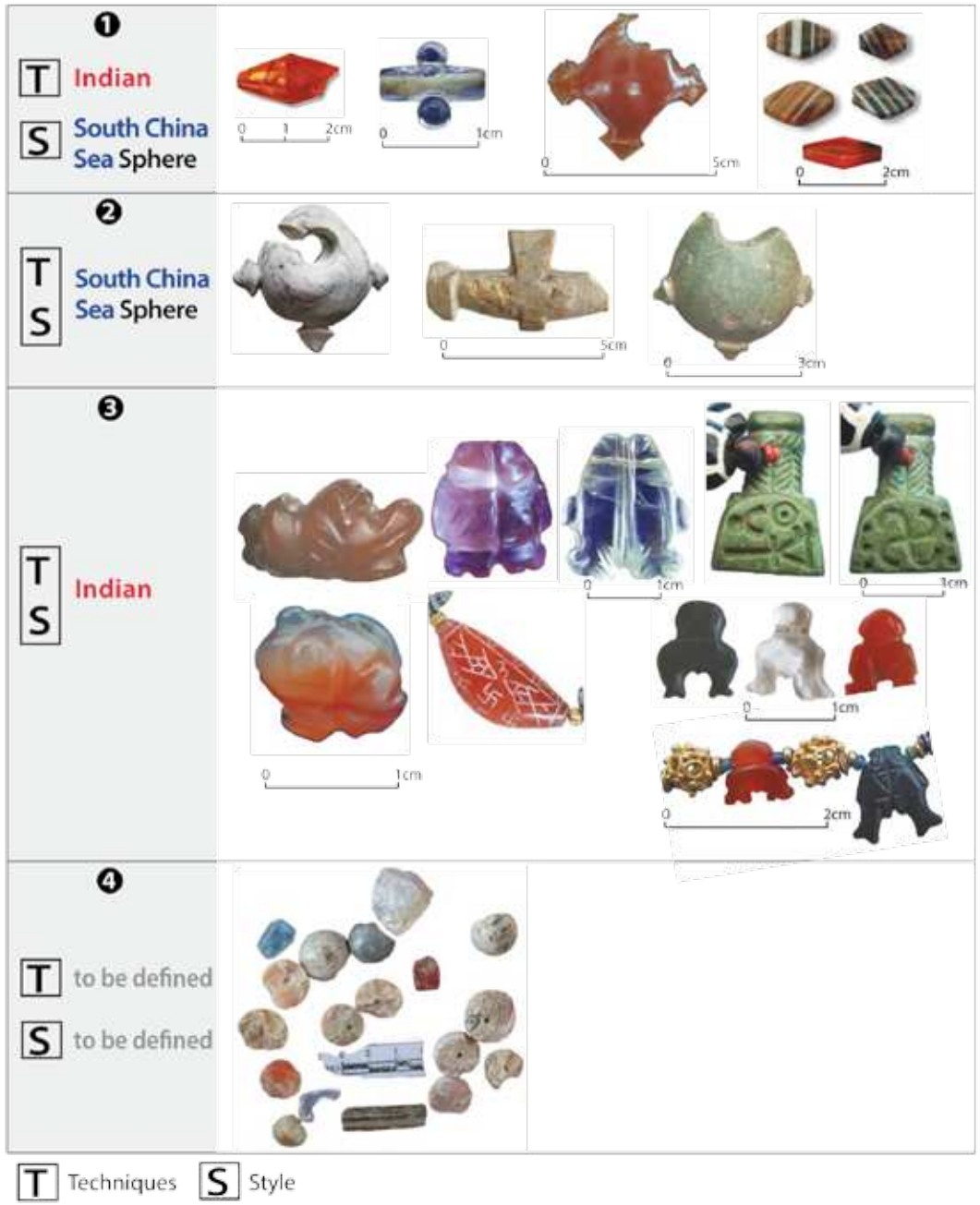

The Development of Coastal Polities in the Upper Thai-Malay Peninsula

Bérénice Bellina *et al.*
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Introduction

The late fourth and third centuries BCE witnessed the political unifications of Mauryan India (including north India after 321 BCE, and most of the subcontinent by 265 BCE) and Han China (206 BCE-220 CE), and the completion of connections between the different regional networks linking the classical western world and Asia. This chain of intertwined networks inaugurated a trading boom and major transnational cultural processes. For Southeast Asia, a producer of several products sought after by her two major economic and political neighbouring regions of China and South Asia, this interconnection opened an avenue to economic and cultural integration. It is argued herein that the inception of this network coincided with the fashioning of political and socio-cultural configurations that predicted certain patterns described for the later historical periods.

It is also argued that the much earlier integration within long-distance maritime networks of pre-existing local and regional networks had already allowed, and encouraged, the emergence of a chain of separate, independent, local "trading" polities both in what is today South Asia and in Southeast Asia. Evidence tends to suggest that the levels of complexity and the sizes of these polities varied, contributing to the development of a hierarchy and possibly to different economic specialisations within this network. Economic specialisation seems to have involved various social groups at distinct socio-political levels of organisation, and occupying different environments. Amidst those emerging exchange-based complex polities, the "port-entrepôts" or port-cities constitute the focus of this essay.

By the final centuries BCE, certain port-cities were already able to concentrate control over both local and far-reaching ties. The economic and cultural vitality of some of these nodes acted as catalysts for the creation of syncretic cultural configurations, amongst which, it is argued, were a shared cosmopolitan-type of urbanism and culture that touched spheres of life ranging from material culture (daily life utensils and technologies) through the ideational sphere and even culinary preferences. Such assertions are based on the results of recent investigations led by the Thai-French archaeological mission, working in the upper Thai-Malay Peninsula since 2005, and by the Thai Fine Arts Department. The essay thus emphasises continuity, in the sense

Opposite Figure 1: *Hard stone ornament types of productions identified at Khao Sam Kaeo based on morpho-technological criteria [Photographs and drawing by Bérénice Bellina].*

that the so-called Silk Road networks did not emerge *ex-nihilo* but developed out of a pre-existing chain of socio-economic and political networks that crystallised in the maritime "Silk Road" trade, allowing the fashioning of broader transregional socio-economic practices, the results of hybridised cultural traits processed in the coastal port-cities.

The Early Importance of Coastal Polities and Transpeninsular Routes

The research presented here has been conducted in the Kra Isthmus area, in the present-day provinces of Chumphon to the east and Ranong to the west, where the peninsula is the narrowest, approximately 50 kilometres. The Isthmus can be seen as a stepping stone between the Bay of Bengal and the South China Sea, and the authors of this collective essay believe that its transpeninsular routes were used even before the Mauryan and Han unifications took place, for early exchange among independent polities located around the two basins, before circumnavigation of the peninsula began to be used in the first century BCE at the earliest (Wheatley 1961: 12). The early use of the northern transpeninsular routes is conjectured and based on a reference in the *Qian Han Shu* which alludes to the mission sent by the Han Emperor Wu (r. 140-87 BCE) to the kingdom of "Huangzhi," said to have been located at Kanchipuram, Tamil Nadu, in southern India (Wheatley 1961: 8-13).

The intensity of the use of transpeninsular routes during the historical periods fluctuated depending on the political situation and the prevalence of piracy. The use of Isthmian land routes, which crossed over very irregular terrain, implies that travel required combining different modes of transport (men, porters, wagons, pack animals – including elephants –, bull carts, boats, rafts, and pirogues). According to the season and the route, the duration of a journey could vary tremendously from a week to a month (Andaya 2008).

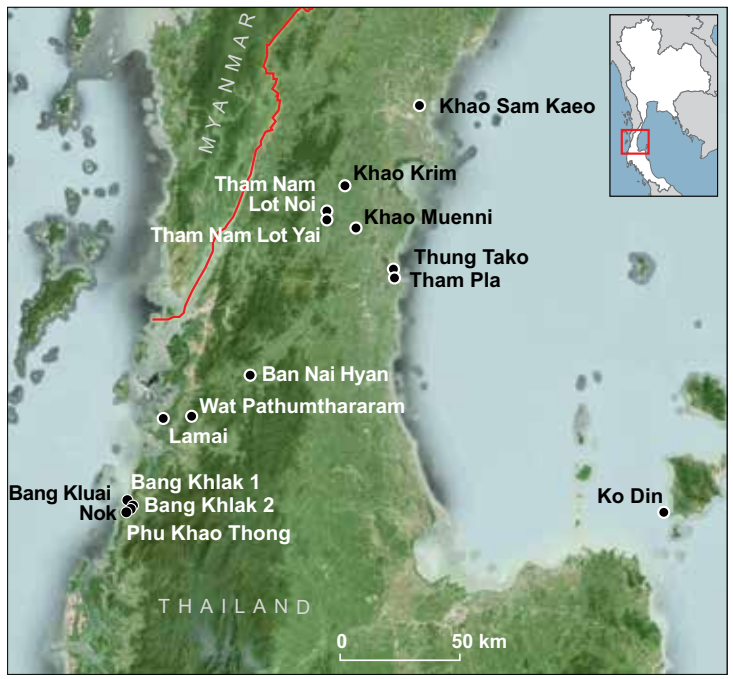
Even if the use of transpeninsular routes was not easy, they had the advantage of shortening the journey. Based on Chinese accounts, Paul Wheatley (1961: 12) estimates that their use saved about four months on a total journey from South Asia to China (twelve months as against sixteen). Until recently, the region and its transpeninsular routes that lack major monumental Brahmanical or Buddhist remains were felt not to have played any major historical role. Michel Jacq-Hergoualc'h (2002: 104), for example, concluded that "Panpan," which is known from Chinese sources to have emerged around the fourth century CE, was the earliest "indianised" city-state of the peninsula, but that the actual remains of fully fledged "indianised polities" only appeared from the fifth century CE onwards and further south from the regions of Chumphon-Ranong.

While the upper part of the peninsula is devoid of monumental remains, its archaeological sites are rich in debris of local industries including metal-, glass- and, stone working, dating in some cases to the Metal Age from the fifth century BCE. It is this richness in industrial remains that opened the avenue to investigate the development of the coastal polities that produced them. The analysis of these remains at certain sites revealed complex technological transfers and hybrid production techniques which suggest that early and close contacts between populations occupying the two maritime basins took place there. These remains and associated structural remnants unravelled complex socio-economic structures and their close association with the emergence of exchange-based, complex polities at the end of the first millennium BCE.

Although work is being conducted at sites of various types in the peninsula, in particular those of the forested interior, this essay focus on partly contemporary port-entrepôts situated on the two coasts of the upper peninsula that might have been located at the two ends of sets of northern transpeninsular routes: Khao Sam Kaeo on the east coast and the complex of Phu Khao Thong/Bang Kluai Nok on the west coast **[Map 1]**.

Khao Sam Kaeo, on the east coast of the peninsula, excavated for five seasons by a French-Thai team, has proved to be an early urban settlement with socio-professional quarters delimited by series of walls and embankment berms, and characterised by a hydraulic system. There, several highly specialised industries implementing foreign technologies were producing prized products, some of which were clearly part of the symbolic assemblage shared by maritime Southeast Asian elites. The overall configuration at Khao Sam Kaeo finds no comparison yet in contemporaneous Southeast Asian settlements but predicts those of certain later maritime city-states that thrived along the fringes of the South China Sea – e.g. sites like Pasai, Banten and Malacca. One of the goals of the archaeological research at Khao Sam Kaeo, however, is to focus on production and its organisation, an aspect rarely and poorly described by later historical sources for these early polities.

Phu Khao Thong, on the west coast of the peninsula, is a smaller site that seems to have been part of a complex of sites in the Kluai



Map 1: *Map showing Khao Sam Kaeo on the east coast and the complex of Phu Khao Thong/ Bang Kluai Nok on the west coast [Drawing by the Thai-French archaeological mission].*

Bay. This complex includes Bang Kluai Nok, which yielded a significant amount of material from South Asia, and, further west, two very small sites, Bang Khlak 1 and Bang Khlak 2.

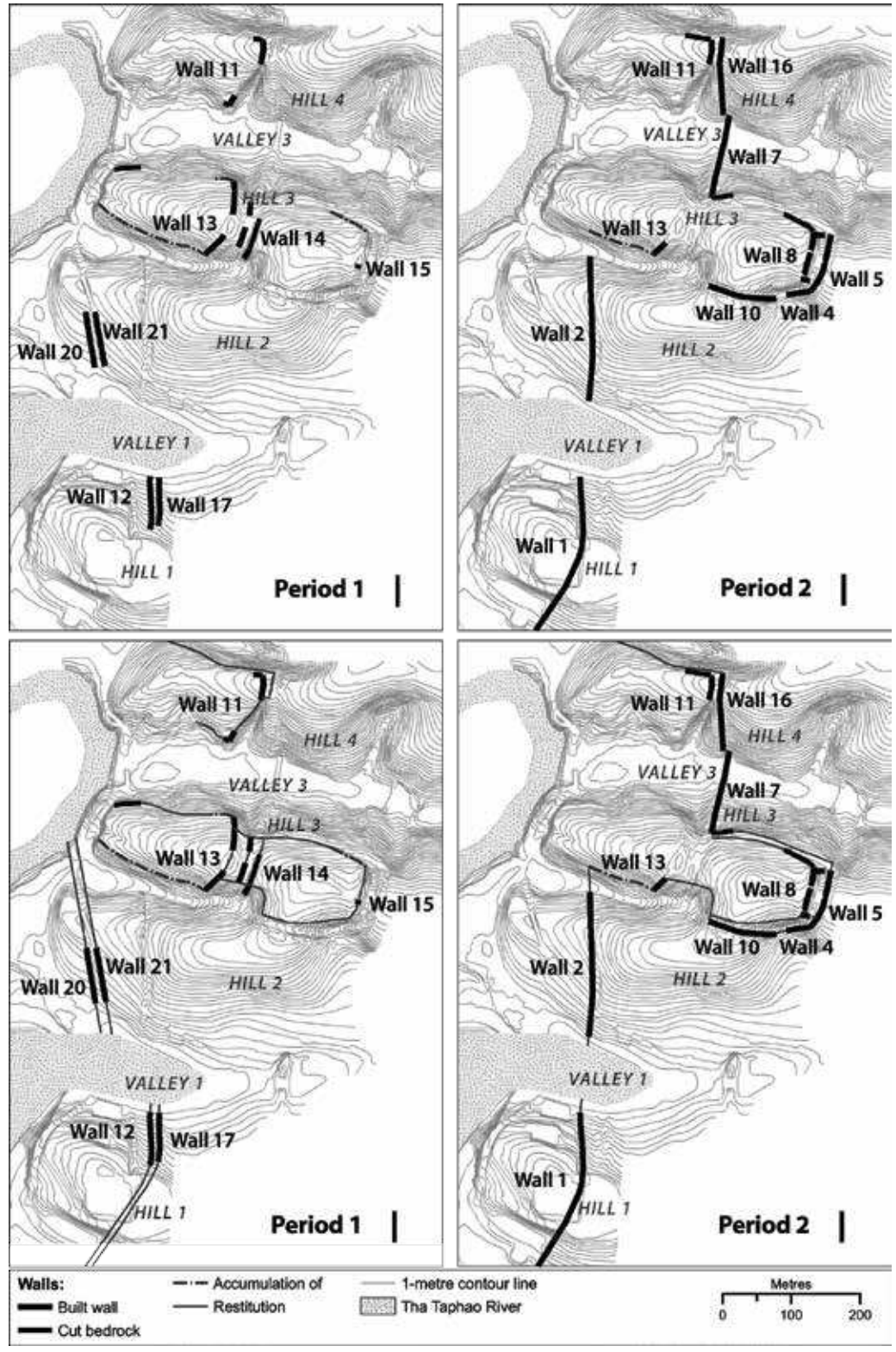
Khao Sam Kaeo

Our excavations at Khao Sam Kaeo from 2005 to 2009 revealed a coastal complex polity of cosmopolitan and proto-urban character whose emergence seems clearly linked to the development of the maritime silk roads. Based on the radiocarbon-dating results of 30 samples consisting of charcoal, wood, and organic material, using conventional (13) and AMS (17) radiocarbon analysis, the site is securely dated to the very early fourth to second or first century BCE.

Located five kilometres from the coast today, the site extends over four hills; it is limited on its western side by the Tha Taphao river, which connects it with the Gulf of Thailand and the China Sea in the east and with resource-rich forests in the north. One hundred and thirty five test pits opened (2 x 2 m.) over an area of 55 hectares revealed an occupation *stricto sensu* over 35 hectares delimited by walls and palisades; however, erosion of the western part of the site by the river makes it difficult to estimate the size of the area it occupied **[Map 2]**. The bordering walls include simple and twin parallel earth walls that were probably surmounted by wooden palisades that do not survive. A ditch usually ran beside the wall. In the steepest parts of the hills, indirect evidence suggests that wooden palisades were placed in cuts in bedrock. These ramparts were probably built during two main phases, the second apparently corresponding to an extension of the site towards the north. The presence of these ramparts expresses a double concern: first to retain sediments upslope and upstream, avoiding the erosion and redeposition that are induced by heavy monsoon rains (Allen 2009), and second to delineate the urban space, delimiting specialised zones (Malakie LaClair 2008: 28-33).

The enclosing system finds no comparison amongst contemporaneous Southeast Asian sites, which, except in the case of the Co Loa citadel in northern Vietnam, consist of a moat surrounding the site. At Khao Sam Kaeo, in contrast, valleys were crossed by earth walls. Their structure varied according to their role. The wall in Valley 1 aimed at maintaining a flooded area, that probably corresponded to a mooring place for boats sailing up the river; the wall prevented its silting-in. On the other hand, the succession of earth walls blocking Valley 3 aimed at containing the water streaming from the hills towards the west; this system kept the western part of the valley dry and retained water in its east, upstream zone, which may have been dedicated to agriculture (Bellina-Pryce & Praon 2008).

As for agriculture, Cristina Castillo's research (2009 and 2011) indicates that dryland cultivation was practised on the hills. The archaeobotanical finds so far include rice and foxtail millet, crops that originated in China, as well as mung beans and horse gram, which are of South Asian origin. Evidence for dryland cultivation is also found further south on the peninsula, where, for example, it supported historical city-states in Kedah, on the north-western coast of peninsular Malaysia, from the early centuries CE to the middle of the second millennium (Allen 1991 and 1999).



Opposite Map 2: *Map of Khao Sam Kaeo suggesting two stages of rampart erection [Drawing by the Thai-French archaeological mission].*

The morphology of the settlement of Khao Sam Kaeo resulted from both the natural landscape and fully human-constructed boundaries. The encircling walls do not trace a distinguishable geometric or other cultural pattern but follow the natural topography, even enhancing it. Their morphology and the configuration of the site are not comparable to those of the contemporaneous irregular concentric-moated sites of northeast Thailand, the Mimotian sites in Cambodia, or the northern Vietnamese citadel of Co Loa, 17 kilometres north of Hanoi (Kim *et al.* 2010).

Khao Sam Kaeo's enclosed pattern finds pertinent comparisons with early cities that emerged in northern Indian polities from the mid-first millennium BCE onwards (Smith 2003: 274-275). Data concerning the morphology, size, structure, and network integration of early historical cities is still sparse, and the changes made during long-term occupations of settlements greatly limit the understanding of their earliest phases. Nonetheless, it appears that cities were situated, for the greater part, on flat lands of low or average height but took advantage of hills, hillsides, and other higher elevations punctuating the landscapes (Deloche 1992). The early cities in northern India were not uniform in plan and seem to have been adapted to local topography, especially when integrating a river. They were delimited by ramparts, each consisting of an earthen structure constructed of fill excavated from an adjacent ditch, and laid out to follow the natural topography (Smith 2003: 275; Deloche 1992). The ramparts served multiple purposes besides warfare, controlling floods, restricting the access of outsiders to markets, encouraging the development of civic identity, and generating social cohesion in part through the need to maintain the ramparts cooperatively at regular intervals. In any case, the ramparts embodied a level of political control capable of mobilising and organising the labour needed to produce and maintain them (Smith 2003: 280-283). As for their size, they surrounded sites that range from more than 241 hectares in area (Pataliputra) to much smaller areas between 16 and 14 hectares (e.g. Bhita) (Coningham 1995: 58). It appears that Khao Sam Kaeo's morphology, location, and encircling boundary wall find more pertinent comparisons with contemporaneous Indian cities than with contemporaneous Southeast Asian settlements, although the cities in both regions at the time were small, independent polities, not parts of a unified nation-state, like today's Thailand or India.

The occupation area at Khao Sam Kaeo was delimited by the walls. No structures other than the hydraulic ones have been found outside the boundary walls. Inhabitants built structures on piles and on terraces set on plateaux and the gentle slopes of the four hills. The bases of the hills and the river banks were also occupied. Occupied zones are characterised by domestic or craft structures of small dimensions (terraces, floors, wells, low walls, drains, and holes left by posts) and by monumental structures (pathways with drains and terraces). The network of habitations on piles and terraces was dense and is characterised by accumulations of terraces and drains.

All craft activities (iron, copper-base alloy, and hard stones) expanded both on the plateaux and at the bases of the hills, except that the lapidary glass, stone, and glass-bracelet craft centres have been identified exclusively in the lower parts of Valley 1 and along the river. The western and low slopes of Hill 2 seem to have held a cemetery, which we could not excavate but which yielded a rich small-material assemblage (hard stone ornaments, glass, and gold) and thick jars.

The study of the occupation of the site combines data from the excavations of the settlement with the results of technological analysis of the artefacts, an approach from the anthropology of techniques (Bellina-Pryce & Praon 2008: 260). Data from technological analysis, integrated in Geographic Information Systems (GIS), reveal a spatial distribution by groups in different zones; a series of statistical tests has established that this distribution is statistically significant (Malakie LaClair 2008: 28-33).

Two clearly defined zones emerge from the spatial analysis: a southern area corresponding to Hills 1 and 2, most likely used for indigenous occupation, and a northern area, including Hills 3 and 4, occupied by various Asian groups: South Asian, Southeast Asian, and East Asian.

The southern part of the site provides objects whose style is South China Sea-related, and locally produced, using:

- techniques found in Southeast Asian areas around the South China Sea, as for instance certain types of shell-incised ceramics that relate to the Sa Huynh-Kalanay complex elaborated by Wilhelm Solheim (Bellina *et al.* 2012);

- Indian raw materials were probably worked under the aegis of a few experienced Indian craftspersons. These productions comprise ornaments in hard stone (Bellina 2003 and 2007; Bellina-Pryce & Praon 2008) and facetted lapidary-worked glass ornaments that is ornaments whose "chaîne opératoire" used some lapidary techniques. The lapidary glass beads and an important proportion of the bracelets are made from a transparent green glass with a m-Na-Al 3 composition, which is particularly abundant in the southern part of the site and has been identified at other contemporaneous sites around the South China Sea (Dussubieux & Bellina, forthcoming). Evidence of primary m-Na-Al 3 glass manufacture in northeastern India indicates a possible source area for the same type of glass found at Khao Sam Kaeo. Both ornaments implemented Indian lapidary techniques (Bellina-Pryce & Praon 2008), and are characterised by a high level of expertise that necessitates an apprenticeship of several years (Roux 2000). The presence of a fully-developed glass industry, involving complex technologies, in the earliest occupation levels makes it very unlikely that this glass tradition evolved locally.

The hard-stone ornament production **[Figure 1]**, referred to as "South China Sea siliceous production," and found in the southern part of the settlement, consists of both finished and unfinished products. This type of production, combining Indian raw material and highly skilled Indian technologies with South China Sea-related style, is the earliest hard stone tradition identified in Southeast Asia, beginning in the fourth century BCE and found in central Thailand (Ban Don Ta Phet), central and southern Vietnam (Sa Huynh sites) and Palawan in the Philippines (Tabon caves) (Bellina 2001: 280, 2003: 291 and 2007: 33).

This type of production shared a workshop with those producing facetted glass beads and bracelets, at the bases of Hills 1 and 2. Other stone-working workshops occupy the summits of Hills 3 and 4, and both iron smithies are located on Hill 3's western and eastern plateaux.

The northern part of the settlement (Hills 3 and 4) yielded evidence for habitation and for different types of craft production associated with various groups from South, Southeast, and East Asia. Some materials were imported; others were locally produced with exogenous or local techniques.

Materials associated with South Asia were found concentrated on both plateaux of Hill 3. They consist of goods that were imported, like Indian rouletted and knobbed ware (Bouvet 2008 and 2012: 318, 429-449); or locally produced. Local wares include some Indian-influenced Fine Wares (Bouvet 2012: 441-443) and hard-stone ornaments whose skilled manufacturing techniques, good-quality materials, and certain stylistic elements appear either South Asian or South Asian-inspired. The stylistic repertoire includes auspicious symbols, for some of which we do not know the ancient name or significance (*triratna*, *minayugala*, *svastika*, *haṃsa*, and *nandipāda*). A third category includes owners' names inscribed on seals in Prakrit, written with Brāhmī characters; some of these are unfinished **[Figure 1]**. This north part of the settlement also yielded evidence for the transfer of Indian metallurgical technologies to local craftspeople, especially those involving high-tin bronze (Murillo-Barosso *et al.* 2010). Fragments of high-tin bronze bowls decorated with Indian motifs comparable to those found in central Thailand (Ban Don Ta Phet and Khao Chamuk) have been recovered at Khao Sam Kaeo by looters (Glover & Bellina 2011: 35; Glover & Shahnaj, this volume). This type of bowl was used by numerous Southeast Asian communities during the late prehistoric period and constitutes one of the pieces of evidence for early contacts with polities in certain areas of the Indian subcontinent (Bellina & Glover 2004). It appears most likely that Khao Sam Kaeo imported the copper (in metal or mineral form), which is lacking in the Thai-Malay Peninsula, and exploited the rich tin ores of the peninsula, to produce high-tin bronze ingots for bowl manufacture or exchange (Pryce *et al.* 2008; Murillo-Barroso *et al.* 2010). Furthermore, Khao Sam Kaeo's high-tin bronze production represents the most ancient evidence for exploitation of the peninsula's vast tin resources, an industry whose importance to Arabic trade during the historical period is well known (Murillo-Barroso *et al.* 2010).

The earliest iron-working evidence recovered on the peninsula comes from a workshop on the eastern plateau of Hill 3, a workshop later covered by a wall but that was active during the fourth to second centuries BCE (Bellina-Pryce & Praon 2008). At Khao Sam Kaeo, smithing was practised but, as opposed to other technologies, seems to have involved only rudimentary skills, while bloomer-smelting was common (Biggs *et al.* 2013).

Materials recovered at Khao Sam Kaeo also attest to links with the insular world of the South China Sea. These include imported ceramics, which represent a minority at the site (Bouvet 2009 and 2012: 433; Bellina *et al.* 2012: 14-15), and ornaments such as bicephalous ornaments and *lingling'o*, which were produced in the workshops of Hill 3 using imported materials **[Figure 1]**. Analysis of nephrites recovered, indicates that part of that material assemblage originated at the eastern Taiwanese source of Fengtian. Green nephrite from Fengtian was used to make these two very specific forms of ear pendant, which were distributed along a network that extended from the Philippines, eastern Malaysia, southern Vietnam, and eastern Cambodia to peninsular Thailand (Hung *et al.* 2007; Hung & Bellwood 2010).

Hills 3 and 4 also yielded what is currently the most abundant Western Han (206 BCE-9 CE) Chinese artefact corpus found outside China and northern Vietnam. Metal artefacts include a complete bronze mirror of the type called *xing yunjing* ("mirror with stars and clouds"). A mirror fragment from Khao Sam Kaeo is fairly similar to Western Han mirrors recovered in central and southern Vietnam (Pryce *et al.* 2008: 11). The Han-style metallic assemblage also includes a prismatic arrowhead comparable to examples found in quantity at Co Loa Citadel near Hanoi in northern Vietnam, an axe, and two bronze seals. One of these seals which has been dated to the first century BCE has a turtle shape and bears an inscription that reads in Chinese: *Lü Yougongyin*, that is "the seal of Lü Yougong," Lü being a common family name during the Han dynasty (206 BCE-220 CE). Eighty-four Han-style ceramic storage-jar sherds were recovered on Hills 3 and 4 **[Figure 2]**. Most are decorated with a seal-on-net design. This net pattern was very popular throughout the Han dynasty, especially in South China around Guangdong (Canton), but also in northern Vietnam, in the province of Thanh Hoa. Twenty sherds are stamped with a "checkered design," a pattern very popular in eastern China during the Han period; jars with this design are numerous in tombs in Zhejiang, Jiangsu, and Anhui provinces. Also related to eastern China are two handles decorated with animal masks (Peronnet & Sachipan, forthcoming).

Figure 2: *Han style ceramics recovered at Khao Sam Kaeo on Hills 3 and 4 [Photographs by Bérénice Bellina].*

Finally, Hill 4 hosted another type of stone production, one characterised by lower-quality mass-production techniques and large numbers of similar or identical items. The extensive and rapid looting that took place on Hill 4 did not give us much opportunity to observe many ornaments or to define the style. It seems to include large spherical and ellipsoid beads and flat agate pendants like those found at prehistoric sites in central (Bellina 2001: 145, 157, Table 5; Bellina 2007: CD Rom) and northeast Thailand, such as Noen U Loke (Theunissen 2007). It is likely that this hill was used at the very late stage of the site's activity.

Discussion on Khao Sam Kaeo

Thriving local populations occupied the southern part of the settlement. They had been participating in the South China Sea sphere of interaction, probably for a long time already. During the period when the site was most active (ca late fifth-second centuries BCE), autonomous polities engaged in exchanges of commodities such as tin and "prestige goods" like Dong Son drums and developed a shared symbolic and material culture.

When the Bay of Bengal and the South China Sea networks were interconnected by nodes such as Khao Sam Kaeo, merchants and also craftspeople could access products and markets from different Southeast Asian networks. At Khao Sam Kaeo, the earliest industries are believed to have involved South Asian craftsmen who used highly skilled traditional Indian techniques to produce very fine-quality goods of types that fit within the South China Sea cultural repertoire. Khao Sam Kaeo's central role in the maritime trade network would have been strengthened initially by the presence of these foreign specialists. These productions at the site would have made it a location that exerted complete control over this important, forest-to-coast, segment of the extra-regional trade network.

Quite plausibly, the few foreign craftspersons who resided at a centre and were involved in producing a mixed range of products enhanced the reputation of the polity hosting them (Bellina 2007: 92). By doing so, these foreign residents probably served the strategies of Khao Sam Kaeo's elite, who were presumably engaged in competitive exchanges with other socio-political systems around the South China Sea, a type of relationship that has been described by Colin Renfrew and John F. Cherry (1986) as "peer polity interaction." This prestige-enhancing role of the artisans probably remained important during the later occupation of the site, when the evidence suggests that some trade items were still being produced by patronised South Asian artisans.

At a later stage of the occupation at Khao Sam Kaeo (perhaps from the late fourth-third centuries BCE?), this cultural sphere integrated more ostentatious South Asian-inspired or "indianised" elements. This evidence includes elements such as the hard-stone products made on the eastern plateau of Hill 3 and also found in the cemetery area, which display symbols belonging to the "Indian" ideational world at that time, that is still undefined Brahmanical/Buddhist/Jain symbols used in small, individual polities on the Indian subcontinent. This "indianised" South China Sea product repertoire differs in many respects from what would be found in contemporaneous South Asian sites. These very fine ornaments display a wide range of morphologies, some of them only rarely or never used for ornaments in South Asia (Bellina, in press). These later "South China Sea indianised" products, motifs, and techniques, whose distribution quickly expanded within the Southeast Asian sites of the late prehistoric period, would have been produced mainly for Southeast Asian populations either in the process of "Indianisation," that is probably the coastal trading elites or those wanting the same symbolic items as those acquired by the former, at Khao Sam Kaeo or elsewhere as for instance at the contemporary site of Ban Don Ta Phet (Glover & Bellina 2011).

At Khao Sam Kaeo, South Asian specialists may have been welcomed by local elites to set up industries that played a role in the economic and political strategies of the South China Sea early trading polities. Their industries which the main author of this essay believes may have been attached to the local elite (Bellina 2007: 91-93), produced elements which became part of this cultural sphere. As early as this period some South Asian representations and technologies began to be transferred to Southeast Asia, especially in the coastal trading polities. The development of these industries and their possible close association to political strategies might be better understood if we look at other contemporaneous sites on the peninsula that were involved at different levels of this trans-Asiatic network.

Phu Khao Thong and Bang Kluai Nok

Phu Khao Thong or "Golden Hill," is located in Suk Samran sub-district, Ranong province, on the Andaman coast. It is a small site that can be interpreted as an entrepôt. It may have been part of a trading complex located along the shoreline of an ancient bay, protected by small islands, such as Ko Kluai, from the waves of the Andaman Sea. Phu Khao Thong is located approximately 20 kilometres from the mouth of Kraburi river, beside which one may find a path that crosses the Isthmus of Kra.

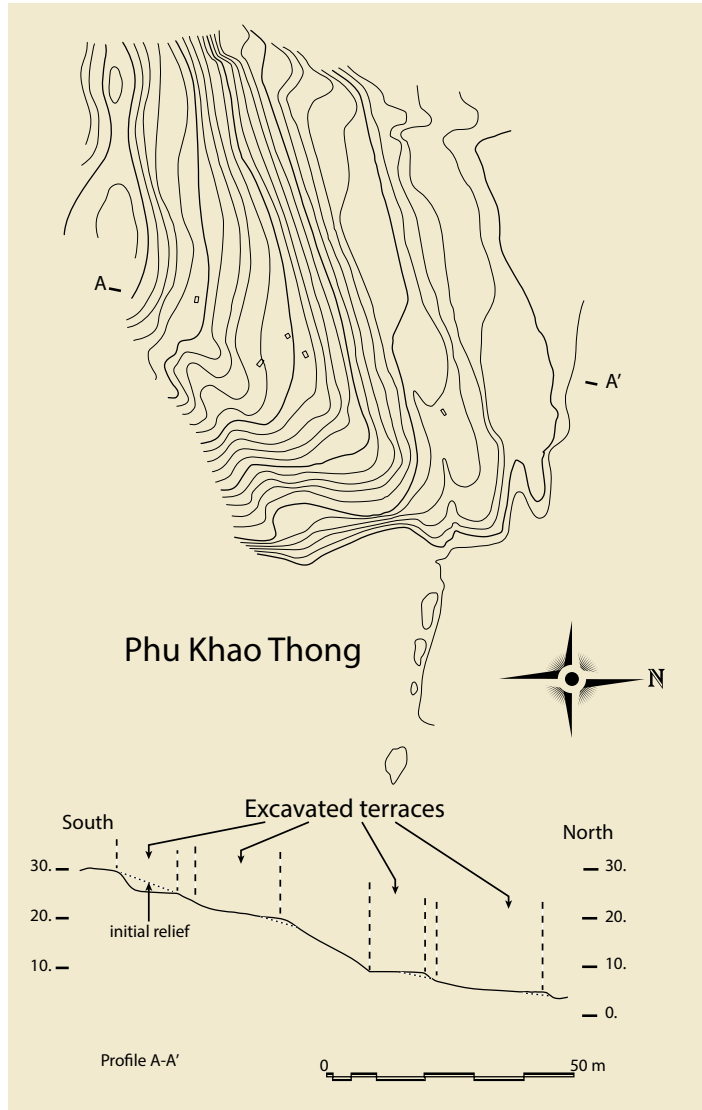
This complex includes a bigger site, Bang Kluai Nok, and two minor sites, Bang Khlak 1, and Bang Khlak 2, both now completely destroyed. They all yielded a variety of imported artefacts and evidence for glass and semi-precious ornament production.

Captain Boonyarit Chaisuwan from the Fine Arts Department conducted excavations at the base of the hill in 2006 and 2008 (Boonyarit 2011). The Thai-French archaeological mission conducted three surveys in May 2006, April 2007 and 2009 consisting of non-systematic survey, section clearing, sampling and material study. Because no in-depth investigations could be conducted, the nature of these severely looted sites is difficult to interpret. The chronological sequence of the sites is based on relative dating, mostly of material collected on the surface.

The relief of the hill is quite steep. Our survey and the mapping done on the accessible part of the hill led us to observe that some terraces had been cut into the rock, as at Khao Sam Kaeo, thus providing flat areas for activities conducted there **[Map 3]**. We did not observe any embankment that would have delimited the site, in contrast with Khao Sam Kaeo.

Phu Khao Thong's early period of activity (perhaps around the third-first centuries BCE?) coincides with the later period of activity at Khao Sam Kaeo. Part of the assemblage is very comparable, for example the Indian ceramics and some morphological types of hard-stone ornaments (flat lozenge, lion, *nandipāda*, etc). But its sequence may have extended

Map 3: *Topographic profile of Phu Khao Thong [Drawing by the Thai-French archaeological mission].*



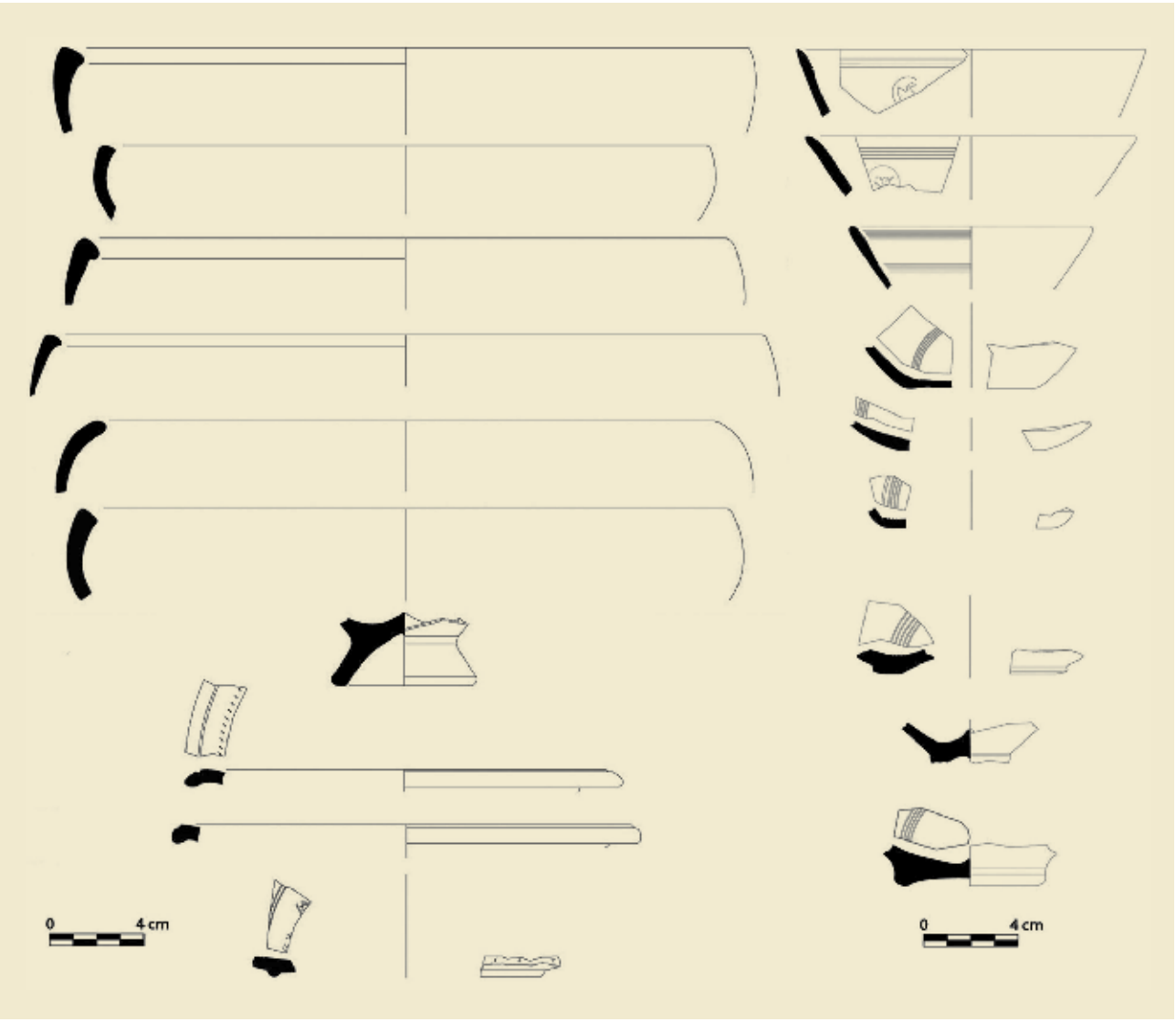


Figure 3: *Fine Wares from Phu Khao Thong and Khao Sam Kaeo [Drawing by Phaedra Bouvet].*

a little later, probably until the second or third century CE. As we would expect from a site located along the Andaman Sea, Phu Khao Thong yielded a significant amount of South Asian material, as well as material from further west. This is well demonstrated with ceramics.

So far, with Khao Sam Kaeo, Phu Khao Thong has yielded a large corpus of Indian Fine Wares. At Phu Khao Thong, Phaedra Bouvet (2012: 287-301) distinguished "rouletted wares," stamped and unstamped bowls, knobbed wares, dishes with a rouletted or chattered rim and a stamped leaf medallion at the centre of the inner base **[Figure 3]**.

Besides Khao Sam Kaeo, sherds of Fine Wares have been recorded on the east coast at Tha Chana (Surat Thani province) and in the caves of Tham Thuai (Thung Tako district, Chumphon province) (Bellina 2009: 122). On the west coast, sherds have been identified at the sites of Bang Kluai Nok and Wat Pathumthararam, a small riverine trading post probably of second order in Kapoe district (both in Ranong province), and Bang Ro (in Phang-nga province). Bouvet's study demonstrates that Indian imports at Phu Khao Thong are much more numerous and more diverse than the imports at Khao Sam Kaeo, and that the Fine Wares may come from various Indian workshops **[Figure 3]**.

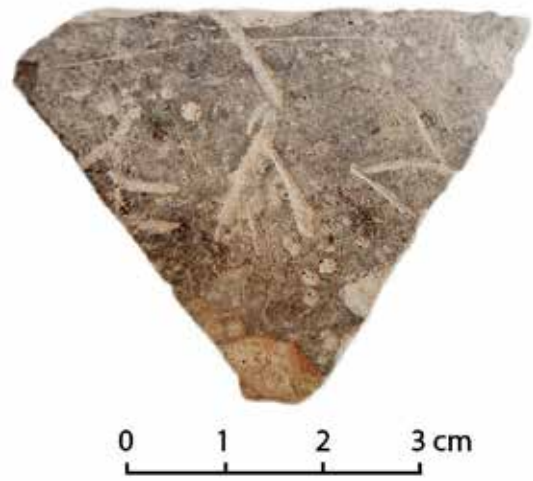


Figure 4: *Sherd bearing three letters, fragmented inscription in Tamil-Brāhmī [Photograph by Bérénice Bellina].*

Amongst the sherds found at Phu Khao Thong, one surface find recovered at the base of the hill during the Thai-French mission's 2006 survey is worth mentioning **[Figure 4]**. Prof. Iravatham Mahadevan and Richard Salomon (pers. comm.) tentatively identified three letters on the sherd as part of a fragmentary inscription in Tamil-Brāhmī which would seem to read *tū Ra o*..., possibly part of the Tamil word *tu̲ravōn* or *tu̲ravōr*, which means "ascetic" or "recluse" (Skt, *ṛṣi* or *sannyāsin*), but not of a Buddhist kind (Skt, *bhikṣu*; P., *bhikkhu*). Alternatively, Emmanuel Francis (pers. comm.) proposes *tū̲ravam*, "common black plum," or *tū̲ravu* for a "plum recipient." The inscription may date to the second century CE on a palaeographic basis and is the earliest Tamil inscription found so far in Southeast Asia. Parallels are found in Egypt and the Red Sea area (site of Berenike), where both Tamil-Brāhmī and standard-Brāhmī inscriptions are found. This inscription thus predates a third- or fourth-century CE inscription engraved on a touchstone from Khuan Luk Pat in Krabi province (Amara 1996: 87).

Fragments of steatite containers **[Figure 5]** have also been found at both Phu Khao Thong and Khao Sam Kaeo. Similar early steatite containers were used or re-used as reliquaries and were found in *stūpa* complexes for example in the region of Gandhāra (modern Pakistan; Jongeward 2012). Their contents varied from bones to deposits of "treasures" (ornaments in ivory, crystal, bronze, and semi-precious stones). The systematic use of such containers as reliquaries, however, remains unproved until they are found in context. These were often and primarily used as household containers for cosmetics, scents, spices, and jewels (Jongeward 2012: 44-46). Any Buddhist connexion for the steatite containers recovered at Khao Sam Kaeo and Phu Khao Thong is therefore wanting and cannot be established at this stage. It would need confirmation through discovery of these containers *in situ* in clearly established Buddhist contexts or structures.

Indirect links with areas even further west, with the Roman world, are suggested by the presence of Roman-like intaglios and pendants, mosaic glass, a granulated gold bead comparable to specimens from Iran, and a fragment of glazed ware. These items place Phu Khao Thong in a trading network that extended beyond the Bay of Bengal. Several intaglios dating to the Roman Imperial period (from the late first century BCE to the third century CE) have been reported from southern Thailand, from Khuan Luk Pat (Krabi province), Tha Chana, another port-entrepôt of the early centuries CE (Surat Thani province), and from both Phu Khao Thong and Khao Sam Kaeo (Borell *et al.*, this volume).

Opposite Figure 5: *Fragments of steatite containers found at Phu Khao Thong and Khao Sam Kaeo [Photographs and drawings by Bérénice Bellina].*

Phu Khao Thong yielded one fragment of turquoise-glazed ware or pottery **[Figure 6]**. Similar discoveries were also found in the peninsula at sites including Takua Pa (Lamb 1963), sites in Kedah, Malaysia (Allen 1988: 483-486), and Kota Cina, Sumatra in Indonesia (Milner *et al.* 1978). Jane Allen (1988: 484) believes that these wares were used by visiting merchants, rather than as trade wares. This type of pottery was probably manufactured in modern-day southern Iraq, for example at the kilns in Old Basra and in southern Iran (Mason & Keall 1991: 52-55). The turquoise ware has a wide distribution, reaching coastal sites around the Indian Ocean from Tanzania to Pakistan and Southeast Asia and travelling as far east as Japan (Glover 2002: 167-173).

This extensive distribution network is further supported by the analysis of glass, part of which was imported from the Mediterranean world (Dussubieux *et al.* 2012). Of particular interest is a fragment of a moulded bowl from Phu Khao Thong made of mosaic glass composed of cane sections fused together, which create spirals of opaque yellow in a matrix of translucent green that Brigitte Borell dates from the late second century BCE to the early first century CE.

Moulded glass bowls, in particular the ribbed type, were part of the traded commodities in the Indian Ocean, from the Red Sea coast to the sites at Pattanam, Arikamedu, and Dharanikota on the Indian subcontinent (Cherian 2010: 271-272). They appear to have been mass-produced from the first century BCE to the first century CE. Another parallel with Arikamedu can be made through two types of glass (potash and m-Na-Ca-Al/Arika glass) present in identical proportions at the two sites, suggesting not only that both sites were ports of entry for these types of glass in South and Southeast Asia but also that Arikamedu and Phu Khao Thong were parts of the same trade sphere, with long-distance connections.

Connections between exchange-based polities on the western coast of the peninsula and South Asia and areas further west are also attested at the neighbouring site of Bang Kluai Nok. This evidence can only be introduced briefly because of the lack of excavation and the resulting dearth of context. Like Khao Sam Kaeo and Phu Khao Thong, the site occupies a small hill that might have been suited for settlement. As at Phu Khao Thong, we did not observe any evidence of embankments.

The site yielded finished siliceous stone ornaments and evidence for glass bead manufacture. It is worth noting that no stone industrial remains seem to have been reported so far at this site, in contrast with the clear workshop evidence found at both Phu Khao Thong and Khao Sam Kaeo. Bang Kluai Nok also yielded an intaglio with a horse motif of Indian inspiration and probably relatively early, perhaps first century BCE (Borell *et al.*, this volume, fig. 7). It also produced a fragmented cameo of Roman Classical inspiration that shows a "Bacchic scene" probably dating from the late first century BCE to early first century CE.

Figure 6: *Fragment of a turquoise glazed ware or pottery recovered at Phu Khao Thong [Photograph by Bérénice Bellina].*

In addition to the already-mentioned Fine Wares, Bang Kluai Nok yielded evidence from the South China Sea and mainland Southeast Asia in the form of a coin of "rising sun and *śrīvatsa*" Type A. Similar coins have been attributed to sites in Myanmar (Halin and Binnaka), to the Dvāravatī realm in Thailand (U Thong),

Figure 7: *Original golden seal with a Brāhmī inscription from Bang Kluai Nok (left) and its mirror image (right) [Photograph by Boonyarit Chaisuwan].*

and to the Funan region in Cambodia and southern Vietnam (found near Ho Chi Minh City and at Oc Eo) (Wicks 1992: 117).

Like Phu Khao Thong, Bang Kluai Nok has also yielded a significant Brāhmī inscription in reverse on a golden seal **[Figure 7]**. This inscription is in Sanskritised-Prakrit and surrounds a representation of a *bhadrapīṭha* or auspicious seat/throne. Once inverted, Oskar von Hinüber and Peter Skilling have been able to read the inscription as *brahaspatiśarmasanāvikasa* which can be rendered as "Of the sailor/captain Brahaspatiśarma." Skilling believes it may date to the first to second century CE and von Hinüber to the fourth century CE at the latest (pers. comm.). This inscription adds to the known *mahānāvika* references such as the famous "Buddhagupta" stone slab, which was found in Seberang Perai (formerly Wellesley province), Malaysia (Chhabra 1935: 22; Allen 1988: 253-265).

Finally, Bang Kluai Nok also provided material from China, in the form of two fragments of Eastern Han (25-220 CE) mirrors, thus providing further argument for the possible use of the transpeninsular routes between the east and the west coasts. The maritime route would have been a very long journey, whereas at this point, the Isthmus is narrow and could be crossed relatively quickly on a pathway like the one mentioned above, beside the mouth of the Kraburi river.

Discussion on Phu Khao Thong and Bang Kluai Nok

We are well aware that the lack of in-depth investigation at the sites on the west coast and their destruction greatly limit interpretation of their economic and political organisation as well as any comparisons with Khao Sam Kaeo on the east coast.

The first limitation is affected by the hazy respective dating of Phu Khao Thong and Bang Kluai Nok. Both sites contain materials, most out of context, that date stylistically to the late centuries BCE or the early centuries CE. Phu Khao Thong produced late-century BCE material similar to some at Khao Sam Kaeo, such as the Fine Wares (rouletted ware, stamped ware, etc.) and the Sasanian-Islamic turquoise-glazed ware, which dates to between the seventh and the eleventh or twelfth century CE. Bang Kluai Nok yielded fewer Fine Ware sherds than Phu Khao Thong, but produced Eastern Han material, as well as intaglios and cameos that probably date to the initial centuries CE; it also provided mid-to-late first-millennium CE objects such as the *śrīvatsa* coin. Were Phu Khao Thong and Bang Kluai Nok active exactly at the same time? Was there a period when their activities overlapped, or did Bang Kluai Nok emerge after Phu Khao Thong's decline?

A second limitation affects our understanding of the specialisation at each of the four sites. Phu Khao Thong appears small but concentrates more evidence for ornament production (glass and stone industries) than Bang Kluai Nok. Meanwhile, Bang Kluai Nok's topography appears more appropriate for settlement, and the site yielded evidence for more recent occupation. On a political level, the question remains as to whether they belong to the same political entity, a polity that would have thrived from the last century BCE until about the mid-late first millennium CE. No definitive answer can be provided at this stage. Khao Sam Kaeo was apparently an enclosed settlement housing various foreign communities and trading and industrial activities. In contrast, the two sites on the west coast do not provide evidence for boundary walls, for hydraulic systems, or for the concentration of as many activities as in Khao Sam Kaeo. Phu Khao Thong might have hosted South Asian traders, given the extensive numbers of Indian wares found there. However, again, the absence of in-depth investigation prevents our discussing any potential distribution of different activities within various portions of the site area.

What roles were played by Bang Khlak 1 and Bang Khlak 2, the two neighbouring sites that yielded stone-production evidence? What were their relationships with Phu Khao Thong and Bang Kluai Nok? As far as we are aware, Bang Kluai Nok has not yielded any evidence for industrial activities or their distribution networks.

Finally, what was the role of Bang Kluai Nok, compared to its neighbour Phu Khao Thong? If the sites were partially contemporary, were their activities complementary, with Phu Khao Thong serving as a port-entrepôt and specialised industrial site, and Bang Kluai Nok serving as the area's main settlement? These hypotheses still need to be confirmed by more extensive research and surveys at the sites.

Conclusion

The three sites, Khao Sam Kaeo in the east and Phu Khao Thong and Bang Kluai Nok in the west, were clearly trading nodes on the maritime trade routes linking the South China Sea and the Bay of Bengal with their extensions further east and west **[Map 1]**. A major part of the organisation of the political and economic networks of these sites is unfortunately missing, thus restricting evaluation of their capacity, extensions, evolution, and local peculiarities at this developing stage.

Our understanding of the subsistence modes and agricultural regimes of these coastal trading posts, and in particular the western sites, is still very limited. At both Khao Sam Kaeo and Phu Khao Thong, the results of archaeobotanical research corroborate the technological reconstruction of the industries, demonstrating that the sites participated in the exchange of crops coming from both the East and the West. Evidence also indicates that Khao Sam Kaeo had the capacity to develop an agricultural system able to sustain local as well

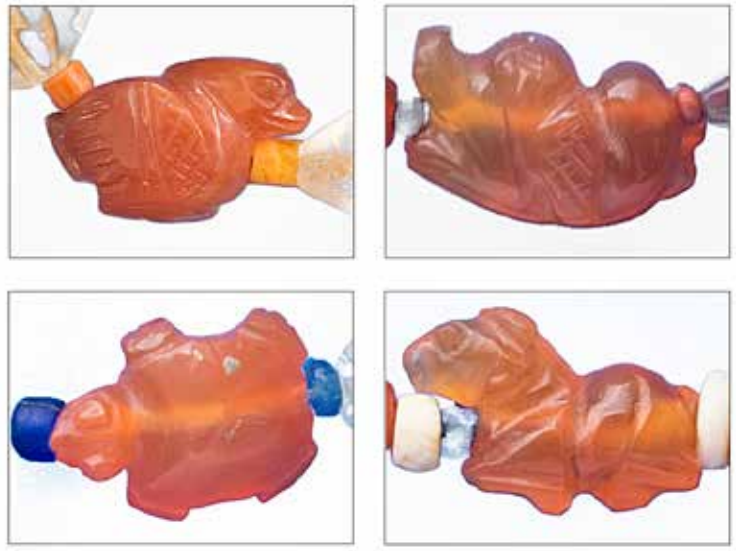


Figure 8: *Examples of ornaments found in Khao Muenni caves of the interior in Thung Raya sub-district, Sawi district, Chumphon province [Photographs by Bérénice Bellina].*

as transient populations. It is clear from the volume of rice remains recovered at the site that it was the main cereal consumed at Khao Sam Kaeo. Geomorphological evidence suggests that many areas near the settlement could have been used for dryland cultivation, as could the hill slopes and plateaux within the settlement. The archaeobotanical study conducted by Cristina Castillo at Phu Khao Thong (sampling during surveys conducted in 2007 and 2009) shows that the processing of rice was taking place on-site and that rice was again the most important cereal, although not enough evidence is available yet to help us understand where agriculture was taking place and where the rice originated.

Indian pulses are represented more prominently at Phu Khao Thong than at Khao Sam Kaeo, suggesting that they were probably brought in by the Indian population, as some of these pulses would not have been available in peninsular Thailand on their arrival. On the other hand, no assertion can be made about the subsistence base for Bang Kluai Nok, where no archaeobotanical study has been conducted, and no information is available concerning the agricultural regime as to level of production, crop variety, or destinations of the various products.

We will conclude by saying that achieving an integrated view of the economic, political, and social networks represented at these sites requires not only considering the trans-Asiatic networks and their populations but also the various local ones (i.e. interior, coastal, from the sea), an approach Laura Lee Junker (1999) has applied in her research concerning later sites in the Philippines and that researchers have applied in other areas including peninsular Malaysia and Sumatra (e.g. Miksic 1979; Allen 1988). What potential change did integration within a transregional network bring to these interior populations and their environments? Alternatively, how did those local populations affect the long-distance networks? These populations, based on the evidence for interior groups studied by later ethnographic observers including F.L. Dunn (1975), lived in close association with the forest, knew its products intimately, and exploited their environments for the benefit of the coastal polities, via networks of riverine way-stations (e.g. Bronson 1977). According to this scheme, the leaders at stations in the network could control the traffic, whether of goods or travellers, for their own benefit and that of the local people who supported them.

The Thai-French mission is only beginning to investigate interior regions, which almost certainly constituted vital parts of the hinterlands that supported the complex coastal polities. A few discoveries of artefacts **[e.g. Figure 8]** at sites in the interior that are similar to those found at coastal sites suggest that it may eventually be possible to identify, for periods as early as the final centuries BCE, the kind of symbiotic relationship that is described in ethnographic accounts. In the context of the multiple social and political strategies that were used by the various populations, and based on ethnographic extrapolations, it seems likely that these artefacts might have been used as gifts to strengthen alliances with other elites, as well as to recompense the loyalty of subordinates (Bronson 1977; Junker 1990: 176-177). This study would allow us to address whether, some groups became highly economically specialised, some collecting forest products or precious ores in the interior, others becoming specialised in the offshore collection of sea products for the maritime trade networks and so on. In this way, a much earlier "globalisation" would have thus contributed significantly to the creation of cultural identities in Southeast Asia.

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References

Allen, Jane
1988 *Trade, Transportation, and Tributaries: Exchange, Agriculture, and Settlement Distribution in Early Historic-period Kedah, Malaysia*. Doctoral Dissertation. Mānoa: University of Hawai'i. [Unpublished]

1991 Trade and Site Distribution in Early Historic Period Kedah: Geoarchaeological, Historic and Locational Evidence. *Bulletin of the Indo-Pacific Prehistory Association* 10: 307-319.

1999 Managing a Tropical Environment: State Development in Early Historical-era Kedah, Malaysia. In Bacus, E. & Lucero, L. (eds), *Complex Polities in the Ancient Tropical World*. Arlington: American Anthropological Association, pp. 131-150.

2009 Étude géomorphologique : paléo-drainage, érosion, gestion des sols et agriculture. In Bellina, B. (ed.), *Campagne de fouilles à Khao Sam Kaeo. Campagne 2009 : rapport pour le Ministère des Affaires Étrangères*. Paris: CNRS. [Unpublished]

Amara Srisuchat
1996 Merchants, Merchandise, Markets: Archaeological Evidence in Thailand Concerning Maritime Trade Interaction between Thailand and Other Countries before the 16th Century A.D. In Amara Srisuchat (ed.), *Ancient Trades and Cultural Contacts in Southeast Asia*. Bangkok: The Office of the National Culture commission, pp. 237-266.

Andaya, Leonard Y.
2008 *Leaves of the Same Tree. Trade and Ethnicity in the Straits of Melaka*. Honolulu: University of Hawai'i Press.

Bellina, Bérénice
2001 *Témoignages archéologiques d'échanges entre l'Inde et l'Asie du Sud-Est, morphologie, morphométrie et techniques de fabrication des perles en agate et en cornaline (VIe siècle avant notre ère – VIe siècle de notre ère)*. Doctoral Dissertation. Paris: Sorbonne Nouvelle. [Unpublished]

2003 Beads, Social Change and Interaction between India and Southeast Asia. *Antiquity* 77: 285-297.

2007 *Cultural Exchange between India and Southeast Asia: Production and Distribution of Hard Stone Ornaments, 6th c. BC-6th c. AD*. Paris: Éditions de la Maison des sciences de l'homme.

2009 Carte archéologique régionale : repérage et prospections à l'échelle régionale. In Bellina, B. (ed.), *Campagne de fouilles à Khao Sam Kaeo. Campagne 2009 : rapport pour le Ministère des Affaires Étrangères.* Paris: CNRS. [Unpublished]

In Press Maritime Silk Roads' Ornament Industries: Socio-political Practices and Cultural Transfers in the South China Sea. *Cambridge Journal of Archaeology*.

Forthcoming Stone Ornament Production System's Sociopolitical Environment, Social Identities and Cultural Transfers in Khao Sam Kaeo. In Bellina, B. (ed.), *Khao Sam Kaeo: An Early Industrial Port-city between the Indian Ocean and the South China Sea.* Paris.

Bellina, Bérénice & Glover, Ian C.
2004 The Archaeology of Early Contacts with India and the Mediterranean World from the Fourth Century BC to the Fourth Century AD. In Glover, I.C. & Bellwood, P. (eds), *Southeast Asia from the Prehistory to History.* London: Routledge/Curzon Press, pp. 68-88.

Bellina-Pryce, Bérénice & Praon Silapanth
2008 Weaving Cultural Identities on Trans-Asiatic Networks: Upper Thai-Malay Peninsula – An Early Socio-political Landscape. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 257-293.

Bellina, Bérénice, Bacus, Elizabeth, Pryce, Thomas Oliver & Wisseman Christie, Jan (eds)
2010 *50 Years of Archaeology in Southeast Asia: Essays in Honour of Ian Glover.* Bangkok: River Books.

Bellina, Bérénice, Epinal, Guillaume & Favereau, Aude
2012 Relations et échanges en Mer de Chine Méridionale à la fin de la préhistoire : début de caractérisation du matériel céramique de la péninsule Thaïe-Malaise. *Archipel* 84: 7-33.

Biggs, Lynn, Bellina, Bérénice, Martinon-Torres, Marcos & Pryce, Thomas Oliver
2013 Prehistoric Iron Production Technologies in the Upper Thai-Malay Peninsula: Metallography and Slag Inclusion Analyses of Iron Artefacts from Khao Sam Kaeo and Phu Khao Thong. *Archaeological and Anthropology Science* 5(4): 311-329.

Boonyarit Chaisuwan
2011 Early Contacts between India and the Andaman Coast in Thailand from the Second Century BCE to the Eleven Century CE. In Manguin, P.-Y., A. Mani & Wade, G. (eds), *Early Interactions between South and Southeast Asia. Reflections on Cross-Cultural Exchange.* Singapore: Institute of Southeast Asian Studies, pp. 84-111.

Bouvet, Phaedra
2008 Étude préliminaire de céramiques « indiennes » et indianisantes du site de Khao Sam Kaeo. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 353-390.

2009 Rapport sur la céramique à Khao Sam Kaeo, saison 2009. In Bellina, B. (ed.), *Campagne de fouilles à Khao Sam Kaeo. Campagne 2009 : rapport pour le Ministère des Affaires Étrangères.* Paris: CNRS. [Unpublished]

2012 *Interactions culturelles entre l'Asie du Sud-Est et l'Inde aux 4e-2e s. av. J.-C.: étude technologique des céramiques de Khao Sam Kaeo (Thaïlande péninsulaire, province de Chumphon)*. Doctoral Dissertation. Nanterre-La Défense: Université Paris-Ouest. [Unpublished]

Bronson, Bennet
1977 Exchange at the Upstream and Downstream Ends: Notes Towards a Functional Model of the Coastal State in Southeast Asia. In Hutterer, K. (ed.), *Economic Exchange and Social Interaction in Southeast Asia: Perspectives from Prehistory, History and Ethnography.* Ann Arbor: Michigan Papers on South and Southeast Asia 13, pp. 39-52.

Castillo, Cristina
2009 The Archaeobotany of Khao Sam Kaeo: 2009 Season. In Bellina, B. (ed.), *Campagne de fouilles à Khao Sam Kaeo. Campagne 2009 : rapport pour le Ministère des Affaires Étrangères.* Paris: CNRS. [Unpublished]

2011 Rice in Thailand: The Archaeobotanical Contribution. *Rice* 4(3/4): 114-120.

Cherian, P.J.
2010 Pattanam Excavations and Explorations 2007 & 2008: An Overview. In Forte, M., Campana, S. & Liuzza, C. (eds), *Space, Time, Place. Third International Conference on Remote Sensing in Archaeology 17th-21st August 2009, Tiruchirapalli, Tamil Nadu, India*. Oxford: Archaeopress, pp. 269-274.

Chhabra, B.C.
1935 Expansion of the Indo-Aryan Culture during the Pallava Rule, as Evidenced by Inscriptions. *Journal of the Asiatic Society of Bengal* 1: 1-64.

Coningham, R.A.E.
1995 Dark Age or Continuum? An Archaeological Analysis of the Second Emergence of Urbanism in South Asia. In Allchin, F.R. (ed.), *The Archaeology of Early Historic South Asia: The Emergence of Cities and States.* Cambridge: Cambridge University Press, pp. 54-72.

Deloche, Jean
1992 Étude sur les fortifications de l'Inde. II. Les fortifications de l'Inde ancienne. *Bulletin de l'École française d'Extrême-Orient* 79: 89-131.

Dunn, F.L.
1975 *Rain-forest Collectors and Traders – A Study of Resource Utilization in Modern and Ancient Malaya.* Kuala Lumpur: Malaysian Branch of the Royal Asiatic Society.

Dussubieux, Laure, Lankton, James, Bellina, Bérénice & Boonyarit Chaisuwan
2012 Early Glass Trade in South and Southeast Asia: New Insights from Two Coastal Sites, Phu Khao Thong in Thailand and Arikamedu in South India. In Tjoa-Bonatz, Mai Lin, Reinecke, Andreas & Bonatz, Dominik (eds), *Crossing Borders: Selected Papers from the 13th International Conference of the European Association of Southeast Asian Archaeologists, Volume 1*. Singapore: NUS Press, pp. 307-338.

Dussubieux, Laure & Bellina, Bérénice
Forthcoming Glass from Early Southeast Asian Producing and Trading Centre. In Bellina, B. (ed.), *Khao Sam Kaeo: An Early Industrial Port-city between the Indian Ocean and the South China Sea.* Paris.

Glover, Ian C.
2002 West Asian Sassanian-Islamic Ceramics in the Indian Ocean, South, Southeast and East Asia. *Man and Environment* 27(1): 165-177.

Glover, Ian C. & Bellina, Bérénice
2011 Ban Don Ta Phet and Khao Sam Kaeo: The Earliest Indian Contacts Re-assessed. In Manguin, P.-Y., Mani, A. & Wade, G. (eds), *Early Interactions between South and Southeast Asia: Reflections on Cross-Cultural Exchange.* Singapore: Institute of Southeast Asian Studies, pp. 17-42.

Hung, H.-C. & Bellwood, Peter
2010 Movement of Raw Materials and Manufactured Goods Across the South China Sea after 500 BCE: From Taiwan to Thailand, and Back. In Bellina, B., Bacus, E. A., Pryce, T. O. & Wisseman Christie, J. (eds), *50 Years of Archaeology in Southeast Asia. Essays in Honour of Ian Glover*. Bangkok: River Books, pp. 234-245.

Hung, H.-C., Iizuka, Y., Bellwood, P., Nguyen, K.D., Bellina, B., Silapanth, P., Dizon, E., Santiago, R., Datani, I. & Manton, J.H.
2007 Ancient Jades Map 3,000 Years of Prehistoric Exchange in Southeast Asia. *Proceedings of the National Academy of Sciences* 104, pp. 19745-19750.

Jacq-Hergoualc'h, Michel
2002 *The Malay Peninsula. Crossroads of the Maritime Silk-Road (100 BC-1300 AD).* Leiden: Brill.

Jongeward, David
2012 Survey of Gandharan Reliquaries. In Jongeward, D.E., Salomon, R. & Baums, S. (eds), *Gandharan Buddhist Reliquaries*. Seattle: University of Washington Press, pp. 39-110.

Junker, Laura Lee
1990 The Organization of Intra-regional and Long-distance Trade in Prehispanic Philippine Complex Societies. *Asian Perspectives* 29(2): 167-209.

1999 *Raiding, Trading, and Feasting – The Political Economy of Philippine Chiefdoms*. Honolulu: University of Hawai'i Press.

Kim, Nam C., Lai Van Toi & Trinh Hoang Hiep
2010 Walls, Warfare, and Political Centralization: Recent Excavations at Vietnam's Ancient Capital of Co Loa. *Antiquity* 84:1011-1027.

Lamb, Alastair
1963 Indianized Inscriptions in North-western Malaya. *Tamil Culture* 10(1): 75-86.

Malakie LaClair, Julie
2008 *Identifying Patterns between the Looting Pits: Spatial Analysis at Khao Sam Kaeo.* Master Thesis. London: University of London. [Unpublished]

Mason, R.B. & Keall, E.J.
1991 The Abbasid Glazed Wares of Siraf and the Basra Connection: Petrographic Analysis. *Iran* 29: 51-66.

Miksic, John N.
1979 *Archaeology, Trade and Society in Northeast Sumatra.* Doctoral Dissertation. Ithaca: Cornell University. [Unpublished]

Milner, Anthony C., McKinnon, Edward E. & Sinar, Tengku L.
1978 A Note on Aru and Kota Cina. *Indonesia* 26: 1-42.

Murillo-Barroso, Mercedes, Pryce, Thomas Oliver, Bellina, Bérénice & Martinon-Torres, Marcos
2010 Khao Sam Kaeo – An Archaeometallurgical Crossroads for Trans-asiatic Technological Traditions. *Journal of Archaeological Science* 37: 1761-1772.

Peronnet, Sophie & Sachipan Srikanlaya
Forthcoming The Chinese-related Ceramic at Khao Sam Kaeo. In Bellina, B. (ed.), *Khao Sam Kaeo: An Early Industrial Port-city between the Indian Ocean and the South China Sea.* Paris.

Pryce, Thomas Oliver, Bellina, Bérénice & Bennett, Anna
2008 The Development of Metal Technologies in the Upper Thai-Malay Peninsula: Initial Interpretation of the Archaeometallurgical Evidence from Khao Sam Kaeo. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 295-316.

Renfrew, Colin & Cherry, John F. (eds)
1986 *Peer Polity Interaction and Socio-political Change.* Cambridge: Cambridge University Press.

Roux, Valentine (ed.)
2000 *Cornaline de l'Inde : des pratiques techniques de Cambay aux techno-systèmes de l'Indus.* Paris: Éditions de la Maison des sciences de l'homme.

Smith, Monica L.
2003 Early Walled Cities of the Indian Subcontinent as "Small Worlds." *The Social Construction of Ancient Cities.* Washington, DC: Smithsonian Institute Press, pp. 269-289.

Theunissen, Robert
2007 The Agate and Carnelian Ornaments. In Higham, C., Kijngam, A. & Talbot, S. (eds), *The Excavations of Noen U-Loke and Non Muang Kao.* Bangkok: Fine Arts Department, pp. 359-377.

Wheatley, Paul
1961 *The Golden Khersonese. Studies in the Historical Geography of the Malay Peninsula before A.D. 1500*. Kuala Lumpur: University of Malaya Press.

An Early Northwest Indian Decorated Bronze Bowl from Khao Sam Kaeo

Ian C. Glover & Shahnaj Husne Jahan

Introduction

Towards the end of the second millennium BCE, bronze was introduced into Thailand and elsewhere in mainland Southeast Asia by various routes from China (Higham & Rachanie 2012: 145-146). In some areas, especially northern Vietnam, northeast Thailand and the areas east of the Chao Phraya valley, bronze largely replaced stone tools for everyday tasks, and for small ornaments. This regional "Bronze Age" lasted some five hundred years and saw the widening of existing trade networks and the consolidation of settlements into mounded villages surrounded, especially in the Northeast, by moats and earthen banks.

From about 500 BCE, Southeast Asia entered into a major maritime exchange network that linked it with China, India and beyond to Persia and the Mediterranean world (Glover & Bellina 2011; Borell *et al.*, this volume). This had profound cultural changes, involving the adoption of iron technology, first into southern and coastal regions, seeing the introduction of a wide range of new prestige goods, such as glass and semi-precious stone beads, and most importantly, new concepts deriving from the religious and political cultures of India. Among the new products that appeared at three archaeological sites in Thailand, Ban Don Ta Phet, Khao Chamuk[1] and Khao Sam Kaeo were some twelve high-tin bronze bowls with elaborate designs of people, animals in procession and building structures (Bennett & Glover 1992; Glover & Bennett 2012). Of these, one vessel stands out from the others on account of its more refined and naturalistic decoration and its early South Asian iconography and was certainly imported to Thailand at some time in antiquity as most probably were the other decorated vessels. The one we discuss and illustrate in this essay was said to have been found early in 2010 in the Tha Taphao river on the western edge of the archaeological site of Khao Sam Kaeo in Mueang district, Chumphon province, peninsular Thailand, an important archaeological site which has been surveyed, excavated and planned over a number of years by a French-Thai team led by Bérénice Bellina (2002; Bellina *et al.*, this volume).

The Bronze Bowl

The bowl is 16 cm. in diameter, 8 cm. deep and 1 mm. thick on the body, 3-4 mm. at the rim, and its weight is 410 g. **[Figure 1]**. It is currently held in the Buddhadasa Indapanno Archives in Bangkok.

Opposite Figure 1: *The bronze bowl said to have been found from Khao Sam Kaeo, Chumphon district, Śuṅga or Śātavāhana period (?) [Photograph courtesy of Paisarn Piemmettawat].*

Figure 2: *The decoration laid onto a flat plane [Drawing by Shahnaj Husne Jahan and Kwanpoom Wilaival].*

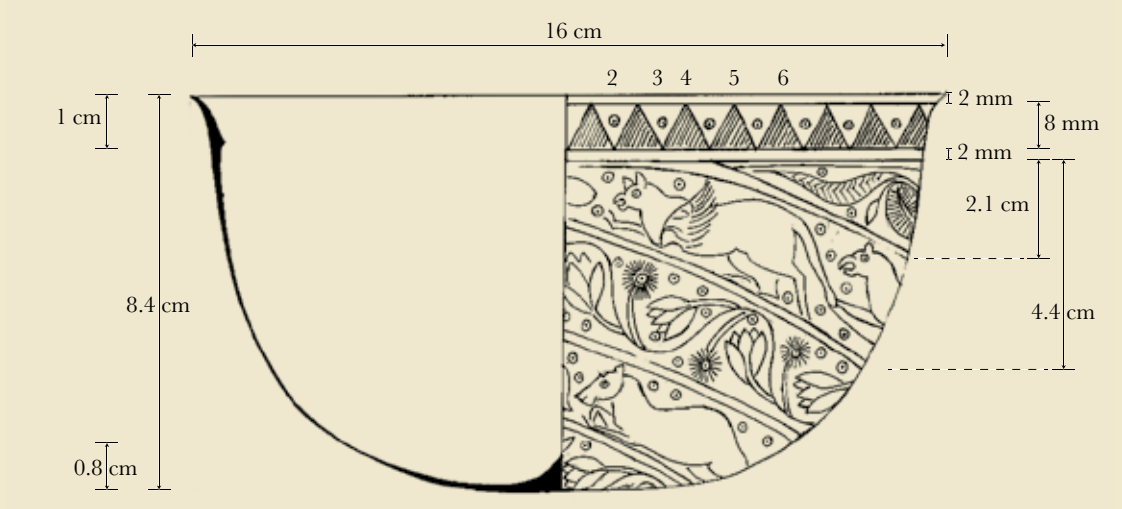

Figure 3: *Cross-section of the bowl with figure of one of the three griffins, foliage and a horse [Drawing courtesy of Sanguansri Tretappratima].*

In January 2011, the authors were able to examine the bowl, to make rubbings of the decoration which were redrawn onto a single plane with the help of Kwanpoom Wilaival from Silpakorn University, Bangkok.[2] **[Figure 2]** On the vessel, nine bands of animals and climbing plants spiral out from a stylised lotus at the base towards the rim decorated with hatched triangles and a dot and circle motif **[Figure 3]**. This vessel differs from the other decorated bronze bowls mentioned above on account of the more flowing and naturalistic decoration and its clearer iconographic links with northwestern India. The bowl is virtually complete yet fragile and it has not been possible to make compositional and structural analyses for comparison with the bowls from Ban Don Ta Phet and Khao Chamuk.

Above the lotus base, the animals represented include elephants, geese, deer, horses and, most unusually a griffin, a mythical winged feline[3] **[Figures 4-6]**. The other animals are regular elements in the religious iconography of early South and Southeast Asia, often, but not exclusive, to Buddhism and are as Peter Skilling (pers. comm.) commented multivalent symbols with meanings in several Indian religious systems. But the griffin is different; it is unknown to us in pre-Thai and other Southeast Asian art and seems to link the vessel to the region dominated by the Śuṅga dynasty in the northwestern part of South Asia where Graeco-Bactrian influences are regularly found.

For example, griffins are quite common in India during the Śuṅga period (180 BCE to 68 BCE) for the decoration of shrines at Mathurā (Uttar Pradesh), Bhārhut (Madhya Pradesh), Sāñci (Madhya Pradesh) and ancient Tagara or Ter (Maharashtra) (Marshall & Foucher 1918; Sharma 1994; Rhie Quintanilla 2007) **[Figures 7-9]**. Griffins are exquisitely portrayed on the ivory royal furniture fittings found at Begrām in Afghanistan, the ancient city of Kāpiśa and summer capital of the Śuṅga and Kuṣāṇa rulers of the second or first century BCE to the early centuries CE (Hackin 1954; St John Simpson 2011: 23-24) **[Figure 10]** and are occasionally found in the art of Amarāvatī (Andhra Pradesh), but further east and later griffins seem to be replaced by winged lions which also enter the repertoire of early Southeast Asian art.

Griffins are fantastic animals with the body of a winged feline and the head and beak of an eagle. In the myths of the lands north of the Black Sea they were thought by some still to exist and were said to roam in pairs or packs, nesting on the ground, preying on horses and deer and were seen as protectors of the gold deposits of the region hence their symbolic role as guardians of treasure (Mayor 2000: 16).[4] The name, "griffin" is derived from the Greek word *gryps*, meaning hooked and there are many legends about their fearsome nature in early Greek literature mostly relating to the Scythians and Sarmatians whose tombs contain images of griffins on gold artefacts and tattoos on the bodies of the nobility. Images of griffins, alongside other mythical and real animals, entered the repertoire of Greek art[5] and were spread westwards, reaching Celtic Gaul, and eastwards to Iran and northern India.

Although no exact parallel for this bronze bowl is known to the authors, it shares a number of features found on the well-known brass water vessel *(loṭā)* from Gundla **[Figures 11a-b]** in Kulu district, Himachal Pradesh, northern India which was found in 1857 by Major

Figures 4a-b: *Base of the bronze bowl (left) showing lotus design (right) [Photographs courtesy of Paisarn Piemmettawat].*

Figure 5: *Side view of the bronze bowl with horse [Photograph courtesy of Paisarn Piemmettawat].*

Figures 6a-b: *Side view of the bronze bowl with griffin (left); close-up (right) [Photographs courtesy of Paisarn Piemmettawat].*

Figure 7: *Stone moulds for small beaten decorations from the Lamture Museum, Ter, Maharashtra, India, Śuṅga or Śātavāhana period (?) [Photograph courtesy of Ariane de Saxcé with permission of the Department of Archaeology and Museums, Government of Maharashtra, India].*

Figure 8: *Lady riding a griffin on stone sculpture from Mathurā, India, Kuṣāṇa period, ca 1st century CE, Varanasi University Museum, inv. no. 21768 [Photograph courtesy of Nicolas Revire].*

Figure 9: *Griffin depicted on* stūpa *no. 2 from Sāñci, India* (in situ), *Śuṅga or Śātavāhana period (?) [Photograph courtesy of Nicolas Revire].*

Figure 10: *Griffin on ivory furniture bracket from Begram, Afghanistan, Śuṅga period (ca 2nd-1st c. BCE), present whereabouts unknown [After Hackin 1954: II, fig. 192].*

Hay in a ruined Buddhist monastery and is generally attributed to the Śuṅga period (180 BCE to 68 BCE) (Errington, Crib & Claringbull 1992: 162-164).

Conclusion

The discovery of this exquisite imported bowl will strengthen the position of Khao Sam Kaeo, a substantial settlement and manufacturing centre as the earliest known port-of-trade from the region and as a major centre of cultural exchanges. Surely, the cosmopolitan population of this favoured place maintained close and lasting links throughout Asia permitting the exchange of ideas and decorative styles that came to bind South and Southeast Asia for more than two millennia (Bellina 2002; Bellina & Praon 2007; Bellina *et al.*, this volume).

Acknowledgements

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Figure 11a: *Bronze* loṭā *from Gundla, Kulu Valley, northern India, Śuṅga period, British Museum, London, inv. no. 1880.22 [Photograph courtesy of the Trustees of the British Museum, Asia].*

Figure 11b: *Decoration on the bronze* loṭā *from Gundla [After Birdwood 1880: pl. 12].*

Endnotes

1 Often spelt "Khao Jamook" in earlier publications.

2 The bowl was found by Mr Nai Yao when sand mining in the Tha Taphao river between Khao Song and Khao Sam Kaeo in early March 2010. On the river's edge villagers have found several bronze artefacts, stone, glass and golden beads.

3 Here we take a narrow definition of griffin as a mythical animal with the body of a feline with wings set low towards the front of the body, talons and the head of an avian raptor such as an eagle. Some writers on Indian art casually refer to winged lions as griffins.

4 Legends in the trans-Oxus region link griffins with the finds of fearsome looking, bird-like Cretaceous period dinosaur, *Protoceratops* whose bones and eggs are commonly found in the eroding gold-bearing sand dunes (Mayor 2000).

5 Another source for the origin and distribution of griffins in art is given by Karttunen (1989: 177-80) who derives them from pre-dynastic Egypt with perhaps a separate origin in Mesopotamia whence it was introduced into Syrio-Palestinian art. But he accepts that, "In India the griffin is a late import from Achaemenian or Hellenistic West and is found mainly in early Buddhist sites like Bhārhut, Sāñci and Sarnath." The *LIMC* lists and illustrates many examples of griffins in Greek and Roman art (Collective 1997, VIII (1): 609-610 and VIII (2): 378-379).

References

Bellina, Bérénice
2002 Le port protohistorique de Khao Sam Kaeo en Thaïlande péninsulaire : lieu privilégié pour l'étude des premières interactions indiennes et sud-est asiatiques. *Bulletin de l'École française d'Extrême Orient* 89: 329-357.

Bellina, Bérénice & Praon Silapanth
2007 Khao Sam Kaeo and the Upper Thai Peninsula: Understanding the Mechanism of Early Trans-Asiatic Trade and Cultural Exchange. In Bacus, Elizabeth A., Glover, Ian C. & Pigott, Vincent C. (eds), *Uncovering Southeast Asia's Past*. Singapore: NUS Press, pp. 379-392.

Bennett, Anna & Glover, Ian C.
1992 Decorated High-tin Bronze from Thailand's Prehistory. In Glover, Ian C. (ed.), *Southeast Asian Archaeology 1990*. Hull: Centre for Southeast Asian Studies, pp. 227-232.

Birdwood, George C.M.
1880 *The Industrial Arts of India*. London: Chapman and Hall.

Collective
1997 *Lexicon Iconographicum Mythologiae Classicae (LIMC), Volume VIII (Part 1 and 2)*. Zurich, Munich, Düsseldorf: Artemis & Winkler Verlag.

Errington, Elizabeth, Crib, Joe & Claringbull, Maggie (eds)
1992 *The Crossroads of Asia. Transformation in Image and Symbol*. Cambridge: The Ancient India and Iran Trust.

Glover, Ian C. & Bellina, Bérénice
2011 Ban Don Ta Phet and Khao Sam Kaeo: The Earliest Indian Contacts Re-assessed. In Manguin, P.-Y., A. Mani & Wade, G. (eds), *Early Interactions between South and Southeast Asia. Reflections on Cross-Cultural Exchange*. Singapore: Institute of Southeast Asian Studies, pp. 17-42.

Glover, Ian C. & Bennett, Anna
2012 The High-Tin in Bronzes of Thailand. In Jett, Paul, McCarthy, B. & Douglas, J.G. (eds), *Scientific Research into Ancient Asian Metallurgy*, Proceedings of the Fifth Forbes Symposium, Freer Gallery of Art at the Freer Gallery. London: Archetype Publications Ltd., pp. 101-114.

Hackin, Joseph
1954 *Rencontre de trois civilisations, Inde, Grèce, Chine : nouvelles recherches archéologiques à Begram (Ancienne Kâpici) 1939-40*. Two Volumes. Paris: Presses Universitaires de France.

Higham, Charles & Rachanie Thosarat
2012 *Early Thailand: From Prehistory to Sukhothai*. Bangkok: River Books.

Karttunen, Klaus
1989 *India in Early Greek Literature*. Helsinki: Finnish Oriental Society.

Marshall, John & Foucher, Alfred
1918 *A Guide to Sanchi*. Three Volumes. Calcutta: Government Printing.

Mayor, Adrienne
2000 *The First Fossil Hunters*. New Jersey: Princeton University Press.

Rhie Quintanilla, Sonya
2007 *History of Early Stone Sculpture at Mathura*, ca. *150 BCE-100 CE*. Leiden: Brill.

Sharma, Ramesh Chandra
1994 *Bharhut Sculptures*. New Delhi: Abhinav.

St John Simpson
2011 *Indian Ivories from Afghanistan – The Begram Hoard*. London: The British Museum Press.

Contacts between the Upper Thai-Malay Peninsula and the Mediterranean World

Brigitte Borell, Bérénice Bellina &
Boonyarit Chaisuwan

Introduction

In the last centuries BCE and the early centuries CE, the coastal regions of mainland Southeast Asia were linked to a network of maritime routes. Recent studies based on archaeological finds demonstrated the active contacts between South Asia and the upper part of the Thai-Malay Peninsula. However, for the sea routes between the coasts of southern China and India, the Thai-Malay Peninsula acts as a huge barrier. In recent years some sites on the western and eastern coast of the Isthmus of Kra area have been receiving more and more attention from archaeologists – but sadly, also from looters, who find digging for artefacts very profitable. These sites yielded an array of finds imported from several rather distant regions. It appears that different systems of maritime routes were here connected by transpeninsular routes, as had already been concluded from a passage in the annals of the Western Han dynasty (206 BCE-8 CE) describing a sea voyage from the southern Chinese ports in the Gulf of Tonkin to India. Judging from the finds, the networks connecting different maritime routes reached as far as China in the east, and in the west to the western coasts of the Indian Ocean, and from there via the Red Sea ultimately to the Mediterranean Sea (Bellina & Glover 2004).

This essay presents a selection of artefacts originating from the region of the Mediterranean Sea and mainly dating from the Roman Imperial period (here the late first century BCE to third century CE) unearthed or reported to have been found mainly at sites in the upper part of the Thai-Malay Peninsula: Khao Sam Kaeo, Tha Chana, Phu Khao Thong and nearby Bang Kluai Nok **[e.g. Figure 1]** in the region of the Isthmus of Kra (Bellina *et al.*, this volume), and Khlong Thom further south. These sites provide a chronological sequence from the very early days of the maritime silk roads – i.e. from the fourth to the third centuries BCE for the site of Khao Sam Kaeo, then from the last centuries BCE and the early centuries CE for the other sites. Although a few Mediterranean finds from Khlong Thom, also known as Khuan Luk Pat ("bead mound"), in Krabi province, had already come to light in the 1980s, some newly reported material from there and also from the other sites is introduced. The discussion will focus on the dating of the objects, and when they might have been used in their Southeast Asian context, their possible function – as well as the types of objects which seem to have been most favoured. Objects, whether made in the West or inspired by its production, help to illustrate the chronological development of long-distance sea routes to this peninsular area.

Opposite Figure 1: *Roman cameo fragment with satyr and standing figure from Bang Kluai Nok, Ranong province, early 1st century CE, preserved height 19.5 millimetres, Suthiratana Foundation, inv. no. BKN 280 [Photograph courtesy of Karunphol Phanich].*

The Sites

Khlong Thom, Krabi province, is located about 240 kilometres south of the Isthmus of Kra. The site is now about 20 kilometres inland from the western coast, and connected to the Andaman Sea by the Khlong Thom river. It was in an ideal location for an entrepôt engaged both in sea-borne trade and specialist manufacturing activities.

Khao Sam Kaeo is in Chumphon province, on the eastern coast of the Kra Isthmus region. According to the chronology established by the Thai-French excavations based on radiocarbon dates, the major period of activity at the site can be dated between the fourth and first centuries BCE, nevertheless some activity appears to have also taken place in the early centuries CE (Bellina-Pryce & Praon 2008; Glover & Bellina 2011; Bellina *et al.*, this volume). The excavations brought to light an astounding array of finds, among them Chinese ceramic fragments dating from the Han period (206 BCE to 220 CE) (Peronnet 2013), large amounts of Indian pottery fragments (Bouvet 2006 and 2011) as well as other imports from India, indicating the status of the site in the trade networks of the period.

The site of Tha Chana in Surat Thani province, about 100 kilometres south of Khao Sam Kaeo, is likewise situated on the east coast. This site has been heavily looted and only briefly surveyed by archaeologists, therefore very little is known about it (Amara *et al.* 1987: 350). The evidence of waste material from the manufacture of stone and glass beads suggests that one of the activities at the site was bead-making; some of the beads can be compared with those from Khao Sam Kaeo and Phu Khao Thong. The finds from the site also include sherds of Han period pottery (Peronnet 2013) and Indian Fine Wares (Bouvet 2012: 307-308). In addition, fragments of at least seven glass vessels of a type known from Han period tombs in the Gulf of Tonkin region (Borell 2011: 62, n. 37) were also found at Tha Chana, which support a dating of the early phase of the site that covers at least the first century BCE and the early centuries CE.

Archaeological investigations have been carried out at Phu Khao Thong, Ranong province on the western coast of the peninsula, only since 2005. Their preliminary results already point to an identification of this site and the group of neighbouring sites including Bang Kluai Nok as an important coastal trading station in a period covering the last two centuries BCE to the early centuries CE. These sites yielded abundant finds of Indian ceramics, among them "rouletted ware," as well as fragments of Han period Chinese ceramics. They are thought to be connected to the western end of transpeninsular routes crossing the Isthmus (Boonyarit 2011; Bellina *et al.*, this volume).

Lastly, the site of U Thong, Suphan Buri province, in central Thailand is a major urban centre of the later Dvāravatī culture. It also yielded archaeological evidence of earlier phases, as well as finds that parallel those from Oc Eo from the first centuries CE. It is an inland site[1] but was well connected to the trading networks, and appears to have been an important place already in the early historic period (Phasook 2004 and 2009).

Left Figure 2: *Roman carnelian intaglio with two fighting cocks from Khlong Thom, late 1st-2nd century CE, Wat Khlong Thom museum, Krabi province [Photograph by Boonyarit Chaisuwan].*

Right Figure 3: *Roman carnelian intaglio with Fortuna from Khlong Thom, late 1st-2nd century CE, 15 millimetres. Formerly at Wat Khlong Thom museum, Krabi province [After Bellina 1998: fig. 8b].*

Intaglios and a Cameo Fragment

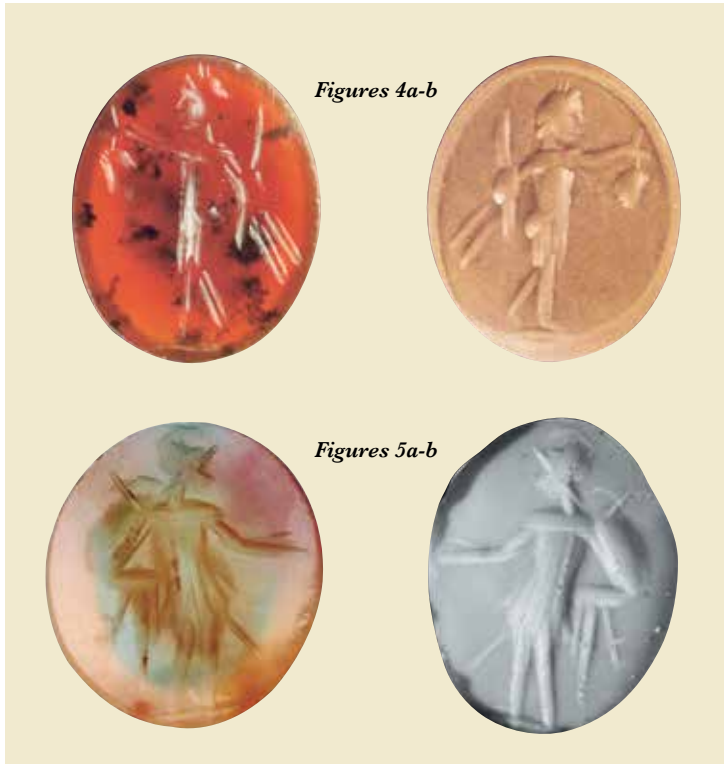
Motifs on Roman intaglios were usually engraved in reverse because it was supposed to have been viewed as it appeared on the impression or sealing. Here for example, Fortuna **[Figure 3]** would be correctly viewed in an impression holding her rudder with her right hand. The Mars in impression **[Figure 5b]** has his sword and arms correctly on his left side. However, this was not always strictly observed by the Roman gem-cutters, maybe because the intaglios were also appreciated for their decorative value in jewellery. For instance, a motif such as the young satyr with a bunch of grapes in his outstretched hand **[Figures 4a-b]** frequently occurs in both versions on Roman intaglios with the actions of arms and legs reversed. In this essay, the motifs are described as they appear on the stone.

A number of intaglios from the Roman Imperial period have been found at Khlong Thom. Three of these are described below and have already been discussed in earlier publications (Mayuree 1992: 157, fig. 5; Glover 1996a: fig. 5 and 1996b: 65, ill. top row centre which is mirror-inverted; Bellina 1998: fig. 8). The first is an oval intaglio with a convex face showing two fighting cocks **[Figure 2]**, a motif well known from Roman gems.[2] The second intaglio, also a carnelian, illustrates one of the most popular motifs used on Roman seal stones: Fortuna **[Figure 3]**. She is standing, dressed in a long garment (*chiton*) with a long cloak (*himation*) draped around her hips and right shoulder, its ends falling down over the right forearm. Fortuna holds her characteristic attributes: the horn of plenty (*cornucopia*) and in her other hand she grasps the rudder. In addition to the rudder, she holds a corn-ear and a poppy-head – attributes originally characteristic of Ceres, the goddess of agriculture, for which reason this type is sometimes also called Fortuna-Ceres. Judging from photographs, Martin Henig has already suggested a date in the late first to second century CE for these two intaglios (Glover 1989: n. 5 and 1996b: n. 7).[3] The third intaglio is an oval carnelian with dark inclusions and a flat face, engraved with another motif very common in the Roman Imperial period. It shows a young, nude, walking satyr, a mythological figure belonging to the retinue of Bacchus, the god of wine **[Figures 4a-b]**.[4] The satyr, part man, part animal, can be recognised here by the two pointed goat horns on his head. Young satyrs of this type are usually shown dancing rather than walking. In his raised right hand he holds a bunch of grapes. On his left he has the throwing-stick (*lagobolon* or *pedum*) for hunting used by shepherds and satyrs, and a fawn skin (*nebris*), customarily worn by the

followers of Bacchus, is draped over his left arm. The style suggests a date between the mid-second to early third century CE.

Recently, another Roman intaglio has been found at the site of Khao Sam Kaeo **[Figures 5a-b]**. Like the intaglios from Khlong Thom it is without a stratigraphic context. It is an oval, pale yellowish carnelian with a flat face. It shows an armed figure, probably Mars the god of war, in short military dress with helmet and spear; he stands to the front with his head in profile. His one arm is bent with his hand on his hip, the sword hangs down behind; the upper arm carries the shield. The short military cloak is draped over the arm, two drapery ends hang down from the forearm. The impression **[Figure 5b]** shows the shield and sword at his left side which would be customary. The other hand (his right hand in impression) is outstretched in front of him, possibly meant to hold a shallow libation bowl (*patera*). The style suggests a date in the second or possibly early third century CE.[5]

At the site of Tha Chana, an amethyst intaglio with the image of Bacchus was found **[Figures 6a-b]**. The oval stone is convex on both sides. The face of the seal shows signs of wear where it was exposed above the ring setting, but otherwise the stone is in good condition. The god stands frontally with his head in profile to the right, he is nude except for a long cloak draped over his shoulder and leg. In one hand, he holds the *thyrsos*, a long staff with its cone-shaped top wreathed in ivy- and vine-leaves, and in his other hand, the two-handled wine cup (*kantharos*), his characteristic attributes. He is accompanied by his animal, the panther, emerging behind his feet. The panther walks with one front paw raised, its head turned back and upwards to the god. Amethyst was



Figures 4a-b: *Roman carnelian intaglio with youthful satyr from Khlong Thom, Krabi province, mid-2nd to early 3rd century CE, 12 millimetres, Suthiratana Foundation, inv. no. KLP 345 (left: original intaglio; right: impression) [After Bunchar 2552: 148].*

Figures 5a-b: *Roman carnelian intaglio with Mars from Khao Sam Kaeo, Chumphon province, mid-2nd to early 3rd century CE, 13 millimetres, Suthiratana Foundation, inv. no. KSK 108 (left: original intaglio; right: impression) [Photographs by Bérénice Bellina and Brigitte Borell].*

Figures 6a-b: *Roman amethyst intaglio with Bacchus from Tha Chana, Surat Thani province, ca early 1st century CE, 11.5 millimetres, Suthiratana Foundation, inv. no. TCN 125 (left: original intaglio; right: impression) [Photographs by Bunchar Pongpanich and Brigitte Borell].*

Figures 7a-b: *Layered sardonyx intaglio with rider on a walking horse from Bang Kluai Nok, Ranong province, late 1st century BCE to early 1st century CE, Suthiratana Foundation, inv. no. BKN 335 (left: original intaglio; right: impression) [Photographs courtesy of Karunphol Phanich].*

often chosen for an intaglio engraved with a representation of Bacchus since the stone was believed to protect the wearer against drunkenness (*methe*). The Greek name for the stone, *amethystos*, means "not drunken." The classicising style of the figure with its fine and detailed modelling suggests a date in the first century CE, possibly even in the early part of the century.[6]

In Boonyarit Chaisuwan's excavations at Phu Khao Thong, a very small carnelian intaglio with the figure of a galloping animal was found.[7] The schematic rendering and the tiny format does not allow a closer dating. From nearby Bang Kluai Nok comes a horizontally layered sardonyx with a convex face, now set in a modern ring. The stone is engraved with a walking horse and rider **[Figures 7a-b]**. The fine and sensuous modelling of the horse's head and legs and the wavy movement in the rendering of the horse's tail are very much in the tradition of Roman gem-cutting and would suggest a date in the late first century BCE to the early first century CE.[8] Some peculiarities, however, like the spiky mane and, most notably, the absence of a ground line, seem to point to an origin in a workshop farther east and possibly to a later dating.[9]

The same site also yielded a fragment from the lower edge of a layered sardonyx cameo **[Figure 1]**. However, only the lower halves of two male figures standing on uneven ground remain. The figure on the left has a tail and is therefore to be identified as a satyr. In a stooping posture, he moves to the left. The figure on the right, possibly another satyr if not the god Bacchus himself, stands in relaxed fashion with his weight on one leg and the other bent at the knee. Judging from the style of the few details preserved, a date in the late first century BCE or the

early first century CE may be proposed.[10] In this period, such Bacchic scenes were particularly popular also on cameo glass.

In contrast to the cameos, which are purely decorative, intaglios in the Graeco-Roman world were used as seals, a function comparable to the role of a signature today. Engraved, the carved stones were usually mounted in finger rings. Besides their use as seals or signet rings, they might also have been prized as items or pieces of jewellery. The high-quality intaglio with Bacchus from Tha Chana **[Figure 6a]** allows the proposing of a relatively narrow dating. The intaglios from Khlong Thom **[Figures 2-4a]** and Khao Sam Kaeo **[Figure 5a]** discussed here belong to the later Imperial period, when gem-cutting workshops made mass-produced intaglios for a wide market of customers. These seals were often engraved with standardised representations of gods and goddesses chosen by their owners as their tutelary deities; or with other motifs, valued for their auspicious meaning. For such mass-produced intaglios, it is difficult to give a precise dating based on stylistic analysis alone (Guiraud 1992: 51). Quite often it is only possible to assign them broadly to a certain time span, as suggested here.

The dating of glass intaglios, like the one found at Khlong Thom **[Figures 8a-b]**, presents a different sort of problem. Such glass gems were formed in a mould made from the impression of an original stone intaglio. The moulds were often formed from high-quality pieces, but the glass intaglios were, of course, much cheaper, and therefore affordable by a wider group of buyers. Set as ring stones, they might have been cherished more for their decorative value than for their use as seals, which, in everyday practice, might have been limited, since glass gems are more fragile. Such glass intaglios might have been made soon after the stone original had been engraved, when a particular motif was still *en vogue*, and so might not be much later in date. Stone intaglios, however, might survive for a long time so glass copies could be made from collector items or family heirlooms long after the original stone intaglio had been created.

The glass intaglio from Khlong Thom **[Figure 8a]**, made of almost clear glass, has a slightly convex face and a flat back, and shows a miniature scene of rural life.[11] On the right stands a bearded herdsman leaning on his staff. He is clad in the typical countryman's garb, consisting of a rough skin cloak over a short tunic. In front of him, his dog walks to the left, its head raised, one front leg in the air. On the left is a rock and a tree; the upper part of the tree bends almost horizontally to the right along the oval edge of the glass gem. On top of the rock is an eagle with its prey underfoot. The scene appears to have been combined of several motifs, including herdsmen looking after their animals, usually goats, which became popular in the late first century BCE and early first century CE. This was inspired by the pastoral poetry in Roman literature flourishing in this period, which praised from the perspective of the urban dweller the idyllic country life. The original of the glass intaglio might date from the early first century CE. We must be aware, however, that, strictly speaking, this suggests only a date for the original stone intaglio, not necessarily for the glass gem moulded from it.

It is important to keep in mind these general dating problems of stone and glass intaglios and the tentative nature of the dates proposed here. In addition, not only is the date of the object itself of interest in our context, but also the presumed date of its arrival at the site where it

Figures 8a-b: *Roman glass intaglio with pastoral scene from Khlong Thom, Krabi province, probably 1st century CE, 18.5 millimetres, Suthiratana Foundation, inv. no. KLP 189 (left: original intaglio; right: impression) [After Bunchar 2552: 150].*

was found. Bennet Bronson (1990: 217), though not excluding a direct contact with the Mediterranean world in the first or second centuries CE, pointed out that other finds from Khlong Thom are indicative of a later period, and argued that the seals with motifs of Mediterranean origin might only have arrived at a much later date. However, Mayuree Veraprasert (1992), based on her later research and excavation, re-assessed the chronology of the Khlong Thom site, and proposed for it a first phase from the first century BCE to the second century CE, and a second phase from the third to fifth centuries CE (Amara 1998: 103-104, 107; Bellina 1998: 97-98). Judging from the increased evidence now available from other Thai peninsular sites, it seems plausible to connect some of the Roman intaglios found at Khlong Thom with the early phase of the site.

Fragments of Glass Vessels

In contrast to the intaglios, fragments of glass vessels, found in peninsular Thailand, might provide a better indication for the date of their arrival in Southeast Asia. At least two or three small glass fragments, identified as of Mediterranean origin on the basis of their chemical composition, were discovered in the Thai-French excavations at Khao Sam Kaeo. Two of these, made of cobalt blue glass, are possibly fragments of glass vessels (Lankton *et al.* 2008: 328; Lankton & Dussubieux 2013: 431). In addition to these fragments, Khao Sam Kaeo yielded another glass fragment probably of Mediterranean origin, although the results of its chemical analysis are still unpublished.[12] It is of opaque bright red glass[13] and presumably stems from a small moulded glass vessel. However, owing to the tiny size of the fragment, no further inferences regarding its original shape are possible at present.

A more significant fragment of opaque bright red glass was found at Tha Chana. It is the rim fragment of a small moulded bowl **[Figure 9]**. The glass analysis indicates a soda glass with a composition characteristic of a Mediterranean origin.[14] Although small in size, the fragment preserves a significant part of its shape which allows it to be assigned to a class of moulded bowls of early Roman glass produced in the end of the first century BCE and in the first half of the first

century CE. These carinated bowls, also called *patella* bowls, were often made of glass in intense colours such as the opaque bright sealing-wax red glass. They are thought to imitate the famous red *sigillata* pottery where this shape also occurs. The question as to where the shape was first developed, however, is still unresolved. At present, the dates suggest that the *sigillata* bowls of this shape are somewhat later than the glass vessels (Stern & Schlick-Nolte 1994: 328-329, no. 99; Arveiller-Dulong & Nenna 2000: 140-141, nos. 181, 198, nos. 248-250; Weinberg & Stern 2009: 40-41).

In Phu Khao Thong, a few fragments of mosaic glass vessels recently came to light (Boonyarit & Rarai 2552: 95-105; Boonyarit 2011: 87). One fragment of a mosaic glass vessel **[Figure 10]** has already been analysed. Its chemical composition is characteristic of Mediterranean glass.[15] The fragment appears to stem from the curved side of a bowl. The pattern is composed of cane sections with spirals of opaque yellow glass in a matrix of translucent green glass. The cane sections were fused together, forming a disc-shaped blank which was then sagged over a convex mould (Stern & Schlick-Nolte 1994: 68-70). Such cane sections with a spiral design in two colours are one of the two basic patterns of Hellenistic mosaic glass vessels, in contrast to the prevalent patterns of Roman composite mosaic glass canes (Grose 1989: 189-190, fig. 102). However, cane sections with a spiral pattern still appear occasionally in early Roman mosaic glass vessels, usually among other motifs (Grose 1989: 225, 322, no. 513). The fragment herein is too small to allow for a more precise dating. It might stem from an early Roman mosaic glass bowl of the early first century CE, yet, the attribution to a Hellenistic mosaic glass bowl of the late second or first century BCE cannot be excluded (Goldstein 1979: 181, no. 475; 188-189, nos. 501-502; Arveiller-Dulong & Nenna 2000: 140-141, no. 176; Weinberg & Stern 2009: 36-38, nos. 63, 67-68).

We know from various sources as well as from the archaeological record that such Mediterranean moulded glass bowls played a role in

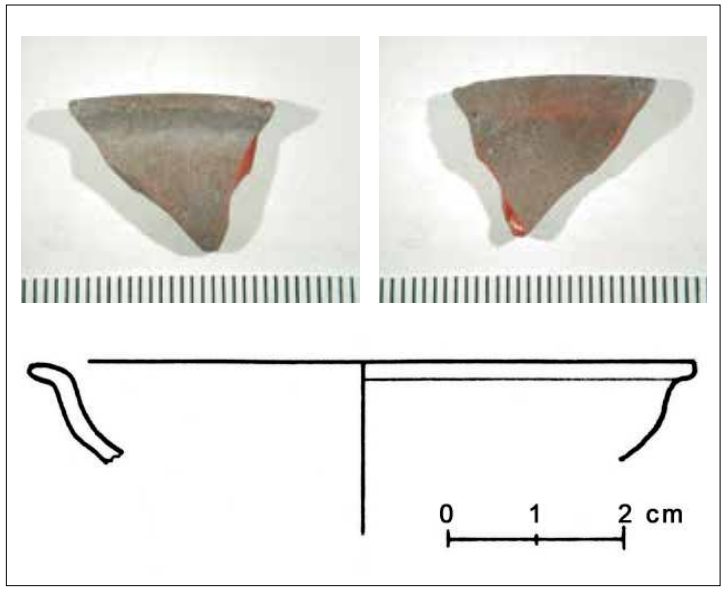


Figure 9: *Rim fragment of a Roman glass bowl from Tha Chana, Chaiya province, probably 1st half of 1st century CE, 2.0 x 1.5 centimetres, estimated diameter of bowl 7.6 centimetres, Suthiratana Foundation, inv. no. TCN 100.10 [Photographs and drawing by Brigitte Borell].*

the maritime trade via the Red Sea to India and beyond (Borell 2010). In particular, ribbed bowls, a special type of moulded bowl, are easily identified, even if only a small fragment is preserved. They were mass-produced in the period from the first century BCE to the first century CE, and fragments of ribbed bowls have been found along the maritime trade routes from the Red Sea along the Arabian Peninsula, and in India. In addition to the well-known finds of ribbed bowls from Arikamedu and Dharanikota on the southeastern coast of India, fragments of at least two more such bowls were recently discovered at the Pattanam site on the Malabar coast, identified as part of the important port-town of Muziris known from ancient sources (Cherian *et al.* 2007: 7 pl. 1D; Cherian 2010: 271-272). It is unlikely that all these glass vessels were traded as antiques; they probably arrived at their distant destinations relatively soon after manufacture. This is supported by the discovery of such a ribbed bowl of mosaic glass deposited in a tomb of the Yangzi Delta in the Chinese province of Jiangsu (Borell 2010: 128, fig. 1). The tomb has been identified as the burial of Liu Jing, a son of the Eastern Han emperor Guangwu (r. 25-57 CE), dated to the year 67 CE. Presumably, this ribbed bowl reached China along the maritime routes and therefore would have passed coastal sites in southern Thailand and then would have even been carried along one of the land routes across the peninsula. Although no finds of such ribbed bowls have yet come to light in southern Thailand, it would not be surprising if they were to do so. It is worth noting here that other objects found in the upper Thai-Malay Peninsula show similarities to those from Oc Eo in southern Vietnam and Han tombs in southern China, in particular polyhedral gold ornaments. This supports the theory that the maritime route was already in use at the time (Pryce *et al.* 2008: 310).

Figure 10: *Fragment of a Mediterranean mosaic glass bowl from Phu Khao Thong, Ranong province, 1st century BCE to early 1st century CE, 2.2 x 1.4 centimetres, 15th Regional Office of Fine Arts Department, Thalang, Phuket [Photograph by Boonyarit Chaisuwan].*

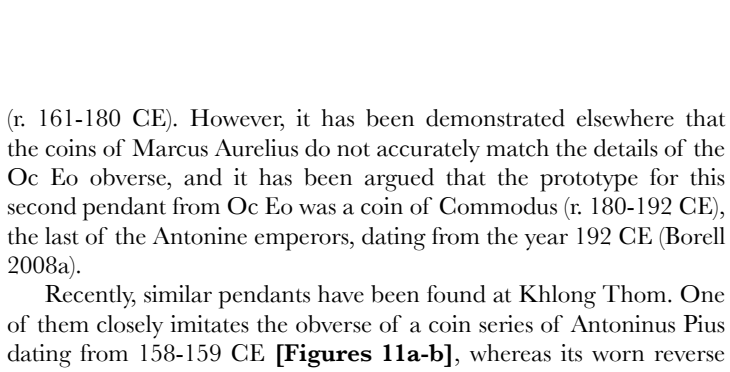
Pendants with Coin Designs

In addition to these finds imported from the Mediterranean region, there is another group of objects with a Mediterranean connection, which deserves to be briefly surveyed in this context.[16] These are pendants, made of gold and bronze, which imitate to varying degrees of fidelity, the design of a Roman coin. Such pendants are already known from the site of Oc Eo in southern Vietnam (Malleret 1962: 115-117, nos. 919-921, pl. 40; Borell 2008a), their design imitating the obverse of Roman coins with the portrait heads of Roman emperors in profile. Oc Eo, where Louis Malleret conducted excavations in 1944, is recognised as an early urban centre of the polity referred to as Funan in Chinese sources. A canal connected it to the Gulf of Thailand, and the artefacts recovered at Oc Eo demonstrate its participation in maritime trade, and underline its cosmopolitan character. The city was laid out as a rectangle covering about 3 square kilometres and recent investigations indicate that the construction of its central canal and enclosing moats may have already begun as early as the end of the second century CE (Bourdonneau 2009; Manguin 2009).

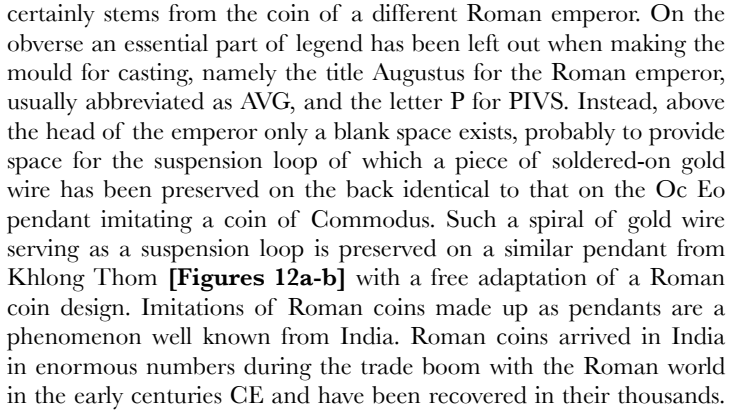
The most famous pendant from Oc Eo is a thin gold sheet in repoussé technique. Its prototype could be clearly identified as a gold coin (*aureus*) of Antoninus Pius (r. 138-161 CE) dating from the year 152 CE. Another pendant from Oc Eo, slightly thicker with a plain reverse and probably cast, was initially thought to derive from a coin of Marcus Aurelius

(r. 161-180 CE). However, it has been demonstrated elsewhere that the coins of Marcus Aurelius do not accurately match the details of the Oc Eo obverse, and it has been argued that the prototype for this second pendant from Oc Eo was a coin of Commodus (r. 180-192 CE), the last of the Antonine emperors, dating from the year 192 CE (Borell 2008a).

Recently, similar pendants have been found at Khlong Thom. One of them closely imitates the obverse of a coin series of Antoninus Pius dating from 158-159 CE **[Figures 11a-b]**, whereas its worn reverse certainly stems from the coin of a different Roman emperor. On the obverse an essential part of legend has been left out when making the mould for casting, namely the title Augustus for the Roman emperor, usually abbreviated as AVG, and the letter P for PIVS. Instead, above the head of the emperor only a blank space exists, probably to provide space for the suspension loop of which a piece of soldered-on gold wire has been preserved on the back identical to that on the Oc Eo pendant imitating a coin of Commodus. Such a spiral of gold wire serving as a suspension loop is preserved on a similar pendant from Khlong Thom **[Figures 12a-b]** with a free adaptation of a Roman coin design. Imitations of Roman coins made up as pendants are a phenomenon well known from India. Roman coins arrived in India in enormous numbers during the trade boom with the Roman world in the early centuries CE and have been recovered in their thousands. These pendants from Khlong Thom and Oc Eo, however, are different in appearance to the imitations known from India and were most likely manufactured in Southeast Asia.

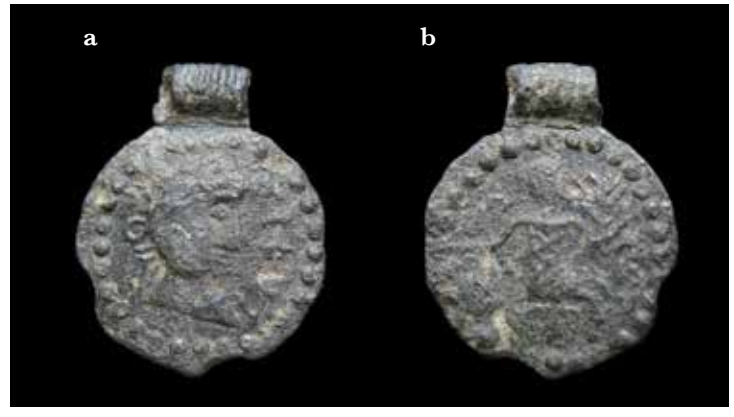


Figures 11a-b: *Gold pendant from Khlong Thom, Krabi province, obverse imitating a coin of Antoninus Pius (r. 138-161 CE), diameter 19 millimetres, weight 4.16 grams, Suthiratana Foundation, inv. no. KLP 071 (left: obverse; right: reverse) [Photographs by Brigitte Borell].*



Figures 12a-b: *Gold pendant from Khlong Thom, Krabi province, diameter 19 millimetres, weight 4.86 grams, Suthiratana Foundation (left: obverse; right: reverse) [Photographs by Brigitte Borell].*

Figures 13a-b: *Gold pendant from U Thong, Suphan Buri province, diameter 19-20 millimetres, U Thong National Museum (left: obverse; right: reverse) [Photographs by Brigitte Borell].*



Figures 14a-b: *Bronze pendant from Khlong Thom, Krabi province, diameter 18 millimetres, Suthiratana Foundation (left: obverse; right: reverse) [Photographs by Brigitte Borell].*

The disc-shaped repoussé pendant discovered at U Thong in central Thailand was probably also locally produced **[Figures 13a-b]**.[17] Khlong Thom yielded yet two other finds whose design is derived from Roman coins. One is a bronze pendant crudely imitating a coin of Tiberius (r. 14-37 CE) of the so-called Livia-type **[Figures 14a-b]**, so named because the seated figure on the reverse is usually identified as Livia, the wife of Augustus and mother of Tiberius. The other find is one half of a two-part stone mould for the reverse of such a pendant **[Figure 15]**.[18] Tiberius coins of this type, which represent one of the most common Roman coin types, were probably minted throughout Tiberius' entire reign and were found in large numbers in India where they arrived through commercial transactions during the Roman period (Turner 1989; Tomber 2008: 35-36). In India, they were also imitated in metal and in clay to be used as pendants. Such clay pendants of local Indian manufacture are known in particular from Kondapur in Andhra Pradesh (Wheeler 1954: 152-153, pls 28-29). Although we cannot be sure where the bronze pendant from Khlong Thom was made, the mould is definite evidence that local production of such pendants took place there.

However, when attempting to date these pendants, we must bear in mind that only their prototypes are firmly dated here, coins of Tiberius, Antoninus Pius, and Commodus. We have no clues to determine how long after these dates the pendants were actually made.

At present it is difficult to determine to what extent the import of these Mediterranean objects like the intaglios, the glass vessels and the coins, involved direct contact with traders from the Roman empire. In

Figure 15: *Stone mould from Khlong Thom, ca 4.5 x 3.5 centimetres, Wat Khlong Thom museum, Krabi province [After Wannasarn 2550: 28, fig 3, top].*

general, many of such trade transactions would have been conducted by intermediaries. As mentioned above, Roman glass vessels were traded to India; and a broken intaglio engraved with a portrait of Augustus was found in Arikamedu in Tamil Nadu (Malleret 1959: 103-104, figs 4c-d; Tomber 2008: 133). The type of pendant such as the one which crudely imitates a coin of Tiberius might have been brought by Indian craftsmen possibly even immigrants present at a place like Khlong Thom. In this case, it would be an indirect adaptation of a Roman prototype, without any need for a genuine coin of Tiberius having arrived in southern Thailand. In contrast, the later production of gold pendants imitating coins of the second century CE differs from the Indian finds and appears to be an indigenous development. The imitations are very close to their prototypes, therefore we may assume that the moulds for their manufacture were directly formed from Roman coins. This suggests that at least a few coins actually came to Southeast Asia.

So far, the only Roman coin known to have been found in Thailand is an *antoninianus* of Victorinus (r. 269-271 CE), one of the usurper emperors of the so-called Gallic empire. It comes from U Thong **[Figures 16a-b]**, dates from 269/270 CE and is attributed to the mint in Cologne (Landes 1981; Borell 2008b: 14, n. 51). These debased coins of the Gallic empire with a minimal silver content were in circulation in the western provinces of the Roman empire until the end of the third century CE. They were not used in bulk in long-distance trade with India, although occasional finds of such coins are known from there.

Written Sources

The contacts between India and Southeast Asia were already well developed in the last centuries BCE. The upper Thai-Malay Peninsula was the crossroads between maritime networks from an eastern and a western direction connecting here with a land crossing. A Chinese source (*Han Shu*, chapter 28B) describes such a land crossing already being in use between sea voyages from Hepu and Xuwen in the Gulf of Tonkin to Huangzhi, probably to the southeastern coast of India during the reign of Han Emperor Wu (r. 141-87 BCE).

Evidence from written sources suggests that maritime networks from the West, that is, from the Mediterranean and the Red Sea across the Indian Ocean connected with the Far Eastern networks and came into use about two centuries later.

The *Periplus Maris Erythraei*, a mid-first century CE account of maritime trade from the Red Sea to India, written in Greek by an anonymous author, still has only very little to say about the regions east of India. This state of knowledge seems to have changed about fifty years later. Claudius Ptolemy, writing in the second century CE, gives a much more detailed description of the areas east of India in his *Geography* (1.13-14), in particular of the Thai-Malay Peninsula, which he calls the Chryse Chersonesos, i.e. the Golden Peninsula. He relied on an account, which is now lost, written by a certain Alexandros, a sea captain or navigator. This first hand account is thought to date from the late first or early second century CE, as it had also been used by another scholar, Marinus, a geographer and cartographer also writing in the second century CE but somewhat earlier than Ptolemy. Marinus' geographical treatise is likewise lost and known to us mainly through Ptolemy who relies on it although he heavily criticises it. It seems that detailed knowledge of the Thai-Malay Peninsula and the land route across it can be traced to Alexandros' account (Dihle 1984: 90, 147; Berggren & Jones 2000: 75, no. 51; McLaughlin 2010: 57-59, 133-134). According to our knowledge, Alexandros was the first person to document the circumnavigation of the Thai-Malay Peninsula, having returned home safely to be able to bequeath his report. We cannot exclude that before him other traders from the Roman empire had ventured as far east from time to time, but there exists no trace of this in the written records.

However, the presence of individuals from the Roman empire in Southeast Asia is witnessed in Chinese sources for October 166 CE, when the "embassy" of Andun is recorded as the first official contact with the Roman empire (Da Qin). The entry in the annals of the Eastern or Later Han dynasty (*Hou Han Shu*, chapter 88) says:

> The king of this country always wanted to enter into diplomatic relations with the Han. But the Parthians (Anxi) wanted to trade with them in Chinese silk and so put obstacles in their way, so that they could never have direct relations (with China) until the reign of Emperor Huan, in the ninth year of Yanxi (166 CE), when Andun, king of Da Qin, sent an envoy from beyond the frontier of Rinan who offered elephant tusk, rhinoceros horn, and tortoise shell. It was only then that for the first time communication was established (between the two countries). The document listing their tribute had nothing at all precious or rare. Thus one suspects that those who have written about it have erred. (Leslie & Gardiner 1996: 51; with minor stylistic changes)

This text has been discussed by many scholars, and there is general agreement that it was probably not an official embassy sent by the Roman emperor, but a group of merchants from the Roman empire somehow assuming this role in the eyes of their counterparts (Crespigny 1990: 42-43; Graf 1996; Leslie & Gardiner 1996: 153-157). The items listed which they offer as "tribute" might have been acquired on their way along the maritime routes, some of it possibly not far from the frontiers of Rinan in present-day Vietnam, and the derogatory comment in the Chinese source makes it clear that something was out of proportion. The emperor's name Andun is certainly a rendering of Antoninus, however, it is not clear whether it refers to Marcus Aurelius Antoninus (r. 161-180 CE), who ruled together with Lucius Verus (r. 161-169), or rather to their predecessor Antoninus Pius (r. 138-161 CE). These enterprising merchants who ventured beyond India might very well have stayed for some years in the East without knowledge of Antoninus Pius' death in March 161 CE. In our context, the interesting point is that the "embassy" arrived by the sea route along the Vietnamese coast from beyond Rinan, the southernmost commandery of the Han empire, extending south probably as far as central Vietnam. They might have travelled on board foreign ships from the eastern coast of India, thus reaching the western coast of the Thai-Malay Peninsula, which they most likely crossed overland in the Kra Isthmus region.

Figures 16a-b: *Roman coin (so-called* antoninianus*) of Victorinus (r. 269-271 CE), 269/270 CE, diameter 20 millimetres, U Thong National Museum, inv. no. 306/2509 (top: obverse; below: reverse) [Photographs courtesy of the U Thong National Museum].*

Additional information about the presence of traders from the Roman empire is found in the *Liang Shu*, which is ostensibly the history of the Southern Liang dynasty (502-556 CE), compiled by Yao Silian early in the seventh century CE, but it also includes earlier material. It continues with more information about Da Qin:

> Their people are traders and often visit Funan and Rinan and Jiaozhi, but people of (these) various countries beyond our southern border rarely reach Da Qin. […]
>
> In the fifth year of Huangwu of the reign of Sun Quan (226 CE), a merchant of Da Qin named Qin Lun came to Jiaozhi. The prefect of Jiaozhi named Wu Miao sent him to visit (Sun) Quan, who asked him about the land and its customs. (Qin) Lun gave a detailed reply. (Leslie & Gardiner 1996: 100-101, 158-159; with minor stylistic changes)

From this information, we may deduce that, in the later second and early third centuries CE, merchants from the Roman empire came more frequently to Southeast Asia clearly along maritime routes and were not uncommon in the regions along the Vietnamese coast, from Funan in the south to Jiaozhi in the north. After the collapse of the Han empire, one Roman merchant was sent in the year 226 CE to the court of the Wu dynasty (222-280) in the area of present-day Nanjing (Crespigny 1990: 479-480, n. 38; Graf 1996: 201-202; McLaughlin 2010: 136-137). To arrive in southern Vietnam these groups of Roman traders must have either bypassed the Thai-Malay Peninsula or more likely must have crossed it one way or another.

Conclusion

At present, the surprisingly rich archaeological evidence of objects of Mediterranean origin found at sites in Southeast Asia raises more questions than it answers. Some of the objects may be assigned to early dates such as the first century BCE and the first century CE, but it is doubtful whether they indicate direct trade. It seems more likely, at the present state of research, that they would have reached southern Thailand by intermediary trade along the maritime routes via India.

This seems a plausible explanation for the finds of earlier date, and in particular for the pendant and mould imitating coins of Tiberius. Intaglios could have been brought to southern Thailand by their own owners and been lost from or taken out of their ring settings. They could have been traded by intermediaries to Southeast Asia as luxury goods, or used in trade as gifts of high prestige to the local rulers.

In the later second and in the third century CE, traders from the Roman empire, probably from its eastern provinces, may have arrived more frequently, as indicated not only by the finds of the pendants imitating coins of later emperors but also in written sources. Archaeological evidence for still later direct or indirect contact with the Mediterranean, or at least with Egypt, is the find of the early Byzantine lamp at Phong Tuek, in Kanchanaburi province, which dates from the fifth or sixth century CE (Borell 2008b).

Acknowledgements

For giving access to the collection and providing photographs of material kept in the Suthiratana Foundation, the generous cooperation and untiring assistance of Dr Bunchar Pongpanich is gratefully acknowledged. Special thanks for providing photographs are due to the U Thong National Museum. For fruitful comments on the intaglios and the cameo fragment, Brigitte Borell wishes to express her gratitude to Carina Weiß (Würzburg) and Erika Zwierlein-Diehl (Bonn), as well as to the anonymous reviewer.

Endnotes

1 The maximum transgression of the shoreline, which in the past has been connected with the Dvāravatī period during the second half of the first millennium (Phongsi & Thiwa 2524), occurred much earlier, probably between 6,000 and 5,000 BCE, see Tanabe *et al.* (2003: fig. 1 and fig. 8A-B); also Montri (2011); see also Trongjai, this volume. Although shoreline progradation was rapid, owing to the deltaic processes of the Chao Phraya and the Mae Klong rivers, in the case of U Thong there would have been only a minor difference of less than 20 kilometres between the shoreline of the early historic period and the present shoreline (Tanabe *et al.* 2003: fig. 8E and fig. 8F).

2 Martin Henig (Glover 1989: n. 5) compared this with an intaglio from Aquileia (Italy), see Sena Chiesa (1966: 392, no. 1341, pl. 68). For additional comparisons with further references, see Zwierlein-Diehl (1991: 107, no. 1949, pl. 54); for a stylistic comparison with a gem from Carnuntum (Austria), see Dembski (2005: 142, no. 914, pl. 94).

3 Martin Henig (see note 2) gave as references three intaglios from Aquileia (Sena Chiesa 1966: 240-241, nos. 602-604, pl. 31), and several intaglios from Gadara in Jordan, see Henig & Whiting (1987: nos. 102-105); in addition, see also Maaskant-Kleibrink (1986: 44-45, no. 90), Zwierlein-Diehl (1991: 315, no. 2825, pl. 230), Middleton (1991: 81-82, no. 120 and 2001: 41, no. 22) and Weiß (1996: 84, no. 147, pl. 20).

4 The motif has been erroneously identified as Perseus with the head of Medusa by Bennet Bronson (1990: 217), followed by others including very recently by Piriya Krairiksh (2012: 43, fig. 1.10). For comparisons of the satyr motif, see Sena Chiesa (1966: 189, no. 391, pl. 20), Henig (1978: 206-208, nos. 159-177, esp. 161), Maaskant-Kleibrink (1986: 109, app. 18), Henig & Whiting (1987: no. 241) and Middleton (2001: 36, no. 18).

5 For the type, see Sena Chiesa (1966: 149-50, nos. 217-220, esp. 217, pl. 11) – perhaps holding a *patera*; Zwierlein-Diehl (1979: 169, no. 1281, pl. 116) – second century CE carnelian, here Mars holds out a small Victory. For the style, see Guiraud (1988 : no. 542, pl. 37) and Zwierlein-Diehl (1991: 306, no. 2763, pl. 223).

6 For the motif, see Maaskant-Kleibrink (1978: 209-210, nos. 482-483, the latter also an amethyst with convex face, pl. 90) and Pannuti (1983: 30, no. 39, although without *himation*) showing a carnelian intaglio, convex face, flat back from Pompei (pre-79 CE).

7 Found in 2006; measurements 0.85 x 0.6 cm.

8 For the motif of a rider on a walking horse with one front leg raised, see Zwierlein-Diehl (2007: 131, 423, fig. 520), interpreted as the young C. Caesar in military dress and therefore dated to around 8 BCE; Pannuti (1983: 108, no. 161), from Pompei (pre-79 CE date) depicting a youth likewise with his cloak flying out behind; Middleton (1991: 154, app. 11a-b), said to be from Persia and dated to the second half of the first century BCE-beginning of the first century CE, showing a helmeted warrior looking back. However, the style and, in particular, the iconography of the rider differ.

9 An anonymous reviewer suggested a Bactrian origin, however, so far no convincing parallel has been found. The intaglio with a horse and a Graeco-Bactrian inscription (Middleton 1998: 102-103, no. 83), interestingly likewise engraved on a layered sardonyx, is very different in style. Thanks are due for this reference to Erika Zwierlein-Diehl who feels that a Bactrian origin may be excluded for the Bang Kluai Nok intaglio (pers. comm.).

10 For the unstable stance of the right figure, compare the satyr on a cameo at the Hermitage museum in Saint Petersburg (Neverov 1988: 50, no. 39).

11 This scene has been erroneously described as the abduction of Ganymed by Bunchar Pongpanich (2552: 150) and Michael Wright (2552: 48, ills 5-6, centre). For the scene of rural life, see Hamburger (1968: 21, 35 no. 141, pl. 7); for the motif of dog and eagle with its prey under a tree, compare with Sena Chiesa (1966: 385-386, nos. 1291-1293, pl. 65) and Zwierlein-Diehl (1991: 87, no. 1810, pl. 34); for the shepherd, see Maaskant-Kleibrink (1978: 250, nos. 658-659, pl. 115), Henig (1994: 112-113, no. 208), Middleton (2001: 61, no. 36), Weiß (2007: 226-227, nos. 333-338, pl. 45), and Guiraud (2008: 148, no.1313, pl. 25).

12 This was brought to our attention by Yatima Thongkam (pers. comm.), who also showed us a photograph of the fragment.

13 This opaque bright red glass (also called sealing-wax red) is a special glass colour not easily achieved in antiquity (Welham *et al.* 2000). It should not be confused with the opaque red glass of a different red hue usually encountered in glass beads found in Southeast Asia. For analyses of red opaque beads from four different sites in peninsular Thailand (Khlong Thom, Phu Khao Thong, Nang Yon, and Thung Tuek), see Wantana *et al.* (2011). On glass in Southeast Asia in general, see Dussubieux & Gratuze (2010).

14 The chemical analysis was carried out by James Lankton in 2009.

15 The chemical analysis was carried out by Pisutti Dararutana, Department of Earth Sciences, Faculty of Science, Kasetsart University, Bangkok, and Yatima Thongkam. It has also been analysed by James Lankton, see Boonyarit & Rarai (2552: 96); also Boonyarit (2011: 87).

16 For a full discussion of these pendants, see Borell (2012).

17 According to information provided by the U Thong National Museum, this find was brought into the museum from the community in 2006. In February 2007, Brigitte Borell had the opportunity to see it and take the photographs.

18 The back of the mould is prepared for casting collared disc beads. See also Wannasarn (2550: 28, fig. 3, top).

References

Amara Srisuchat
1998 A Proposed Outline of the Chronology of Early History in Thailand: Dating and Re-Analysis of Data from Recently Excavated Sites in Thailand. In Klokke, M.J. & Bruijn, T. de (ed.), *Southeast Asian Archaeology, Proceedings of the 6th International Conference of the European Association of Southeast Asian Archaeologists, Leiden, 2-6 September 1996*. Kingston upon Hull: Centre for South-East Asian Studies, pp. 99-115.

Amara Srisuchat, Buranee Buransiri, Phatraphi Khanthakan & Boosaya Chaiseno
1987 An Archaeological Visit to the South. In *Seminar in Prehistory of Southeast Asia. SPAFA Final Report*. Bangkok: SEAMO Project in Archaeology and Fine Arts, pp. 345-363.

Arveiller-Dulong, Véronique & Nenna, Marie-Dominique
2000 *Les verres antiques, volume 1 : contenants à parfum en verre moulé sur noyau et vaisselle moulée, VIIème siècle avant J.-C.-Ier siècle après J.-C. Musée du Louvre*. Paris: Réunion des Musées nationaux.

Bellina, Bérénice
1998 La formation des réseaux d'échanges reliant l'Asie du Sud et l'Asie du Sud-Est à travers le matériel archéologique (VIe siècle av. J.-C. – VIe siècle ap. J.-C. – le cas de la Thaïlande et la Péninsule Malaise). *Journal of the Siam Society* 86: 89-105.

Forthcoming The Inception of the Trans-national Processes between the Indian Ocean and the South China Sea from an Early City-state on the Thai-Malay Peninsula (4th-2nd c. BCE). In Boussac, M.-F., Roychoudhury, S., Salles, J.-F. & Yon, J.-B. (eds), *The Ports of the Indian Ocean, from the Red Sea to the Gulf of Bengal*. Delhi: Primus Books.

Bellina, Bérénice & Glover, Ian C.
2004 The Archaeology of Early Contact with India and the Mediterranean World, from the Fourth Century BC to the Fourth Century AD. In Glover, I.C. & Bellwood, P. (eds), *Southeast Asia. From Prehistory to History*. London: Routledge, pp. 68-88.

Bellina, Bérénice & Praon Silapanth
2006 Khao Sam Kaeo and the Upper Thai Peninsula: Understanding the Mechanisms of Early Trans-asiatic Trade and Cultural Exchange. In Bacus, E., Glover, I.C. & Pigott, V.C. (eds), *Uncovering Southeast Asia's Past*. Singapore: NUS Press, pp. 379-392.

Bellina-Pryce, Bérénice & Praon Silapanth
2008 Weaving Cultural Identities on Trans-asiatic Networks: Upper Thai-Malay Peninsula – an Early Socio-political Landscape. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 257-293.

Berggren, J. Lennart & Jones, Alexander
2000 *Ptolemy's Geography. An Annotated Translation of the Theoretical Chapters*. Princeton/Oxford: Princeton University Press.

Boonyarit Chaisuwan
2011 Early Contacts between India and the Andaman Coast in Thailand from the Second Century BCE to Eleventh Century CE. In Manguin, P.-Y., Mani, A. & Wade, G. (eds), *Interactions between South and Southeast Asia: Reflections on Cross-Cultural Exchange*. Singapore: Institute of Southeast Asian Studies, pp. 83-112.

Boonyarit Chaisuwan & Rarai Naiyawat
2552 *Thung tuek chut chueamyong sen thang sai mai thang thale/ Thung Tuk: A Settlement Linking Together the Maritime Silk Route*. Hat Yai: Trio Creation. [In Thai and English; 2009 CE]

Borell, Brigitte
2008a Some Western Imports Assigned to the Oc Eo Period Reconsidered. In Pautreau, J.-P., Coupey, A.-S., Zeitoun, V. & Rambault, E. (eds), *From* Homo Erectus *to the Living Traditions. Choice of Papers from the 11th International Conference of the European Association of Southeast Asian Archaeologists, Bougon, 25th - 29th September 2006*. Chiang Mai: Siam Ratana, pp. 167-174.

2008b The Early Byzantine Lamp from Pong Tuk. *The Journal of the Siam Society* 96: 1-26.

2010 Trade and Glass Vessels along the Maritime Silk Road. In Zorn, B. & Hilgner, A. (eds), *Glass along the Silk Road, from 200 BC to AD 1000*. Mainz: Römisch-Germanisches Zentralmuseum Mainz, pp. 127-142.

2011 Han Period Glass Vessels in the Early Tongking Gulf Region. In Cooke, N., Tana Li & Anderson, J.A. (eds), *The Tongking Gulf Through History*. Philadelphia: University of Pennsylvania Press, pp. 53-66 and 172-179.

2012 Roman Coins and Derivatives. Paper presented at the 14th International Conference of the European Association of Southeast Asian Archaeologists, Dublin, 18-21 September 2012. [Unpublished]

Bourdonneau, Éric
2009 Réhabiliter le Funan. Óc Eo ou la première Angkor. *Bulletin de l'École française d'Extrême-Orient* 94 [for 2007]: 111-158.

Bouvet, Phaedra
2008 Étude préliminaire de céramiques indiennes et "indianisantes" du site de Khao Sam Kaeo IVe-IIe siècles av. J.-C. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 353-390.

2011 Preliminary Study of Indian and Indian Style Wares from Khao Sam Kaeo (Chumphon, Peninsular Thailand), Fourth-Second Centuries BCE. In Manguin, P.-Y., Mani, A. & Wade, G. (eds), *Early Interactions between South and Southeast Asia: Reflections on Cross-Cultural Exchange*. Singapore: Institute of Southeast Asian Studies, pp. 47-81.

2012 *Interactions culturelles entre l'Asie du Sud-Est et l'Inde aux 4e-2e s. av. J.-C. : étude technologique des céramiques de Khao Sam Kaeo (Thaïlande péninsulaire, province de Chumphon)*. Doctoral Dissertation. Nanterre-La Défense: Université Paris-Ouest. [Unpublished]

Bronson, Bennet
1990 Glass and Beads at Khuan Lukpad. In Glover, I.C. & Glover, E. (eds), *South Asian Archaeology 1986. Proceedings of the First Conference of the Association of Southeast Asian Archaeologists in Western Europe*. Oxford: Archaeopress, pp. 213-230.

Bunchar Pongpanich
2552 *Roi lukpat/Beyond Beads*. Bangkok: Matichon Publication House. [In Thai and English; 2009 CE]

Cherian, P.J.
2010 Pattanam Excavations and Explorations 2007 & 2008: An Overview. In Forte, M., Campana, S. & Liuzza, C. (eds), *Space, Time, Place. Third International Conference on Remote Sensing in Archaeology 17th-21st August 2009, Tiruchirapalli, Tamil Nadu, India*. Oxford: Archaeopress, pp. 269-274.

Cherian, P.J., Selvakumar, V. & Shajan, K.P.
2007 The Muziris Heritage Project: Excavations at Pattanam – 2007. *Journal of Indian Ocean Archaeology* 4: 1-10.

Crespigny, Rafe de
1990 *Generals of the South. The Foundation and Early History of the Three Kingdoms State of Wu*. Canberra: The Australian National University.

Dembski, Günther
2005 *Die antiken Gemmen und Kameen aus Carnuntum*. Wien: Phoibos.

Dihle, Albrecht
1984 *Antike und Orient. Gesammelte Aufsätze*. Heidelberg: Carl Winter.

Dussubieux, Laure & Gratuze, Bernard
2010 Glass in Southeast Asia. In Bellina, B., Bacus, E.A., Price, T.O. & Wisseman Christie, J. (eds), *50 Years of Archaeology in Southeast Asia. Essays in Honour of Ian Glover*. Bangkok: River Books, pp. 246-259.

Glover, Ian C.
1989 *Early Trade between India and South-East Asia: A Link in the Development of a World Trading System*. Kingston upon Hull: Centre for South-East Asian Studies.

1996a The Archaeological Evidence for Early Trade between India and Southeast Asia. In Reade, J. (ed.), *The Indian Ocean in Antiquity*. London: Kegan Paul International, pp. 365-400.

1996b The Southern Silk Road: Archaeological Evidence for Early Trade between India and Southeast Asia. In Amara Srisuchat (ed.), *Ancient Trades and Cultural Contacts in Southeast Asia*. Bangkok: The Office of the National Culture Commission, pp. 57-94.

Glover, Ian C. & Bellina, Berénice
2011 Ban Don Ta Phet and Khao Sam Kaeo: The Earliest Indian Contacts Re-assessed. In Manguin, P.-Y., Mani, A. & Wade, G. (eds), *Interactions between South and Southeast Asia: Reflections on Cross-Cultural Exchange*. Singapore: Institute of Southeast Asian Studies, pp. 17-45.

Goldstein, Sidney M.
1979 *Pre-Roman and Early Roman Glass in the Corning Museum of Glass*. Corning, N.Y.: The Corning Museum of Glass.

Graf, D.F.
1996 The Roman East from the Chinese Perspective. *Annales archéologiques arabes syriennes* 42: 199-216.

Grose, David Frederick
1989 *The Toledo Museum of Art: Early Ancient Glass. Core-formed, Rod-formed and Cast Vessels and Objects from the Late Bronze Age to the Early Roman Empire, 1600 B.C. to A.D. 50*. New York: Hudson Hills Press.

Guiraud, Hélène
1988 *Intailles et camées de l'époque romaine en Gaule*. Paris: CNRS.

1992 Intaglios from Dura-Europos. *Yale University Art Gallery Bulletin* (1992): 48-85.

2008 *Intailles et camées de l'époque romaine en Gaule, volume 2*. Paris: CNRS.

Hamburger, Anit
1968 *Gems from Caesarea Maritima*. Jerusalem: Department of Antiquities and Museums.

Henig, Martin
1978 *A Corpus of Roman Engraved Gemstones from British Sites*. Oxford: British Archaeological Reports. [Second Edition; First Edition 1974]

1994 *Classical Gems. Ancient and Modern Intaglios and Cameos in the Fitzwilliam Museum, Cambridge*. Cambridge: Cambridge University Press.

Henig, Martin & Whiting, Mary
1987 *Engraved Gems from Gadara in Jordan*. Oxford: Oxford University Committee for Archaeology.

Landes, Christian
1981 Pièce d'époque romaine trouvée à U Thong, Thaïlande. *Silpakorn Journal* 26(1): 113-115.

Lankton, James & Dussubieux, Laure
2013 Early Glass in Southeast Asia. In Janssens, K. (ed.), *Modern Methods for Analysing Archaeological and Historical Glass*. Chichester: J. Wiley & Sons, pp. 413-441.

Lankton, James, Dussubieux, Laure & Gratuze, Bernard
2008 Glass from Khao Sam Kaeo: Transferred Technology for an Early Southeast Asian Exchange Network. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 317-351.

Leslie, Donald D. & Gardiner, Kenneth H.J.
1996 *The Roman Empire in Chinese Sources*. Studi Orientali, Vol. 15. Rome: Bardi.

Maaskant-Kleibrink, Marianne
1978 *Catalogue of the Engraved Gems in the Royal Coin Cabinet The Hague*. Wiesbaden: Franz Steiner.

1986 *The Engraved Gems: Roman and Non-Roman*. Description of the Collections in the Rijksmuseum G. M. Kam at Nijmegen, Vol. 10. The Hague: Ministry of Welfare, Health and Cultural Affairs.

Malleret, Louis
1959 Les lapidaires et artisans du verre de Vîrampatnam. *Arts Asiatiques* 6: 93-106.

1962 *L'archéologie du delta du Mékong, volume 3*. Paris: École française d'Extrême-Orient.

Manguin, Pierre-Yves
2009 The Archaeology of Fu Nan in the Mekong River Delta: The Oc Eo Culture of Viet Nam. In Tingley, N. (ed.), *Arts of Ancient Viet Nam. From River Plain to Open Sea*. New York: Asia Society, pp. 103-118.

Mattingly, Harold & Sydenham, Edward A.
1930 *The Roman Imperial Coinage, Volume III: Antoninus Pius to Commodus*. London: Spink & Son Ltd.

Mayuree Veraprasert
1992 Khlong Thom: An Ancient Bead-manufacturing Location and an Ancient Entrepot. In Glover, I.C., Pornchai Suchitta & Villiers, J. (eds), *Early Metallurgy, Trade and Urban Centres in Thailand and Southeast Asia*. Bangkok: White Lotus, pp. 149-161.

McLaughlin, Raoul
2010 *Rome and the Distant East. Trade Routes to the Ancient Lands of Arabia, India and China*. London & New York: Continuum.

Middleton, Sheila E. Hoey
1991 *Engraved Gems from Dalmatia, from the Collections of Sir John Gardner Wilkinson and Sir Arthur Evans in Harrow School, at Oxford and Elsewhere.* Oxford: Oxford University Committee for Archaeology.

1998 *Seals, Finger Rings, Engraved Gems and Amulets in the Royal Albert Memorial Museum, Exeter*. Exeter: Exeter City Museums.

2001 *Classical Engraved Gems from Turkey and Elsewhere: The Wright Collection*. Oxford: Archaeopress.

Montri Choowong
2011 Quaternary. In Ridd, M.F., Barber, A.J. & Crow, M.J. (eds), *The Geology of Thailand*. London: The Geological Society, pp. 335-350.

Neverov, Oleg
1988 *Antičnye kamei v sobranii Ermitaža*. Leningrad: Iskusstvo.

Pannuti, Ulrico
1983 *Museo Archeologico Nazionale di Napoli: Catalogo della collezione glittica 1.* Roma: Istituto poligrafico e Zecca dello Stato.

Peronnet, Sophie
2013 Overview of Han Artefacts in Southeast Asia with Special Reference to the Recently Excavated Material from Khao Sam Kaeo in Southern Thailand. In Klokke, M.J. & Degroot, V. (eds), *Unearthing Southeast Asia's Past. Selected Papers from the 12th International Conference of the European Association of Southeast Asian Archaeologists, Volume 1*. Singapore: NUS Press, pp. 155-169.

Peronnet, Sophie & Sachipan Srikanlaya
Forthcoming The Han-related Ceramics. In Bellina, B. (ed.), *Khao Sam Kaeo: An Early Industrial Port-city between the Indian Ocean and the South China Sea*. Paris.

Phasook Indrawooth
2004 The Archaeology of the Early Buddhist Kingdoms of Thailand. In Glover, I.C. & Bellwood, P. (eds), *Southeast Asia. From Prehistory to History*. London: Routledge, pp. 120-148.

2009 Un antique royaume urbanisé de Thaïlande. In Baptiste, P. & Zéphir, T. (eds), *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des Musées nationaux, pp. 30-45.

Phongsi Wanasin & Thiwa Suphachanya
2524 *Mueang boran boriwen chai fang thale doem khong thi rap phak klang prathet thai: kansueksa tamnaeng thi tang lae phumisat samphan* (*Ancient Cities on the Former Coastline in the Central Plain of Thailand: The Study of Sites and Geographical Correlation*). Bangkok: Chulalongkorn University Press. [In Thai; 1981 CE]

Piriya Krairiksh
2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Rakngao haeng sinlapa thai*, 2553 (2010 CE)].

Pryce, Oliver, Bellina, Bérénice & Bennett, Anna
2008 The Development of Metallurgies in the Upper Thai-Malay Peninsula: Initial Interpretation of the Archaeometallurgical Evidence from Khao Sam Kaeo. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 295-315.

Sena Chiesa, Gemma
1966 *Gemme del Museo Nazionale di Aquileia*. Aquileia: Associazione Nazionale per Aquileia.

Stern, E. Marianne & Schlick-Nolte, Birgit
1994 *Early Glass of the Ancient World 1600 B.C.-50 A.D.* Ostfildern: Hatje.

Tanabe Susumu, Saito Yoshiki, Sato Yoshio, Suzuki Yuichiro, Sin Sinsakul, Suwat Tiyapairach & Niran Chaimanee
2003 Stratigraphy and Holocene Evolution of the Mud-dominated Chao Phraya Delta, Thailand. *Quartenary Science Reviews* 22: 789-807.

Tomber, Roberta
2008 *Indo-Roman Trade. From Pots to Pepper*. London: Duckworth.

Turner, Paula
1989 *Roman Coins from India*. London: Royal Numismatic Society.

Wannasarn Noonsuk
2550 *Sayam prathet: kantittolok phainok lae phatthanakan khong banmueang* (*Siam: External Contacts and Early Development of Cities and States*). Bangkok: National Discovery Museum Institute. [In Thai; 2007 CE].

Wantana Klysubun, Yatima Thongkam, Sorapong Pongkrapan, Krit Won-in, Jiraroj T-Thienprasert & Pisutti Dararutana
2011 XAS Study on Copper Red in Ancient Glass Beads from Thailand. *Analytical and Bioanalytical Chemistry* 399: 3033-3040.

Weinberg, Gladys & Stern, E. Marianne
2009 *The Athenian Agora, Volume 34: Vessel Glass*. Princeton: The American School of Classical Studies at Athens.

Weiß, Carina
1996 *Die antiken Gemmen der Sammlung Friedrich Julius Rudolf Bergau im Germanischen Nationalmuseum, Nürnberg*. Nürnberg : Verlag des Germanischen Nationalmuseums.

2007 *Die antiken Gemmen der Sammlung Heinrich Dressel in der Antikensammlung Berlin*. Würzburg : Ergon.

Welham, Kate, Jackson, Caroline M. & Smedley, James W.
2000 Colour Formation in *Sealing Wax* Red Glass. *Annales du 14e Congrès de l'Association internationale pour l'histoire du verre, Venezia-Milano 1998*. Lochem: Association internationale pour l'histoire du verre, pp. 11-15.

Wheeler, Robert Eric Mortimer, Sir
1954 *Rome Beyond the Imperial Frontiers*. London: G. Bell & Sons Ltd.

Wright, Michael
2552 *Krik-Roman nai usakhane* (*Graeco-Roman in Southeast Asia*). Bangkok: Matichon Publication House. [In Thai; 2009 CE].

Zwierlein-Diehl, Erika
1979 *Die antiken Gemmen des Kunsthistorischen Museums in Wien, Volume 2*. Munich: Prestel.

1991 *Die antiken Gemmen des Kunsthistorischen Museums in Wien, Volume 3*. Munich: Prestel.

2007 *Antike Gemmen und ihr Nachleben*. Berlin/New York: De Gruyter.

Phromthin Tai: An Archaeological Perspective on Its Societal Transition

Thanik Lertcharnrit

Introduction

Knowledge about prehistory in Thailand or mainland and maritime Southeast Asia is generally well-established (Bellwood 1997; Higham 1989 and 2002; Higham & Rachanie 2012), as is the modern history of the region (e.g. Wyatt 1984; Tarling 1992). However, it is unfortunate that the transition from prehistory to history in Thailand and Southeast Asia is still relatively poorly understood, especially from archaeological perspectives, due to a lack of research and focus on the question.

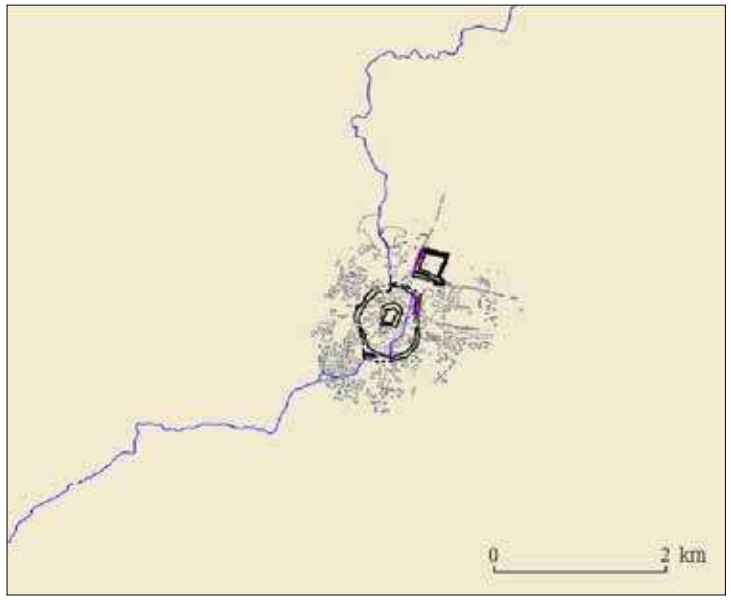
In recent years, however, there has been a growing body of literature on the archaeology of late prehistory and early history in the area (e.g. Glover & Bellwood 2004; Stark 1998). In central Thailand in particular, the last decade saw a relatively fair amount of research and excavations of archaeological sites dating between 500 BCE and 500 CE or somewhat later (e.g. Sawang 2002, 2004 and Thanik 2005; Suraphol 2545; Saritpong *et al.* 2011).

This essay presents additional archaeological data on the transition from late prehistory to early history resulting from the recently excavated site of Phromthin Tai in central Thailand. This stratified multi-component site located in Khok Samrong district of Lop Buri province is the main focus of this preliminary study.

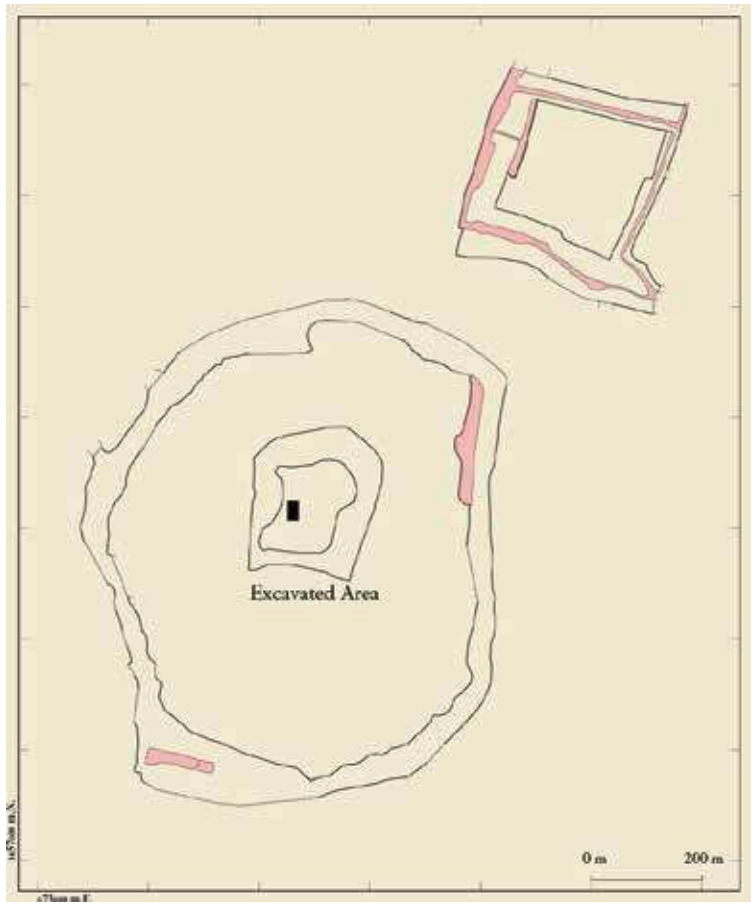
Archaeological Investigations at Phromthin Tai

Phromthin Tai (named after the modern village where the site is located) is about 20 kilometres northeast of the modern town of Lop Buri in central Thailand and 12 kilometres northwest of Khao Wong Prachan, a hill where prehistoric copper smelting took place in the second millennium BCE and continued into the first millennium BCE (Pigott *et al.* 1997). Its geographic position lies at the latitude of 14º 59' 26" N and longitude of 100º 37' 17" E, and it sits on an eroded limestone terrace covered with moderately acidic dark clay soil (labeled as "Ban Mi district soil series") near a foothill at an elevation of between 10-20 metres above the mean sea level, with the average annual rainfall at 877-1,317 mm.

Opposite Figure 1: *A stone image of "Buddha-on-a-monster" found at Phromthin Tai [Photograph by Thanik Lertcharnrit].*



Map 1a: *Aerial view of Phromthin Tai moated settlement [After Department of Treasury 2550].*



Map 1b: *Close-up of Phromthin Tai and excavation area [After Department of Treasury 2550].*

According to Phongsi Wanasin and Thiwa Suphachanya (2524: Appendix 11.2), the site is a relatively small semicircular-shaped ancient moated town measuring about 1 kilometre wide and long **[Map 1a]**. The site is poorly known among scholars although Wat Phromthin Tai houses a fine stone image of a "Buddha on-a-monster" flanked by two deities (Phuthon 2555: 11) **[Figure 1]**, a type of religious icon found mainly in the early Buddhist centres of central Thailand and sometimes referred to in literature as "Phanasbodi" (e.g. Brown 2011). Two Pāli stone inscriptions have also been found by chance in the neighbourhood in the late 1970s, early 1980s and are now kept at the Phra Narai National Museum in Lop Buri (Phuthon 2555: 22, 24, 29-30; Revire, this volume, fig. 10) **[Figure 2]**. Today, the moat no longer exists probably because it was destroyed by modern villagers to clear the area for rice agriculture. In this process a number of silver coins ascribed to the early historic period were unearthed (Phuthon 2524), suggesting that the site was occupied by a Dvāravatī cultural group during the sixth to seventh centuries CE. In spite of this, the site received little attention and study until 1991 when archaeologists from the Fine Arts Department (FAD) carried out an excavation and restored a brick structure (probably an ordination hall) dating to the Ayutthaya period (fourteenth-seventeenth centuries CE). In a test unit near this structure, two human skeletons were excavated at the depth of about 2 metres below the present surface. Associated grave goods included pottery, iron implements, bronze earrings, bronze rings, bronze bracelets, and beads (Nongkhran 2534). More surface finds including glass and stone beads, iron slag, polished stone tools, iron implements, earthenware sherds, clay anvils, and fragments of stone and ivory bracelets were found during a field walking survey conducted by the author and his students in January 2004. These findings confirmed the antiquity of the site and led to systematic research by the author.

In March 2004, the Department of Archaeology, Silpakorn University, decided to run a two-week archaeological field school at the site **[Map 1b]**. Four 3 x 3 m. test units (identified as PTT-S1, PTT-S2, PTT-S3, and PTT-S4) were opened in a line about 5 metres west of the aforementioned brick structure. These excavations were not finished because of time constraints and the high volume of debris and artefacts. Several additional field seasons have been conducted every year between 2005 and 2011 to complete the three earlier excavation units (PTT-S2, PTT-S3, and PTT-S4). Two units (PTT-S3 and PTT-S4) were expanded into 6 x 6 m. units. It should be noted that the excavation of PTT-S4 was still in progress in 2013 during the writing of this essay. The previous excavations in the area, however, have unearthed a number of human burials and a large amount of archaeological remains. Parts of the earlier excavation conducted in 2004 has already been published (Thanik 2006).

Figure 2: *A stone Pāli inscription (*ye dhammā *formula) from Phromthin Tai, now kept at Phra Narai National Museum, Lop Buri [Photograph courtesy of Nicolas Revire].*

Preliminary Results and Discussion

The majority of archaeological data presented in this essay is drawn from a series of excavations mentioned earlier. It should be noted that the interpretations here are still largely tentative, rather than conclusive, and further detailed analysis of archaeological evidence might perhaps modify these assertions in the future.

Cultural Chronology and Occupational Sequence

Previous and recent excavations reveal a multiple occupation sequence at Phromthin Tai. Four cultural layers were identified primarily on the basis of stratigraphy and archaeological evidence. Stratigraphic and archaeological data demonstrate that the site was probably first occupied during the late Bronze Age (ca 700-500 BCE). Supporting data for this interpretation is derived from the basal layer of the PTT-S2 unit where a human skeleton buried in an extended supine position with associated grave goods including a bivalve shell, bronze bracelets, and pottery was recovered **[Figure 3]**. One charcoal sample from this layer was radiocarbon dated at the Office of Atomic Energy for Peace in Bangkok, and the uncalibrated date was 2,430 ± 260 BP. It should be noted that data on this cultural layer is very limited as contexts other than the burial were not found and the interpretation of the cultural sequence is based solely on this result.

The successive occupation at Phromthin Tai is interpreted on the basis of cultural materials and radiometric determinations. Stratigraphic data showed continuity of occupation from the late Bronze Age deposits to the next occupational layer, which is determined as the Iron Age. The Iron Age occupation (500 BCE-500 CE) is characterised by the presence of extended supine human burials and a wide variety of associated grave goods including ceramics, iron tools, glass and stone beads, bronze anklets, bronze toe rings, stone earrings, a bronze bowl, as well as artefacts found in domestic context: e.g., stone and clay bracelets, spindle whorls, polished stone adzes, glass, carnelian and agate beads (Thanik 2010 and 2011). This line of evidence is comparable to that found in other Iron Age sites in central Thailand, such as Tha Khae (Suraphol 2527), Chansen (Bronson & Dale 1972), Noen Makok (Sunisa 2532), Ban Don Ta Phet (Glover 1990), Sap Champa (Sawang *et al.* 2544), and Ban Pong Manao (Suraphol 2545). Radiometric analysis of charcoal samples derived from the Iron Age occupational layer of PTT-S2 has produced dates as shown in **Table 1**. An additional absolute date of 2,652 ± 79 BP (uncalibrated) was obtained from an Electron Spin Resonance (ESR) dating of a dog's tooth found in a human burial.

Figure 3: *A late Bronze Age burial from Phromthin Tai [Photograph by Thanik Lertcharnrit].*

Table 1: Calibrated Radiocarbon and ESR Dates Associated with Phromthin Tai

ID	Date	Calibrated Date*	Material	Context	Excavation Unit
OAPE2169	2,430 ± 260	1,211 BCE-73 CE	Charcoal	Bronze Age occupation layer	PTT-S2
OAPE2168	1,810 ± 220	357 BCE-645 CE	Charcoal	Iron Age occupation layer	PTT-S2
OAPE2167	2,170 ± 260	828 BCE-388 CE	Charcoal	Iron Age occupation layer	PTT-S2
OAPE2166	3,110 ± 230	1,912-819 BCE	Charcoal	Iron Age occupation layer	PTT-S2
OAPE2165	2,220 ± 260	903 BCE-355 CE	Charcoal	Iron Age occupation layer	PTT-S2
OAPE2163	2,860 ± 220	1,611-512 BCE	Charcoal	Iron Age occupation layer	PTT-S2
**Unassigned	2,652 ± 79	1,007-543 BCE	A dog's tooth enamel	Associated with Iron Age burial	PTT-S2

* Calibrated by Scott Kirkland (North Carolina State University, USA) using OxCal 4.1

** Dated using ESR method performed at the Research Institute of Materials and Resources, Faculty of Engineering and Resource Sciences, Akita University, Japan in 2004.

The most intensive and longest occupational phase at Phromthin Tai corresponds to the so-called "Dvāravatī period" (sixth-ninth centuries CE). It was determined by the appearance of presumably classic Dvāravatī artefacts including silver coins **[Figures 4a-b]**, small clay seals (with a diameter of 1.5 centimetres) depicting a crouching bull **[Figure 5]**, spouted pots (only spouts were recovered, not the whole vessels), carinated pots **[Figure 6]**, potsherds with stamped designs, clay coins (perhaps used as game-pieces), glass beads of various colors, lead earrings, and spindle whorls (Phasook 2528). The date of the Dvāravatī cultural occupation is firmly established when it is considered in concert with material remains (e.g., silver coins, and stone Pāli inscriptions) first reported by Phuthon Phumathon (2524 and 2555). It has been proposed on the basis of artefacts cross-dating and comparison of inscriptions that the Dvāravatī occupation lasted at Phromthin Tai from approximately the sixth to the ninth centuries CE. The character of the material culture indicated that the site was contemporary with other Dvāravatī sites in central Thailand (e.g., U Thong in Suphan Buri province, ancient Nakhon Pathom in Nakhon Pathom province, Khu Bua in Ratchaburi province, Sap Champa in Lop Buri province, Chansen in Nakhon Sawan province, and Dong Lakhon in Nakhon Nayok province) and early historic sites in mainland Southeast Asia (e.g. Bronson & Dale 1972; Phuthon 2529; Charuek 2534; Phasook 2542; Saritpong *et al.* 2011). It is stratigraphically obvious that there is no occupational break during the main occupation from the late prehistoric (late Bronze Age and Iron Age) to the early historic periods (Dvāravatī). After the "Dvāravatī period," the site was left unoccupied for centuries and was reoccupied in the Ayutthaya period as evidenced by the presence of a variety of artefacts (i.e. stoneware ceramics, Chinese Blue & White porcelains, Ayutthaya-style boundary stones) and the presence of an Ayutthaya-style brick monument.

Figures 4a-b: *A silver coin found at Phromthin Tai (top: obverse; below: reverse) [Photograph courtesy of Borisut Boriphon].*

Left Figure 5: *A clay seal depicting a crouching bull from Phromthin Tai [Photograph by Thanik Lertcharnrit].*

Right Figure 6: *A Dvāravatī period carinated cooking pot from Phromthin Tai [Photograph by Thanik Lertcharnrit].*

Mortuary Practice

There are at least 20 human burials that have so far been uncovered at Phromthin Tai, and we can comment thus on differences in mortuary patterning. Detailed analysis of mortuary tradition is on-going. At present, the human burials can be chronologically divided into two periods based on their stratigraphic layer and mortuary practice: a Bronze Age and several Iron Age burials.

There is only one Bronze Age burial that has been found thus far, the rest belong to the Iron Age. The one late Bronze Age burial was found in the basal layer and can be distinguished from the other Iron Age burials in terms of the orientation of the heads, associated grave goods, and ritual behaviour. It should be noted that one of the Iron Age burials was very poorly preserved and only arm bones were still present. The other burial, although better preserved, was also incomplete with only the lower body parts left intact; the upper parts had been disturbed by later occupants of the site. Turning to the burials themselves, both the late Bronze Age burial and the Iron Age burials were interred in extended supine position, and had their heads oriented to the northwest. In terms of grave goods, the late Bronze Age burial was interred with a series of bronze bracelets on arms, a cup, potsherds, and bivalve shells **[Figure 3]**. In contrast, the Iron Age burials were richer in grave goods. For example, a male burial was elaborately associated with a wide variety of grave goods such as high-tin bronze items (bracelets, anklets, toe rings, finger rings, and a bowl), mortuary vessels, and strings of glass beads on each leg, a spindle whorl, and an iron knife **[Figure 7]**. It was also observed that the head orientation of individuals was not uniformly practised; some individuals were buried oriented to the east, while some other's heads were directed to the west, northwest, and south.

Figure 7: *An Iron Age burial featuring an individual with a variety of grave goods from Phromthin Tai [Photograph by Thanik Lertcharnrit].*

Finally, a number of mortuary vessels associated with the Iron Age burials were mutilated. For instance, the pedestals of high pedestal bowls were removed and only the bowls themselves were interred in the grave. This ritual behaviour, the killing or mutilation of grave offerings, seems to by typical of Iron Age mortuary practice in central Thailand (Glover 1990; Suraphol 2545).

Settlement Pattern and Subsistence

Stratigraphic and archaeological data clearly show that the settlement of Phromthin Tai was permanent and continued uninterrupted for at least three successive periods and over several generations. Phromthin Tai is located in the lowland area where soil is appropriate for rain-fed wet-rice agriculture and was easily accessible by land or river. Furthermore, it is located near rich natural resources, especially the natural copper ore available on the hill of Khao Wong Prachan. Excavations have yielded a layer of slag and copper ingots, averaging 20 cm. thick, in the Iron Age occupation level. Copper smelting was probably the key economic activity during the early settlement. Two clay moulds used for moulding copper ingots were found as grave goods in a human burial. It is believed that key sources of iron ore are located in the vicinity of the site as large iron ore deposits were found at Khao Thap Kwai, a hill located only 6 kilometres southeast of the site.

The settlement history of Phromthin Tai could probably be summarised in the following way. In the early through the late prehistoric period (ca 500 BCE-500 CE) people settled in the area as a small group with a self-reliant economy (community-based copper smelting) while maintaining an exchange or trade relationship with neighbouring communities. It is apparent that people used the same area for different purposes including domestic, ritual, and specialised activities (metal smelting). No clear-cut segregation of land use was found. Intensive land use seems to have expanded during the Dvāravatī period. For instance, wet rice cultivation was commonly practiced as a relatively large number of bricks and brick fragments yielding imprints of rice chaff have been excavated at the site.

Trade and Exchange

There is strong archaeological evidence for trade and exchange at Phromthin Tai. For example, though there are relatively few copper ingots, the abundance of metal slag indicates that the people inhabiting this site were engaged in intra- and inter-regional exchanges. Copper and iron smelting during the early occupation was carried out for exchange purposes, not for household use. Copper ingots made from the site might have been distributed widely across the region as some of the copper ingots similar in form and size to those made from Phromtin Tai have been found in highland sites about 70 kilometres east of Phromthin Tai, including Ban Pong Manao and Pong Ta Khop (Suraphol, pers. comm.). Beads of various size, shape and color, particularly glass beads, were among the most common imported items found at this site. Agate, carnelian **[Figure 8]**, and gold-foiled beads were also present, but in lower number. Preliminary technological and compositional studies of some Iron Age stone beads found in burial context show that the beads might have been made in India (Thanik & Carter 2010). A preliminary result of composition study of Dvāravatī glass beads using a chemical compositional analysis method known as Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MSA)

Figure 8: *A carnelian bead found at Phromthin Tai during the 2013 field investigation [Photograph by Thanik Lertcharnrit].*

method suggests that the beads were made from multiple production centres. An electron microscopic study of artefact's surface topography and composition using a method called Scanning Electron Microscope (SEM) of glass bead samples also shows that some beads were white painted. Other imported commodities during the late prehistoric period were high-tin bronze anklets, toe rings and finger rings, fine-grained pottery vessels (e.g., orange and buff wares), and stone bracelets. Some pottery types (e.g., spouted pots, and pots with flower-stamped designs) were probably non-locally produced items as they are rare and were made using fine-grained clay. They are similar to those found at other early historic sites (e.g., Khu Bua in Ratchaburi province, Sap Champa in Lop Buri province, ancient Nakhon Pathom in Nakhon Pathom province) that are thought to have been made from some key production centres (Saritpong *et al.* 2011; Sawang 2004), even though household pottery production took place on the site.

Diet and Health

A substantial amount of faunal remains were encountered during test excavations. These materials are currently under analysis. Preliminary interpretations of diet and consumption patterns are made here on the basis of general observations of the artefact assemblages and faunal remains.

It appears that the staple diet of the early occupants during the Iron Age was probably derived from hunting, gathering and fishing. Their major sources of protein came from both land and aquatic animals. Big and small game hunting were practised. Identifiable species include wild boars, a wide variety of deer and wild bovid species, tigers, elephants, birds, rats, dogs, and snakes. Hunting method can only be inferred from the presence of clay pellets believed to have been used with wooden bows. Fresh water shell and fish bones were present in relatively high frequencies. These water species could have been collected from nearby

Figure 9: *Rice grains from Dong Lakhon, Nakhon Nayok province [Photograph courtesy of Thongchai Sako].*

Figure 10: Cribra orbitalia *found on an individual at Phromthin Tai [Photograph courtesy of Scott Burnett].*

ponds, rice fields, and rivers. Rice consumption remains highly possible, but no direct or indirect evidence has been recovered thus far. It is apparent that the early historic period or the Dvāravatī period saw an increase in subsistence based on marine resources and rice cultivation; people might have relied heavily on rice domestication. Remains of fish, shellfish and marine animals (e.g., turtles and crocodiles), rice grains **[Figure 9]** and rice imprints in bricks and brick fragments have been found at the site and at other sites (e.g., Dong Lakhon in Nakhon Nayok province). It should also be noted that a sheer number of bones of domesticated cattle have been excavated at the site as well, suggesting that animal domestication also played a crucial role as a major kind of diets consumed by ancient people during the early historic period. However, no remarkable change in consumption pattern from late prehistoric to early historic times was observed, except for the marine resource and rice consumption.

A dental paleopathological study of human teeth from the site found that the Iron Age people at Phromthin Tai suffered less dental problems, having a low rate of dental carries compared to other prehistoric people in northeast and east-central Thailand (Kirkland 2010). An additional bioarchaeological study of the Iron Age human remains further found that there is a high proportion of very young adult deaths for males, and some individuals were scored by *cribra orbitalia* **[Figure 10]** or *porotic hyperostosis* suggesting poor nutrition or some form of anemia (Case & Burnett 2013).

Phromthin Tai in a Wider Perspective

The presence of human occupation at Phromthin Tai beginning at approximately 500 BCE, if not earlier, and continuing until around 500-700 CE, the period that saw intensive contact with Indic culture and the beginnings of the historic period, is not uncommon in Thailand. Archaeological research at various sites in central Thailand and other regions has yielded evidence for occupation starting from Iron Age (ca 500 BCE) or the late prehistoric period (ca 300-500 CE) to early historic times (ca 500-700 CE).

For instance, recent excavations at the ancient moated town of Mueang Sema on the Khorat Plateau (Khemika 2543) unearthed evidence of human occupation, beginning in late prehistoric period (ca fourth-fifth century CE) which continued uninterrupted until the Dvāravatī period of around the sixth-ninth century CE. Similarly, recent archaeological investigation at areas near and inside the ancient town of Si Thep in the upper reach of the Pasak river valley has yielded a large number of late prehistoric period and protohistoric sites dating between 2,000-1,500 years ago, before those small communities were later aggregated into the large town of Si Thep in approximately the seventh century CE (FAD 2554). In addition, at the moated and walled town of Sap Champa in the eastern highlands of the central plains of Thailand, archaeologists have found prehistoric burials and artefacts diagnostic of late prehistoric period or the Iron Age in the basal layers of the site, suggesting the continuity of cultural development at the site from a small village into a large Buddhist centre (Sawang 2004; Suraphol, pers. comm.).

Considered in a wider perspective, Phromthin Tai was situated not only in a good location for procurement of locally available natural resources (mainly but not limited to copper), but also in a location that could have served nearby agricultural communities as a religious centre during the sixth-ninth centuries CE. To the north, Phromthin Tai could have had frequent contacts with communities located in the undulating area such as Chansen, Ban Mai Chaimongkon, Phai Sali in Nakhon Sawan province, and Phu Noi in Lop Buri province (Bronson & Dale 1972; Chureekamol 2003; Suraphol 1997). To the east there are several ancient settlements on the upland areas dating to the Bronze and Iron Ages (Noen Makok, Nong Daeng, Ban Pong Manao, and Sap Takhien in Lop Buri province), as well as to the Dvāravatī period (Sap Champa). To the west there were ancient communities located both in the immediate Lop Buri region, such as Tha Khae, Wang Pai, and the ancient city of Lop Buri, and further west, in the Chao Phraya river valley, there are sites like U Taphao in Chai Nat province, Ban Don Ta Phet in Kanchanaburi province, U Thong in Suphan Buri province, and Khu Mueang in Sing Buri province. Very likely, people from these settlements would have been in contact with inhabitants of Phromthin Tai during the late prehistoric to early historic period. It is likewise unlikely that Phromthin Tai was isolated from communities located further to the south such as Dong Lakhon in Nakhon Nayok province and Dong Si Mahosot in Prachin Buri province.

Conclusion

The above archaeological evidence shows that Phromthin Tai in Lop Buri province is an important site for understanding the transition from late prehistory to the early historic period in Thailand as well as elsewhere in Southeast Asia. The range of evidence recovered from the recent investigation and excavation campaigns contributes to several important archaeological research questions.

For example, it indicates that the site is potentially important in regard to the investigation of prehistoric mortuary variability. The continued sequences of occupation suggest that early people during the Iron Age might have increasingly adopted some new traditions, evidently Indic beliefs, while also retained their indigenous cultures like pottery traditions, subsistence strategies, and metal technology. The transition from late prehistory to early history at the site was seemingly gradual and slow, with increase in site size and settlement pattern during the Dvāravatī period. It is strongly evident that aspects of Indic culture (writing and cremation practice), and other religious belief (probably "animism"), were common during the early historic period. The site also provides several lines of evidence for inter- and intra-regional exchanges during the later prehistoric and early historic periods in Thailand.

As noted earlier, however, the interpretations presented here are made on preliminary results only. Additional scientific analysis of different classes of artefacts and evidence including bronze objects, beads, ceramic vessels, potsherds, and faunal and human remains will no doubt provide a large amount of information regarding the transition from late prehistory to early history, not only at this location, but in Thailand and Southeast Asia as a whole. More secure conclusions must therefore await the results of continuing investigations.

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References

Bellwood, Peter
1997 *Prehistory of the Indo-Malaysian Archipelago*. Honolulu: University of Hawai'i Press. [Revised Edition]

Bronson, Bennett & Dales, George
1972 Excavation at Chansen, Thailand, 1968, 1969: A Preliminary Report. *Asian Perspectives* 15 (1): 15-46.

Brown, Robert L.
2011 A Sky-lecture by the Buddha. *Bulletin of the Indo-Pacific Prehistory Association* 31: 17-24.

Case, Daniel Troy & Burnett, Scott
2013 *Phromthin Tai Skeleton Report: 2011 Excavation Season*. [Unpublished]

Charuek Wilaikaeo
2534 *Borannakhadi mueang u taphao* (*The Archaeology of U Taphao*). Bangkok: Fine Arts Department. [In Thai; 1991 CE]

Chureekamol Onsuwan
2003 Metal Age Complexity in Thailand: Socio-Political Development and Landscape Use in the Upper Chao Phraya Basin. *Bulletin of the Indo-Pacific Prehistory Association* 23: 7-13.

Department of Treasury
2550 *Kansueksa kankamnot khop khet thi din kamphaeng kao – khu mueang krom thanarak* (*The Study of the Boundary Demarcation of Ancient Walls – Moats by the Department of Treasury*). Bangkok: Department of Treasury, Ministry of Finance. [Unpublished in Thai; 2007 CE]

Fine Arts Department (FAD)
2554 *Si thep: mueang sun klang khwam charoen haeng lumnam pasak* (*Si Thep: A Centre of Early Civilisation in the Pa Sak River Basin*). Bangkok: Fine Arts Department. [In Thai with English Summary; 2011 CE]

Glover, Ian C.
1990 Ban Don Ta Phet: The 1984-85 Excavation. In Glover, Emily & Glover, Ian C. (eds), *Southeast Asian Archaeology 1986*. Oxford: British Archaeological Reports, pp. 139-184.

Glover, Ian C. & Bellwood, Peter (eds)
2004 *Southeast Asia from Prehistory to History*. London: Routledge Curzon.

Higham, Charles
1989 *The Archaeology of Mainland Southeast Asia*. Cambridge: Cambridge University Press.

2002 *Early Cultures of Mainland Southeast Asia*. Bangkok: River Books.

Higham, Charles & Rachanie Thosarat
2012 *Early Thailand: From Prehistory to Sukhothai*. Bangkok: River Books.

Ho, Chui-mei
1992 An Analysis of Settlement Patterns in the Lopburi Area. In Glover, Ian C., Pornchai Suchitta & Villiers, John (eds), *Early Metallurgy, Trade and Urban Centres in Thailand and Southeast Asia*. Bangkok: White Lotus, pp. 39-45.

Khemika Wangsuk
2543 *Phatthanakan thang watthanatham nai lum maenam mun: korani sueksa laeng borannakhadi mueang sema amphoe sung noen changwat nakhon ratchasima* (*The Cultural Development in the Mun River Basin: A Case Study of the Archaeological Site at Mueang Sema, Sung Noen District, Nakhon Ratchasima Province*). Master Thesis. Bangkok: Silpakorn University. [Unpublished in Thai; Available online at www.opac.lib.su.ac.th; 2000 CE]

Kirkland, Scott
2010 *Dental Pathology at Phromthin Tai: An Iron Age Cemetery from Central Thailand*. Master Thesis. Raleigh: North Carolina State University. [Unpublished]

Nongkhran Sichai
2534 *Raingan kankhuttaeng wat phromthin tai tambon lumkhao amphoe khok samrong changwat lop buri* (*Report on Excavation and Restoration at Wat Phromthin Tai, Khok Samrong District, Lop Buri Province*). Lop Buri: Regional Office of Fine Arts Department. [Unpublished in Thai; 1991 CE]

Phasook Indrawooth
2528 *Dachani phachana dinphao samai thawarawadi* (*Index Pottery of Dvāravati Period*). Bangkok: Silpakorn University Press. [In Thai with English Summary; 1985 CE]

2542 *Thawarawadi: kansueksa choeng wikhro chak lakthan thang borannakhadi* (*Dvaravati: A Critical Study Based on Archaeological Evidence*). Bangkok: Silpakorn University Press. [In Thai with English Summary; 1999 CE]

Phongsi Wanasin & Thiwa Suphachanya
2524 *Mueang boran boriwen chai fang thale doem khong thi rap phak klang prathet thai: kansueksa tamnaeng thi tang lae phumisat samphan* (*Ancient Cities on the Former Coastline in the Central Plain of Thailand: The Study of Sites and Geographical Correlation*). Bangkok: Chulalongkorn University Press. [In Thai; 1981 CE]

Phuthon Phumathon
2524 Rian ngoen thawarawadi phop thi lop buri (The Dvāravatī Silver Coins Found in Lop Buri). *Silpakorn Journal* 28 (4): 55-63. [In Thai; 1981 CE]

2529 *Mueang boran sap champa* (*The Ancient City of Sap Champa*). Lop Buri: Lop Buri Conservation of Ancient Monuments, Objects and Environments Club. [In Thai; 1986 CE]

2555 *Lakthan laktham yuk raek phop thi lop buri* (*The Earliest Dhamma Evidence Found in Lop Buri Province*). Lop Buri. Document distributed at the Seminar *The Earliest Dhamma Evidence of the Buddhist Era Found in Lop Buri Province* organised by the Lop Buri Conservation of Ancient Monuments, Objects and Environments Club in Lop Buri on 11 December 2012. [Unpublished]

Pigott, Vincent C., Weiss, Andrew D. & Suraphol Natapintu
1997 The Archaeology of Copper Production: Excavations in the Khao Wong Prachan Valley, Central Thailand. In Ciarla, Roberto & Rispoli, Fiorella (eds), *South-East Asian Archaeology 1992*. Rome: Istituto Italiano per l'Africa e l'Oriente, pp. 119-158.

Saritpong Khunsong, Phasook Indrawooth & Suraphol Natapintu
2011 Excavation of a Pre-Dvāravatī Site at Hor-Ek in Ancient Nakhon Pathom. *Journal of the Siam Society* 99: 150-171.

Sawang Lertrit
2002 Some Notes on New Data from Recent Excavations in the Pa Sak River Valley. *Silpakorn University International Journal* 2(1): 119-135.

2004 Sab Champa Revisited: Results of Recent Archaeological Field Investigations. In Paz, Victor (ed.), *Southeast Asian Archaeology: Wilhelm G. Solheim II Festschrift*. Quezon City: University of the Philippines Press, pp. 504-521.

Sawang Lertrit, Priyanut Chumphrom & Anan Klinphoklap
2544 Sap Champa 2544: kanpatibat ngan thang borannakhadi lae lakthan thi phop (Sab Champa 2001: Archaeological Research and Evidence Found). *Muang Boran* 27(3): 117-133. [In Thai; 2001 CE]

Stark, Miriam
1998 The Transition to History in the Mekong Delta: A View from Cambodia. *International Journal of Historical Archaeology* 2(3): 175-240.

Sunisa Mankhong
2532 *Noen makok: raingan bueangtan kiao kap chandin lae lakthan borannakhadi* (*Noen Makok: Preliminary Report of Stratigraphic and Archaeological Evidence*). Bangkok: Fine Arts Department. [In Thai; 1999 CE]

Suraphol Natapintu
2527 Kantang thinthan samai boran thi ban thakae (Ancient Settlement at Ban Tha Khae). *Muang Boran* 10(4): 20-27. [In Thai; 1984 CE]

1997 Current Archaeological Research in Central Thailand with Special Reference to the Site of Phu Noi, Lopburi Province. In Ciarla, Roberto & Rispoli, Fiorella (eds), *South-East Asian Archaeology 1992*. Rome: Istituto Italiano per l'Africa e l'Oriente, pp. 45-51.

2545 Raingan bueangtan phon kankhut khan thi laeng borannakhadi ban pong manao lop buri (Preliminary Results of an Archaeological Excavation at Pong Manao, Lop Buri). *Muang Boran* 28(2): 139-142. [In Thai; 2002 CE]

Tarling, Nicolas (ed.)
1992 *The Cambridge History of Southeast Asia, Volume I*. Cambridge: Cambridge University Press.

Thanik Lertcharnrit [Formerly known as Sawang Lertrit]
2005 Late Prehistoric and Early Historic Archaeology in Thailand: Recent Evidence from the Central Highland. *Silpakorn University International Journal* 5(1-2): 55-72.

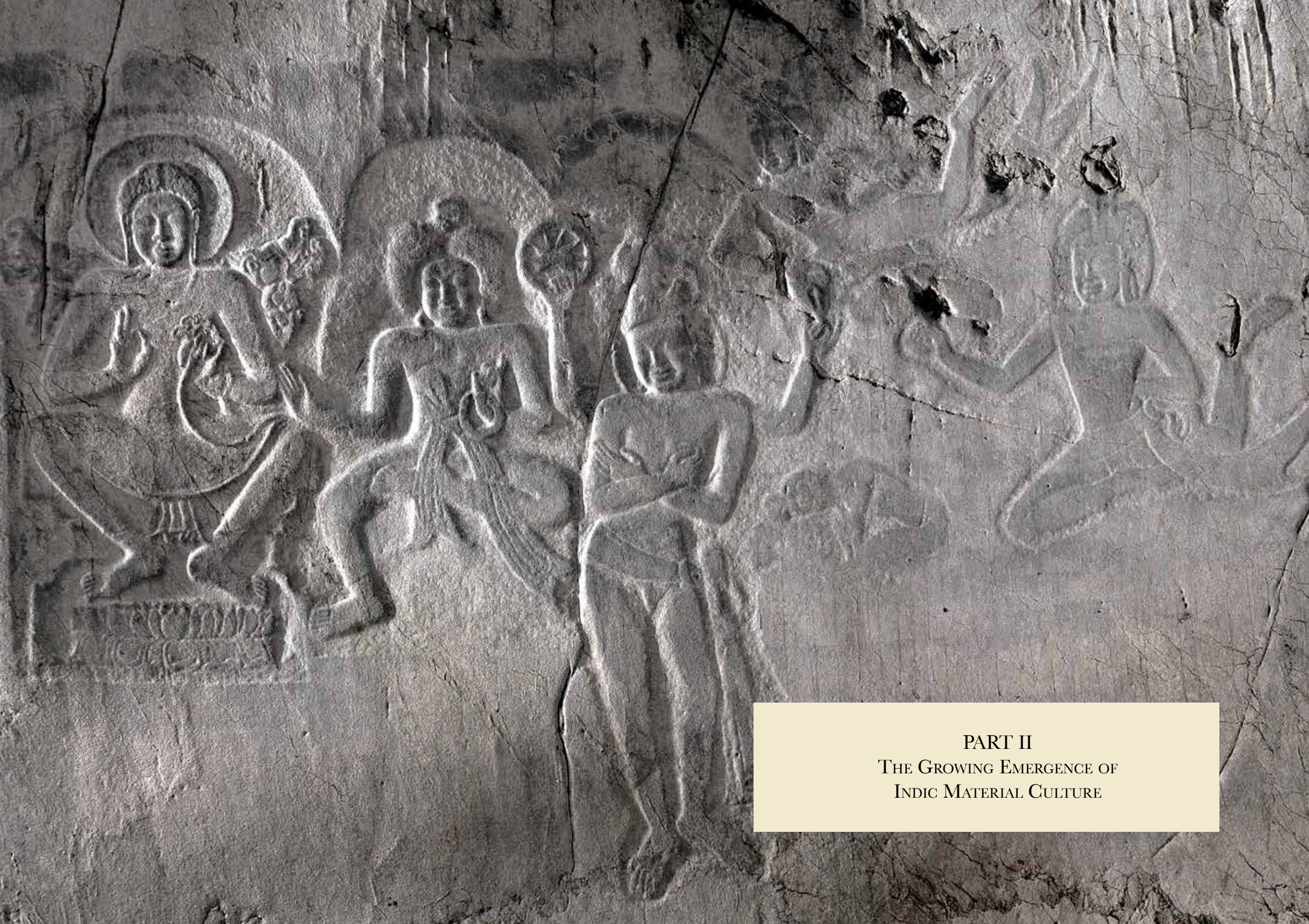
2006 The Moated Site of Phromthin Tai and the Transition from Late Prehistory to Early History in Central Thailand. In Bacus, Elizabeth A., Glover, Ian C. & Pigott, Vincent C. (eds), *Uncovering Southeast Asia's Past*. Singapore: NUS Press, pp. 258-265.

2010 An Early Ivory Bracelet from Central Thailand. *Expedition* 52(2): 8.

2011 Zoomorphic Spouts from Central Thailand. *Bulletin of the Indo-Pacific Prehistory Association* 31: 25-29.

Thanik Lertcharnrit & Carter, Alison
2553 Phonwichai lasut rueang luk pat hin lae luk pat kaeo yuk lek chak laeng borannakhadi phromthin tai lop buri (Recent Research on Stone Beads from Phromthin Tai, Central Thailand). *Muang Boran* 36(4): 53-68. [In Thai with English Summary; 2010 CE]

Wyatt, David K.
1984 *Thailand: A Short History*. New Haven: Yale University Press.



PART II

The Growing Emergence of Indic Material Culture

Multi-religious Maritime Linkages across the Bay of Bengal during the First Millennium CE

Himanshu Prabha Ray

Previous pages: *Wall carving showing the Buddha preaching to Śiva and Viṣṇu in the Bodhisattva cave, Saraburi province [Photograph courtesy of Paisarn Piemmettawat].*

> In the past kings used to go out on pleasure tours during which there was hunting and other entertainment. But ten years after Beloved-of-the-God's (*rājā piyadassi*) coronation he went on a tour to *saṁbodhi* and thus instituted [Dharma] *dhamma* tours. During these tours, the following things took place: visits and gifts to [Brahmins] *brāhmaṇa*s and ascetics [*śramaṇa*s], visits and gifts of gold to the aged, visits to people in the countryside, instructing them in *dhamma*, and discussing *dhamma* with them as is suitable. (Major Rock Edict VIII, Girnar version, Sircar 1975: 46)

Introduction

The *dhamma* or religious policy of the Mauryan King Aśoka, who ruled approximately from 272 to 232 BCE, was aimed at giving gifts to both Brahmins (*brāhmaṇas*), Buddhists and other ascetics (*śramaṇas*) in the third century BCE. The king did not stop feeding the Brahmins, nor did he denigrate them. Yet in secondary writings, there are references to hostility between the different groups. Romila Thapar (2000: 967), for example, makes a distinction between Brahmanism and Śramaṇism and refers to them as organisationally separate. The latter term, according to her, included a variety of Buddhist, Jaina, Ajivika and other "sects," which denied the fundamentals of Brahmanism such as Vedic *śruti* and *smṛti* (oral and written tradition). Brahmins are seen as legitimisers of political authority and Brahmanism is credited with the adoption of a common language, viz. Sanskrit. Can one postulate a connection between religion and language? What Thapar does not explain is the relationship between Buddhism and Sanskrit and the fact that Sanskrit was also used by Buddhists by the beginning of the Common Era. Was Sanskrit used only for ritual communication by Brahmins? What was the language(s) used by trading groups and can identification of these languages provide indicators to the religious affiliation of trading networks?

Historians writing within the socio-economic framework of Indian history define the post-fourth century CE period as marking a transitional phase between the sacrificial Vedic religion and the emergence of Purāṇic worship marked by devotion to a deity. This transformation, it is suggested, was brought about by the migration of Brahmins from the towns and the development of *tīrtha*s or sacred pilgrimage spots (Nandi 1986: 27-46). Brahmins are credited with being agents of acculturation among the tribal populations from the fifth century CE onwards. It is suggested that at numerous feudal centres temples were constructed in

Opposite Figure 1: Ekamukhaliṅga *found at Nong Wai, Surat Thani province, 5th-6th century. Currently in the Bangkok National Museum, stone, 104 cm. high, inv. no. SV 31 [Photograph courtesy of Paisarn Piemmettawat].*

permanent material such as stone for the first time in the fifth century CE "inspired by the growing importance of Bhakti and by the newly established Smarta-Pauranic religion, which was associated with the new social set-up" (Desai 1989-90: 31). Regional states emerged in India from the seventh to the tenth centuries marked by complex changes in religious dimensions of the society and it is "believed that Bhakti and the worship through Bhakti of God as a Lord located in a temple, was the key ideological strand of the period" (Chattopadhyaya 1994: 29).

This framework is by no means limited to writings on early South Asia, but has been repeated in works on early Southeast Asia as well. Pierre-Yves Manguin for example refers to the two phases of "Indianisation" and while the term has now been discarded for the period from 500 BCE to 500 CE, it still provides us with "a convenient term for the second phase of cultural exchange between South and Southeast Asia […] to denote profound socio-political modifications brought about by the adoption, at least by the ruling elites of state concepts, broad based universalist religions and their props (temples and statues) and writing in Sanskrit (the language of power)" (Manguin *et al.* 2011: xx). In an earlier paper, Manguin (2004: 295) refers to coastal polities on the Malay Peninsula as early as the third century CE which were hosts to "hundreds of Brahmins and to large merchant communities from India and the Iranian world. Buddhist communities were also active." What was the role of Brahmins in these polities and their relationship with Buddhist communities?

Thus there is a need to interrogate the paradigm of movements of Brahmins to courts of regional kings largely for the purpose of providing legitimacy; and the proposed shift from Buddhism to "Purāṇic Hinduism" around the middle of the first millennium CE. The emphasis in this essay is clearly not on sequential development and antagonism between adherents of different religions, but on plurality, diversity and co-existence of diverse religious traditions at the beginning of the Common Era both in South and Southeast Asia. The larger issue that the essay addresses is the multi-cultural and multi-religious context of early maritime activity across the Bay of Bengal starting from the beginning of the Common Era. This included the sharing of languages such as Sanskrit, Prakrit, Pāli, but also Tamil, which were written in Brāhmī and Kharoṣṭhī scripts. Yet before I move to the central theme, a brief historiography indicating the different perspectives adopted by scholars on the issue may be appropriate.

Historiography and State of Scholarship

In his recent study, Johannes Bronkhorst (2011: 1) does not share the opinion that Buddhism was a reaction against Vedic Brahmanism, as, according to him, *brāhmaṇa*s or Brahmins did not occupy a dominant position in the region where the Buddha preached. A third coeval group with the Brahmins and the Buddhists were the Jains. The earliest cave inscriptions from carved beds in a natural cave at Sittanavasal, in Pudukkottai district of Tamil Nadu show that Jains were in that region at least from second century BCE onwards and may have preceded the Buddhists in other regions as well such as in Mathurā **[Figure 2]**. This would suggest that the Jains may have been the main competitors of the Buddhists rather than the Brahmins (Bronkhorst 2011: 20). The author continues that in the competition between Brahmanism and Buddhism, the former had an advantage, as Brahmins had always been involved in affairs of the state and were well prepared for counselling the king (2011: 99). Thus Bronkhorst introduces a critical element of affiliation to political power in the discussion, i.e. the relationship of Brahmanism and Buddhism with the king and this is an issue that finds resonance in several writings on Siam or Thailand.

Peter Skilling refers to the complex and hybrid nature of the "Siamese religion" as reflected in the Thai phrase *samana-chi-phrām*, which may be translated into "mendicants, renunciants and brahmanas" (2007: 184). The participation of Brahmins and Buddhists in joint rituals is first attested to in the Wat Maheyong inscription from Nakhon Si Thammarat, southern Thailand, dated between the seventh and ninth centuries, which records donations of buildings and materials to Buddhist monks (both as a community and individually) and of food to the community of twice-born (*dvija*s or *brāhmaṇa*s) (Cœdès 1961: 34-36, pl. XIII).

In his recent book, Prapod Assavirulhakarn (2010) raises several pertinent questions about the introduction of Buddhism into Southeast Asia, especially in pre-modern Thailand. On the basis of the inscriptional record, he convincingly shows that Pāli Buddhism was present in the western part of mainland Southeast Asia from around the fifth or sixth centuries CE onwards and did not come only later in the twelfth century after the reforms in Sri Lanka that unified the Theravāda Saṅghas there, as previously thought. Based on a study of the Dvāravatī culture, Stephen Murphy (2010: 73) reaffirms that adoption of Buddhism was a unifying feature from the sixth-seventh century onwards. What Prapod (2010: 20) called the "Dvāravatī

Figure 2: *Early Jain votive plaque with Prakrit inscription in Brāhmī script from Kankali Tila, Mathurā, India. Currently in the National Museum New Delhi [Photograph by Himanshu Prabha Ray].*

Figure 3: Dharmacakra *inscribed with Pāli text in Pallava script. Currently in the Bangkok National Museum, inv. no. KTh 29 [Photograph courtesy of Paisarn Piemmettawat].*

*maṇḍala*s" expanded over part of central modern Thailand and shows strong localisation at centres such as U Thong, Nakhon Pathom, Khu Bua, Lop Buri and Si Thep. But what was the exact nature of this Buddhism and how was it practised in the second half of the first millennium?

A *stūpa* for instance was considered a sacred place for public reverence and any devotee could participate in its decoration and veneration. As evident from inscriptions from large-scale sites such as Amarāvatī, Nāgārjunakoṇḍa and Bodhgayā, pilgrims from different regions and "sectarian affiliations" could reside in the vicinity of *stūpa*s. In pre-modern Thailand, it was also common to find objects belonging to different traditions in the same area making it possible for Brahmanical images to be found there as well (Prapod 2010: 104). For example, Śiva *liṅga*s are often present in Buddhist monastery compounds, as in the case of Wat Phra Chetuphon (Wat Pho) in Bangkok. Near Lop Buri, Śiva *liṅga*s were found in such large numbers that the hill came to be known as Khao Sapphalinga after *sarvaliṅga* (Prapod 2010: 138, 231, n. 84). To this day in Thailand, Buddhism provides the moral context and merit-making framework for most people, and Brahmanism is used for rituals connected with governance and kingship. To what extent can this present model be sustained in the context of early Thailand and India? In the next section, a brief survey of the archaeological and inscriptional material is provided to highlight the multi-religious nature of many of the so-called "Buddhist" sites in Thailand, as also the several languages used by Buddhists in the region.

Cultural and Religious Diversity in Pre-modern Thailand

Inscriptions from Thailand provide insights into the practice of Buddhism and the diversity of languages and expressions used is indeed striking. One of the prominent categories includes Old Mon inscriptions in a variant of the Brāhmī script, which record donations by people from different groups to Buddhist monastic centres and the ritual celebrations that followed (Dhida 1999: 196-197). The donors represented a cross-section of the populace and include commoners, dancers, ascetics, *brāhmaṇa*s, kings and nobles. The donations involved such activities as casting of Buddha images, building *stūpa*s and *vihāra*s, repairing damaged images or freeing caged animals (Prapod 2010: 86).

A second category of epigraphs comprises of extracts from the Buddhist Canon and several religious formulas mostly in Pāli (Revire, this volume). These are engraved on stone *dharmacakra*s or wheels of law, octagonal pillars, stone slabs, clay tablets and reliquaries and are dated between the sixth and eighth centuries CE **[Figures 3-5]**. This practice is well attested in both ancient Thailand and Myanmar, but no contemporary canonical inscriptions have been found in first-millennium Sri Lanka. In contrast, religious formulas and extracts from canonical texts occur at several Indian sites from at least the Mauryan period onwards. Old Mon records in Thailand use both Pāli and Sanskrit loanwords but there is little unanimity regarding Southeast Asian scripts, which continue to follow nineteenth century categorisation and are termed "pre-Pallava," "Pallava," "Gupta" and so on (Skilling 2003: 104-107).

This diversity in language and script indicating complexity of Buddhist traditions adopted in the region, is matched by a variety of religious affiliations at archaeological sites. Khok Chang Din for example is a cluster of twenty historic sites at the foothills of Khao Dok, southwest of the moated settlement of U Thong, which have yielded bricks, stones, sherds including Tang ceramics. The site was identified in the 1960s, but subsequent excavations by the Fine Arts Department unearthed a terracotta vessel filled with silver "coins" stamped with the conch symbol from site no. 18. At site no. 5, laterite bases of a rectangular structure were discovered, as also finds of stone Śiva *liṅga*s and *mukhaliṅga*s **[Figures 6-8]** now displayed in the U Thong National Museum (Skilling 2003: 93).

These finds are matched by a large number of hybrid imagery and inscriptions found throughout first-millennium Thailand. The sixth-eighth century "Bodhisattva cave" (Tham Phra Phothisat), in Saraburi province shows an enthroned Buddha preaching to the gods Śiva and Viṣṇu (see photograph pages 132-133, this volume), while an inscription under the huge relief of Buddha seated and preaching in the "Hermit cave" (Tham Ruesi) in Ratchaburi province possibly reads "the pious work (or gift) of the holy *ṛṣi* [ascetic or hermit] Śrī Samādhigupta"

Figure 4: Ye dhammā *formula inscribed on terracotta found at Phra Pathom Chedi, Nakhon Pathom. Currently in the Bangkok National Museum, inv. no. DV 1-1 [Photograph by Himanshu Prabha Ray].*

Figure 5: Ye dhammā *formula on stone found in Si Thep, Phetchabun province. Currently in the Phra Narai National Museum, Lop Buri [Photograph courtesy of Nicolas Revire].*

(Cœdès 1961: 19, pl. VII; Brown 1996: 30-31; Revire 2012: 93-98, figs 1-3). Similarly Robert Brown reports an inscription (K. 981) carved on a *sema* or boundary stone from Wat Si That Pramancha in Udon Thani province, which bears the legend "this ascetic honored by the brahmans has erected this stone serving as a marker with the *bhikṣu*" (see also Murphy, this volume). But these donative inscriptions are not limited to the use of Sanskrit. A Mon inscription of *circa* 750-850 CE on a *sema* from Wat Non Sila in Khon Kaen province also reads: "The Brahman Mahayat gives the fruit of this merit to Rasa, who is of the lineage of Brahmā, and to [male name is missing], who is a relative." A second comparable Mon inscription on another *sema* from the same site also seem to record the practice of "transference of merit" by naming three men who gave merit to three others and then ends with "May the merit be offered to Maitreya" (Brown 1996: 31; Murphy 2010: 93). Finally, Brown discusses the stele bearing the Bo Ika inscription which carries a Buddhist donation on one side, while the other side records the establishment of a golden Śiva *liṅga* (Brown 1996: 32).

Furthermore, many first-millennium mitred images of the Brahmanical deity Viṣṇu have long been uncovered at sites in southern Thailand (O'Connor 1972: 21), as also in eastern Thailand around Prachin Buri province. One 67 cm. high four-armed stone image of Viṣṇu was found on the site of Wat Sala Thueng in Chaiya (Lavy, this volume, figs 1-2). Three other similar images are known: two were found in the region of Nakhon Si Thammarat and one in the area of Sichon. Other specimens are reported to come from Khao Si Wichai, Wiang Sa, Wat Phra Phikanet, about 20 kilometres north of Chaiya, and along the coast from Sichon to Nakhon Si Thammarat as well as from Sathing Phra. The most impressive is perhaps the 202 cm. high image of Viṣṇu from Takua Pa on the west coast of the peninsula (Jacq-Hergoualc'h 2002: 118-125). These Viṣṇu images are not the sole representatives of Brahmanism as Śiva *liṅga*s are also known to come from the same region. These vary in size from 20 cm. to 147 cm. A truly exceptional *ekamukhaliṅga*, with the face of Śiva on one side, was found at Nong Wai, about 20 kilometres north of Chaiya **[Figure 1]**. In addition, we can add the twenty ablution bases and mortises found in the area, though it is difficult to establish a link between them and the Śiva *liṅga*s referred above, except perhaps with the one found in an ancient temple at Nakhon Si Thammarat (Jacq-Hergoualc'h 2002: 128-133; Wannasarn, this volume, figs 7-9). Sathing Phra also yielded an early, possibly sixth century, image of Gaṇeśa which may be the oldest found in the region (Jacq-Hergoualc'h 2002: 133-134). In the coastal region extending from Sichon to Nakhon Si Thammarat, the finds of Brahmanical images were often associated with brick temples and nearly thirty shrines were identified, though many of these have since been destroyed. Two of the largest were at Khao Kha (Sichon district) and in Wat Mokkhalan (Tha Sala district). What is significant is the attested presence of Buddhist remains in the same area dated from around the fifth to eighth centuries CE (Jacq-Hergoualc'h 2002: 143-158).

From what precedes, it is evident that we can no longer consider the Brahmanical and Buddhist material at U Thong, Bodhisattva cave, Si Thep, etc. as sequential. Instead, Brahmanism and Buddhism clearly coexisted in many areas of pre-modern Thailand. One further comment requires emphasis. Secondary writings often divide Buddhism

Figure 6: *Stone* ekamukhaliṅga *from U Thong, Suphan Buri province. Currently in the U Thong National Museum [Photograph by Himanshu Prabha Ray].*

into two opposing camps, viz. Hīnayāna and Mahāyāna. This classification is however erroneous, since "Hīnayāna" is a polemical term that even in Mahāyāna texts is used in specific contexts. Prapod reminds us that monks affiliated to different "sects" sometimes lived in the same monasteries and lay support was given to members of different communities even by the same person. Even today, most Buddhists in Thailand do not think of themselves as "Theravāda" Buddhists but rather simply as supporters of the Buddha's *sāsana* or religion, and include in their practice ideas from both "Hīnayāna" and "Mahāyāna" traditions, as well as many practices that are not derived from Buddhism at all, such as the worship of local spirits (2010: 71-112).

One has also to desist from identifying schools in Buddhism based on linguistic evidence alone. For example languages very similar to Pāli were used by other "Hīnayāna sects," and Sanskrit was used by various groups, not necessarily Mahāyānist, such as the Sarvāstivādins or Mūlasarvāstivādins, the Dharmaguptakas and even possibly the Theravādins of the Abhayagirivihāra branch. As Prapod has underlined:

> People perceived religion as the institution in which to place their trust, with all religions being regarded as auspicious, and which could be applied to different situations in everyday life [...]. The idea that one professes to belong to a single religion is foreign to the Southeast Asian mind, which sees no need to synthesize multiple beliefs into one exclusive belief. (2010: 147)

In the final analysis it needs to be stressed that in ancient times, societies were not monolithic and that religions shared a common vocabulary, rather than demanding exclusive allegiance. How does this overview compare with the situation in the Indian subcontinent during the first millennium of the Common Era? Archaeological data corroborates the presence of Brahmanical temples at so-called Buddhist sites of Mathurā and Nāgārjunakoṇḍa and the use of Prakrit in *dharmacakra* pillar inscriptions from the Buddhist site of Amarāvatī (Seshadri Sastri 1984: 256-257) **[Figure 9]**.

Figure 7: *Stone Śiva* liṅga *from Khok Chang Din sanctuary, near U Thong, Suphan Buri province. Currently in the U Thong National Museum [Photograph by Himanshu Prabha Ray].*

Figure 8: *Stone Śiva* liṅga *and* yonī *from U Thong, Suphan Buri province. Currently in the U Thong National Museum [Photograph by Himanshu Prabha Ray].*

Nāgārjunakoṇḍa: The Religious Landscape

A region, which provides crucial archaeological data on the religious landscape from the earliest Neolithic settlement in the third millennium BCE to the sixteenth century CE, is the secluded Nāgārjunakoṇḍa valley extending over 23 square kilometres in Andhra Pradesh, shut in on three sides by offshoots of the Nallamalai hill range. More than thirty Buddhist establishments, nineteen Brahmanical temples and a few medieval Jain shrines were unearthed in several seasons of archaeological excavations conducted at the site after its discovery in 1920 until its submergence in 1960.

Early Buddhist religious architecture occurs throughout the valley, while early Brahmanical or later Hindu temples were located mainly along the banks of the Krishna river and around the citadel area **[Figure 10]**. The inscriptional records dated to the third and fourth century CE refer to the Ikṣvāku kings based at Nāgārjunakoṇḍa. A citadel complex overlooking the Krishna river was unearthed in archaeological excavations and several residential structures were located outside it. It is significant that religious architecture of both the Brahmanical and the Buddhist devotees was built on diverse ground plans and both used the apsidal form, associated earlier on only with the Buddhists (Ray 2004: 343-359).

Nāgārjunakoṇḍa is unique in that it provides a large corpus of inscriptions associated both with Brahmanical as well as Buddhist architecture which allows insights into several aspects of interaction between the community and religious architecture. The dynasty of the Ikṣvākus is prominently represented in the epigraphs, but royal patronage is indicated for only three of the nineteen Brahmanical temples; patronage for the other temples being provided by the community in general. An analysis of these records of donations indicates that in a majority of the Buddhist inscriptions the motive as stated by the donor related to attainment of *nirvāṇa* and the welfare and happiness of the world. A similar desire is evident in the inscription from the Brahmanical Pushpabhadrasvami temple, which was established by the king's wife and son for his long life and victory (Rupavataram 2003: Tables 30-31).

Generally speaking, Buddhist monuments carried records in Prakrit **[e.g. Figure 11]**, while Brahmanical monuments had records in Sanskrit, though there were notable exceptions: a Sanskrit epigraph of the 24th year of Ehuvala Chantamula, (ca 294 CE) when Kumaranandi, the son of Iśvaradatta, and a headman of Syandakaparvata along with his son Īśvarabhatta and his wife and other relatives installed a stone image of the Buddha (Sircar & Krishnan 1960-61: 17-22); and correspondingly a Prakrit record of the 30th year of Ābhīra Vasusēna recording the erection of the image of Aṣṭabhujasvāmī or eight-armed Viṣṇu (Sircar 1960-61: 197-204). It is also true that a majority of the inscriptions are in Prakrit and only six are in Sanskrit (Soundararajan 2006: 514).

Thus the assumption by historians that kings established temples and donated to *brāhmaṇa*s to seek legitimisation for their rule and that these religious shrines were agents of acculturation is not substantiated by the available data. Instead the data from Nāgārjunakoṇḍa clearly establishes the intersection of diverse religious traditions, some associated with communities settled earlier in the region and others

Figure 9: Dharmacakra *pillar inscribed with Prakrit inscription in Brāhmī script from Amarāvatī, Andhra Pradesh, India. Currently in the Archaeological Museum Amaravati [Photograph courtesy of Nicolas Revire].*

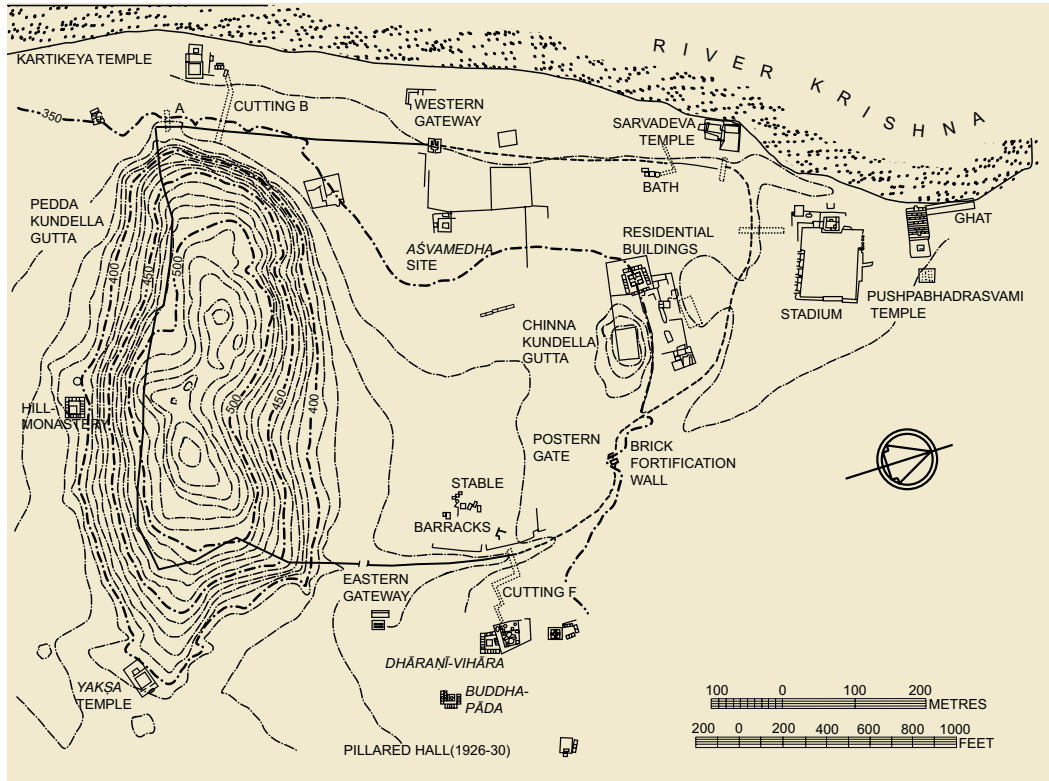


Figure 10: *Distribution of archaeological sites on Nāgārjunakoṇḍa hill, Andhra Pradesh, India [Drawing adapted from Sarkar & Misra 1999: pl. XIII].*

drawn in by movements of trading and craft groups, Buddhist clergy as well as internal dynamics associated with the emergence of the site as a centre of political power. Nāgārjunakoṇḍa as is evident from the archaeological record participated in both coastal networks as well as overland trading activity. It is also unusual in the varied secular architecture preserved at the site, including a citadel, an elaborate water system, residential complex and what has been termed an amphitheatre.

Several conclusions may be drawn from the excavations at Nāgārjunakoṇḍa **[Figure 12]**. One, the third-fourth century CE kings of the Ikṣvāku dynasty performed Vedic sacrifices and patronised the construction of temples, while their queens donated to the Buddhist Saṅghas. However, both the Brahmanical temples and the monastic complexes at the site were supported by lay devotees making it difficult to categorise them on the basis of their association with the political elite only. The monastic complexes at Nāgārjunakoṇḍa drew resources from a vast hinterland and while there is inscriptional evidence to suggest that monks from Sri Lanka were possibly resident at the site, there is debatable evidence for the centre sending out monks to preach in different parts of the subcontinent (Gethin 2012: 35-36).

One final point that needs an explanation is the changing power dynamics between the Brahmanical temple and the Buddhist shrine in peninsular India, i.e. the region south of the Vindhyas, from the fourth-fifth century CE onwards. Bronkhorst explains that in this period, Buddhists were ready to concede that there were occupations which should best be left to Brahmins, such as all forms of divination and

interpretation of signs, certain sciences, most notably mathematics and astronomy, and the art of giving professional advice to kings. Therefore, in the case of physiognomy, astrology, astronomy and mathematics there are Brahmanical, but no Buddhist treatises. It is also true that there are no Buddhist treatises that might compete with the *Arthaśāstra* or with the Laws of Manu (Bronkhorst 2011: 109). The points raised by Bronkhorst are well taken and need serious consideration. Somewhat different insights are, however, provided by the diversity of languages and scripts that expanded across the Bay of Bengal. Were Brahmins or Buddhist monks the sole transmitters of knowledge in this early period? In the next section, this issue is discussed with further reference to the archaeological data for the writing from the Indian subcontinent and Southeast Asia, especially Thailand.

Figure 11: *Four-sided pillar inscribed with a Buddhist Prakrit inscription in Brāhmī script from Nāgārjunakoṇḍa, Andhra Pradesh, India. Currently in the Archaeological Museum Nagarjunakonda [Photograph courtesy of Nicolas Revire].*

The Written Word and Information Transfer

In an earlier section, I have referred to the absence of any correlation between language, script and religious affiliation. It is suggested here that in the historical period, one significant use of writing was for codifying knowledge relating to economic transactions. Trading activity by its very nature was mobile, cut across political frontiers and as a result created its own networks of communication and information transfer. Around the third-second centuries BCE, urban centres in the western Deccan evolved from exchange and market centres largely as a result of the expansion of trade. In Andhra Pradesh, on the other hand, urban centres were in most cases, associated with localised chieftains and *rāja*s as a result of the growing power of the megalithic communities supplemented with trading activities. Further south, there is a clear distinction in settlements along the coast in contrast with those located inland.

The pace of change and inputs from trading communities is evident in references to the *nigāma* or market centre and the *goṣṭhī* or market association. In both the western and eastern Deccan changes in the nature of settlement are associated with increased religious activity as indicated by the construction of Buddhist monastic centres along trade routes and along the coasts. This was not the case further south where there is evidence for the presence of Jainism in the region around Madurai in the archaeological record. The earliest cave inscriptions from Sittanavasal from Puddukkotai region of Tamil Nadu show that Jains were in that region at least from second century BCE onwards. The Jains may have preceded the Buddhists in other regions as well and may have been the main competitors of the Buddhists rather than the Brahmins in this early period (Bronkhorst 2011: 20). The early Tamil sources, however, describe a diverse religious landscape with the concurrent presence of *brāhmaṇa*s, the performance of sacrifices and the reverence of the hero who led the communities in battle.

These diverse communities in peninsular South Asia used at least four languages, viz. Prakrit, Tamil, Old Sinhalese and Sanskrit, which were all written in Brāhmī scripts, with some evidence for the presence of Kharoṣṭhī as well. Brāhmī scripts were adopted for inscribing names in more than one language on pottery in peninsular India. This clearly indicates the presence of at least four language groups involved in trading activity in the region – those using Tamil, Prakrit, Sanskrit and

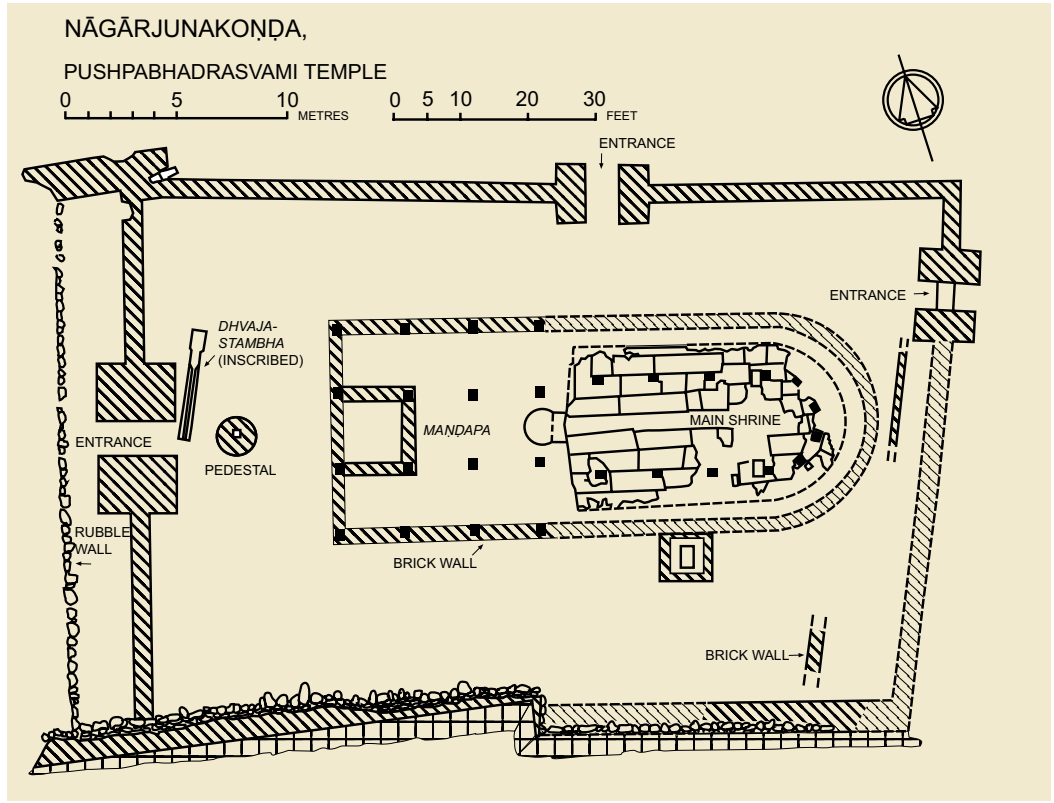


Figure 12: *Plan of an apsidal temple at Nāgārjunakoṇḍa, Andhra Pradesh, India [Drawing adapted from Soundararajan 2006: 227, fig. 71].*

Sinhala, with several overlaps between these networks. This complexity is further enhanced by finds of sherds with early Brāhmī inscriptions in fifth-fourth century BCE levels at Anurādhapura in Sri Lanka.

The finds of sherds inscribed with Brāhmī letters from Anurādhapura in Iron Age levels have raised several questions. A majority of the sherds are of coarse and medium black and red ware of local manufacture and the inscriptions are post firing. The inscriptions comprising of either letters or names are often described as being in Prakrit (Coningham & Allchin 1995), but this issue needs to be re-examined, in view of a different perspective presented by Iravatham Mahadevan (1996a). Mahadevan argues for Sinhala-Prakrit (Old Sinhalese) as the language of the inscribed sherds, including one sherd from Kodumanal. After the early centuries CE, the inscribed sherds decline in frequency and this corresponds to the increasing use of palm-leaf manuscripts (*oḷa*s). Ivory manuscript covers are also attested to in the excavations at Anurādhapura (Coningham & Allchin 1995: 178).

The finds of inscribed sherds at Anurādhapura in well-dated sequence has led the excavators to suggest mercantile involvement in the rise of a Brāhmī script or at least in its introduction into Sri Lanka (Coningham *et al.* 1996: 73-97). An analysis of the inscribed fragments from Anurādhapura indicates that the legends were inscribed on lids and on ceramic vessels and that many of these vessels may have been dedicated to religious establishments. During excavations of the northern and southern *ayaka*s or stone pillars of the main *stūpa* at Jetavana in Anurādhapura, seventeen vessels were found containing conch shells,

Figure 13: *Terracotta seal from Nakhon Pathom depicting a two-masted ship. Currently in the Bangkok National Museum, inv. no. 2309 [Photograph courtesy of Paisarn Piemmettawat].*

ivories, over two thousand beads, hundreds of fragments of semi-precious stones and so on (Coningham *et al.* 1996: 90). Thus the close association of mercantile activity with travels by Buddhist clergy is evident.

In addition, nearly two hundred inscribed potsherds were found at the site of Kodumanal in Coimbatore district of Tamil Nadu in stratified contexts. These are mostly in Tamil language written in the Tamil-Brāhmī script and a few are in Prakrit in a Brāhmī script. These have been dated through archaeo-magnetic tests to between 300 BCE and 200 CE (± 50) (Mahadevan 1996a: 59). The inscriptions on the pots include Tamil names such as Kannan Atan, Pannan, Antavan Atan, etc., as also Sanskrit names like Varuni. One burial (megalith II) yielded a sherd with the name Visaki. Another significant discovery was the presence of the term *nikama* (Rajan 1996: 79). Mahadevan argues for Sinhala-Prakrit (Old Sinhalese) similar to the language found on one sherd from Kodumanal.[1]

At least 17 of the 66 inscriptions on pottery from Arikamedu are known to be in Tamil. A majority of the inscribed sherds date to the first-second centuries CE, though the earliest find at the site was from the megalithic levels dated to the third century BCE. These consist largely of masculine personal names, such as "[…] *kuttai*" and has been identified as Prakrit *guttä* or *gutta* of the Sri Lankan cave inscriptions. Another proper name that has wider prevalence is "Kuyiran" (Tamil) or "Kubira" (Old Sinhalese) both derived from Sanskrit Kubera. Variants appear as "Kupiro" at Bharhut in central India, "Kubirako" from Bhattiprolu in Andhra Pradesh, "Kubira" in Sri Lankan cave inscriptions and "Kuviran" in early Tamil cave inscriptions (Mahadevan 1996b: 295-296).

Another 214 inscribed sherds were recovered from the archaeological excavations at Vaddamanu located 10 kilometres south-east of Amarāvatī on the Andhra coast. The largest concentration of 109 sherds was found in the Period II stratigraphic layer dated between 100 BCE and 200 CE, though the overall chronological span ranges from 200 BCE to the fourth century CE (Krishna Sastri *et al.* 1992: 116-140). The monastic complex at Salihundam or ancient Kattaharama also on the Andhra coast yielded 80 inscribed sherds and the few complete readings from the site would suggest that these were on platters or pots donated to the monastery (Subrahmanyam 1964: 119-122).

Thus several language groups used Brāhmī scripts, though there are regional variations, and the fact that it had wide currency across most parts of the Indian subcontinent around third-second centuries BCE is an indication of the extended linkages of the groups using it. Inscriptions on pottery have an extensive distribution in the early historic period and inscribed pottery fragments are found both at non-monastic and Buddhist monastic sites. Pots were used for transporting commodities and hence the extensive distribution of inscribed sherds. Particularly noteworthy in the monastic context are the inscribed bowls and vessels carrying dedicative inscriptions (Ray 1987: 2-3). Overall, the ceramics which bear inscriptions are varied and include black-and-red ware, all-black ware, russet-coated painted ware, rouletted ware and so on. Of these, fragments with legible inscriptions are few and these in a majority of cases contain names.

These inscribed sherds are in addition to the large numbers of seals and sealings found at archaeological sites in the Indian subcontinent (Thaplyal 1972). Seals were used for marking merchandise (*Arthaśāstra* II.21.2-3); they were stamped on wet clay laid over fastenings on the mouths of pots containing valuables (*Khadiraṅgārajātaka*, no. 40). They were also used for securing documents and for identification. An early Buddhist text, the *Milindapañha*, refers to the custodian of seals. These seals occur in a variety of materials such as stone, ivory, copper and the ubiquitous terracotta at a range of archaeological sites. Particularly relevant to our discussion are the carnelian seals and intaglios with inscriptions found at sites in Sri Lanka and at least at four major coastal centres in Southeast Asia, viz. Khuan Luk Pat in Krabi province and Chaiya in southern Thailand, Kuala Selinsing on the Malay Peninsula, and Oc Eo in southern Vietnam. The earliest specimen of carnelian seals with Brāhmī legends from Khuan Luk Pat dates to approximately the first century CE, though these continued to be in use until the sixth-seventh centuries CE as indicated by later finds (Ray 2000: 87-120). This corpus is supplemented by finds of seals with legends in alleged Kharoṣṭhī, e.g. a seal from U Thong apparently kept in the Phra Narai National Museum in Lop Buri. Kharoṣṭhī characters have also been identified on a seal matrix of tin from Oc Eo, while the male head on another tin seal resembles the head of Kuṣāṇa ruler Miaos on his coins (Mukherjee 1990: 3).

A symbol widely distributed in the Indian Ocean region is the ship symbol, which occurs around the first-second centuries CE on punch-marked, cast copper and Śātavāhana coins, terracotta sealings and as graffiti from deltaic Bengal and the Andhra coast (Ray 2000: 52). Other examples of the use of the ship-symbol on pottery and coins are known from Sri Lanka (Weishaar *et al.* 2001: 15-16) and southern Thailand. A terracotta seal from Nakhon Pathom depicts a two-masted ship identified as a Southeast Asian vessel with outrigger (Lyons 1979: 355) **[Figure 13]**.

Another archaeological site from the other end of the spatial spectrum is Khao Sam Kaeo located in the upper Thai-Malay Peninsula (Bellina-Pryce & Praon 2008; Bellina *et al.*, this volume). Archaeological excavations conducted here have identified settlement patterning at the site in the late prehistoric period and the extent to which the socio-cultural parameters changed in the early historical period. The site on the Tha Taphao river is particularly suited for this purpose as it was involved with both inland and maritime exchange involving the use of complex technology in glass and hard stone working. One gold seal bears a Sanskrit inscription that is stylistically dated fifth to sixth century CE. Two of the other three seals and the bicolour sphere all display the genitive forms of names in Prakrit language, written in an early Brāhmī script that was used from the first century BCE to the first century CE.

One of the earliest Tamil inscription found in Thailand dates to around the fourth century CE and is engraved on a small flat rectangular stone now in the possession of the temple museum of Wat Khlong Thom

in Krabi province. It reads "*perumpatan kal*" or stone of the goldsmith (Karashima 2002: 10). How is this data from inscribed pottery and seals written in Brāhmī scripts, but in a variety of languages, such as Sanskrit, Prakrit, Sinhala and Tamil to be understood? The shared culture that extended across not only South Asia, but also the Indian Ocean was part of a literate tradition, which was by no means controlled only by the ruler or the Brahmins. It also included Buddhist and Jain ascetics, as well as navigators and trading and crafts groups. Writing facilitated the storing of information, cumulative knowledge promoted new genre of cultural and artistic expression and aided ordering of information under numeric and alphabetic heads and the use of maps (Goody 2001: 144).

There is a marked difference in the distribution pattern of inscriptions in stone in peninsular India as compared to those on pottery and seals. The earliest are the rock edicts in Prakrit of the Mauryan ruler Aśoka, which are unique in the history of South Asia and are not replicated by subsequent kings. These are perhaps the only records where the king speaks to the populace in the first person and addresses them directly. The second-first century BCE period in India marked a shift in the relationship between the king, religious centres and the groups that patronised these as indicated by the placement and contents of the inscriptions. An analysis of the epigraphs shows a shift from local and individual entrepreneurs to kin-based trading groups using a common language and with more than casual links with religious institutions. Epigraphs were now located within Buddhist monastic establishments rather than in their vicinity. Instead of providing communication between the king and the populace, the inscriptions record donations to religious centres made by diverse groups and suggest the beginnings of religious travel to sacred centres.

From the fourth century CE onwards, inscriptions were increasingly inscribed on copper plates indicating both a change in the nature of recording, affiliation to religious institutions and transformation in the social base. At the same time these inscriptions reflect political consolidation and increasing complexity of the administrative structure as compared to those of the earlier period. For example, the Vilavetti copper plates of the fifth century Pallava King Siṁhavarman refer to taxes payable by metal-workers, leather-workers, weavers, shop keepers, artisans, water-diviners and so on, though the specific amounts are not mentioned (Mahalingam 1988: nos. 15, 78-81). This is further matched by an enlargement in the number of terms used for habitation types indicating increasing hierarchy in settlement pattern.

There was a corresponding increase in the resource base as evident from grants of land and villages to Brahmanical temples and Buddhist monastic establishments and elaboration, as also expansion in the social base of the temple, coinciding with marked transformations in the nature of the Buddhist monastic establishments. Modifications in ritual and ceremony meant alterations in consumption patterns and changing patterns of trade. Another change was in the use of language, such as Sanskrit mixed with Prakrit from the third and fourth centuries CE onwards.

As in South Asia, in Southeast Asia also early inscriptions are often associated with religious structures. In maritime Southeast Asia, the earliest inscriptions are in Sanskrit, inscribed on seven stone pillars located in the Kutei region of East Kalimantan on the east coast of Borneo, traditionally dated to the fifth century CE on palaeographical ground. These record the performance of a sacrifice by King Mūlavarman at the sacred place of Vaprakeśvara and the setting up of the sacrificial post by the Brahmins. A large number of donations were made on this occasion. The correspondence between these inscriptions and those from India is striking and it is evident that a conventional pattern seems to have been followed.

There was also a clear shift in maritime networks around the middle of the first millennium CE and pilgrims visiting sites associated with the life of the Buddha formed a major category of travellers, as also the setting up of religious shrines on successful completion of sea voyages. A cluster of fifth-seventh century inscriptions of unequivocal Buddhist affiliation was found in Kedah on the west coast of the Malay Peninsula. This includes engraving of a Buddhist formula on stone – a feature that does not occur among contemporary records from the Indian subcontinent, though the formula is found on terracotta sealings. Three of these inscriptions are made of local stone and bear similar illustrations of Buddhist *stūpa*s. Texts very similar to these inscriptions have been found on the island of Borneo and on the coast of Brunei (Wisseman Christie 1995: 256). The most interesting of these inscriptions in Sanskrit is that of Buddhagupta, which refers to the setting up of the stone by the mariner Buddhagupta, resident of Raktamṛttika, often identified with Rājbādīdāngā in Bengal, on the successful completion of his voyage (Chhabra 1965: 20-26).

Conclusion

From what precedes, certain conclusions may be drawn. First, information on seafaring communities from historical and archaeological sources indicates that their make-up cut across religious lines. Hence attempts at categorising them within present national boundaries may be in keeping with current aspirations, but has little support historically. Second, while trade provided an important motive for sea-travel, it was by no means the only reason for travel by sea and needs to be studied within a wider perspective of seafaring activity and maritime networks. Third, the role of religions, such as Buddhism or Brahmanism, in motivating and supporting seafaring activity needs to be recognised and accepted. Finally, for an appreciation of cultural interchanges across the Bay of Bengal, it is crucial to highlight the diverse channels of communication, which also included oral transmission by priests and pilgrims, traders, wandering story tellers and entertainers. It is only then that a holistic understanding of cultural interaction across the maritime world will emerge.

Moreover, archaeological research during the last few decades has deepened the past of Thailand and challenged the notion of a unified superimposed "Dvāravatī kingdom." In the 1980s, a careful study of aerial photographs of the central plain of Thailand produced an atlas of sixty-three moated settlements (Phongsi & Thiwa 2524) that have been generally identified as remnants of this "Dvāravatī kingdom," on the shores of the former extent of the Bay of Bangkok. During the first millennium CE, it has been suggested that the sea level was appreciably higher and the shallow bay extended inland many more kilometres

than at present, possibly creating an irregular shoreline with numerous peninsulas. Particularly relevant to this section is the Chao Phraya valley, the large fertile lowland suitable for rice cultivation and accessible to maritime travel through the Gulf of Thailand (Trongjai, this volume). While Buddhism provided a common faith to the several contemporary centres and the diverse and heterogeneous communities inhabiting the region during the first millennium CE, it is also significant that as in India, Buddhist centres co-existed with Brahmanical shrines.

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Endnote

1 Mahadevan's study (1996a) has not taken the Anurādhapura material into account, but is based on nine sherds from coastal centres in India dated between second century BCE and the first century CE. Other sites in Tamil Nadu include Arikamedu (two sherds) and Alagankulam (two sherds).

References

Bellina-Pryce, Bérénice & Praon Silapanth
2008 Weaving Cultural Identities on Trans-asiatic Networks: Upper Thai-Malay Peninsula – An Early Socio-political Landscape. *Bulletin de l'École française d'Extrême-Orient* 93 [for 2006]: 257-293.

Bronkhorst, Johannes
2011 *Buddhism in the Shadow of Brahmanism*. Leiden: Brill.

Brown, Robert L.
1996 *The Dvāravatī Wheels of the Law and the Indianization of South East Asia*. Leiden: Brill.

Chattopadhyaya, Brajadulal
1994 *The Making of Early Medieval India*. New Delhi: Oxford University Press.

Chhabra, Bahadur Ch.
1965 *Expansion of the Indo-Aryan Culture during Pallava Rule*. Delhi: Munshiram Manoharlal.

Cœdès, George
1961 *Recueil des inscriptions du Siam. Pt. II. Inscriptions de Dvāravati, de Çrīvijaya et Lāvo*. Bangkok: Fine Arts Department. [Second Revised Edition; First Edition 1924. In Thai and French]

Coningham, Robin A.E. & Allchin, F.R.
1995 The Rise of Cities in Sri Lanka. In Allchin, Frank R. (ed.), *The Archaeology of Early Historic South Asia*. Cambridge: Cambridge University Press, pp. 152-184.

Coningham, Robin A.E. *et al.* (ed.)
1996 Passage to India? Anuradhapura and the Early Use of the Brahmi Script. *Cambridge Archaeological Journal* 6(1): 73-97.

Desai, Devangana
1989-90 Presidential Address, Section I. In *Proceedings of the Indian History Congress, 50th session*. Gorakhpur: University of Gorakhpur, pp. 21-56.

Dhida Saraya
1999 *(Sri) Dvaravati: The Initial Phase of Siam's History*. Bangkok: Muang Boran Publishing House.

Gethin, Rupert M.L.
2012 Was Buddhaghosa a Theravādin? Buddhist Identity in the Pali Commentaries and Chronicles. In Skilling, Peter *et al.* (eds), *How Theravāda is Theravāda: Exploring Buddhist identities*. Chiang Mai: Silkworm Books, pp. 1-63.

Goody, Jack
2001 *The Power of the Written Tradition*. Washington-London: Smithsonian Institution Press.

Jacq-Hergoualc'h, Michel
2002 *The Malay Peninsula: Crossroads of the Maritime Silk Road (100 BC – 1300 AD)*. Leiden: Brill.

Karashima, Noboru
2002 Tamil Inscriptions in Southeast Asia and China. In Karashima, Noboru (ed.), *Ancient and Medieval Commercial Activities in the Indian Ocean: Testimony of Inscriptions and Ceramic Sherds*. Tokyo: Taisho University, pp. 10-18.

Krishna Sastri *et al.* (ed.)
1992 *Thotlakonda*. Hyderabad: Government of Andhra Pradesh.

Lyons, Elizabeth
1979 Dvaravati: A Consideration of its Formative Period. In Smith, Ralph B. & Watson, William (ed.), *Early South East Asia*. New York: Oxford University Press, pp. 352-359.

Mahadevan, Iravatham
1996a Old Sinhalese Inscriptions from Indian Ports: New Evidence for Ancient India-Sri Lanka Contacts. *Journal of the Institute of Asian Studies* 14(1): 55-67.

1996b Pottery Inscriptions in Brahmi and Tamil-Brahmi. In Begley V. *et al.* (ed.), *The Ancient Port of Arikamedu: New Excavations and Researches 1989-1992*. Pondicherry: École française d'Extrême-Orient, pp. 287-315.

Mahalingam, Tēraḷundūr Veṅkaṭarāma
1988 *Inscriptions of the Pallavas*. New Delhi: Indian Council for Historical Research and Agam Kala Prakashan.

Manguin, Pierre-Yves
2004, The Archaeology of Early Maritime Polities of Southeast Asia. In Glover, Ian & Bellwood, Peter (eds), *Southeast Asia: From Prehistory to History*. London and New York: Routledge Curzon, pp. 282-313.

Manguin, Pierre-Yves, Mani, A. & Wade, Geoff
2011 *Early Interactions between South and Southeast Asia: Reflections on Cross-cultural Exchange*. Singapore: Institute of Southeast Asian Studies.

Mukherjee, Bratindra N.
1990 Kharoshti and Kharoshti-Brahmi Inscriptions in West Bengal (India). *Indian Museum Bulletin* 25. [Special Issue]

Murphy, Stephen A.
2010 *The Buddhist Boundary Markers of Northeast Thailand and Central Laos, 7th-12th Centuries CE: Towards an Understanding of the Archaeological, Religious and Artistic Landscapes of The Khorat Plateau*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished]

Nandi, Ramendra Nath
1986 *Social Roots of Religion in Ancient India*. Calcutta: K.P. Bagchi.

O'Connor, Stanley J.
1972 *Hindu Gods of Peninsular Siam*. Ascona: Artibus Asiae Supplementum.

Phongsi Wanasin & Thiwa Suphachanya
2524 *Mueang boran boriwen chai fang thale doem khong thi rap phak klang prathet thai: kansueksa tamnaeng thi tang lae phumisat samphan* (*Ancient Cities on the Former Coastline in the Central Plain of Thailand: The Study of Sites and Geographical Correlation*). Bangkok: Chulalongkorn University Press. [In Thai; 1981 CE]

Prapod Assavavirulhakarn
2010 *The Ascendancy of Theravāda Buddhism in Southeast Asia*. Chiang Mai: Silkworm Books.

Rajan, Karai
1996 Kodumanal Excavations – A Report. In Ramesh, K.V. *et al.* (ed.), *Gauravam: Recent Researches in Indology*. New Delhi: Harman Publishing Company, pp. 72-86.

Ray, Himanshu Prabha
1987 Inscribed Potsherds: A Study. *Indica* 24(1): 1-14.

2000 *The Winds of Change: Buddhism and the Maritime Links of Early South Asia*. New Delhi: Oxford University Press. [Reprint; First Edition 1994]

2004 The Apsidal Shrine in Early Hinduism: Origins, Cultic Affiliation, Patronage. *World Archaeology* 36(3): 343-359.

2008 Archaeology and Empire: Buddhist Monuments in Monsoon Asia. *The Indian Economic and Social History Review* 45(3): 417-449.

Revire, Nicolas
2012 A Comprehensive Study of Bhadrāsana Buddha Images from First-Millennium Thailand. *Rian Thai: International Journal of Thai Studies* 5: 91-152.

Rupavataram, Anita
2003 *An Archaeological Study of the Temple in the Eastern Deccan: 2nd century BC to 8th century AD*. M. Phil.Thesis. New Delhi: Jawaharlal Nehru University. [Unpublished]

Sarkar, Haribishnu & Misra, Bhaskar N.
1999 *Nagarjunakonda*. New Delhi: Archaeological Survey of India.

Seshadri Sastri, P.
1984 Dharanikota Dharmachakra Pillar Inscription. *Epigraphia Indica* 24: 256-260. [Reprint; First Edition 1937-38].

Sircar, Dines C.
1960-61 Nagarjunakonda Inscription of the Time of Abhira Vasushena, Year 30. *Epigraphia Indica* 34: 197-204.

1975 *Inscriptions of Asoka*. New Delhi: Government of India. [Third Edition; First Edition 1957]

Sircar, Dines C. & Krishnan, K.G.
1960-61 Two Inscriptions from Nagarjunakonda. *Epigraphia Indica* 34: 17-20.

Skilling, Peter
2003 Dvāravatī: Recent Revelations and Research. In Baker, Chris (ed.), *Dedications to HRH Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra*. Bangkok: The Siam Society, pp. 87-112.

2007 King, Saṅgha and Brahmans: Ideology, Ritual and Power in Pre-modern Siam. In Ian Harris (ed.), *Buddhism, Power and Political Order*. London-New York: Routledge, pp. 182-215.

Soundararajan, K.V.
2006 *Nagarjunakonda 1954-1960*. Memoirs of the Archaeological Survey of India, no. 75. New Delhi: Archaeological Survey of India.

Subrahmanyam, Rayaprolu
1964 *Salihundam, a Buddhist Site in Andhra Pradesh*. Hyderabad: Government of Andhra Pradesh.

Thapar, Romila
2000 *Cultural Pasts: Essays in Early Indian History*. New Delhi: Oxford University Press.

Thaplyal, Kiran Kumar
1972 *Studies in Ancient Indian Seals*. Lucknow: Akhila Bharatiya Sanskrit Parishad.

Weishaar, Hans J. *et al.* (ed.)
2001 *Ancient Ruhuna: Sri Lankan-German Archaeological Project in the Southern Province*. Mainz am Rhein: Verlag Philipp von Zabern.

Wisseman Christie, Jan
1995 State Formation in Early Maritime Southeast Asia: A Consideration of the Theories and the Data. *Bijdragen tot de Taal-, Land- en Volkenkunde* 151(2): 235-288.

Conch-on-hip Images in Peninsular Thailand and Early Vaiṣṇava Sculpture in Southeast Asia

Paul A. Lavy

Introduction

The dating of what are probably the earliest Brahmanical sculptures from Thailand, and indeed from all of Southeast Asia, has come under renewed scrutiny in recent years. The well-known Viṣṇu (or Vāsudeva-Kṛṣṇa) image **[Figures 1-2]**, from Chaiya, Surat Thani province in peninsular Thailand, has attracted considerable attention, but there is little consensus among scholars regarding its date or immediate stylistic precedents.

Since the groundbreaking work of Stanley O'Connor (1972: 39), many scholars have followed his fourth century attribution for the date of the Chaiya image, or his *terminus ante quem* of *circa* 400 CE.[1] Others have accepted O'Connor's argument (1965: 49-57) that the Chaiya image may be the earliest Brahmanical sculpture in Southeast Asia, but have advocated various dates ranging through the fifth-sixth centuries CE.[2] The proponents of O'Connor's fourth century date have demonstrated a somewhat blinkered tendency to ignore without comment the arguments that favour a later date, and this in spite of considerable evidence that a fifth or early sixth century date is justified. At the other end of the spectrum, the recent suggestion of a date in the second quarter of the sixth century strains the evidence, attempts unsupportable specificity construed through debatable stylistic comparisons, and perhaps pushes the date rather too late (Havenon 2006-07: 86-90).

By comparison to the lengthy and unresolved discussion surrounding the Chaiya image, there has been almost no analysis of two closely related and long-known Viṣṇu sculptures, both from Nakhon Si Thammarat province, Thailand **[Figures 3-4, 7-8]**. To these may be added a third conch-on-hip Viṣṇu from the same province (Preecha & Wannasarn 2546: 90-107; Wannasarn 2013: 76-78) **[Figures 5-6]**. Discovered in 2000, it provides important new and corroborating evidence for the arguments that will be advanced here.

This essay examines these four sculptures, and offers a reassessment of the issues and arguments surrounding their dates and stylistic relationships.[3] It then seeks to determine a relative chronological sequence for their development, an endeavour that has not been previously undertaken. While scholars have long observed that the Chaiya image exhibits stylistic features that closely relate it to sculpture from India, the same cannot be said for the three Nakhon Si Thammarat Viṣṇus, which do not have close South Asian counterparts. Thus, this essay utilises comparisons with Indian sculpture to reaffirm a late fifth or early sixth century date (ca 500 CE) for the Chaiya image, but does not

Far left Figure 1: *Vāsudeva-Kṛṣṇa, found at Wat Sala Thueng, Chaiya district, Surat Thani province, Thailand, ca 500 CE, sandstone (?), H. 67 cm., Bangkok National Museum [Photograph courtesy of Paisarn Piemmettawat].*

Left Figure 2: *Profile of Vāsudeva-Kṛṣṇa, found at Wat Sala Thueng, Chaiya district, Surat Thani province, Thailand [Photograph courtesy of* Artibus Asiae*, after O'Connor 1972: fig. 1b].*

Figure 3: *Viṣṇu, found at Wat Phra Phreng, Phra Phrom district, Nakhon Si Thammarat province, Thailand, ca early 6th cent. CE, sandstone (?), H. 65 cm., Wat Phra Mahathat Museum, Nakhon Si Thammarat [Photograph courtesy of Paisarn Piemmettawat].*

depend on South Asian evidence to chart the subsequent development of the Nakhon Si Thammarat Viṣṇus.[4] Instead, following the advice of Robert Brown (2000: 2) to focus on the "evidence within the Southeast Asian corpus itself," it turns attention to their relationships with other Southeast Asian sculpture and to comparative analysis among the four images themselves.

The Conch-on-hip Image Type

The conch-on-hip iconographic type that is the focus of this essay is represented in Southeast Asia by at least seven, and possibly twelve, sculptures: (1-4) the four images from peninsular Thailand that are discussed here **[Figures 1-8]**; (5) the Viṣṇu from Tuol Koh in Ta Keo province, Cambodia, now in the National Museum, Phnom Penh (Dalsheimer & Manguin 1998: 91-93, fig. 1; Lavy 2004: 245-249); (6) a Viṣṇu reportedly from the site of Oc Eo in An Giang province, Vietnam, and now in the Museum of Vietnamese History, Ho Chi Minh City (Malleret 1959: 393-395, pl. LXXXII; Lavy 2004: 275-278); and (7) a Viṣṇu image from Wat Krapau Brik in the village of Vong The near Ba The, also in An Giang province, and also now in the Museum of Vietnamese History (Malleret 1959: 395-396, pl. LXXXIIIa-b; Lavy 2004: 278-279, 343-344).

There are at least five additional candidates, but in each case it is difficult to determine with any degree of certainty whether a conch was originally present or placed against the hip. Two high-relief stone Viṣṇus from Suphan Buri province, Thailand – one in U Thong district and the other at the city pillar shrine in the municipal district of Suphan Buri – may have been conch-on-hip images, but they are today obscured beneath heavy layers of gold foil (Wannasarn 2013: 86-88, figs 2.14 and 2.16). Another stone relief sculpture, stylistically related to the Suphan Buri images and also presently encrusted in gold leaf, is housed at San Phra Kan in Lop Buri, Thailand (Dhida 2545: 127). A fourth possibility is a small and badly damaged sculpture from Nhon Nghia near Can Tho, Vietnam, now in the Can Tho Museum (Lê 2006: 64, 77, 198, figs 44-45, 81b). The fifth is an image from Trapeang Veng, Tra Vinh province, Vietnam, known to the present author only through a drawing (Malleret1963: 17-19, fig. 3). In total, these twelve images probably range in date from *circa* 500 CE (the Chaiya image) to perhaps as late as the early seventh century (the Ba The, U Thong, and Lop Buri images).

Although these twelve images vary in terms of style, state of preservation, and in aspects of their iconography, they belong to a large family of early Vaiṣṇava images from Southeast Asia characterised by four arms (*caturbhuja*), a bare torso, a mitred headpiece, and a long robe worn around the hips. The primary iconographic trait that distinguishes these sculptures from other "Viṣṇu" images is the conch shell (*śaṅkha*) held akimbo by the anterior (or "natural") proper left hand against the proper left hip.[5]

Characterised by a heavy round body and pronounced whorls at the apex, these *śaṅkha*s are usually identified as *Turbinella pyrum*, a species of gastropod that inhabits the Bay of Bengal, the coast of southern India, and the waters around Sri Lanka. Known more commonly as the "Indian Chank," these shells have a long history of ritual use and cultural significance throughout much of India (Hornell 1915). As ritual implements for libations, lustrations, or producing sound, they are notable in Southeast Asia particularly in the art of eleventh-thirteenth century Angkor (Krisda 2010: 156-157). This is a period from which numerous ritual conches survive in bronze, stoneware, and, more rarely, natural shell with bronze mounts (Boisselier 1966: 333-334; Jessup & Zéphir 1997: 322, cat. no. 105; Soutif 2008; Rooney 2010: cat. nos. 20, 21, 47, 135, 136). As an aquatic symbol associated with creation and an emblem of a warrior (i.e. a war-trumpet), the conch has been a perennial element of Vaiṣṇava iconography from nearly its inception (Krishna 1980: 30-40; Taddei 1991: 647-655; Srinivasan 1997: 185, 216-217).

Vaiṣṇava images of the conch-on-hip type seem to have first appeared in the Kuṣāṇa art of Mathurā (second-third century CE) **[Figures 9-10]**, remained relatively common through the Gupta period (fourth to mid-sixth century CE) **[Figures 11-14]**, and occurred sporadically in Indian art thereafter. By the fifth century, however, the conch was increasingly, but to varying degrees, detached from the hip (Bautze-Picron 1985: 442) **[Figures 13-14]**.[6] In Southeast Asia, conch-on-hip images appear – according to current evidence and confirmed through stylistic analysis – to have been exclusively early in date, i.e., confined to the sixth and perhaps early seventh centuries CE. During the late sixth and early seventh centuries, the conch-on-hip iconography was replaced by, or evolved into, a new iconographical type that was probably a Southeast Asian innovation (Brown 2000: 10). The conch was no longer placed on the left hip, but was instead elevated in the raised left hand. Thus, the new arrangement of the attributes became, clockwise from the lower proper right hand, the orb, discus or wheel (*cakra*), conch (*śaṅkha*), and mace or club (*gadā*).[7] This new iconography occurred not only in peninsular Thailand, but also in eastern Thailand, Cambodia, southern Vietnam, and, to a more limited degree, in Java and Myanmar (Lavy 2004: 303-304, n. 5). It was particularly popular in the Khmer artistic tradition where its continuity is indicated by numerous sculptures dating from the pre-Angkorian period through the sixteenth century (e.g. Jessup & Zéphir 1997: cat. nos. 31, 34, 69, 108, 115) and

Figure 4: *Back of Viṣṇu, found at Wat Phra Phreng, Phra Phrom district, Nakhon Si Thammarat province, Thailand [Photograph by Paul Lavy].*

Left Figure 5: *Viṣṇu, from Wat Ta Nen site, Tha Sala district, Nakhon Si Thammarat province, Thailand, ca early to mid-6th cent. CE, grayish white sandstone (?), H. 49 cm., currently at Wat Sai Kham, Tha Sala district, Nakhon Si Thammarat province, Thailand [Photograph courtesy of Wannasarn Noonsuk].*

Right Figure 6: *Back of Viṣṇu, from Wat Ta Nen site, Tha Sala district, Nakhon Si Thammarat province, Thailand [Photograph courtesy of Wannasarn Noonsuk].*

Left Figure 7: *Viṣṇu, found at Ho Phra Narai, Mueang Nakhon Si Thammarat district, Nakhon Si Thammarat province, Thailand, ca early to mid-6th cent. CE, sandstone (?), H. 78 cm., Nakhon Si Thammarat National Museum, inv. no. 16/2515 [Photograph by Paul Lavy].*

Right Figure 8: *Back of Viṣṇu, found at Ho Phra Narai, Mueang Nakhon Si Thammarat district, Nakhon Si Thammarat province, Thailand [Photograph by Paul Lavy].*

by the late twelfth or early thirteenth century relief sculptures from the Bayon that depict standing four-armed Viṣṇu statues in worship and holding the same four attributes in the same configuration (e.g. Jessup & Zéphir 1997: 137, fig. 4).

Conch-on-hip Images from Peninsular Thailand

First published in 1928 and housed today in the Bangkok National Museum, the "Chaiya Viṣṇu" **[Figures 1-2]** was discovered at Wat Sala Thueng in the Chaiya district of Surat Thani province (Cœdès 1928: 25, pl. X, centre). Prior to O'Connor's studies, scholars tended to characterise it and other comparable images, as rustic, mediocre, degraded, aberrant, and archaistic works of relatively late date, i.e., the seventh-eighth centuries CE (Boisselier 1959b).[8] This date was refuted by O'Connor (1972: 39), who used Indian evidence to advocate a date "at least three centuries" earlier for the Chaiya image.

O'Connor (1972: 25-26) also drew attention to two four-armed Viṣṇu sculptures, also from peninsular Thailand, that are closely related to the Chaiya image in both iconography and style. Although noted in earlier scholarship, neither of these images had previously been the subject of serious discussion.[9] Both were discovered south of Chaiya in what is today Nakhon Si Thammarat province. One of them, displayed today at the Wat Phra Mahathat Museum in Nakhon Si Thammarat, was found at Wat Phra Phreng in Na San sub-district, Phra Phrom district **[Figures 3-4]**.[10] The other was found at Ho Phra Narai ("Narayana, or Viṣṇu, Shrine") in the municipal (Mueang) district and is now housed in the Nakhon Si Thammarat National Museum **[Figures 7-8]**. A third conch-on-hip Viṣṇu sculpture from Nakhon Si Thammarat province was recently discovered at the site of Wat Ta Nen in Pho Thong sub-district, Tha Sala district, and is currently held nearby at Wat Sai Kham in Don Tako sub-district (Wannasarn 2013: 76) **[Figures 5-6]**.

These four conch-on-hip images **[Figures 1-8]** share numerous stylistic features that, occurring altogether, unite them as a group and indicate an early date in the development of Southeast Asian stone sculpture.[11] These include what O'Connor (1972: 25-26) characterised as a "flat, two-dimensional presentation" and a "harsh angular rhythm of the contours." They all exhibit a strict frontality, nude torso, and similar calf-length garment with a long vertical fold between the legs. All four have a system of two sashes with one wrapped around the waist and the other falling in an arc across both thighs. Except for the less well-preserved Wat Ta Nen image, the tension of the fabric, wrapped tightly around the waist, is indicated by a series of narrow parallel folds or creases along the legs. The head of the Wat Ta Nen image has not been found, but the other three sculptures have somewhat similar high narrow mitres and long, heavy earrings that fall from the earlobes to the shoulders.

Below left Figure 9: *Vāsudeva-Kṛṣṇa, Mathurā, Mathurā district, Uttar Pradesh, India, Kuṣāṇa period, ca 2nd-3rd cent. CE, red sandstone, H. 33 cm., Mathurā Museum, inv. no. MM 34.2487 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 54513, negative no. 365.65].*

Below right Figure 10: *Vāsudeva-Kṛṣṇa, found in a well at Baghichal Birhal, Īsapur, Mathurā district, Uttar Pradesh, India, Kuṣāṇa period, ca 2nd-3rd cent. CE, red sandstone, H. 22 cm., Mathurā Museum, inv. no. MM 15.956 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 469, negative no. 20.26].*

The Vāsudeva-Kṛṣṇa from Chaiya

In order to "resolve" the chronological problems posed by the conch on-hip images from peninsular Thailand, O'Connor (1972: 32-40) turned to the art historical evidence from India and attempted to locate Indian prototypes for the Southeast Asian images. He traced their lineage ultimately to several Kuṣāṇa-period sculptures from Mathurā that share similar iconographic features with the Chaiya image, including the anterior proper right hand raised with the palm outward

in either the gesture of *abhayamudrā* or *vyāvṛttamudrā*, the mace held in the posterior right hand, and the conch held against the hip by the anterior left hand (O'Connor 1972: 33-34; Schmid 2010: 205-235, 534-549, figs 24-38) **[Figures 9-10]**. Like these Kuṣāṇa examples, the Chaiya image **[Figure 1]** would in all likelihood have held a *cakra* in its now lost posterior left hand.

More recent scholarship has convincingly demonstrated that this iconography belongs specifically to an early form of Viṣṇu known as Vāsudeva-Kṛṣṇa, one of the five Vṛṣṇi Vīras (heroes) who were apotheosised probably no later than the early second century BCE. They became the focus of an ancestor cult that was centred at-, and disseminated from-, Mathurā during late centuries BCE and early centuries CE, particularly during the Kuṣāṇa period (Härtel 1987: 573-587; Srinivasan 1997: 211-220, 240-259; Schmid 2010: 121-171). By the late second or early first century BCE, Vāsudeva-Kṛṣṇa seems to have emerged as the most important of the deified Vṛṣṇi heroes and the dominant deity of Bhāgavatism while the importance of the others gradually diminished (Jaiswal 1981: 62-92). These developments were associated with the crystallisation of Vaiṣṇavism, which chiefly occurred at Mathurā during the Kuṣāṇa period through the merging of previously distinct traditions oriented around (1) the Viṣṇu of the Vedas, (2) Nārāyaṇa of the Brāhmaṇas and Āraṇyakas, and (3) Bhāgavata Vāsudeva (Srinivasan 1997: 257-258; Schmid 2010: 363-385). The Viṣṇu of the Vedas was a relatively minor divinity, and the god named Viṣṇu does not appear in Indian epigraphy until the Gupta period (Härtel 1987: 586). The Hindu deity properly called "Viṣṇu" probably first appeared in art during the transitional period from the late Kuṣāṇa to the early Gupta period, and thus "so-called Kuṣāṇa Viṣṇu" images **[Figures 9-10]** should be recognised as representations of Vāsudeva-Kṛṣṇa (Härtel 1987: 585-587).

Figure 11: *Vāsudeva-Kṛṣṇa, Devangarh, Nawādā district, Bihar, India, post-Kuṣāṇa or early Gupta period, ca 4th cent. CE, buff sandstone, H. 136 cm., Patna Museum, inv. no. Arch.11299 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 23959, negative no. 111.13].*

Robert Brown (2000: 2-6), following some of the aforementioned scholars, has argued that the Chaiya image should be identified not as Viṣṇu but rather as Vāsudeva-Kṛṣṇa, and it is this identification that is adopted here. Contra Brown, it has been suggested that the term Viṣṇu "probably supplanted Vāsudeva by the date" of the Chaiya image (Havenon 2006-07: 95-96, n. 19), but it is by no means clear that such a transformation was uniformly complete throughout all of South and Southeast Asia. With variable iconography (i.e., the configuration of the attributes in the four hands), Vāsudeva consistently appears as one of the twenty-four forms of Viṣṇu *caturviṃśatimūrti* (or *caturviṃśatimūrtayaḥ*) enumerated in Indian iconographical texts from the *Agnipurāṇa*, probably the earliest extant description of these forms, through their systematisation in *circa* the ninth century and onwards (Bidyabinod 1920; Mallmann 1963: 3-6; Krishna 1980: 86-87).[12] In Cambodia, there are several pre-Angkorian inscriptions that refer to a deity, or deities, named Śrī Kapilavāsudeva (K. 151 and K. 563) and Vāsudeva (*bhagavate vāsudevāya*, K. 134/dated 781 CE) (Cœdès 1942: 92-94, 198 and 1943-1946: 5-7). Dating from *circa* the mid-seventh to the late eighth century, these inscriptions provide testimony to the continued use of the name Vāsudeva, though it cannot be precisely determined to what divinity or iconography the name referred.

In addition to iconography, O'Connor (1972: 33) also emphasised stylistic similarities between Mathurā sculpture and the Chaiya

Vāsudeva-Kṛṣṇa, such as the carving of the posterior right hand against the mace, the banded decoration of the mace, and the arrangement of the jewellery. There are, however, significant stylistic differences between them. Most notably, the Mathurā images of Vāsudeva-Kṛṣṇa, whether carved in high-relief or in-the-round, tend to have a more fully modeled and robust figure, they lack the looping sash, and many of them wear a turban. When trapezoidal or cylindrical crowns or mitres do appear in Mathurā art, in what is perhaps a slightly later development, they often have prominent rims around the edges or vertical flanges on both sides and, in the cases where decoration is preserved, lack the foliate pattern of the Chaiya image **[Figure 10]**. Cylindrical mitres without flanges appear *circa* fourth century CE during the transitional period from late-, or post-, Kuṣāṇa to early Gupta **[Figures 12-13]**.

Figure 12: *Viṣṇu, Mathurā area, Uttar Pradesh, India, post-Kuṣāṇa or early Gupta period, ca 4th cent. CE, pink sandstone, H. 79.4 cm., The Avery Brundage Collection, acc. no. B73S17 [Photograph courtesy of the Asian Art Museum, San Francisco].*

Casting more widely for potential comparisons to the Chaiya image, O'Connor first turned to a Viṣṇu (or Vāsudeva-Kṛṣṇa) sculpture from Bhinmāl (Rajasthan), then believed to date to *circa* 400 CE (Shah 1955-56: 52-54) but now accepted by most art historians as a later image **[Figure 18]**. He noted that the two sculptures not only exhibit comparable iconography, but that they seem to emerge from the same "stylistic current" (O'Connor 1972: 35, fig. 11). His discussion moved next to two sculptures from Andhra Pradesh, both of which he identified as "Viṣṇu" (O'Connor 1972: 37-38): a now headless Vāsudeva-Kṛṣṇa sculpture from Yeleśwaram **[Figure 15]** and a relief from Koṇḍamoṭu **[Figure 16]** that depicts Nārasiṃha and the Vṛṣṇi Vīras, including Vāsudeva-Kṛṣṇa. These images were then understood to date to the fourth-fifth and third-fourth centuries respectively (Khan 1963: 14 and 1964: 1-4). The early fourth century, however, may be the latest reasonable date for both (Havenon 2006-07: 88, 97, n. 44). They both have only two arms, but, like the Chaiya image, they hold a conch against the left hip, wear a garment that includes the low-arcing sash, and are adorned with heavy earrings that drape onto the shoulders. Based on these similarities, O'Connor concluded that, although the "ultimate prototypes" for the Chaiya image may be sought in Kuṣāṇa-period Mathurā, "the most immediate stylistic influence seems to be from the fourth century art of the Andhradeśa." Thus, he argued, it dates "no later" than 400 CE, and the Viṣṇus of Wat Phra Phreng **[Figures 3-4]** and Ho Phra Narai **[Figures 7-8]**, which exhibit some stylistic similarities to the Chaiya image but slightly different iconography, should be ascribed to the fifth century (O'Connor 1972: 39).

O'Connor's re-dating of the Chaiya Vāsudeva-Kṛṣṇa from the eighth to the fourth century won widespread acceptance and remains influential to this day (Piriya 2012: 100-101, fig. 1.96). It is now clear, however, that there are a number of significant problems with his arguments. First, it is unlikely that the "two-armed" Yeleśwaram and Koṇḍamoṭu images would have had a direct, or "immediate," relationship with the "four-armed" Chaiya image (Brown 2000: 4). Furthermore, the *kirīṭamukuṭa* (crown or mitre), worn by the Vāsudeva-Kṛṣṇa in the Koṇḍamoṭu relief does not "match," as O'Connor (1972: 38) vaguely stated, those worn by the three peninsular images, neither in its overall form nor in its decoration. In spite of the problems with comparing relief sculpture to free-standing sculpture (however flat and

Figure 13: *Viṣṇu, northern central India, Gupta period, ca late 4th-early 5th cent. CE, sandstone, H. 68.6 cm., Brooklyn Museum, acc. no. 81.203 [Photograph courtesy of the Brooklyn Museum].*

Figure 14: *Viṣṇu, Unchdih, Allahabad district, Uttar Pradesh, India, Gupta period, ca early to mid-5th cent. CE, buff sandstone, H. 80 cm., Allahabad Museum, inv. no. AM 857 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 12028, negative no. 12.59].*

allied to relief the peninsular images may be), some observations can be made.

The Koṇḍamoṭu Vāsudeva-Kṛṣṇa **[Figure 16]** appears to wear a cylindrical *kirīṭamukuṭa* belonging to a type, presumably in imitation of metal, which first appeared in Vaiṣṇava imagery (i.e., an image from Malhār, Chhattisgarh) as early as the second or first century BCE (Srinivasan 1997: 185, pls 14.1, 15.3). In both South and Southeast Asia somewhat similar mitres are associated with the deities Indra, Sūrya, Viṣṇu, and Harihara. Indra images often, but not invariably, wear such mitres in the Kuṣāṇa-period art of Mathurā and Gandhāra, as well as in relief images at, or from, Sāñcī, Amarāvatī, and Nāgārjunakoṇḍa (Coomaraswamy 1928; Pal 1979: 212-219). These mitres also occur on Kuṣāṇa-period images of Vāsudeva-Kṛṣṇa from Mathurā (e.g. Schmid 2010: figs 27, 29, 34-40; Härtel 1987: pl. Xa) and with regularity on Vaiṣṇava images from the Gupta period onward (e.g. Williams 1982: pls 44, 50, 125, 177, 205, 268).

These early mitres take a variety of shapes – more or less cylindrical, trapezoidal, or somewhat square-shaped – and, although rare examples are smooth and undecorated, they are much more often adorned with a large central crest and/or an all-over cross-hatched pattern (Lavy 2004: 269, n. 56), precisely the decorative approach taken on the Koṇḍamoṭu mitre where the central crest indicates perhaps a stylised floral motif or a jewel. Like many Kuṣāṇa and Gupta images, there are also two additional motifs above the ears (possibly flowers) and, as occasionally encountered in Mathurā art, a wide band across the forehead that may be intended to indicate a thickly-rolled strap (Pal 1979: 212, figs 4-5, 9). Running along each vertical side of the mitre are long projecting flanges, a feature that is widely attested in pre-Pallava southern Indian art as well as on Viṣṇu mitres of the Kuṣāṇa and Gupta periods (e.g. Coomaraswamy 1928: 41; Pal 1979: figs 8-9).[13]

On the three peninsular sculptures with extant mitres **[Figures 1-4 and 7-8]**, however, the vertical projections are absent and, seen in profile, it is clear that none of the mitres are cylindrical. Rather they are flattened rectangular or trapezoidal forms with slightly convex and tapering contours.[14] On the Chaiya image the tapering is visible only in profile **[Figure 2]**, but on the Viṣṇus of Wat Phra Phreng and Ho Phra Narai, both the front and side planes incline towards the top **[Figures 3-4 and 7-8]**.

Of the three peninsular images, the mitre worn by the Ho Phra Narai Viṣṇu is the most similar to the one depicted in the Koṇḍamoṭu image. In spite of its badly worn condition, a prominent central pattern is evident (either floral or perhaps a "mask of glory" of the lion type; i.e., *siṁhamukha*) **[Figure 7]**. This need not, however, indicate a similar date for the Koṇḍamoṭu and Ho Phra Narai images; mitres with a variety of similar central crest motifs persist for centuries in the art of South Asia.[15] In contrast to the Ho Phra Narai and Koṇḍamoṭu images, the entire front face of the Chaiya and Wat Phra Phreng mitres are decorated with foliate sprays. The condition of the Ho Phra Narai sculpture notwithstanding, none of the peninsular mitres are adorned with cross-hatching. In fact, with the exception of these three peninsular images and Viṣṇu no. 1 from Cibuaya (Karawang regency, West Java), there are few other free-standing Southeast Asian Viṣṇu images with decorated mitres, and those rare examples that do occur probably date

to the eighth-ninth centuries or later.[16] Most earlier (i.e. seventh century) Southeast Asian Viṣṇu mitres on free-standing images are smooth and unadorned save for an occasional rim around the lower edge or a convex protuberance on the top (Lavy 2004: 270, n. 59).[17] The lack of decoration distinguishes them from many seventh-eighth century Southeast Asian Sūrya images, such as those from Si Thep (Phetchabun province, Thailand), which are often adorned with one or more floral crests similar in design to the decoration on the Chaiya and Wat Phra Phreng mitres (e.g. Piriya 2012: fig. 1.108). It is, moreover, perhaps only on *circa* eighth century images of Harihara and Sūrya that the mitre is incised with geometric patterns (e.g. quatrefoil rosettes set within squares) reminiscent of early Indian mitres like the Koṇḍamoṭu example (Lavy 2004: 270, n. 60).

Figure 15: *Vāsudeva-Kṛṣṇa, Yeleśwaram, East Godavari district, Andhra Pradesh, India, ca 3rd-early 4th cent. CE, grey limestone, H. 61 cm., State Museum, Hyderabad [Photograph by M.A.W. Khan, courtesy of* Artibus Asiae, *after O'Connor 1972: fig 12].*

Rather than the Koṇḍamoṭu Vāsudeva-Kṛṣṇa, a much better South Asian comparison for the *kirīṭamukuṭa*s worn by the Chaiya and Wat Phra Phreng sculptures is to be found on what is probably a Viṣṇu image **[Figure 17]** originally from the Śiva temple at Bhumara (Madhya Pradesh, India), a temple that scholars variably date from the mid-fifth century to *circa* 520-530 CE (Chandra 1970: 73-87; Woodward 1973: 211; Williams 1982: 120). In all three cases, there is a remarkably similar low-relief pattern of flattened foliate forms that scroll outward from centrally placed and vertically arranged nodes to cover the entire front face of the mitre.

Indeed, rather than fourth century Andhra Pradesh, scholars subsequent to O'Connor have stressed stylistic relationships with the fifth-sixth century sculpture of northern India. For example, Hiram Woodward (2003: 41), while noting similarities between the earrings of the Chaiya Vāsudeva-Kṛṣṇa and fourth century sculpture from northeastern India, has emphasised the similar treatment of the necklace and belt shared by the Chaiya image and early fifth century Gupta sculpture. Brown (1992: 46-47) observed that both the low looping sash and the long earrings that extend onto the shoulders are attested in the fifth-sixth century sculpture of western and northern India. In addition to re-emphasising relationships between the Chaiya and the Bhinmāl images **[Figure 18]**, Brown (1992: 46, 51, n. 2) also compared the Chaiya Vāsudeva-Kṛṣṇa with a Viṣṇu from Mandsaur (Madhya Pradesh), particularly in terms of the similar way the ears are pushed forward **[Figure 19]**.

To these northern Indian comparisons might also be added a lesser-known conch-on-hip sculpture of Harihara, also from Mandsaur and today in the State Museum, Bhopal **[Figure 20]**. Although the sashes are arranged differently, the Chaiya Vāsudeva-Kṛṣṇa and the Mandsaur Harihara share a similar calf-length garment with a pronounced median fold descending from the groin to the base between the feet. In both cases, incised folds radiate from this median fold to encircle the legs. Another feature shared by Chaiya Vāsudeva-Kṛṣṇa, the Wat

Phra Phreng Viṣṇu, and both Mandsaur images is the appearance of two short tassels or loops dangling from the belt and extending over the proper left upper thigh.

Today few scholars accept Shah's date of *circa* 400 CE for the Bhinmāl image, a date upon which O'Connor relied. Although the decoration of the Bhinmāl mitre is quite similar to a Kuṣāṇa head of Indra from Mathurā (Pal 1979: fig. 10), the most thorough discussions of the Bhinmāl and Mandsaur images suggest an early sixth century date, perhaps around 500 CE for the prior and 510-520 CE for the latter (Schastok 1985: 37-38; Williams 1982: 142-143). Thus, given the current state of the field, it is most likely that the Chaiya Vāsudeva-Kṛṣṇa dates to the late fifth or early sixth century, with a reasonable estimate of *circa* 500 CE, or, i.e., over a century after O'Connor's argued date.

Michael de Havenon (2006-07: 90), following comments and dates offered by Sara Schastok, has recently attempted to date more precisely the Chaiya image to the "second quarter of the 6th century" by theorising what a supposed northern Indian "model" must have looked like. The date is not an entirely unreasonable *terminus ante quem*. However, the additional comparisons he makes to Indian images do not convincingly support his argument, which rests on three elements: the looping sash, the form of the mitre, and the jewellery (including the long earrings). What is questioned here is not so much the date itself, but rather the reasoning upon which it is based.

First, variations of the looping sash worn in conjunction with a calf-length garment and long median pleat occur earlier in northern Indian art, for example, on a Kuṣāṇa or early Gupta-period Bodhisattva torso from Kumrahar (or Kumhrar, Bihar) and possibly on a *circa* fourth century triad of sculptures from Devangaṛh (Bihar), including a Vāsudeva-Kṛṣṇa **[Figure 11]** (Asher 1980: 11, 18-19, pls 2, 9).[18] While it may be the case that good comparisons can be made with the looped sash that became common in the sculpture of Gujarat (the Śāmalājī style) and Maharashtra dated by Schastok to *circa* 525-530 CE (1985: 50-51), the narrow, flat, and shallow sashes of the peninsular images are not usefully comparable to the thick, deeply-cut sash on a fragmentary conch-on-hip Viṣṇu torso from Elephanta that Schastok

Figure 16: *Nārasiṃha and the Viṣṇi Vīras including Vāsudeva-Kṛṣṇa (second from viewer's left), Koṇḍamoṭu, Guntur district, Andhra Pradesh, India, ca 3rd-early 4th cent. CE, grey limestone, H. 81 x W. 181 cm., State Museum, Hyderabad [Photograph courtesy of the American Institute of Indian Studies, acc. no. 16505, negative no. 166.70].*

also, but hesitantly, dates to *circa* 525-530 CE (Havenon 2006-07: 90-91, fig. 10; Schastok 1985: 51-52; fig. 115). Nor is it reasonable to compare the Chaiya image to the Śāmalājī Viśvarūpa (ca 535-540 CE) based on the presence of a looping sash (cf. Havenon 2006-07: 90-91, fig. 9). The overall aesthetic presentation of the crouching, emanatory, eight-armed cosmic form of Viṣṇu is completely opposed to the comparatively simple and static peninsular images.

Second, against the assertion by Havenon (2006-07: 90), there is little discernible relationship between the mitres worn by the Chaiya image and the Śāmalājī Viśvarūpa. The latter is flamboyantly decorated with clearly and strongly delineated flower motifs, looping pearl swags, and a prominent flame-shaped and foliate central motif framing a mask. All of this stands in dramatic contrast to the comparatively restrained and flattened vegetal patterns that appear on the Chaiya and Wat Phra Phreng mitres, which relate so much more straightforwardly to the aforementioned Bhumara image **[Figure 17]**.[19]

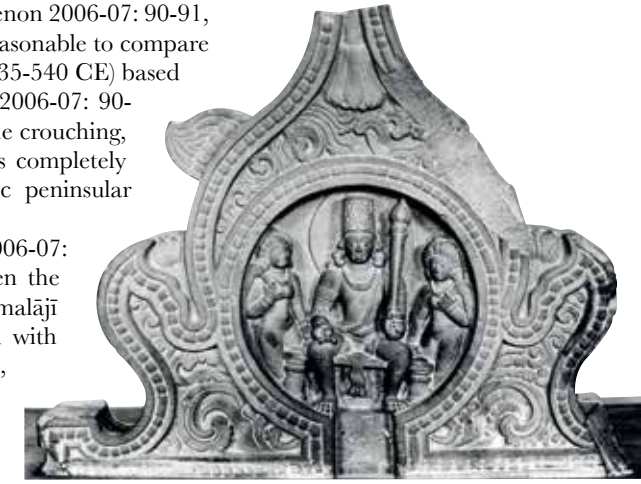

Figure 17: Candraśālā *with Viṣṇu (?), Śiva temple, Bhumara, Satna district, Madhya Pradesh, India, late Gupta period, ca mid-5th cent.-520/30 CE, dark pink sandstone, H. 37.5 x W. 45 x D. 9.5 cm., Allahabad Museum, acc. no. 153 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 11032, negative no. 12.39].*

Third, Havenon's suggestion (2006-07: 90) that the earrings are "almost the same" as figures on the Parel stele (ca 525-530) from the Mumbai area is unclear (Schastok 1985: figs 112-113). While the earrings similarly fall to the shoulders, they do not appear to take the same tasseled form as those of the Chaiya image. Alternately, some of the Parel earrings, though they are quite indistinct, may be meant to be crouching lions similar to those that appear on a stylistically related *circa* sixth century Śiva sculpture also from Parel (Gorakshkar 1982: 22, figs 1-3, 5-6). More comparable tasseled earrings are to be found on the fourth century Vāsudeva-Kṛṣṇa **[Figure 11]** and Balarāma images from Devangaṛh (Brown 1992: 46-47). In short, all of the supposed mid-sixth century elements emphasised by Havenon occur on earlier Indian images. And in his quest to pinpoint a precise date and northern Indian model for the Chaiya image, Havenon has assumed that Indian art is "more securely dated and identified than it often is" (Brown 1992: 45).

The question of the role of southern Indian influence cannot be entirely dismissed. In addition to the Yeleśwaram and Koṇḍamoṭu images, the looping sash and shoulder-length, sometimes tasseled, earrings occur together on several second-third century CE sculptures from Andhra Pradesh (Nigam 1980: pl. VI; Prasad 1980: 39-40, pl. 7; Ray 1983: pl. 154; Piriya 2012: 14, fig. 4). These deeply cut figures with their strong hip-sway stance do not otherwise compare well with the flat and static peninsular sculptures. On the other hand, a third-early fourth century CE Skanda-Mahāsena image from Nāgārjunakoṇḍa does exhibit strong similarities in its strict frontality and narrow width, as well as its looping sash, prominent median fold that descends to the socle, and its jewelry (long earrings, necklace, bracelets and armbands) (Sarma 1982: 106-107, pl. 71a-b).

It is also worth noting that the peninsular sculptures do not hold the conch in precisely the same manner as most of the northern Indian images. Whereas Kuṣāṇa Vāsudeva-Kṛṣṇas tend to cradle the conch against the hip **[Figures 9-10]**, some northern Indian images from

Top Figure 18: *Viṣṇu (Vāsudeva-Kṛṣṇa?), Bhinmāl (Bhillamāla), Jālor district, Rajasthan, India, late Gupta period, ca 500 CE, blue-grey schist, H. 44 cm., Baroda Museum, inv. no. 2.676 [Photograph courtesy of the American Institute of Indian Studies, acc. no. 20203, negative no. 184.29].*

Top right Figure 19: *Viṣṇu, discovered at base of Mahadeva Temple ghat, Mandsaur, Mandsaur district, Madhya Pradesh, India, late Gupta period, ca 510-520 CE, grey-black schist, H. 29 cm., Mandsaur Circuit House [Photograph courtesy of the American Institute of Indian Studies, acc. no. 15426, negative no. 86.76].*

fourth-fifth century CE **[Figures 12-14]** and all of the aforementioned later northern and western Indian images (those from Bhinmāl, Mandsaur, and Elephanta) hold the conch in a very specific fashion with three fingers inserted into the aperture **[Figures 18-20]**. The thumb is placed on the apex of the conch and the little finger projects across the aperture, but is not inserted into it. In contrast, the Vāsudeva-Kṛṣṇa images from Yeleśwaram **[Figure 15]** and Koṇḍamoṭu **[Figure 16]**, as well as all four peninsular images **[Figures 1-8]**, maintain the position of the thumb but neatly tuck all four fingers into the aperture of the conch. This hand position also occurs, however, on some northern Indian images of the Gupta period **[e.g. Figure 11]**, so this trait does not provide conclusive evidence of Southeast Asian artistic connections with southern India.

Without therefore excluding the possibility of southern Indian influences, the best that can be said is that the Chaiya image most closely reflects northern Indian stylistic and iconographic characteristics that are broadly associated with the fourth-fifth centuries, but that it most closely relates to specific Indian images dated by style, and not by any chronologically fixed points, to the late fifth-early sixth centuries (images from Bhinmāl, Mandsaur, and Bhumara). However, even these images are not unequivocal models for the Chaiya image, and, regardless of which Indian precedents are accepted, it remains quite possible that the Chaiya Vāsudeva-Kṛṣṇa represents a "parallel development" (Quaritch Wales 1976: 45) to these northern Indian examples rather than a direct descendant from them.

Peninsular Developments after the Chaiya Image

Like the Chaiya Vāsudeva-Kṛṣṇa, the three Nakhon Si Thammarat Viṣṇus **[Figures 3-8]** were originally four-armed figures, each today in various states of preservation, however their iconography differs slightly. All four hold the conch in the anterior (or "natural") proper left hand, but only the Chaiya image retains the posterior right arm, which cradles a long mace (*gadā*) in a vertical position parallel to the body **[Figure 2]**. While both posterior arms of the Wat Phra Phreng Viṣṇu **[Figure 4]** have broken off and are presumed lost, the Wat Ta Nen Viṣṇu **[Figures 5-6]** preserves the posterior left arm and hand clutching the *gadā* (in contrast to its right-hand position on the Chaiya image). The presence of the arm and the *gadā* on the Wat Ta Nen Viṣṇu help to confirm what was likely to have been a similar configuration for the Ho Phra Narai Viṣṇu **[Figure 7]**; on the back of the image, a section of its posterior left arm is visible in relief against the *gadā* **[Figure 8]**. The opposing posterior proper right hands of the Wat Ta Nen and Ho Phra Narai Viṣṇus, which are now missing, would almost certainly have held a *cakra*.[20] The posterior hands of the Wat Phra Phreng Viṣṇu **[Figure 3]** may have had the same arrangement of attributes (*gadā* in the proper left and *cakra* in the right), but there is also the possibility that the configuration was reversed and followed the one presumed for the Chaiya Vāsudeva-Kṛṣṇa, namely with the *gadā* placed in the proper right and the *cakra* in the left.[21]

The anterior ("natural") and lowered proper right hand of all three Nakhon Si Thammarat Viṣṇus is damaged and the attribute missing **[Figures 3, 5, 7]**. Whereas the anterior right hand of the Chaiya Vāsudeva-Kṛṣṇa is raised to the level of the shoulder in the gesture of *abhayamudrā* or *vyāvṛttamudrā*, the Wat Phra Phreng Viṣṇu clearly holds this hand at waist level with the palm up in the manner common to most of the mitred Viṣṇus of Southeast Asia. The broken remnants of the anterior hands on the proper right hips of the other two Nakhon Si Thammarat Viṣṇu images indicate a similar position. In all likelihood, all three images would have originally held a small spherical object.

The origin, identity, and development of the spherical object often held in Viṣṇu's anterior right hand is one of the most poorly understood aspects of Vaiṣṇava iconography. By approximately the fourth century, northern Indian Vaiṣṇava images began to hold a round object or a disk that is often identified as some variety of fruit, perhaps a citron (*Citrus medica* or *bījapūraka*), *citraphala* ("bright" or "spotted fruit"), or wood-apple (*Aegle marmelos*, bael fruit, or *bilva*, also known as *śrīphala* or "blessed fruit") (Chandra 1970: 72, cat. no. 120; Gail 2009: 83-84). Similar round, or approximately spherical, attributes occur through the Gupta period and into the seventh century. Some scholars have identified them as lotuses, lotus seeds, or lotus buds (*padma* or *kamala*) (e.g. Gail 2009: 83-84). It has been suggested that the lotus first appears in Viṣṇu's hand during the fourth century CE but this is unproven (Krishna 1980: 65-66; Härtel 1987: 586).[22] Indeed, the lotus does not seem to become an attribute of Viṣṇu until the sixth or seventh century (G. Bhattacharya 2007: 99-104; Gail 2009: 83-89).[23]

In Southeast Asia, there are few free-standing stone Viṣṇu images that may plausibly and definitively be argued to hold a lotus.[24] Viṣṇu no. 1 from Cibuaya, West Java (Boisselier 1959b: 210), and the conch-on-hip Viṣṇu from Oc Eo (Malleret 1959: 393-395) are perhaps candidates, but in neither case is this identification very convincing (Lavy 2004: 256, n. 19, 276-277). In virtually all other instances where this attribute survives intact – whether on Viṣṇus from peninsular Thailand, Cambodia, or southern Vietnam – it is a smooth-surfaced orb, sometimes slightly flattened, most likely representing the earth. That this is the case for Khmer art is made clear by a number of inscriptions, dating from the seventh through the eleventh centuries, that list Viṣṇu's attributes as the discus (*cakra*), the conch (*śaṅkha*), the mace (*gadā*), and the earth (*bhū*, *mahī*, *pṛthivī*, or *dhāraṇī*) (Dupont 1955: 143-146; K. Bhattacharya 1961: 103-105; Gail 2009: 84; Soutif 2009: 22-23).[25]

Without distinguishing between the Viṣṇus of Wat Phra Phreng **[Figures 3-4]** and Ho Phra Narai **[Figures 7-8]**, O'Connor (1972: 39) dated both of them later than the Chaiya image on the basis of iconographic differences (i.e., the lowering of the anterior proper right hand to hold what O'Connor supposed was a *padma*, or lotus, but which was more likely a sphere). He did not, however, suggest a developmental sequence for the Wat Phra Phreng and Ho Phra Narai Viṣṇus relative to one another. Similarly, other publications either do not distinguish between the dates of the two Viṣṇus or imply tacitly – through the arrangement of plates – that the Ho Phra Narai Viṣṇu is the earlier of the two (Piriya 1980: 20, 82-85; Jacq-Hergoualc'h 2002: 118-119). The reverse is, however, a more likely sequence. Given how little is known about the precise chronology of Vaiṣṇava iconographic developments, as well as the uncertainties that surround the chronological relationships between the art of South and Southeast Asia, Forrest McGill (1975: 143) has quite rightly observed that "[…] developments in iconography are not by themselves sufficient" to determine the sequence of these images. Fortunately, stylistic features offer some clues to indicate that the sequence of development was from the Chaiya image **[Figures 1-2]** to the Wat Phra Phreng Viṣṇu **[Figures 3-4]** and finally to the Wat Ta Nen **[Figures 5-6]** and Ho Phra Narai Viṣṇus **[Figures 7-8]**.

Of these four peninsular sculptures, the Chaiya image is the most closely related to Indian art and is therefore likely the earliest of the four. It is also the thinnest, flattest, and the back is much more minimally carved with just a hint of modeling along the spine and none of the delineation of the waist and thighs that is apparent, however rudimentarily, on the three Nakhon Si Thammarat Viṣṇus. The Chaiya and Wat Phra Phreng images do, however, share some notable features between them. They are virtually identical in height (67 and 65 cm. respectively), they exhibit remarkably similar narrow pursed lips in contrast to the thick lips and fuller cheeks of the Ho Phra Narai Viṣṇu, and their more pronounced male genitalia (in contrast to the Wat Ta Nen and Ho Phra Narai images) align them more closely with a Kuṣāṇa and Gupta aesthetic **[Figures 9-14]**. In addition, the manner in which the ears of the Chaiya image are pushed forward occurs to a lesser degree on the Wat Phra Phreng Viṣṇu and not at all on the Ho Phra Narai Viṣṇu. Finally, the foliate, or leaf-and-vine, decoration of the mitres is similar and quite distinct from the central crest adornment of the Ho Phra Narai mitre.

At 78 cm. in height, the Ho Phra Narai Viṣṇu is the largest of these four peninsular sculptures. It relates differently to each of the others. With the Chaiya and Wat Ta Nen images, it shares the armband, bracelet, and necklace (perhaps similarly decorated with a central rosette), all of which are lacking on the Wat Phra Phreng Viṣṇu. Like the latter, however, the Ho Phra Narai Viṣṇu is adorned with heavy globular earrings that distend and offset the earlobes to a greater degree than the tasseled earrings of the Chaiya image. Compared to the straight-sided mitre of the Chaiya Vāsudeva-Kṛṣṇa, moreover, the mitres of the Wat Phra Phreng and Ho Phra Narai Viṣṇus taper slightly towards the top and thus, together, exhibit a trait that is relatively rare in Southeast Asian art.[26]

The differences between the Chaiya and Wat Phra Phreng images, on the one hand, and the Ho Phra Narai and Wat Ta Nen Viṣṇus, on the other, set the two pairs of images somewhat apart. Remarkably similar in style to one another, the Ho Phra Narai and Wat Ta Nen Viṣṇus are considerably more solid and robust with wider hips and thighs. They also have somewhat more defined and muscular torsos that are emphasised by the inclusion of a sacred thread (*upavīta* or *yajñopavīta*) worn over the proper left shoulder and continuing down the back **[Figures 5-8]**.

There are two distinguishing features of the Ho Phra Narai Viṣṇu that may suggest a slightly later date, but neither is conclusive. First, the fluted halo may be comparable to a type that first appeared in India in the fifth century **[e.g. Figure 14]** but that was not common until the sixth-seventh centuries (Brown 2000: 8; Harle 1987: 345). With such a wide range of dates, however, the motif is obviously of limited utility for any attempt at precise dating.

Second, the notion of a relatively steady transition from relief to "ronde bosse" or sculpture-in-the-round remains one of the basic principles employed to understand the development of Southeast Asian stone sculpture (Lavy 2004: 206-250), and may correspond to the development of greater technical skill and thus a later date. Unlike the Chaiya and Wat Phra Phreng images, the vertical median fold of the Ho Phra Narai garment does not appear to have joined the socle. Furthermore, whereas the legs and garment of the Chaiya and Wat Phra Phreng images remain joined by reserves of stone and are essentially carved in relief, the lower legs of the Ho Phra Narai Viṣṇu are cut free from one another and the surrounding stone matrix. With what was probably an engaged median fold, similar to the Chaiya and Wat Phra Phreng images, but now combined with fully cut lower legs more in the manner of the Ho Phra Narai Viṣṇu, the recently discovered Wat Ta Nen Viṣṇu may represent a transition to the technique seen in the latter and an intermediary stage towards the liberation of the lower legs from structural support. While this hypothetical progression seems to be justified by the evidence, however, too much emphasis on technique can be problematic insofar as, among other things, it presumes rather than proves such an evolution and it neglects the possibility that technical decisions may also be motivated by ritual imperative, artistic intention, and aesthetic choice.

Related to the way the legs of the Ho Phra Narai Viṣṇu are carved is the configuration of the drapery, and it is this additional feature that may offer the clearest indication of its slightly later date. Whereas,

Figure 20: *Harihara, Mandsaur, Mandsaur district, Madhya Pradesh, India, late Gupta period, ca early 6th century CE, sandstone, H. 102 cm., State Museum, Bhopal, inv. no. E.914 [Photograph courtesy of Donald Stadtner].*

Figure 21: *Viṣṇu, found at Wat Bot, Mueang Prachin Buri district, Prachin Buri province, Thailand, ca early 7th cent. CE, sandstone, H. 165 cm., Prachin Buri National Museum [Photograph courtesy of Paisarn Piemmettawat].*

the long median fold of fabric on the Chaiya, Wat Phra Phreng, and Wat Ta Nen images is carved as one unit with the legs and bears little discernible relationship with the lower hem of the garment, on the Ho Phra Narai image, it notably bifurcates into the lower hems of the garment. Although the descending length of cloth appears to simply split into two distinct hems, one over each shin at oblique angles to the vertical axis, this treatment may be intended to indicate the tightening of the fabric around the calves that would be caused if the central panel of cloth was brought between the legs and cinched at the waistband or tucked into the hem at the lower back (albeit a feature not indicated in the rather abbreviated carving on the posterior of the image). Alternately, the median panel may consist of the combined lateral edges of fabric that are tucked into the waistband rather than long extensions of fabric descending from it. In any case, the bifurcating median fold typically occurs on images that, like the Ho Phra Narai Viṣṇu, have the lower legs cut free of one another, including some later Viṣṇus from peninsular sites and Dong Si Mahosot (or Dong Si Maha Phot), in eastern Thailand, which exhibit a similar configuration of the garment (e.g. Piriya 2012: figs 1.99-1.102).[27] In these related examples, the details are, however, more naturalistically handled so that the median panel of cloth articulates with, but is clearly distinct from, the fabric comprising the bunching hems **[Figure 21]**. Probably occurring on the Ho Phra Narai image for the first time in the sculpture of Southeast Asia, and perhaps South Asia as well, this incipient and rather tentative feature is a notable departure from the Chaiya, Wat Phra Phreng, and Wat Ta Nen images. The cumulative evidence suggests, therefore, that they are somewhat earlier in date and that the Ho Phra Narai Viṣṇu is the latest of the peninsular conch-on-hip images.

Conclusion

Most scholars would agree that a date of *circa* 500 CE makes the Chaiya Vāsudeva-Kṛṣṇa the earliest known Brahmanical image in Southeast Asia and, consequently, accord it a pivotal role in the art history of the region. Robert Brown (2000: 1) has suggested that it is the only Southeast Asian Vaiṣṇava image that can be closely tied to Indian prototypes and that it may be "the single extant seed from which all other Southeast Asian mitred Viṣṇu images spring." This may be an overstatement, but, with the exception of sculpture likely to have been imported from South Asia, few other early Southeast Asian stone sculptures seem to have such close comparisons in the corpus of Indian art.[28] While Indian art may have continued to exert a limited influence on the production of mitred Viṣṇus in Southeast Asia, the arguments and new observations presented here support the contention that subsequent developments were "largely internal" (Brown 2000: 2).

If, according to Indian evidence, the Chaiya Vāsudeva-Kṛṣṇa may be reasonably placed *circa* 500 CE, the similarities it shares with the Wat Phra Phreng Viṣṇu suggest that the latter must have been made very soon thereafter, i.e., in the very early sixth century. Slightly later is the Wat Ta Nen image, which appears to be transitional between the Wat Phra Phreng and Ho Phra Narai Viṣṇus. In turn, the more developed anatomy and drapery of the Ho Phra Narai Viṣṇu (ca early to mid-sixth century) foreshadow features associated with the very accomplished sculptures of

the fully developed mitred Viṣṇu tradition of the late sixth-early seventh centuries, a localised and largely "internal" Southeast Asian innovation.

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Endnotes

1 See for example, Quaritch Wales (1976: 43-46), Piriya (1980: 80 and 2012: 12-14, 100-101), Dalsheimer & Manguin (1998: 92), Dofflemyer (1999: 34), Jacq-Hergoualc'h (2002: 116), Gosling (2004: 85), and Manguin (2010: 174).

2 See Boisselier (1969: 59 and 1975: 71, 225), Pisit & Subhadradis (1978: 107), Woodward (1973: 211 and 2003: 41), Brown (1992: 46-47), and Lavy (2004: 268-272). Jean Boisselier (1959a: 66-67 and 1959b: 224-226) initially dated the Chaiya image to the seventh-eighth centuries, but, following O'Connor, adjusted his dating to the fourth century at the earliest (1975: 71). In the commentaries added by Jean-Michel Beurdeley to Boisselier's text, the date is given as *circa* fifth century (1975: 225).

3 This essay revises a portion of my doctoral dissertation's chapter 6, entitled "The Earliest Vaiṣṇava Sculpture of Southeast Asia" (Lavy 2004: 253-275) written under the supervision of Robert L. Brown, Anthony Reid, Susan B. Downey, and Lothar von Falkenhausen. Some of these arguments were presented at *Across the South of Asia: A Symposium in Honor of Robert L. Brown*, San Diego Museum of Art, 19 January, 2013.

4 A date of *circa* 500 CE is reasonable, and is used here for convenience, but it must be recognised that the present state of evidence does not support the attribution of a specific date, or even a narrow range of dates, to the Chaiya image nor to the Nakhon Si Thammarat Viṣṇus.

5 The designation "Viṣṇu" subsumes numerous names and it may well be that these various images comprise forms of Viṣṇu that may be more accurately referred to under specific epithets. Given their fragmentary condition and the often incompletely preserved state of the iconography, however, all will be referred to here as "Viṣṇu" except for the Chaiya sculpture and images that share its particular configuration of attributes.

6 Some Kuṣāṇa images of Vāsudeva-Kṛṣṇa hold what appears to be a long-necked flask or vase instead of a conch. The flask may indicate an earlier date than the conch (Srinivasan 1997: 245-246; Schmid 2010: 221-223). In addition to the examples here, various degrees of separation of the conch from the hip can be seen on the two Viṣṇus at Udayagiri Cave 6 (Madhya Pradesh, India), dated by inscription to 401/2 CE (Schastok 1985: figs 86-87), and on the Viṣṇu from Jhusī (or Jhunsi, Uttar Pradesh, India), *circa* early to mid-fifth century CE (Chandra 1970: 88, cat. no. 196).

7 With a lotus (*padma*), rather than- or synonymous with- the orb, this configuration is identified in the Indian iconographical texts that enumerate the twenty-four forms of Viṣṇu as either Janārdana or Vāsudeva (Bidyabinod 1920: 23-33).

8 See also Nilakanta Sastri (1949: 91-92), Dupont (1955: 133-134), and Boisselier (1959a: 66-67). Exceptions to this line of thinking can be found in Rawson (1957: 33-34) and Lamb (1961: 70), the latter suggesting a date of sixth century or earlier for the Chaiya image. Cœdès (1928: 25) considered it to be close to Indian prototypes but did not specify dates or examples. Le May (1964: 80, fig. 48) described it as "pure Indian style" without offering a date. For further commentary, see Lavy (2004: 245-253).

9 See Cœdès (1928: caption of pl. X centre), Nilakanta Sastri (1949: 92), Lamb (1961: 70, pl. 114), Boisselier (1959b: 221, fig. 3 and 1969: 65, fig. 23), and Le May (1964: 80).

10 The name "Wat Phra Phreng" (FAD 2543: 83; Banchong 2545: 16) is variably given as "Wat Phrapheng" (Jacq-Hergoualc'h 2002: fig. 3), "Wat Phra Phraeng" (Preecha & Wannasarn 2546: 107), "Wat Phra Pleng" (Piriya 1980: 84), "Wat Phra Loeng" (Piriya 2012: 101), or "Wat Phrang" (Wannasarn 2013: 74). Lamb (1961: 70, pl. 114) published a photograph depicting the Wat Phra Phreng Viṣṇu resting awkwardly on a pedestal that consists of the remnants of two lateral supports, two feet, and a broken stump corresponding to the fragmented median fold of a garment. The pedestal almost certainly belonged to a sculpture of Viṣṇu, but its relationship with the Wat Phra Phreng image is unclear. It is the smaller of two such pedestals (widths approximately 28 cm. and 46 cm.) that were found in Na San sub-district (previously Mueang district, now Phra Phrom district). They are now displayed in the museum at Wat Phra Mahathat Woramahawihan (also known as Wat Phra Borommathat) with the Wat Phra Phreng Viṣṇu. Photographs of both pedestals are published in O'Connor (1982: pls 1-2), however it should be noted that both photographs are flipped so that the right and left sides of the pedestals are the reverse of their actual appearance. Lamb's photograph is the correct orientation; see also Jacq-Hergoualc'h (2002: fig. 9).

11 To my knowledge, none of the images has undergone petrographic analysis. The Chaiya image is sometimes said to be limestone (e.g. Le May 1964: 80; O'Connor 1972: 20; Boisselier 1975: 71). All four images, however, may be made of sandstone.

12 Portions of the *Agnipurāṇa*, including those dealing with Vaiṣṇava iconography, may date as early as the sixth century CE. Earlier, in the *Mahābhārata*, these twenty-four forms occur among the names of Viṣṇu, but without description of their iconography.

13 For mitres of the Pallava period (seventh-eighth centuries CE), see Lavy (2004: 280-281).

14 Similar in its flattened form, but differing in its decoration and shape, is the mitre worn by Viṣṇu Trivikrama on a *circa* late fourth or early fifth century lintel from Pawaya, Madhya Pradesh, India (Williams 1982: fig. 50).

15 For examples from the sixth-eleventh centuries, see Desai (1973: figs 6-30). Also present on the Ho Phra Narai Viṣṇu mitre are the lateral floral motifs perhaps joined by a thickly rolled strap.

16 See Wirjosuparto (1963: 172), Boisselier (1975: pl. 66), and Piriya (2012: figs 2.82, 2.84-2.85).

17 Some seventh and eighth century Southeast Asian mitres are polygonal or tiered (e.g. Piriya 1980: color pl. 3). Mitres occurring in scenes on lintels tend to be more ornate than those on free-standing sculpture. The comparative simplicity of the latter may reflect the practice of equipping sacred images with jewelry and metal adornments that have been lost or separated from the images, thus making them appear less ornate than they were intended to appear in worship.

18 It is not clear whether the Devangarh images wear a low looping sash or a garland (*vanamālā*).

19 Following Woodward, Havenon refers to the Bhumara image in passing but curiously omits it from the discussion (2006-07: 97, n. 56).

20 With a lotus (*padma*), this configuration is identified in Indian iconographical texts either as the Śrīdhara, Dāmōdara, or Hṛṣīkeśa form of Viṣṇu (Bidyabinod 1920: 23-33).

21 With a lotus (*padma*), a configuration identified in Indian iconographical texts either as the Trivikrama or Upendra form of Viṣṇu (Bidyabinod: 23-33).

22 According to Härtel (1987: 586), the lowering of the anterior right hand and the appearance of the sphere accompanied the transition from Vāsudeva-Kṛṣṇa to Viṣṇu.

23 See also Joshi (1989: 131); Srinivasan (1997: 246); Lavy (2004: 255-256).

24 Viṣṇu images holding a lotus do, however, appear on pre-Angkorian lintels (Lavy 2004: 256, n. 19).

25 Relevant inscriptions include K. 21, K. 165, K. 262, K. 263, and K. 278.

26 For other examples of tapering mitres in Southeast Asia, see Jacq-Hergoualc'h (2002: fig. 4) and O'Connor (1972: fig. 20).

27 The development of Viṣṇu sculpture in peninsular and eastern Thailand after these early conch-on-hip images is discussed in Lavy (2004: 302-334).

28 A possible early import from South Asia is the small sandstone Buddha image (H. 16.5 cm.) found at Wiang Sa, Surat Thani province, and now in the Bangkok National Museum (Piriya 2012: fig 1.17). Carved in the Sarnath style of northern India, it dates *circa* late fifth-early sixth century and is therefore approximately contemporary with the Chaiya Vāsudeva-Kṛṣṇa.

References

Asher, Frederick M.
1980 *The Art of Eastern India, 300-800*. Minneapolis: University of Minnesota Press.

Banchong Wongwichian
2545 *Prawatisat borannakhadi nakhon si thammarat* (*The History and Antiquities of Nakhon Si Thammarat*). Nakhon Si Thammarat: Fine Arts Department. [2002 CE]

Bautze-Picron, Claudine
1985 L'image de l'Ādimūrti Vāsudeva au Bihar et au Bengale, du 5e au 12e siècle. *Annali dell'Università degli studi di Napoli "L'Orientale"* 45(3): 437-481.

Bhattacharya, Gouriswar
2007 Vāsudeva-Viṣṇu Images from Bengal: Development and Innovation: Is Lotus an Essential Attribute? In Bhattacharya, Gouriswar *et al*. (eds), *Kalhār (White Water-Lily): Studies in Art, Iconography, Architecture and Archaeology of India and Bangladesh (Professor Enamul Haque Felicitation Volume)*. New Delhi: Kaveri Books, pp. 99-108.

Bhattacharya, Kamaleswar
1961 *Les religions brahmaniques dans l'ancien Cambodge : d'après l'épigraphie et l'iconographie*. Paris: École française d'Extrême-Orient.

Bidyabinod, Pandit B.B.
1920 Varieties of the Vishnu Image. In *Memoirs of the Archaeological Survey of India* no. 2. New Delhi: Archaeological Survey of India, pp. 23-33.

Boisselier, Jean
1959a La statuaire préangkorienne et Pierre Dupont. *Arts Asiatiques* 6(1): 59-69.

1959b Le Visnu de Tjibuaja (Java Occidental) et la statuaire du Sud-Est Asiatique. *Artibus Asiae* 22(3): 210-226.

1966 *Le Cambodge*. Paris: Picard.

1969 Recherches archéologiques en Thaïlande. II : rapport sommaire de la mission 1965 (26 juillet-28 novembre). *Arts Asiatiques* 20: 47-98.

1975 *The Heritage of Thai Sculpture*. New York: Weatherhill. [First published in French as *La sculpture en Thaïlande*, 1974; In collaboration with J.M. Beurdeley]

Brown, Robert L.
1992 Indian Art Transformed: The Earliest Sculptural Styles of Southeast Asia. In Bronkhorst, Johannes (ed.), *Panels of the VIIth World Sanskrit Conference*. Leiden: E. J. Brill, pp. 40-53.

2000 The Early Viṣṇu Images from Southeast Asia and Their Indian Relationships. A paper presented at *Crossroads and Commodification: A Symposium on Southeast Asian Art History*, University of Michigan, 25-26 March 2000. [Unpublished]

Chandra, Pramod
1970 *Stone Sculpture in the Allahabad Museum: A Descriptive Catalogue*. Poona: American Institute of Indian Studies.

Cœdès, George
1928 *Les collections archéologiques du Musée national de Bangkok*. Paris: Éditions Van Oest.

1942 *Inscriptions du Cambodge, volume 2*. Hanoi: École française d'Extrême-Orient.

1943-46 Quelques précisions sur la fin du Fou-nan. *Bulletin de l'École française d'Extrême-Orient* 43: 1-8.

Coomaraswamy, Ananda
1928 Early Indian Iconography: I. Indra, with Special Reference to Indra's Visit. *Eastern Art* 1(1): 33-41.

Dalsheimer, Nadine & Manguin, Pierre-Yves
1998 Visnu mitrés et réseaux marchands en Asie du Sud-Est : nouvelles données archéologiques sur le Ier millénaire apr. J.-C. *Bulletin de l'École française d'Extrême-Orient* 85(1): 87-123.

Desai, Kalpana S.
1973 *Iconography of Viṣṇu (In Northern India, Upto* [sic] *the Mediaeval Period)*. New Delhi: Abhinav Publications.

Dhida Saraya
2545 *Thawarawadi: ton prawatisat thai (Dvaravati: Early History of Thailand)*. Bangkok: Muang Boran Publishing House. In Thai; [2002 CE].

Dofflemyer, Virginia S.
1999 Vishnu Images from Ancient Thailand and the Concept of Kingship. In Brown, Robert L. (ed.), *Art from Thailand*. Mumbai: Marg Publications, pp. 34-48.

Dupont, Pierre
1955 *La statuaire préangkorienne*. Ascona: Artibus Asiae Supplementum.

Fine Arts Department (FAD)
2543 *Visitors Guide to the Nakhon Si Thammarat National Museum*. Bangkok: Fine Arts Department. [Second Edition, 2000 CE; First published in Thai as *Namchom phiphithaphan sathan haeng chat nakhon si thammarat*, 2529 (1986 CE)]

Gail, Adalbert J.
2009 The Earth and the Lotus: A Contribution to Viṣṇu's Iconography in India. *Pandanus '09: Nature in Literature, Art, Myth and Ritual* 3(1): 83-91.

Gorakshkar, Sadashiv
1982 The Parel Mahādeva Reassessed and Two Newly Discovered Images from Parel. *Lalit Kalā* 20: 15-24.

Gosling, Betty
2004 *Origins of Thai Art*. Bangkok: River Books.

Harle, J.C.
1987 The Pleated *Siras Cakra*. In Nagaraja Rao, M.S. (ed.), *Kusumāñjali: New Interpretation of Indian Art and Culture, Sh. C. Sivaramamurti Commemoration Volume. Volume 2*. Delhi: Agam Kala Prakashan, pp. 345-347.

Härtel, Herbert
1987 Archaeological Evidence of the Early Vāsudeva Worship. In Curaverunt, Edenda *et al.* (eds), *Orientalia Iosephi Tucci Memoriae Dicata. Volume 2*. Rome : Istituto Italiano per il Medio ed Estremo Oriente, pp. 573-587.

Havenon, Michael de
2006-07 The Earliest Viṣṇu Sculpture from Southeast Asia. *The Journal of the Walters Art Museum* 64/65: 81-98.

Hornell, James
1915 *The Indian Conch (Turbinella Pyrum, Linn.) and Its Relation to Hindu Life and Religion.* London: Williams and Norgate.

Jacq-Hergoualc'h, Michel
2002 *The Malay Peninsula: Crossroads of the Maritime Silk Road*. Leiden: Brill.

Jaiswal, Suvira
1981 *The Origin and Development of Vaiṣṇavism: Vaiṣṇavism from 200 BC to AD 500*. New Delhi: Munshiram Manoharlal Publishers. [Revised Edition; First Edition published in 1967]

Jessup, Helen & Zéphir, Thierry (eds)
1997 *Sculpture of Angkor and Ancient Cambodia: Millennium of Glory*. Washington, D.C.: National Gallery of Art.

Joshi, N.P.
1989 *Catalogue of the Brahmanical Sculptures in the State Museum, Lucknow, Part II, Volume 1 (Śiva and Viṣṇu)*. Lucknow: The State Museum.

Khan, M.A.W.
1963 *A Monograph on Yĕlēśwaram Excavations*. Hyderabad: Government of Andhra Pradesh.

1964 *An Early Sculpture of Narasimha (Man-Lion Incarnation of Vishnu found from the Coastal Andhra along with Pañcha Vīras)*. Hyderabad: Government of Andhra Pradesh.

Krisda Pinsri
2010 Iconography of Khmer Ceramics. In Rooney, Dawn F. (ed.), *Khmer Ceramics: Beauty and Meaning*. Bangkok: River Books.

Krishna, Nanditha
1980 *The Art and Iconography of Vishnu-Narayana*. Bombay: Taraporevala.

Lamb, Alastair
1961 Kedah and Takuapa: Some Tentative Historical Conclusions. *Federation Museums Journal*, New Series 6: 69-88.

Lavy, Paul A.
2004 *Viṣṇu and Harihara in the Art and Politics of Early Historic Southeast Asia*. Doctoral Dissertation. Los Angeles: University of California. [Unpublished]

Le May, Reginald
1964 *The Culture of South-East Asia: The Heritage of India*. London: Allen & Unwin. [First published in 1954]

Lê Thị Liên
2006 *Nghệ thuật Phật giáo và Hindu giáo ở Đồng bằng sông Cửu Long trước thế kỷ X (Buddhist and Hindu Art of the Mekong Delta before the Tenth Century)*. Hanoi: Thế Giới.

Malleret, Louis
1959 *L'archéologie du Delta du Mékong Volume 1 : l'exploration archéologique et les fouilles d'Oc-Eo*. Paris: École française d'Extrême-Orient.

1963 *L'archéologie du Delta du Mékong Volume 4 : le Cisbassac.* Paris: École française d'Extrême-Orient.

Mallmann, Marie-Thérèse de
1963 *Les enseignements iconographiques de l'Agni-Purāṇa.* Paris: Presses universitaires de France.

Manguin, Pierre-Yves
2010 Pan-Regional Responses to South Asian Inputs in Early Southeast Asia. In Bellina, Bérénice *et al.* (eds), *50 Years of Archaeology in Southeast Asia: Essays in Honour of Ian Glover*. Bangkok: River Books, pp. 170-181.

McGill, Forrest
1975 Review of *Hindu Gods of Peninsular Siam* by Stanley J. O'Connor, Jr. *Artibus Asiae* 37, 1-2: 142-145.

Nigam, M.L.
1980 *Sculptural Art of Andhra*. Delhi: Sundeep Prakashan.

Nilakanta Sastri, K.A.
1949 *South Indian Influences in the Far East*. Bombay: Hind Kitabs.

O'Connor, Stanley J., Jr
1965 *Brahmanical Sculptures of Peninsular Siam*. Doctoral Dissertation. Ithaca: Cornell University. [Published as *Hindu Gods of Peninsular Siam*, 1972]

1972 *Hindu Gods of Peninsular Siam*. Ascona: Artibus Asiae Supplementum.

1982 Ancient Sculptures from Tambon Na San, Nakhon Si Thammarat Province, Peninsular Thailand. *Journal of the Malaysian Branch of the Royal Asiatic Society* 55(2): 60-61.

Pal, Pratapaditya
1979 A Kushān Indra and Some Related Sculptures. *Oriental Art* 25(2): 212-226.

Piriya Krairiksh
1980 *Art in Peninsular Thailand Prior to the Fourteenth Century A.D.* Bangkok: Fine Arts Department.

2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Raknga haeng sinlapa thai*, 2553 (2010 CE)]

Pisit Charoenwongsa & Subhadradis Diskul, M.C.
1978 *Thailand*. Geneva: Nagel.

Prasad, B. Rajendra
1980 *Art of South India: Andhra Pradesh*. Delhi: Sundeep Prakashan.

Preecha Noonsuk & Wannasarn Noonsuk
2546 Phrawisanu baep song thue sang nuea phrasoni: kankhonphop mai (The Discovery of a New Vishnu Image in Southeast Asia). *Muang Boran* 29(2): 90-107. [In Thai with English Abstract; 2003 CE]

Quaritch Wales, Horace Geoffrey
1976 *The Malay Peninsula in Hindu Times*. London: Bernard Quaritch.

Rawson, Philip S.
1957 Review of *La statuaire préangkorienne* by Pierre Dupont. *Oriental Art*, New Series 3(1): 33-34.

Ray, Amita
1983 *Life and Art of Early Andhradesa*. Delhi: Agam Kala Prakashan.

Rooney, Dawn F.
2010 *Khmer Ceramics: Beauty and Meaning*. Bangkok: River Books.

Sarma, I.K.
1982 *The Development of Early Śaiva Art and Architecture (With Special Reference to Āndhradēśa)*. Delhi: Sundeep Prakashan.

Schastok, Sara
1985 *The Śāmalājī Sculptures and 6th Century Art in Western India*. Leiden: Brill.

Schmid, Charlotte
2010 *Le don de voir : premières représentations krishnaïtes de la région de Mathurā*. Paris: École française d'Extrême-Orient.

Shah, Umakant P.
1955-56 Some Early Sculptures from Abu and Bhinmal. *Bulletin of the Museum and Picture Gallery, Baroda* 12: 43-56.

Soutif, Dominique
2008 La monture de conque inscrite du Musée national de Phnom Penh : relecture de l'inscription angkorienne K. 779. *Aséanie* 22: 47-61.

2009 À propos de trois possibles attributs mobiles dans les inscriptions khmères. *Siksācakr* 11: 22-42.

Srinivasan, Doris Meth
1997 *Many Heads, Arms and Eyes: Origin, Meaning and Form of Multiplicity in Indian Art*. Leiden: Brill.

Taddei, Maurizio
1991 Reflections on *Śaṅkha* in Vaiṣṇava Iconography. In Gail, Adalbert J. & Mevissen, Gerd J.R. (eds), *South Asian Archaeology 1991*. Stuttgart: Franz Steiner Verlag, pp. 647-658.

Wannasarn Noonsuk
2013 *Tambralinga and Nakhon Si Thammarat: Early Kingdoms on the Isthmus of Southeast Asia*. Nakhon Si Thammarat: Nakhon Si Thammarat Rajabhat University.

Williams, Joanna Gottfried
1982 *The Art of Gupta India: Empire and Province*. Princeton: Princeton University Press.

Wirjosuparto, R.M. Sutjipto
1963 The Second Visnu-image of Cibuaya in West-Java. *Madjalah ilmu-ilmu sastra Indonesia/Indonesian Journal of Cultural Studies* 1(2): 170-187.

Woodward, Hiram, Jr
1973 Review of *Hindu Gods of Peninsular Siam* by Stanley J. O'Connor, Jr. *Journal of the Siam Society* 61(2): 210-213.

2003 *The Art and Architecture of Thailand. From Prehistoric Times through the Thirteenth Century*. Leiden-Boston: Brill.

New Evidence of Early Brahmanical Vestiges in Pattani Province

Wannasarn Noonsuk

Introduction

For those who have been following the news from Thailand over the past few years, one of the most frequent stories to be heard is the tragedies, including various forms of violence such as killings, shootings, and bombings, inflicted on the southernmost region of Thailand due to the conflict between the Thai state and radical Muslim groups. Although a very complex problem with deep roots in history, one of the causes of this conflict is the religious struggle between the Malay-speaking Muslims and the central government dominated by the Thai-speaking Buddhists, the latter being the majority in Thailand and who sometimes mistreat other minorities (Chaiwat 2554: 14-16).

Attempting to win legitimacy over the region, the radical Muslim groups have created a powerful discourse stating that Pattani and nearby provinces were a pure Muslim land for many centuries,[1] and this led to the recent burning of the Fine Arts Department Office, a storage for ancient artefacts, as well as a *stūpa* at the Yarang archaeological complex, where the archaeological assemblage is predominantly Buddhist, in an attempt to erase the Buddhist past of the region **[Figure 1]**.[2] Exaggerated or fabricated claims regarding the religious affiliations of a region are common in conflict zones around the world and can usually be proven to be untrue.

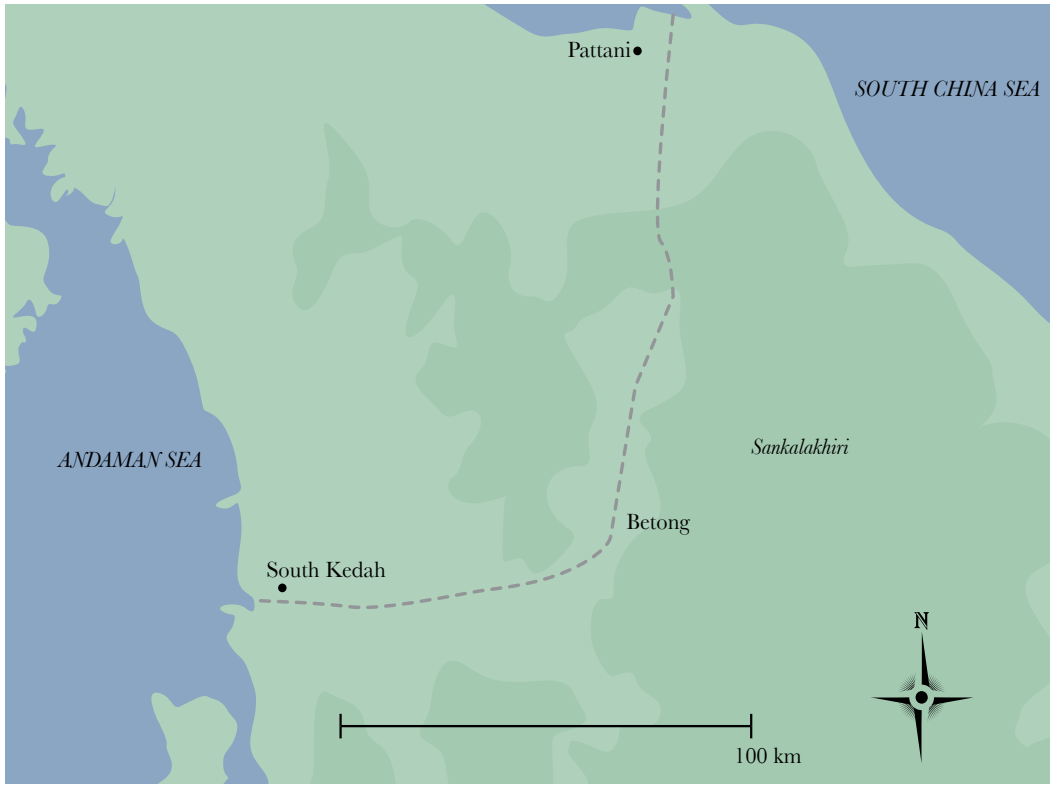
Pattani faces a similar situation. Although becoming the most powerful Islamic centre in Siam since around the fourteenth century (Perret *et al.* 2004), Pattani, or the area that has become Pattani today, housed a large number of archaeological sites, architecture, and artefacts associated with Buddhism and Brahmanism, and these ruins and finds were older than those of Islam by more than half a millennium. This suggests that various religions and their groups or sub-groups have probably co-existed in the past in Pattani. Learning from the past, a land does not necessarily have to belong to a sole religion, and this short essay attempts to uncover the rich and ancient multi-religious milieu of Pattani, even before the emergence of Siam or Thailand.

Figure 1: *Burnt artefacts from the Yarang archaeological complex, now displayed at the Nakhon Si Thammarat National Museum [Photograph by Wannasarn Noonsuk].*

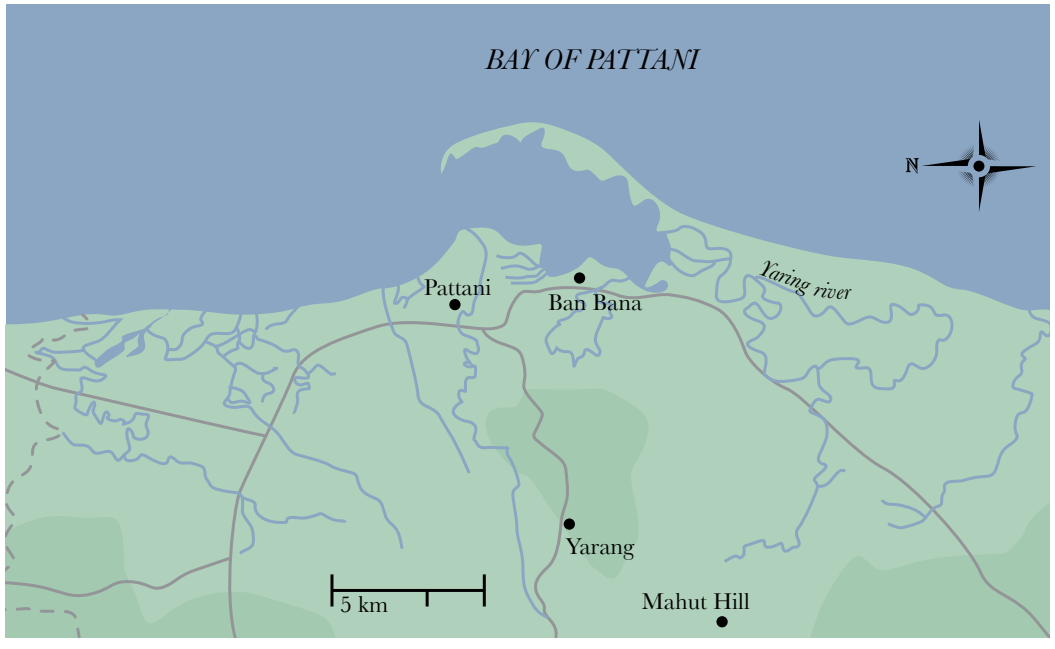
Background on Archaeological Geography

One of the most prominent geographical features of the southernmost region of Thailand is the Sankalakhiri mountain range, which forms the modern border between Thailand and Malaysia. The range runs roughly in an east-west direction with several branches extending northward, like fingers, creating several valleys in this region, including the Chana, Thepa, Pattani, Saiburi, and Takbai valleys. Each of these valleys has rivers running in north-south directions towards the Gulf of

Opposite Figure 2: *Head of Avalokiteśvara, found at Ban Chale, Yarang archaeological complex, Pattani province, 7th-8th century. Currently in the Songkhla National Museum, bronze, 13 cm. high [Photograph courtesy of Paisarn Piemmettawat].*



Map 1: *Pattani, South Kedah and possible trans-isthmian route [Drawing by Wannasarn Noonsuk].*



Map 2: *Ban Bana, Yarang, Mahut Hill and Bay of Pattani [Drawing by Wannasarn Noonsuk].*

Thailand (Srisakra *et al*. 2550: 5-7). One of them is the Pattani valley, which has the Pattani river as the main watercourse flowing from Betong district in Yala province. Betong is also a mountain pass that leads to the west coast of peninsular Malaysia.

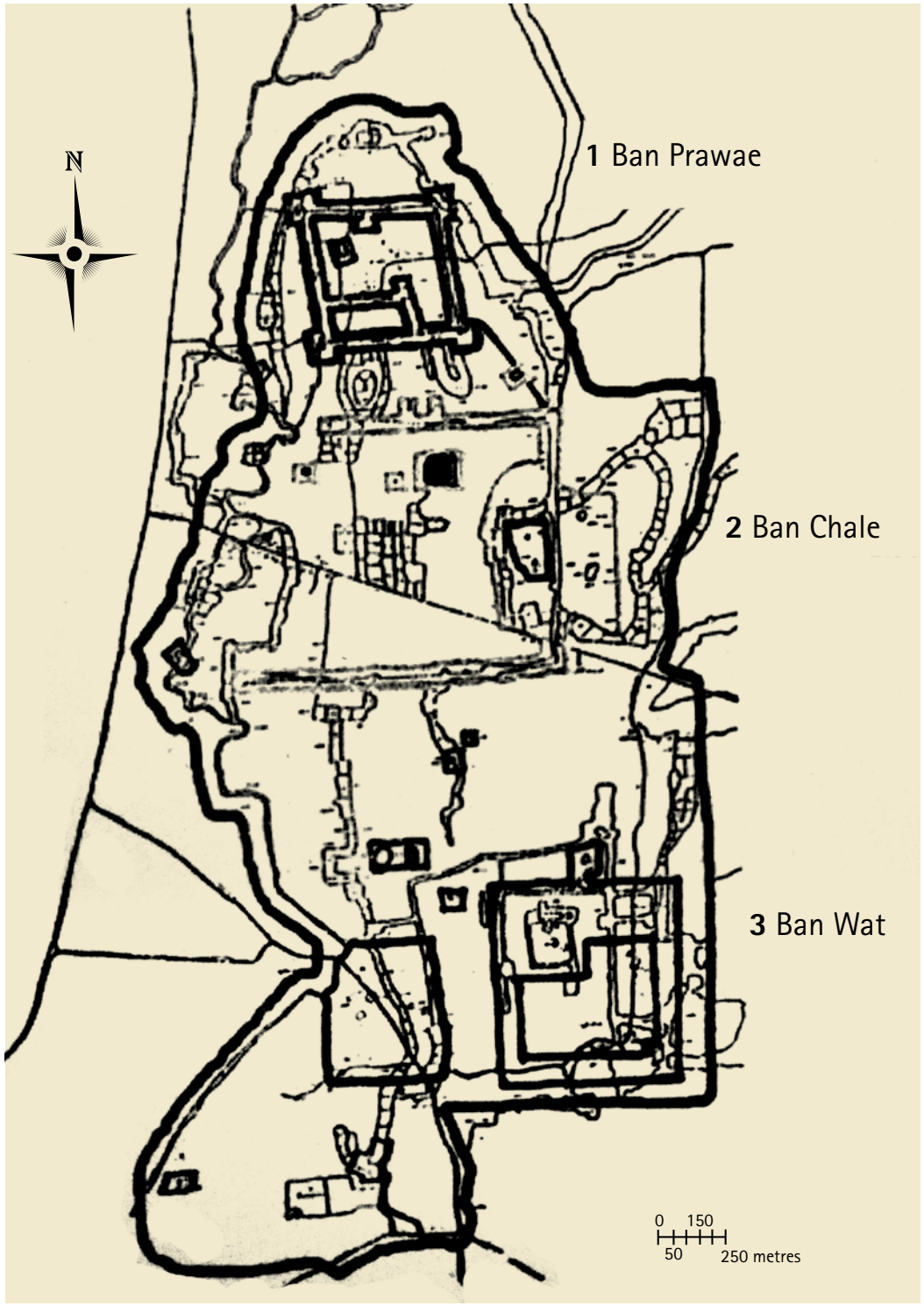
The Sankalakhiri range in the Betong area also feeds a number of rivers flowing to the Andaman Sea on the west coast, such as the Merbok river, running in an east-west direction and which has the famous Bujang cultural complex and other coastal sites, contemporaneous with those of Yarang, at its estuary **[Map 1]**. This geography allowed for trans-isthmian routes and made the social connectivity and trade between the two coasts of the isthmus possible. People from ancient Pattani and foreign merchants in the South China Sea could walk or navigate the Pattani river upstream, through the mountain pass at Betong and then walk or navigate downstream to coastal Kedah where they reached the Indian Ocean. These may be the southernmost trans-isthmian routes because the area south of the Betong pass was heavily forested and comprised of high mountains, which made it almost impossible to cross (Jacq-Hergoualc'h 2002: Docs 3 and 7). The region referred to as the "isthmus" technically ends here.

The Pattani valley can be divided into three parts, including the upper, middle, and lower valleys. The upper valley is close to the watersheds and people in this area still cultivate orchards, while the middle valley is wider and now the location of a large dam called Bang Lang. Most Neolithic sites (ca 5,000-4,000 years BP) with polished stone tools have been found in the upper and middle valleys (Preecha & Chatchai 2549: 17-19). The lower valley was defined by a broad coastal land with the bay of Pattani at the northernmost end. It is here that the Yarang archaeological complex is located. Only one possible prehistoric site was identified in the lower valley at "Sin cave" or Tham Sinlapa where prehistoric paintings were identified along with early historic mural paintings on the cave walls, which some scholars date back to the Śrīvijaya period (ca the seventh to twelfth centuries CE) (Preecha & Chatchai 2549: 22).

The bay of Pattani, with the spit of land called "Pho" or Laem Pho extending into this body of water, like a barrier protecting the bay in the north, forms a suitable harbour. This spit, however, may have been formed after the sixth to eighth centuries CE when Yarang was at its peak. It has been hypothesised that the ancient shores went quite deep inland, especially at the estuary of the Pattani river, where they almost reached the Yarang archaeological complex (Jacq-Hergoualc'h 2002: Doc. 17). If this is actually the case, then this deep estuary would have also provided protection from the wind and strong currents for ships disembarking near Yarang. In this hypothetical geography, Ban Bana would have been located right on the shore in the sixth century **[Map 2]**.

The Site of Yarang

The most well-known pre-Islamic site in Pattani and all of southern provinces for that matter, is perhaps Mueang Boran Yarang, or the Yarang archaeological complex (around 600 *rai*s or 96 hectares), which comprised of three main moated areas (or so-called *mueang*s), including Ban Wat, Ban Chale and Ban Prawae, from south to north, and a number of sites near these moated areas (FAD 2535: 39 and 2549: 77;



Map 3: *Yarang archaeological complex [Drawing by Wannasarn Noonsuk based on an information sign displayed at the Nakhon Si Thammarat National Museum].*

Wannasarn 2009: 66-67) **[Map 3]**. Because most of the structures and finds in these sites could be approximately dated to the sixth-ninth centuries CE, some scholars propose that the Yarang archaeological complex was the centre of the kingdom of Langyaxiu or Langkasuka, which according to the Chinese accounts sent its first ambassadorial mission to China in 515 CE (FAD 2535: 30-36; Jacq-Hergoualc'h 2002: 162; Wheatley 1961: 253-255).

Regardless of what its ancient name may have been, the Yarang archaeological complex provided a wealth of Buddhist structures and objects, such as terracotta *stūpa*s, so-called "votive *stūpa*s," "votive tablets," Buddha and Bodhisattva statues (Jacq-Hergoualc'h 2002: 171-187) **[e.g. Figure 2]**. Two *liṅga*s and a Śiva bull, however, were also found in this complex. The first *liṅga* is one of the earliest of its kind in peninsular Thailand **[Figure 3]**. Being created in a more naturalistic fashion, with its end section (*rudrabhāga*) being swollen and much larger than the rest of its body, Michel Jacq-Hergoualc'h has suggested an early date to *circa* the sixth century. It is now kept at the Songkhla National Museum with a record stating that it was found at Ban Prawae in 1962 (FAD 2549: 78). For the second *liṅga*, Jacq-Hergoualc'h (2002: 187) argues that it was made in a comparatively more traditional fashion and may be later in date, in which the *rudrabhāga* (the end and round section), the *brahmābhāga* (the square section) and the *viṣṇubhāga* (the octagonal section) being made in equal proportion **[Figure 4]**. It may be dated to *circa* the beginning of the seventh century. As for the stone statue of the bull, it was discovered in an excavation at site BJ8 or Monument no. 8 at Ban Chale (FAD 2549: 79) **[Figure 5]**. It was very badly eroded and, therefore, impossible to date at this point (Jacq-Hergoualc'h 2002: 187). Furthermore, there are some stone architectural parts **[Figure 6]** found in the Yarang archaeological complex, which are now kept at the Princess Galyani Vadhana Institute of Cultural Studies, Prince of Songkhla University, Pattani campus. However, their exact provenances were not recorded when they were moved to the Institute in around the 1970s. The only pieces of stone architectural parts of which the find-spots are known in Yarang are the threshold **[Figure 7]** and door frame from Monument no. 15 at Ban Wat. The pieces are now displayed in front of Monument no. 3 at Ban Chale (Preecha & Chatchai 2549: 55). These stone architectural parts seem to be uncommon in the Buddhist artistic tradition at Yarang, but quite common in the Brahmanical artistic tradition of peninsular Thailand, such as those in Tāmbraliṅga, a kingdom that had Brahmanism as its dominant religion in *circa* the fifth to the eleventh centuries, with its heartland in what is today Nakhon Si Thammarat (Wannasarn 2013: 57-157).

Although Jacq-Hergoualc'h suggested that BJ8 was initially Buddhist and then was possibly reused later for Śaiva worship (2002: 187-188), it is clear that Brahmanism in fact co-existed along with Buddhism in ancient Yarang when we also consider the two *liṅga*s. The degree of Brahmanical practices, however, seems to be quite thin and does not

Figure 3: *A* liṅga *(44 cm. in height) from the Yarang archaeological complex, now kept at the Songkhla National Museum [Photograph courtesy of Nicolas Revire].*

Figure 4: *Second* liṅga *from the Yarang archaeological complex, now kept at the Cultural Centre of Yala Rajabhat University [Photograph courtesy of the Cultural Centre of Yala Rajabhat University].*

represent firm evidence for well-established Brahmanical communities. The artworks associated with Brahmanism seem to be outside of the mainstream artistic tradition of Yarang. Therefore, Brahmanism would seem to be only an alternative ritual system within a much larger Buddhist context.

Outside of the Yarang archaeological complex, there have been few reports on other archaeological sites, and this has created a large gap in our knowledge about ancient Pattani. The remaining part of the essay will therefore be devoted to two important sites, so far largely underexplored, that yield additional evidence related to the early Brahmanical tradition in the region.[3]

The Site of Ban Bana

Around 10 kilometres north of Yarang, at the site of Ban Bana, the story is quite different from that of Yarang. At this site, the archaeological evidence for Buddhism is absent to date but that of Brahmanism is manifest in the forms of an ablution basin, a possible *liṅga*, brick shrines, and various architectural parts.

Ban Bana, roughly translated from Malay as "the village of the harbour,"[4] is located on a short ancient beach ridge running in an east-west direction, parallel to the modern shoreline and the spit of Pho. It was probably created by the coastal wave-dominated deposits during the Holocene Maximum Transgression of the sea water in the years 6,000-8,000 BP or not long after the sea had regressed (Apichart 2005: 19-23; see also Trongjai, this volume). The maximum transgression and the regression of the sea had also created a number of ancient beach ridges in peninsular Thailand, on which ancient communities were located, such as the cities of Nakhon Si Thammarat and Chaiya to the north of Pattani (Wannasarn 2013: 63). Like other large communities on the east coast of peninsular Thailand, Ban Bana is located on an ancient beach ridge because it would not have been easily flooded in the rainy season and it would be accessible to and from the sea, which was important for any fishing and trading community.

Figure 5: *The bull (54 cm. in height and 66 cm. in length) from the Yarang archaeological complex, now kept at the Songkhla National Museum [Photograph courtesy of Nicolas Revire].*

Ban Bana is practically surrounded by water. The ancient beach ridge of Ban Bana is situated between the deltas of the Pattani and Yaring rivers, which are around 4 kilometres to the west and east of Ban Bana, respectively. Today, the area between Ban Bana and the current shoreline to the north (around 200-metre distance) is covered with very fertile mangrove forests. On the southern side, the Naring and Maning rivers run parallel to the beach ridge and connect Ban Bana to the Pattani and Yaring rivers, with which people could navigate upstream for rice and forest resources for their consumption and trade with foreign merchants.

According to my survey in Ban Bana with my late father, Preecha Noonsuk, in June 2002, two brick foundations have been identified at the site, including the western and eastern structures. The western structure is located in Mu 3, Bana sub-district, at the location of a modern Islamic mosque next to the cemetery. At the northeast corner of the mosque, a brick well of 140 cm. diameter is situated.

At the southeast corner, there is a depression on the ground, probably a remnant of an ancient man-made pond associated with the shrine. Around the mosque, a number of bricks and artefacts, such as stone sculptures, architectural parts, a grinding stone, pottery sherds, Chinese ceramics, and an ivory bead, were found. Some of them are discussed below.

A large ablution basin (*snānadroṇī*) was discovered **[Figures 8a-c]**. It is square and quite flat: 247 cm. in length, 114 cm. in width, and 10 cm. in height. It is made of granite and the edges were elaborately carved to suggest the rims were equally 21 cm. on all sides. At one end, there is a channel, most likely for liquid, and this reminds us of a *somasūtra*, characteristic to Brahmanical tradition. Granite is also a common raw material for *yonī* and architectural parts in ancient Brahmanical communities in southern India (Huntington 1999: 303) and in Tāmbraliṅga (Wannasarn 2013: 57-157).

Preecha and Chatchai believed that this piece is a *yonī* (2549: 63-65), and, if it actually is, then this piece would be the largest *yonī* so far discovered in ancient peninsular Thailand. There is no hole, however, to insert a *liṅga* or a statue at the middle of this granite slab, which would be very peculiar for a *yonī*. Perhaps, it is only an ablution basin on which a statue was put without fixing it within. There is also a slight possibility that this piece is a slab for washing clothes but it is highly improbable because the piece seems too elaborate to be created for mundane uses. I know of two more examples of ablution basins from Nakhon Si Thammarat province with no hole in the middle. The first one was made of limestone from Monument no. 4 at Khao Kha in Sichon district. It has a round body (77 cm. in diameter) and a similar prolongated channel for sacred water **[Figure 9]**. It is said to be the most naturalistic ablution basin in peninsular Thailand (Nongkhran 2544: 183); however, the shape of this round ablution basin is very different from our specimen at Ban Bana. The second piece is a sandstone slab from Wat Phetcharik in the city of Nakhon Si Thammarat. It is square (93 x 93 cm.), and quite flat (16 cm. in height) and its channel for sacred water is broken. It seems to have also been reused as stone for sharpening tools and grinding herbs, as suggested by the features on its body and edges **[Figure 10]**. All these ablution basins without a hole are exceptional in peninsular Thailand. They seem to have been used in a religious context, seemingly associated with Brahmanism as it will become clear from what follows.

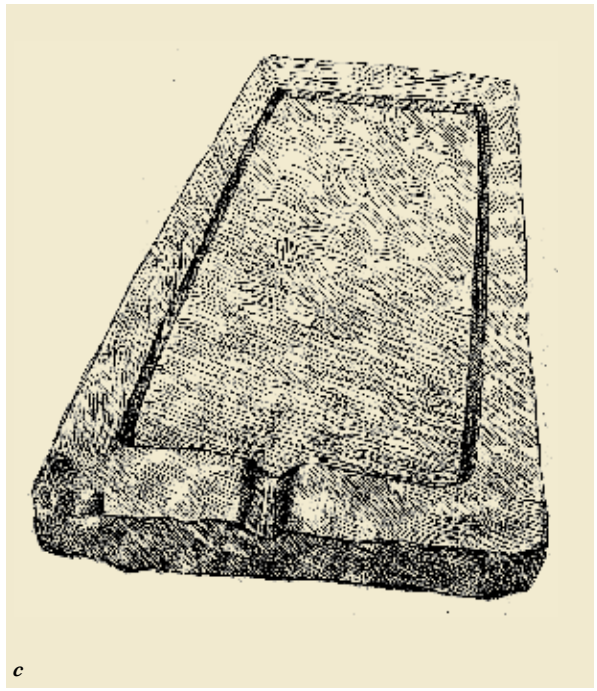
A possible *liṅga* was also discovered near the western structure of Ban Bana **[Figure 11]**. It was made of sandstone but broken in half and quite weather-beaten; therefore, it is difficult to see the original features. The piece, however, is dome-like (40 cm. in height) with a carving of a straight line running from top to bottom, similar to the *rudrabhāga* of a *liṅga*. There are also some smooth blocks of sandstone, the raw material usually used for sculptures, which appeared to be intentionally carved. Perhaps, they were broken parts of sculptures or architectural parts.

Figure 6: *Threshold from the Yarang archaeological complex [Photograph courtesy of Jidaporn Sangnil, the Princess Galyani Vadhana Institute of Cultural Studies].*

Figure 7: *Threshold from Monument no. 15 at Ban Wat, now displayed in front of Monument no. 3 at Ban Chale in the Yarang archaeological complex [Photograph courtesy of Pornthip Puntukowit, the 13th Regional Office of Fine Arts Department].*

a

b


c

Figures 8 a-c: *Ablution basin (*snānadroṇī*) from the western shrine at Ban Bana, (a) picture showing the whole piece, (b) the* somasūtra*, and (c) drawing [Photographs by Preecha Noonsuk and drawing by Wannasiree Noonsuk].*

Opposite Figure 9: *Ablution basin from Khao Kha, Sichon district, Nakhon Si Thammarat province [Photograph by Wannasarn Noonsuk].*

Opposite Figure 10: *Ablution basin from Wat Phetcharik, Mueang district, Nakhon Si Thammarat, now kept at the Nakhon Si Thammarat National Museum [Photograph by Wannasarn Noonsuk].*

Opposite Figure 11: *Fragments of a possible* liṅga *from the western shrine at Ban Bana [Photograph by Preecha Noonsuk].*

Opposite Figure 12: *A fragment of door frame from the western shrine at Ban Bana [Photograph by Preecha Noonsuk].*

There are also a variety of stone architectural parts, such as foundation rocks, pillar bases, and door frames. One broken door frame is particularly interesting **[Figure 12]**. It was made of granite and had a tenon at one end to fit into a mortise of a threshold or lintel. These architectural parts suggest the construction techniques characteristic to Brahmanical shrines, especially in Tāmbraliṅga, where these types of architectural parts were abundant (Wannasarn 2013: 103-109). It may be assumed that the western structure was in fact a Brahmanical shrine and was made with similar construction techniques used in Tāmbraliṅga, in which the body of the shrine may have been made of bricks but the superstructure was made of wood and thatch, and stone parts were used as pillar bases, door frames, thresholds, and lintels. Granite was normally used in Tāmbraliṅga from the eighth century onwards, this being partly confirmed by the Thermoluminescence date of *circa* 800 CE from a brick sample excavated at Wat Thao Khot where some granite architectural parts were found nearby (Wannasarn 2013: 138). It may therefore be possible to assume that the western shrine at Ban Bana **[Figure 13]** was erected in some time during approximately the eighth to eleventh centuries. It is important to note, however, that these stone architectural parts have not been found in Buddhist architecture in this region, except when they were reused for other purposes which were not their original functions. Therefore, it may be assumed at present that these features were mainly characteristic of a Brahmanical architectural tradition in the region.

The eastern structure is located at the centre of the modern-day community of Ban Bana in Mu 2, Bana sub-district. This structure was largely destroyed by the construction of a new road. Fortunately, there are still some bricks and artefacts, such as architectural parts **[Figure 14]**, pottery sherds, Chinese ceramics, and grinding stones. The bricks are of similar size (around 32 x 17 x 6 cm.) with those of the western structure. A broken sandstone door frame with a tenon was found, and this suggests the same Brahmanical tradition of construction and a contemporaneous date (ca the eighth to eleventh centuries).

Chinese ceramics were found throughout the site of Ban Bana. The 113 pieces that we collected can be dated to the Yuan (1271-1368), Ming (1368-1644), and Qing (1644-1911) dynasties. This suggests that Ban Bana probably became a trading station of Chinese ceramics from the thirteenth to twentieth centuries as well. The earthenware ceramics have not yet been studied in detail, but some of them could be identified as *kendi*s since they had spouts, similar to those discovered in Songkhla, Nakhon Si Thammarat, and Surat Thani provinces.

The Site of "Mahut Hill" or Khuan Mahut

From the evidence presented above, it can be seen that Buddhism and Brahmanism most likely co-existed in pre-Islamic Pattani. Yarang may have been the epicentre, dominated by Buddhism in this area, but there were probably also some smaller Brahmanical communities, like Ban Bana, outside the Yarang complex. In fact, as I and my father surveyed the region in 2002 (Preecha & Chatchai 2549: 61-63), we discovered that Ban Bana is not the sole site of its kind. There is another site complex known as "Mahut hill" or Khuan Mahut where Buddhist finds were absent while Brahmanical ones were numerous.

Mahut hill is located around 6 kilometres to the southeast of the site of Ban Wat in the Yarang archaeological complex. It is also around 6 kilometres to the east of the Pattani river. The hill is around 77 metres above sea level, almost the same height as Khao Kha, the most important Śaiva site in Tāmbraliṅga. It is a small hill surrounded by plains and would have been like an island in the rainy season. Perhaps, it was this sacred geography that made people believe that Mahut hill was the sacred mountain in the Brahmanical conception, and this led to the construction of a series of brick shrines on its top. The hilltop was made into a large platform surrounded by stone retaining walls. On top of this platform, two brick shrines were built, between which lay a man-made pond (5 x 10 m.), the first measuring 5 x 10 m., the second 15 x 20 m. Another man-made pond was found around 10 metres to the south of the second shrine. There were architectural parts, such as door frames, thresholds, and lintels, similar to those found in Ban Bana and Tāmbraliṅga. According to the villagers, there were "*yonī*s" found in this site, but most of them were badly damaged. The most complete one was moved to Niwet Phupha Buddhist monastery (Wat Trang). It was almost square (85 x 88 x 7 cm.) and made of granite. At the middle of the piece, there was a square hole, into which a *liṅga* could have been inserted **[Figure 15]**.

Figure 9

Figure 10

Figure 11

Figure 12

Figure 13: *The mosque where the western shrine is located [Photograph by Preecha Noonsuk].*

Conclusion

In summary, it may be assumed that the aforementioned ancient Brahmanical communities spread along the east coast of peninsular Thailand with maritime trade. The evidence from Ban Bana and Mahut hill especially suggests that there was a close social connection with Tāmbraliṅga. Their shared Brahmanical tradition was distinctively similar and may be traced back to southern India where stone architectural parts, especially those of granite, were widely used. These communities continued to play a role in maritime trade at least until the twentieth century, although their religious orientation may have at times changed to Islam.

From the foregoing pages, it also appears clear that much more archaeological research is needed. Some fine-grained questions are still left unanswered. Future research should seek to find more connections between Pattani and southern Kedah, which were woven together with trans-isthmian trade. New excavations in Pattani province would also prove useful in uncovering the multi-cultural and multi-religious past and hopefully help mend the bond between people in this conflict zone.

Acknowledgements

I wish to record my intellectual debt to my father, Preecha Noonsuk, and express my gratitude to Wannasiree Noonsuk, Pornthip Puntukowit, Jidaporn Sangnil, the Fine Arts Department, the Princess Galyani Vadhana Institute of Cultural Studies, and the Cultural Centre at Yala Rajabhat University for providing valuable information and illustrations for this essay. I am also grateful to Nicolas Revire, Stephen Murphy, Cy Calugay, and the reviewer for their comments and insights, and to the Ananda Mahidol Foundation and Walailak University for supporting my broader research entitled, "the Cultural Landscape of Tāmbraliṅga," of which this modest contribution is partly a result.

Figure 14: *A fragment of possible architectural part, perhaps a moonstone, from the eastern shrine at Ban Bana [Photograph by Preecha Noonsuk].*

Figure 15: *A* yonī *from the Mahut hill [Photograph courtesy of Pornthip Puntukowit, the 13th Regional Office of Fine Arts Department].*

Endnotes

1 For instance, this claim was reflected in the statement by a head of Muslim group, called PULO, as appeared in an online newspaper. See: http://www.manager.co.th/Politics/ViewNews.aspx?NewsID=9560000023609 (retrieved on 20 July 2013).

2 The burning occurred in 2004 and on 18 February 2007, which destroyed the whole office and valuable archaeological documents. Some of the burnt artefacts, such as terracotta "votive *stūpa*s," are now on display at the Nakhon Si Thammarat National Museum. Personal communication with Ms Pornthip Puntukowit, former Head of the Archaeological Unit at the Yarang Archaeological Complex. See also: http://www.muangboranjournal.com/modules.php?name=News&file=article&sid=1291 (retrieved on 20 July 2013).

3 Preecha and Chatchai (2549: 54-60) wrote in their report that some stone sculptures and architectural parts were found in several sites outside the Yarang archaeological complex as well, including (1) Ban Paka-arang in Pattani mueang district, where several stone architectural parts, such as door frames, were found, (2) Ban Bayomaosumeng in Yarang district, where fragments of three ablution basins, possibly *yonī*s, and some stone architectural parts were found, (3) Ban Bana, and (4) the Mahut hill, which are discussed in detail in this essay. I did not have a chance to join Preecha Noonsuk in his survey in Ban Paka-arang and Ban Bayomosumeng and could not find photographs of his findings at these sites in his collection, therefore I intentionally left out here these two sites from this study.

4 The word *ban* is Thai and could mean "village," while *bana* in Malay seems to be derived from *bandar*, which means "harbour" (Perret *et al.* 2004: 86-87).

References

Apichart Suphawajruksakul
2005 *Coastal Erosion at the Pak Phanang River Basin, Changwat Nakhon Si Thammarat*. Master Thesis. Bangkok: Chulalongkorn University. [Unpublished]

Chaiwat Satha-Anand
2554 Matsayit "daeng": thon khwam runraeng tophuen thi saksit nai sangkhom manut (The "Red" Mosque: Violence Against Sacred Space in Human Societies). *Rubaiyat* 2(3): 14-34. [In Thai; 2011 CE]

Fine Arts Department (FAD)
2535 *Kansamruat borannasathan mueang yarang* (*The Survey of Ancient Monuments at Yarang*). Bangkok: Fine Arts Department. [In Thai; 1992 CE]

2549 *Borannawatthu sinlapa nai phiphithaphan sathan haeng chat* (*Artefacts and Artworks in the Songkhla National Museum*). Bangkok: Fine Arts Department. [In Thai; 2006 CE]

Huntington, Susan
1999 *The Art of Ancient India: Buddhist, Hindu, Jain*. New York: Weather Hill. [Reprint, First Edition 1985; With contributions from John C. Huntington]

Jacq-Hergoualc'h, Michel
2002 *The Malay Peninsula: Crossroads of the Maritime Silk Road (100 BC-1300 AD)*. Leiden: Brill.

Nongkhran Srichai
2544 Khao kha: wiman haeng phra siwa maha thep (Khao Kha: The Vimana of Śiva). In Fine Arts Department (ed.), *Prawatisat borannakhadi nakhon si thammarat* (*History and Archaeology of Nakhon Si Thammarat*). Bangkok: Fine Arts Department. [In Thai; 2001 CE]

Perret, Daniel, Amara Srisuchat & Sombun Thanasuk (eds)
2004 *Études sur l'histoire du sultanat de Patani*. Paris: École française d'Extrême-Orient.

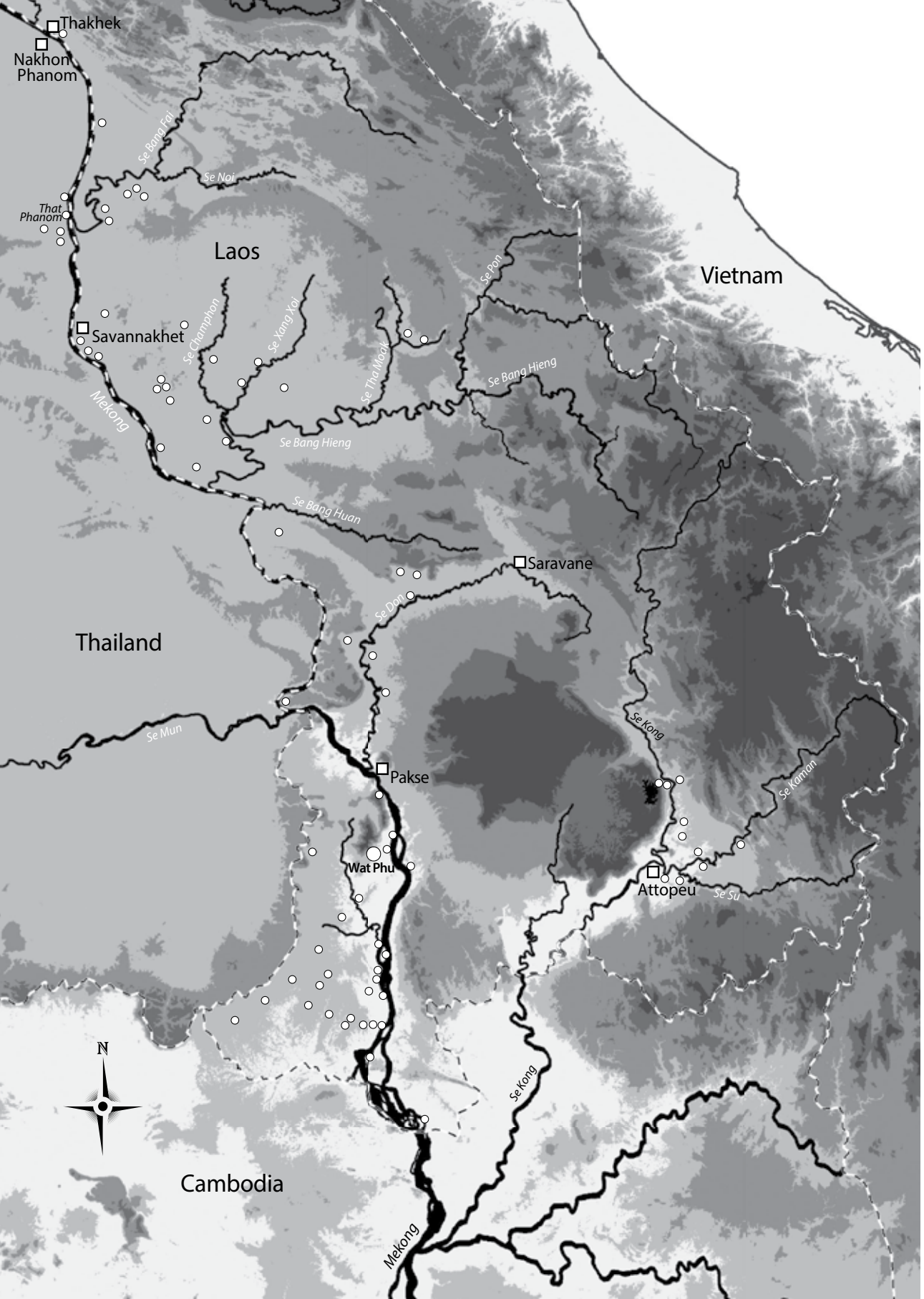
Preecha Noonsuk & Chatchai Sukrakanchana
2549 *Kansueksa phatthanakan khong chumchon boran ban bana tambon bana amphoe mueang changwat pattani* (*A Study of the Development of the Ancient Settlement of Ban Bana, Mueang District, Pattani Province, Southern Thailand*). Nakhon Si Thammarat: Rajabhat Nakhon Si Thammarat University. [Unpublished report in Thai; 2006 CE]

Srisakra Vallibhotama, Chamrun Den-Udom, Abdulloh Laorman & Udom Patnawong
2550 *Lao khan tamnan tai* (*Tales from the South*). Bangkok: Lek-Prapai Viriyapant Foundation. [In Thai; 2007 CE]

Wannasarn Noonsuk
2009 *The Isthmian Civilizations: The Significance of Peninsular Siam in the Southeast Asian Maritime World*. Köln: Lambert Academic Publishing.

2013 *Tambralinga and Nakhon Si Thammarat: Early Kingdoms on the Isthmus of Southeast Asia*. Nakhon Si Thammarat: Rajabhat Nakhon Si Thammarat University Press.

Wheatley, Paul
1961 *The Golden Khersonese. Studies in the Historical Geography of the Malay Peninsula before A.D. 1500*. Kuala Lumpur: University of Malaya Press.



Pre-Angkorian Communities in the Middle Mekong Valley (Laos and Adjacent Areas)

Michel Lorrillard

Introduction

The earliest forms of "Indianisation" in Laos have not been the subject of much research to date. Henri Parmentier (1927: 231, 233-235), when introducing some two hundred sites related to "Khmer primitive art" – soon reclassified as "pre-Angkorian art" as being prior to the ninth century – took into account only five such sites located upstream of the Khone falls. Three of them are located in the Champassak region **[Map 3]**, viz. "Bàn Huèi Thàmô" (i.e. Huei Tomo), "Vat Phu" (hereafter, Wat Phu) and "Čăn Nakhon" (i.e. Phu Lakkhon); the other two being in Savannakhet province **[Map 6]**, viz. "Thăt Phoṅ" (i.e. That Phon) and "Thăt Iṅ Raṅ" (i.e. That In Hang). Although the latter are relatively far away from the Cambodian border, their position was not surprising to the architect as communication would have been easy via the Mekong river with the southernmost sites. This holds true for two other sites in the middle basin of the Se Kong river (Attopeu province) **[Map 2]**– "Vat Sai Phai" (Upmung Se Su) and "Bàn Sáke" (Ban Sakhae) – that can also be easily connected to the pre-Angkorian sanctuaries discovered at the confluence with the Mekong in the Cambodian districts of Stœng Treng and Thala Borivat (Parmentier 1927: 230). Among these seven sites, six – Wat Phu excepted – have not been researched until very recently.

That part of Laos was largely integrated in the Khmer cultural sphere was however made explicit at a rather early stage. Auguste Barth edited and translated two inscriptions from the Champassak region at the beginning of the twentieth century, namely K. 367 (1902: 235-240) and K. 363 (1903: 442-446). Parmentier (1912: 195-197) also acknowledged the very ancient origin of Wat Phu, even if the most visible parts of the sanctuary belong to the Angkorian period. The inherent sacredness of the site – the monumental complex is built at the foot of a mountain the shape of whose top suggests a natural *liṅga* (hence its name Liṅgaparvata) – seems indeed to have been recognised very early on by a community that had adopted the religious tenets imported from India. George Cœdès (1918: 1-3) even considered in his pioneering writings that the area had exceptional historical importance, for he viewed the site as the cradle of the first Cambodian dynasty – the "land of Kambu" – i.e. the territory from which Zhenla had begun expanding to the extent of conquering Funan. This theory, based primarily on the interpretation of a late Sanskrit inscription found at Wat Phu (K. 475), was reaffirmed later on the basis of arguments found essentially in the Chinese annals (Cœdès 1928: 124). It then received considerable support with the

Opposite Map 1: *Khmer and Mon sites in southern and central parts of Laos. All the sites have been referenced by EFEO, excepted some sites in Champassak province where coordinates have been given by PRAL [Drawing courtesy of Jérémy Ferrand].*

edition and translation of the Wat Luang Kau stele (K. 365), dated paleographically to the second half of the fifth century (Cœdès 1956). This inscription, which had been ordered by a *mahārājādhirāja* named Śrī Devānīka, had been found less than 5 kilometres away from Wat Phu in a vast complex whose groundplan had at that time just been revealed by aerial photography. The images clearly displayed what was hardly visible on the ground: in this case a quadrangle of 2,400 m. x 1,800 m. (with the Mekong as the eastern side), composed of several concentric earthen levee enclosures containing the buried remains of many monumental structures. In spite of the importance of the discovery – i.e. the remains of an ancient city comparable to Sambor Prei Kuk in Cambodia – it did not rapidly trigger the excavation campaign that Cœdès called for.[1] Most archaeological research at the time was focussed on the Angkor area where so many other monuments still had to be inventoried and uncovered. Some twenty years later, Bernard-Philippe Groslier expressed great interest in extending research in southern Laos, but the political situation was already such that access to the area was impossible.

The absence of excavation programs in this region for most of the twentieth century was detrimental to the recognition of Laos as a territory in mainland Southeast Asia deserving in-depth historical studies. Concerning the period prior to the emergence of the Lao kingdom of Lān Xāng (fourteenth century), the country still appears as a large blank spot on the published historical maps where only the site of Wat Phu is sometimes mentioned. This observation does not only affect the history of Laos itself; the damage caused by the lack of documented research also severely impacts the overall vision and the degree of knowledge that we can achieve when dealing with regional history. As long as we ignore this territory, in spite of it being geographically located at the crossroads of the great civilisational currents of Southeast Asia, many key questions cannot be satisfactorily addressed. The remark applies to the so-called Indianisation process in inland regions, and to the type of contacts that may have been established between the first historical cultures of the middle Mekong valley and those which thrived in the Delta (Funan) or even in the coastal areas of central Vietnam (Campā) or central Thailand (Dvāravatī). Moreover, this lack of data has prevented any real constructive reflection on the development of the first territorial entities created by the Tai-Lao people. At the turn of the first millennium CE, this Tai-speaking population gradually moved southward along the rivers and settled in areas that other ethnic communities had occupied before them. Myths and legends aside, the questions of historical continuity on the Mekong banks and of the persistence of a cultural substrate have yet to be investigated.

However, thanks to some recent French and Italian field-research programs carried out in cooperation with the Lao Ministry of Information and Culture, it has now become possible to submit all these issues to a thorough review. The archaeological work done in Wat Phu between 1991 and 1998 under the aegis of the *Projet de recherche en archéologie lao* (PRAL) led to the discovery of pre-Angkorian structures in the upper part of the sanctuary and to the excavation of two monuments in the ancient Mekong riverside town (Santoni & Hawixbrock 1998; Santoni & Souksavatdy 1999). In the latter case, geomagnetic surveys provided substantial data about the settlement pattern, highlighting the existence of about thirty structures that are still buried. The surveys carried out by this team in 1998 and 1999 further led to the discovery of new temples in the southern part of Champassak province, close to the Mekong and along the old road connecting Angkor to Wat Phu (Santoni & Hawixbrock 1999). More recently, PRAL launched new excavation campaigns leading to the partial uncovering of two pre-Angkorian monuments in Nong Mung (2011) and Wat Sang-O (2013), in and around the ancient city (unpublished reports).

From 2003 to 2009, the École française d'Extrême-Orient (EFEO) centre in Vientiane has furthermore carried out an ambitious research program in the form of extensive surveys focussing on the identification and inventory of historical material in the seventeen provinces of Laos. While the northern part of the country offers a sizeable amount of useful evidence related to Tai-Lao culture in the second half of the second millennium, research in the southern and the central parts revealed – in addition to Lao remains – about eighty historical sites with much older data, dating back to the second half of the first millennium and the beginning of the second one **[Map 1]**. These sites belong to the Khmer (pre-Angkorian and Angkorian) and Mon cultural areas that had hitherto been largely unnoticed or ignored. This essay will focus mostly on the historical value of pre-Angkorian material found in the middle Mekong valley, mostly in modern-day Laos from Champassak up to Khammuan province, with some references to directly adjacent areas in Thailand and Cambodia.[2]

Backgrounds on a Regional History

Whereas our knowledge of the ancient history of Cambodia, Vietnam and Thailand is more advanced than that of Laos, the geography of pre-Angkorian sites in these three countries has not been extensively documented so far.

The main resource available in this respect is Parmentier's book (1927), whose value is still undiminished in spite of its age. The author recorded over one hundred and seventy sites in Cambodia and southern Vietnam that can be considered as pertaining to Funan and Zhenla. New research has of course resulted in the discovery of other pre-Angkorian structures and artefacts. Some art historians and archaeologists (e.g. Pierre Dupont, Mireille Bénisti, Jean Boisselier and Miriam Stark) have significantly contributed to scholarship with relevant information or clarification on matters of style and dating. The study of inscriptions, developing from Cœdès's work (1937-66), has also led a few scholars (mainly Claude Jacques and Michael Vickery) to supplement and reconsider some matters concerning the dawn of Khmer history. All the data currently available in the region should thus be collected and submitted to a comparative study taking into account, for instance, what we know about settlement modalities, monuments, statuary, material culture and textual sources.

Archaeological research in Thailand has also made considerable progress, highlighting the high degree of specificity of the northeast part of the country, where several native cultures have been recognised. It has now been shown that the first historical communities established in the region had developed into complex societies as early as the Iron Age and already attained an advanced level of technical development

before they start to show evidence of influence from India (Higham & Rachanie 2012). The ethnic identity of these people during the early centuries of the Common Era is still a highly speculative issue. They probably belonged to the large Austro-Asiatic group, but it is impossible to say whether they were part of Khmer or Mon speaking communities before the seventh century when some inscriptions in these vernacular languages make their appearance (after an initial phase of writings in Sanskrit).

This may be of great importance if we consider, following Cœdès, that it was perhaps in both northeast Thailand and southern Laos that the first Khmer polities have arisen. Admittedly, information about the sites of the first millennium CE identified in northeast Thailand was still very scanty in the first half of the twentieth century. However, scholars' attention was drawn after a few Sanskrit inscriptions dated to the late sixth century were discovered in the Mun river basin (see *infra*). Remains of great value were also identified in some sites that appear to have been important cities, not only in the centre of the Khorat Plateau such as Mueang Fa Daet and Kantharawichai, but even more so in the western and southern border areas such as Si Thep and Dong Si Mahosot.

In the mid-1970s, B.-P. Groslier led two missions in northeast Thailand (1997: 199), one of his objectives being to collect information about the place of origin of the Khmer communities who had already been united into a political entity. He finally discarded the Khorat Plateau, where he did not find sufficient data, and pointed rather towards the southern Dangrek range (now in Cambodia) and possibly southern Laos, i.e. the Wat Phu region, for further investigation. He became aware, however, of the importance of the "Round Cities" (i.e. large moated sites) in northeast Thailand and drew a parallel between these protohistoric sites and most of the places that were later selected by the Khmers of the Angkorian period to build temples (1997: 206-207). Apparently, Groslier made a clear distinction between the communities that founded these moated cities with their peculiar hydraulic infrastructures and those that later founded the Khmer empire, never thinking of a possible continuity in the settlement process. Furthermore, he separated the two above-mentioned areas from a third one whose limits included the present-day Thai provinces of Kalasin, Sakon Nakhon and Nakhon Phanom. There, according to him, a "Civilisation of steles" – a type of artefacts already reported by Subhadradis Diskul (1956) – emerged as a cultural area that was even more different from that of the Khmers (1997: 202). Groslier's assumptions, stimulating as they were at the time, are now outdated. The large-scale work carried out by Thai archaeologists from the 1970s onwards, paired with the comprehensive research that has been conducted recently by Stephen Murphy (2010), has shown that the area over which this culture characterised by "Buddhist steles" (i.e. *sema* stones) indeed extended throughout the Khorat Plateau, with significant concentrations in some specific places. They also evidenced a link between this culture and a Mon-speaking population similar to that among which the Dvāravatī culture developed in the Chao Phraya river basin (Revire, this volume).

The Geography of Pre-Angkorian Sites in the Middle Mekong Valley

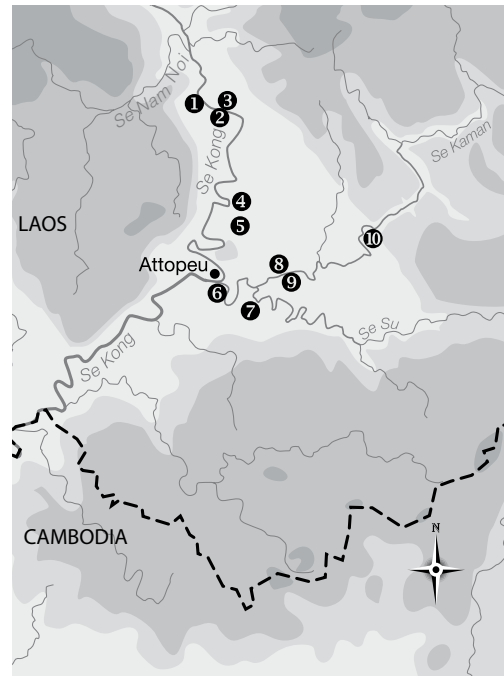
Although based on only seven sites, the limits that Parmentier had set in 1927 for the pre-Angkorian area in Laos differ only slightly from those that are currently established on the basis of the *circa* fifty sites that have been recently inventoried by the Vientiane EFEO centre in the southern and central provinces. The contribution of recent research concerns the composition and the density of this area rather than its geographic extension.

Not only do the historical sites dated to the second half of the first millennium appear to be far more numerous than those dated to the first half of the second millennium, but they are also more evenly distributed, in relation with the constraints and assets of the environment. Parmentier wrote that "the structures displaying primitive Khmer style are rather close to rivers" (1927: 44), and his study is to a large extent structured on the basis of this observation. Apart from the introductory chapter devoted to Sambor Prei Kuk, the work is composed of three parts which cover successively the lower Mekong basin, the Tonle Sap basin and the upper reaches of the great river (upstream from Phnom Penh, including southern Laos and northeast Thailand). The maps provided to illustrate his study place particular emphasis on the secondary drainage system that is otherwise not so very clearly visible in the vast plains of Cambodia and whose importance is often underestimated. In Laos, as most of the territory is covered with mountains, the role played by the Mekong and its major left-bank tributaries appears similarly decisive.

The Se Kong Basin

The Se Kong river, whose upper and middle courses are located in the eastern part of southern Laos, flows into the Mekong in Cambodia, less than 50 kilometres downstream from the Khone falls, the traditional and current frontier between the two countries.

The archaeological wealth at the confluence in both Stœng Treng town and Thala Borivat village on the opposite bank has been highlighted in previous studies on the pre-Angkorian period (Parmentier 1927; Bénisti 1968; Lévy 1970), but current historical works tend to neglect it. The near total absence of field work so far in the region is surely the reason why no Khmer remains has ever been recorded in the lower basin of the Se Kong upstream of the confluence of the Se San (less than 10 kilometres away from Stœng Treng) up to the border of the Lao province of Attopeu, i.e. over a distance of some 150 kilometres. Partial surveys carried out over a distance of about 50 kilometres in Lao territory downstream from the town of Attopeu have not yet been conclusive. However, many remains have recently been found by the EFEO team in the middle basin of the river up to the limit of Sekong province – the upper basin could not be explored due to difficulty of access to the territory – thus confirming the existence of relations with pre-Angkorian sites bordering the Mekong **[Map 2]**.



Map 2: *Pre-Angkorian sites in the middle Se Kong basin, Attopeu province, Laos [Drawing courtesy of Pierre Pichard].*

1. Ban Khum Kham
2. Ban Sok
3. Ban Sapoan
4. Ban Sakhae
5. Ban Halang
6. Ban Se Kaman Nua
7. Upmung Se Su
8. Ban Fang Daeng
9. Ban Wat That
10. Ban Tatkum

Figure 1: *Stele or ogee step, Upmung Se Su site, Attopeu province, Laos [Photograph by Michel Lorrillard].*

Terrestrial east-west routes also ran across the Boloven Plateau from these lowlands to the territory surrounding Wat Phu (Attopeu and Huei Tomo are located at the same latitude) over a distance of about 100 kilometres. Whereas the Attopeu plain is rather vast – about 40 kilometres at its widest point – thus offering much space for human settlement, we can observe that the communities gave preference to riparian habitats, thereby confirming Parmentier's views. Eight of the ten sites where evidence of the pre-Angkorian period has been found seem to have been places where at least one monument was erected.

On the banks of the Se Kong, at a short distance from each other, three sites with both architectural components and ceremonial objects have been identified. Ban Khum Kham – the site located furthest upstream – has revealed several door jambs, one door head/sill, two ogee steps, a *somasūtra* and fragments of ablution basins (*snānadroṇīs*) among various heaps of bricks. These remains may have belonged to the same complex as those found in Ban Sapoan and opposite Ban Sok, 2 kilometres downstream, in particular large-sized bricks and rectangular sandstone slabs which might have been door jambs. In four different places in the village of Ban Sakhae, at about 20 kilometres further south, on the outer side of a narrow bend, significant remains such as a lintel (see *infra*), thresholds, door heads/sills, door jambs, a *somasūtra*, parts of a pedestal and heaps of bricks, suggesting the presence of an important shrine, have been located. A few sandstone fragments found in Ban Halang, 2 kilometres south, could be related to this site.

The modern town of Attopeu lies at the confluence of the Se Kaman, a major river whose source is located in the Annamite mountain range, at the border of Quang Nam province in Vietnam. On the left bank of this river, less than 1 kilometre away from the confluence, the former existence of an ancient structure is indicated only by the presence of a concentration of large bricks amongst which are a few scattered objects that suggest religious activity such as fragments of a pedestal. After navigating past the meanders of the Se Kaman over a distance of about 12 kilometres, travellers arrive at the confluence with the Se Su, another river with its source in Kon Tum province in Vietnam. An important pre-Angkorian site called "Upmung Se Su" has been discovered 2 kilometres upstream on the west bank of this river.

Figure 2: *Detail of a stele with a symbolised* trimūrti*, Ban Tatkum, Attopeu province, Laos [Photograph by Michel Lorrillard].*

At least two monuments must have existed there, as can be deduced from about twenty sandstone architectural components that were found and the extent of the area covered by bricks **[Figure 1]**. The site has obviously been heavily looted and no remains of cultual objects have been found. The structures were discovered in the early twentieth century and the French colonial authorities made arrangements to transport two lintels of the seventh-eighth centuries that looters had not yet taken away to the former *mueang* (town) of Attopeu, somewhat further upstream on the Se Kaman. One of them is still displayed in the modern Lao temple of Ban Fang Daeng, along with the fragment of a colonette probably originating from the Se Su site as well.

Ban Wat That temple, on the left bank of the Se Kaman and almost precisely opposite Wat Ban Fang Daeng, is famous for its *stūpa* that tradition assigns to the reign of the Lao King Setthāthirāt (mid-sixteenth century). However, the site might well be much older, since many Khmer remains, apparently belonging to the pre-Angkorian period, have been discovered there. This applies in particular to the fragment of a pedestal cornice and the corresponding dado with pilasters that is still half buried. Three large rectangular sandstone slabs may also belong to an ancient monument. The remaining parts of a large stone statue of the Buddha (crossed-legs and the head) that were to be assembled – as shown by the presence of a mortise – have however raised some doubts. Some stylistic features, for example the straightened hair, are rather reminiscent of the Angkorian style. The site of Ban Wat That might well have been a stopover along the course of the Se Kaman, as was the case with the Ban Tatkum site located about 30 kilometres upstream, at a distance of only 5 kilometres from the nearest mountain barrier belonging to the Annamite range.

Of all the ancient historical sites identified in Laos, Ban Tatkum is easternmost (one can hardly find a sanctuary lying further away to the east, given the geography of the country); it is also the closest one to the historical territory of Campā in Vietnam. The existence of an ancient structure cannot be proven. However, the area is characterised by the presence of a large stele that lay among some sandstone blocks of indeterminate purpose; the upper part is carved in low-relief and represents a symbolised *trimūrti* **[Figure 2]**. Particular attention has been paid to the carving of attributes: a trident (*triśūla*) for Śiva, flanked by the water-pot (*kamaṇḍalu*) for Brahmā and the wheel (*cakra*) for Viṣṇu.[3] The three figures stand above a rectangular shape with rounded corners, bearing a bulge on the left-hand side. This curious design is reminiscent of the shell of a turtle – possibly the turtle supporting the cosmos.

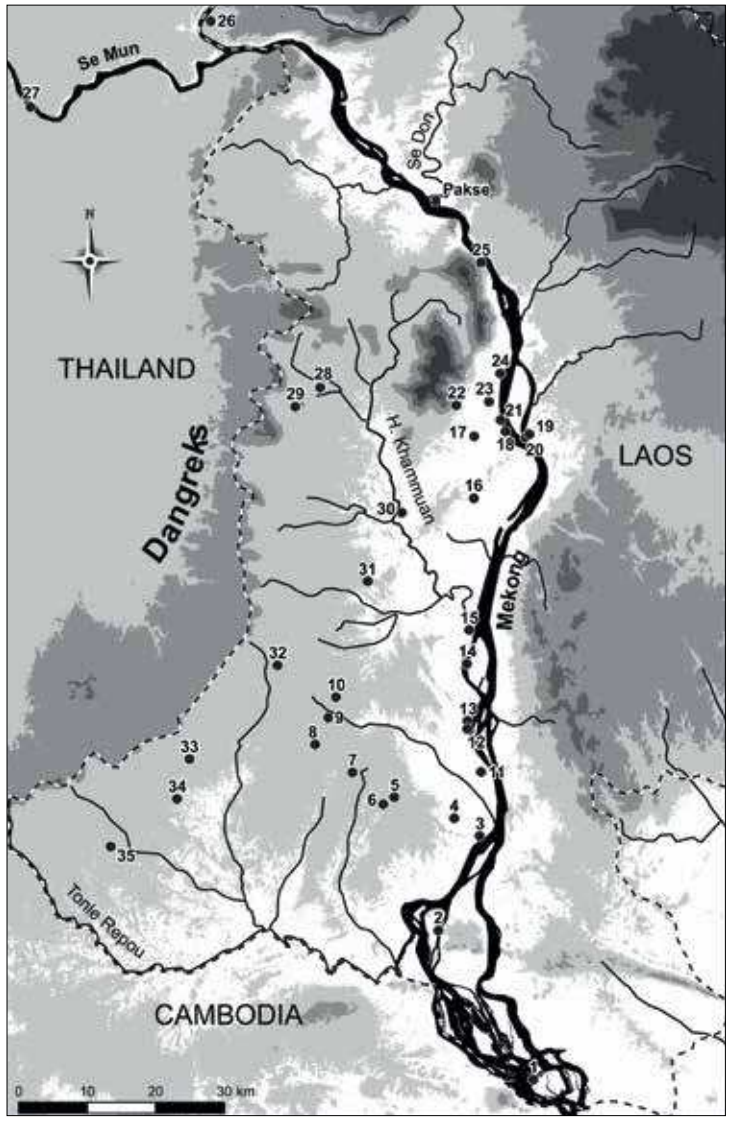
The Champassak Plain

Champassak province, bordering Cambodia and extending on both banks of the Mekong, is not surprisingly the area with the highest number of ancient remains. Some twenty-four pre-Angkorian sites have so far been identified (with Wat Phu and the old city each counted as one) whereas only a dozen Angkorian sanctuaries have been found in the same region **[Map 3]**. Virtually all pre-Angkorian sites, from Khong island in the south to Phu Lakkhon in the north, are located along the Mekong or in its immediate vicinity. The maximum distance from the riverside does not exceed 20 kilometres, except for the Ban Huei Na/Phu Lek complex (about 30 kilometres), which might have been a stopover on the transverse road leading to the Mun valley without having to travel up to the confluence. The rationale underlying the position of sites is clearly different from that of Angkorian sanctuaries that were meant to be primarily stopping places on the land route between Angkor and Wat Phu.

The Huei Tomo site at the confluence of the river bearing the same name should be considered as a particular case, not only because it is positioned on the left bank of the river (which is unique in the province), but also because it harbours both pre-Angkorian (lintel, *somasūtra* with *makara* head, and perhaps a *mukhaliṅga*) and Angkorian remains

Map 3: *Khmer sites in Champassak province, Laos [Drawing courtesy of Jérémy Ferrand].*

1. *Wat Don Khone*
2. *Khong*
3. *Ban Saphang*
4. *Nong Sombat Nai*
5. *Nong Boa Bo Pong*
6. *Nong Sombat Noi*
7. *Nong Sombat Gnai*
8. *Huei Kadien*
9. *Sang Mouang*
10. *Nong Saming*
11. *Veun Kaen*
12. *Non Sombat*
13. *Non Pha Khao*
14. *That Don Sai*
15. *Ban Outhoum Mai*
16. *Ban Na Khi Khuai*
17. *Ban Khok Khong*
18. *Ban Katup*
19. *Huei Tomo*
20. *Khan Mak Houk*
21. *Ban Muang Kang*
22. *Wat Phu*
23. *Wat Phu ancient city (Liṅgapura?)*
24. *Wat Lakhon*
25. *Phu Malong*
26. *Phu Lakkhon*
27. *Ban Sapheu*
28. *Ban Huei Na*
29. *Phu Lek*
30. *Ban That*
31. *That Na Samliang*
32. *Dong That*
33. *That Ban Don*
34. *That Nang In*
35. *Nong Pham Ban Vienne*



(sanctuary, inscription K. 362). We still do not know why Yaśovarman I (r. 889-910) chose to establish one of his hermitages (*āśrama*) in this place – about 10 kilometres from Wat Phu, specifically on the side of the eastern foothills – where occupation seems to have been much more modest.

Khone island also harbours an example of an Angkorian structure located along the Mekong; however, with due consideration for the continuum that seems to have existed between the oldest sites in Stœng Treng province in Cambodia and those in Champassak province, we may assume that the place has also been occupied in the pre-Angkorian period. The nearby waterfalls separating the modern territories of Cambodia and Laos may have been appealing as much as it was a cause of fear, and in-depth research on this area would be profitable. A few kilometres upstream of Khone island (almost precisely opposite to Khong island) is also the confluence of the Tonle Repou, a right-bank tributary of the Mekong separating Laos from Cambodia for more than 80 kilometres. This river (flowing NW-SE), which the Angkor-Wat Phu land route crosses, must have played a major role in giving access to the southern flank of the Dangrek range, particularly to the Preah Vihear temple, whose religious importance may have been based on the transfer of a fragment of the natural Wat Phu *liṅga* in the early ninth century (Jacques 1976: 363; Sanderson 2003-04: 410-420). A pre-Angkorian temple with two inscriptions on door jambs dating possibly from the seventh century (K. 341) was also built on this axis on the Cambodian side, about 30 kilometres from the Lao border (Cœdès 1966: VIII, 134). This region may have been used to travel to Sambor Prei Kuk via Mlu Prei and along the Stœng Saen river in Cambodia. Very little research has been carried out in these remote areas, particularly on the southern and western edges of Champassak province, due to the presence of large non-cleared areas.

Figure 3: *Inscribed door jamb from Huei Kadien, Champassak province, Laos [Photograph courtesy of Ang Choulean].*

The Mekong riparian sites in Champassak province belonging to the pre-Angkorian age display a linear settlement pattern that cannot be so clearly identified in Cambodia, where sites are much more scattered. The complex formed by the original Wat Phu sanctuary and the adjoining ancient city has obviously played the role of a focal point in this network. The remains found there are much older, so that it can be assumed that the construction of the monuments really started and developed from the time when the sanctity of the mountain was recognised, after its summit had been identified as a *liṅga*. It is interesting to note that an almost precisely north-south line of about 80 kilometres, with an alignment connecting most of the other sanctuaries, can be drawn between the old city and the pre-Angkorian temple on Khong island located closer to the Khmer border. It even seems that the early communities, when electing sites for settlement up to a distance of 20 kilometres downstream from the city, where the Mekong forms a loop imposing increased travelling time, preferred to settle away from the riverside to remain in the alignment and therefore use the overland route. This is illustrated by the find-spot of certain remains, such as a *somasūtra* with a *makara* head and a *snānadroṇī* with its *liṅga* in Ban Khok Khong, a *pancaliṅga* in Ban Na Khi Khuai, and even more clearly by the location of many ancient artificial basins, as is revealed with remarkable accuracy by aerial photography.

The existence of several pre-Angkorian sanctuaries erected along the Mekong is further evidenced by the presence of seemingly very early lintels (Khong island, Veun Kaen, Non Sombat, Non Pha Khao, That Don Sai, Wat Phu ancient city, Phu Malong), and other architectural remains such as door jambs (Outhoum Mai) and vestiges of brick structures (Ban Saphang, Wat Lakhon in Champassak). The distance between these sites never exceeds a dozen kilometres (some are even very close to each other), indicating a rather even distribution. Five other small pre-Angkorian sanctuaries (Nong Sombat Nai, Nong Sombat Noi, Nong Sombat Gnai, Huei Kadien, Nong Saming), forming another alignment perpendicular to the river, though never far removed from it, could be slightly more recent, as suggested by K. 1201, an inscription of Jayavarman I dated to 654 CE found near Huei Kadien **[Figure 3]**, and a different construction mode (Santoni & Hawixbrock 1999: 396). Lintels have never been found there. As indicated by their

Figure 4: *Lintel from Ban Huei Na, Pakse Museum, Champassak province, Laos [Photograph by Michel Lorrillard].*

names in many cases, these sites are here again related to rectangular ponds (*nong*) enclosed in large earthen levees. Champassak province is home to hundreds of such artificial basins; these are very common in Cambodia (*trapeang*, *barai*) but are almost non-existent elsewhere in Laos. A study of their distribution is extremely informative, not only because it shows a parallel with the location of the shrines, but also indicates ancient settlements that have now been swallowed by the forest. Some areas that are still unexplored but for which aerial photography reveals a number of such structures probably harbour a rich archaeological potential.

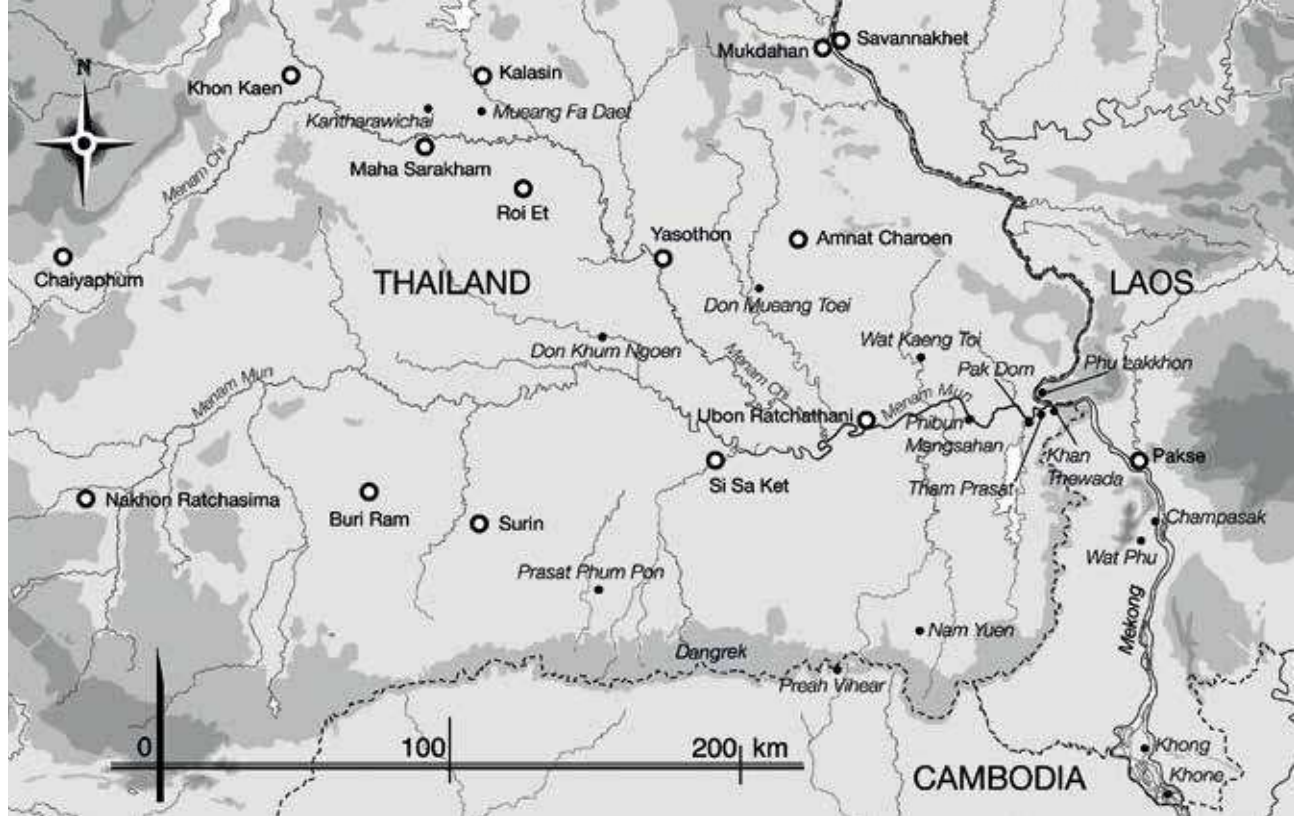
The rivers flowing from the eastern end of the Dangrek range down to the Mekong, whose general course is roughly west-east, also deserve special consideration as they relate to a large extent to the modes of settlement. Attention should also be given to Huei Khammuan, a stream whose source is located on Phu Pasak, i.e. one of the heights overlooking Wat Phu, due to its numerous meanders that make it the longest and widest river of Champassak plain.

Very few shrines have been built on high ground, so that the Wat Phu sanctuary, standing on the eastern slope of Phu Kao, is an exceptional example. Nevertheless, other places of worship have been created along this specific mountainous alignment, including some cave structures with only pre-Angkorian inscriptions (K. 723, K. 724, K. 1040, K. 1059). The Upmung shrine, very close to Wat Phu, as well as the Phu Malong sanctuary that was recently discovered at the other end of the range, are early buildings that may have been vested with a religious status superior to that granted to the monuments erected close to the riverside downstream from the ancient city.

It is possible that, starting from Wat Phu, travellers circumvented the Phu Kao (1,416 m.) and Phu Pasak (1,408 m.) mountains along the western route and progressed northward to reach the vast plain of Phon Thong district, thus easily gaining access to the Mun valley. No sanctuary has been found there yet, though several artificial basins have been identified. We have already referred to another road crossing the Dangrek range, with a stopover in Ban Huei Na/Phu Lek, where an interesting fragment of a pre-Angkorian lintel has been discovered **[Figure 4]**. However, the road most travelled must have been the Mekong up to the confluence with the Mun at a distance of about 70 kilometres from Wat Phu. Apart from the Phu Malong shrine located on a hill, it does not seem that any sanctuary was built along this way, so that a clear distinction should be maintained between the area extending upstream from Wat Phu and that located downstream, up to the Khone falls.

The Lower Mun Basin

George Cœdès was among the first to put forward the idea that there was a form of unity in terms of communities and culture between the basin of the Mun river in Thailand **[Map 4]** and the Champassak area in Laos; however, the suggestion has never really been substantiated with conclusive data. As a matter of fact, it is highly questionable



Map 4: *Ancient historical sites in the Lower Mun basin, Thailand [Drawing by Michel Lorrillard and Nicolas Revire].*

considering that the Khorat Plateau – especially on the western side – has not yielded any quantity of pre-Angkorian material comparable to what has been discovered in Cambodia and even in southern Laos. Just as we can claim that the lower basin of the Mun river has played virtually no role in the process of Angkorian penetration beyond the Dangrek range – as it developed mainly via passes in the western part of the range in the Khmer provinces of Utdor Meanchey and Banteay Meanchey –, we must also acknowledge that pre-Angkorian culture was propagated to a large extent following the course of the main rivers, confirming the importance of the middle Mekong, the Mun and its tributaries.

Concerning the lower Mun basin, references are currently restricted to the six Citrasena/Mahendravarman inscriptions found in the immediate vicinity of the confluence. We should set apart the inscribed stele found in Phu Lakkhon (K. 363) since it is located opposite the place where the Mun reaches the Mekong, i.e. in Lao territory. Among the other five inscriptions found in Ubon Ratchathani province, Thailand, two were discovered in Khan Thewada (K. 496 and K. 497), on a hill overlooking the confluence; two in Tham Prasat (K. 508 and K. 509), a cave shelter overlooking the Mun 2 kilometres from the preceding location; and the last one in Pak Dom (K. 1190), 4 kilometres further upstream. All of them are fairly short and the few French and Thai epigraphists who have examined them suggested that they were items commemorating victories (Jacques 1993). In spite of variations that are worth examining, these inscriptions prove similar to those found on the banks of the Mekong in Cambodia (K. 116, Chroy Ampil and K. 122, Thma Krê, Kratie province) and Laos (K. 363, K. 1193 and K. 1194, Champassak province), but also farther west on the Khorat Plateau (K. 377, Surin province; K. 514, Buri Ram province;[4] K. 1102,

Khon Kaen province; K. 1106, Nakhon Ratchasima region and K. 1280, Roi Et province) and in Prachin Buri province (K. 969). Whereas most of the bases used for these inscriptions are plain steles, one of the two Tham Prasat inscriptions (K. 509) is engraved on a large pedestal serving as a base for a stone carved bull, as is the case at Wat Phu (K. 1193 and K. 1194), Roi Et (K. 1280), Surin (K. 377) and Khon Kaen (K. 1102).

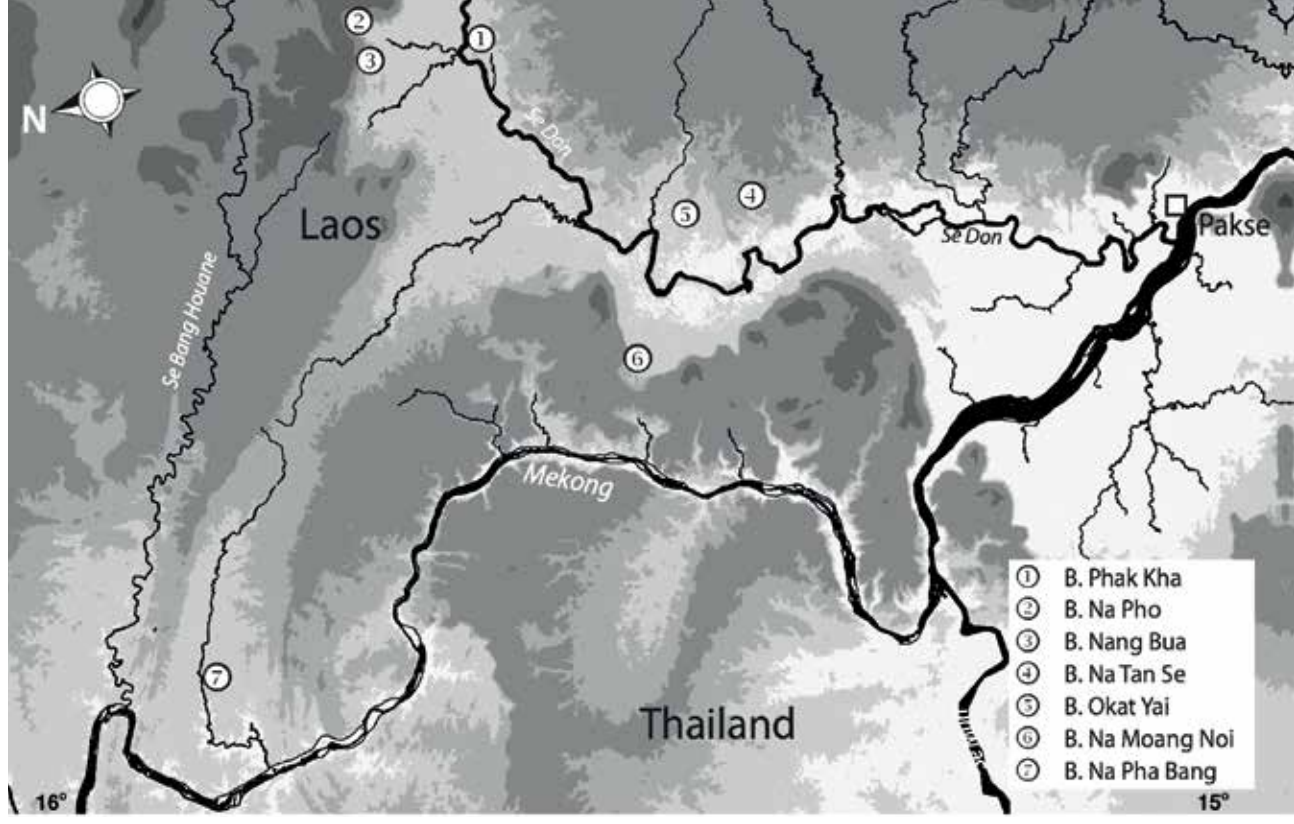
Another short pre-Angkorian inscription (K. 1096) was found before 1975 (FAD 2529: I, 284-286) at Wat Sa Kaeo, Phibun Mangsahan district, Ubon Ratchathani province, just in front of the Keng Sapheu rapids on the Mun, but it seems to have disappeared (FAD 2535: 80). It mentioned a king named Nṛpendrapativarman,[5] possibly a relative of Mahendravarman. Anyway the place where the inscription was found is most interesting since it is also there that the first evidence of pre-Angkorian architecture was discovered upstream from the confluence of the Mun, at a distance of about 40 kilometres, taking all meanders into account. On both sides of the river where large rocks make it possible to wade across in the dry season, three sites have revealed the remains of buildings made of bricks with some sandstone components, including two fine lintels dating back to the seventh or eighth century CE (Le Bonheur 1995: 67, 79-80; Piriya 2012: 120).

No other important vestige from the pre-Angkorian era has been found in the lower reaches of the banks of the Mun itself, but some sites located along its tributaries show that the earliest Khmer culture had expanded widely in the region, that is in Ban Kaeng Toi (*somasūtra*, colonettes) on the Lam Se Bok river in Ubon Ratchathani province; in Don Mueang Toei (brick building, inscription K. 1082) on the Chi river in Yasothon province;[6] in Don Khum Ngoen (architectural remains, inscription K. 1280) on the Lam Sieo Noi river in Roi Et province (Kongkaeo 2549; Charuek 2550); and probably also in Ubon Ratchathani province (Nam Yuen district) along the lower reaches of the Lam Dom Yai river (reclining Viṣṇu carved in rock) whose source in the Dangrek is close to that of the Tonle Repou river flowing on the other flank of the range down to the Mekong (Dhida 2536: 48).

The first "Indianisation" process in this region, i.e. the introduction of new Indic concepts and forms of aesthetic expression, must have developed rather rapidly under political impetus. It is very likely that exchanges by waterway were preferred. However, the position of some pre-Angkorian sites in the Mun basin shows that the Mekong, via Wat Phu, was not the only communication channel from (and to) Cambodia. It is highly probable that additional land routes were also rapidly established across the Dangrek range, especially in its westernmost part. For instance it seems that the early Prasat Phum Pon, dated to the second half of the seventh century according to Piriya (2012: 119), in Surin province, was integrated rather into an overland network, even if two nearby waterways, in the east and west, facilitated communication with the Mun.

The Se Don Basin

After establishing the existence of a link between pre-Angkorian structures and waterways beyond the Khone falls on the right bank of the Mekong, it is reasonable to assume that this also applies to the left bank in Laos. The course of the Se Don river, whose confluence is 40 kilometres downstream from that of the Mun river, was even more likely to harbour substantial archaeological potential as it represents a very good alternative to the Mekong for north-south communication **[Map 5]**. When reaching this portion of its course, the Mekong had to cut its way across a mountain range over a distance of about 100 kilometres between the fifteenth and sixteenth parallel and was forced to change its orientation (predominantly NW-SE) over a significant distance. Navigation in this reach is hampered by dangerous rapids; and human occupation, as attested by the presence of cave paintings, seems to have been limited only to the prehistoric period. To the east of this range, the lower Se Don valley represents a real corridor bordering the northern part of the Boloven Plateau.



Map 5: *Pre-Angkorian and Mon sites in Saravane province, Laos [Drawing courtesy of Jérémy Ferrand].*

The attention that ancient communities paid to the physical features of this territory is particularly evident in Ban Na Moang Noi, on the right bank of the river. The mountain range bordering all the western side of Saravane province is characterised there by a narrowing of the ridge line so that the valley of the Se Don could cut its way across it. A pre-Angkorian temple was built at the tip of this wedge formed by the lowlands, at a distance of only 11 kilometres from the Mekong. Due to the presence of a pass, access to the river via a west-facing trail is easy, whereas it is virtually impossible elsewhere unless the traveller is prepared to prolong the journey by several dozen kilometres to circumvent the range. The ruins of the sanctuary form a mound with several pieces of carved sandstone emerging out of the ground. Parts of a pedestal, as well as a *snānadroṇī* with its *liṅga* **[Figure 5]** have been found on the eastern side, on the edge of a rectangular pond.

Figure 5: *Ablution basin* (snānadroṇī) *with its* liṅga, *Ban Na Moang, Saravane province, Laos [Photograph courtesy of Mr Phakhanxay].*

Figure 6: *That Phon, Savannakhet province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Parmentier, PAR00563, dated 1911].*

Other remains – including a door jamb and a door head, the fragments of a base and a *liṅga* of rough workmanship – have been found in Ban Na Tan Se and Ban Okat Yai, two sites at a distance of 7 kilometres from each other, close to the left bank of the Se Don. Furthermore, at about 30 kilometres upstream, a *liṅga*, a pedestal dado (or a socle) and three *peṣanī*s (grinding stones) have been discovered in three additional sites, of which two are located on the sloping right bank of the river. The upper valley of the Se Don, where the Annamite range commands the vast Saravane plain in the east, has not so far revealed any trace of ancient remains, though the region may also harbour archaeological potential.

The only option when travelling between the isolated province of Saravane and Savannakhet is following the Lakhon Pheng corridor, a narrow (4 kilometres in the centre) and long (about 60 kilometres) NW-SE oriented strip of lowland wedged between two ranges. On its western side, where the mountains are much less elevated, this corridor is cut by the Mekong, but geologically extends far beyond the river up to the vast plains of the Thai provinces of Amnat Charoen and Ubon Ratchathani. The latter feature is quite important as it accounts for the specificity of this archaeological space representing the southernmost limit in Laos of a cultural area that is distinct from that of the Khmers, though equally ancient. Seven *sema* stones decorated with the stylised representation of a *stūpa* and a low-relief image of a sitting Buddha have indeed been discovered at two sites close to each other, in the village of Ban Na Pha Bang, at a distance of 12 kilometres from the Mekong. These carved stones, one in particular with the *kumbha* motif, are typical of the Mon culture that developed in the second half of the first millennium in northeast Thailand (Murphy 2013). The sandstone surface covering the first site has been dug out to create a rectangular space, as aerial photography shows. Rectangular or oval cavities looking like mortises were probably meant to be the base of specific objects (*sema* stones?). The second site, displaying a rather coarse rectangular substructure with a medley of sandstone blocks and large bricks, may have been a place of worship too, although it has probably been refurbished by the Lao people at a later date.

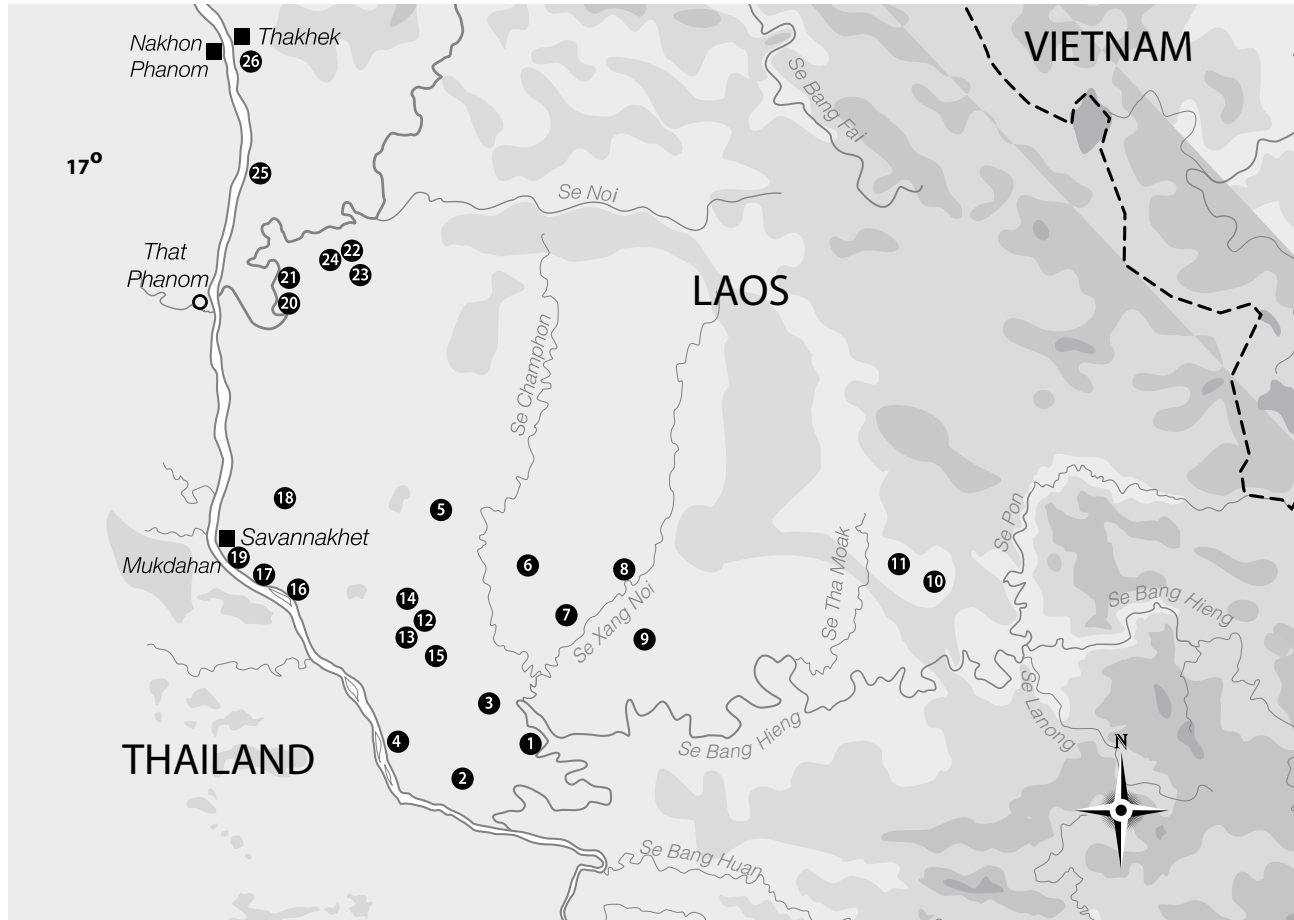
Figure 7: *That In Hang, Savannakhet province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Parmentier, PAR00472, dated 1911].*

The Se Bang Hieng and Se Bang Fai Basins

Two major left-bank tributaries of the Mekong cross the Savannakhet plain in Laos: the Se Bang Hieng in the south and the Se Bang Fai in the north, together with their own tributaries, some of which have their source in the Annamite range. We can assume that this vast lowland area – four times larger than the Vientiane plain – has been an attractive zone for settlement, even if the Lao people settled there only at a late date. The twenty-four ancient sites that have been found there are distributed among different basins, predominantly on the western side, where wetlands are larger **[Map 6]**.

The *circa* fifteen sites dating from the second half of the first millennium are at a short distance from the Mekong and compose a relatively continuous network of stations along the river up to the confluence with the Se Bang Fai, opposite the old sanctuary of That Phanom in present-day Thailand. This monument, whose original structure collapsed in 1975 along with the larger Lao period *stūpa* that covered it, must have been very similar to the pre-Angkorian towers of That Phon **[Figure 6]** and That In Hang **[Figure 7],** whose shapes have survived in spite of successive "restorations." The few remains (bricks, door head/sill, pedestals, *somasūtra* with *makara* head, *snānadroṇī*s with *liṅga*, inscriptions) of the sanctuaries in Ban Na Khu, Ban Nong Hai, Ban Don Seng and Nong Hua Thong, located between the Se Bang Hieng and the Se Bang Fai, may date back to the same period (eighth century?). It seems that the Khmers of the pre-Angkorian era never expanded beyond the seventeenth parallel, on either bank of the Mekong.

The Mon people, who actually also occupied this area as well as others situated much further upstream, in particular in the vast basin of the Nam Songkhram in Thailand and in the Vientiane plain, have left in Savannakhet province a legacy of about 30 *sema* stones with



Map 6: *Khmer and Mon sites in Savannakhet province, Laos [Drawing courtesy of Pierre Pichard].*

1. *Ban Hua Hat*
2. *Ban Na Khu*
3. *Ban Nong Hai*
4. *Huan Hin*
5. *That Ku*
6. *Ban Na Katang*
7. *Ban Tum Ye*
8. *Ban Nong Savang*
9. *Ban Mueang Phong*
10. *Mueang Phin*
11. *Ban Se Tha Moak*
12. *That Phon*
13. *Ban Phumma Chedi*
14. *Ban Don Tum*
15. *Ban Tak Daet*
16. *Ban Pha Kha Niai*
17. *Ban Sompoi Noi*
18. *That In Hang*
19. *Ban Don Seng*
20. *Nong Hua Thong*
21. *Ban Mak Nao Tai*
22. *Ban Kang*
23. *Ban Na Moang*
24. *Ban Sikhai*
25. *Ban Xieng Vang Tha*
26. *That Sikhot*

Figure 8: Sema *stones, Ban Na Moang, Savannakhet province, Laos [Photograph by Michel Lorrillard].*

stylised *stūpa* images, including some large-size and well-crafted pieces **[Figure 8]**. These objects of worship have been discovered mainly in two areas, each of them harbouring several locations, close to That Phon (Ban Tak Daet, Ban Phumma Chedi) and the confluence of the Se Bang Fai (Ban Kang, Ban Na Moang, Ban Sikhai, Nong Hua Thong), where they tend to mingle with pre-Angkorian vestiges.

The Khmers of the early second millennium also left evidence of their presence in this area. About 50 kilometres downstream of Savannakhet, they built (but left unfinished) the Huan Hin temple, which at this stage of knowledge definitely represents the northernmost Angkorian monument erected on the riverside. It was certainly related to several sites that appear to have been established on an axis parallel to the Mekong at about 30 kilometres inland, in the Se Champhon basin. That Ku, a very small ruined building consisting of three aligned cells, is the furthest north. In Ban Na Katang, satellite photography has revealed the presence of a double rectangular enclosure made of earth levees. On-site surveys led to the discovery of sandstone sculptures, including a Buddhist triad of the Bayon style (cf. Multzer o'Naghten, this volume, fig. 18). Other carvings in Khmer style have been found in Ban Tum Ye, Ban Non Savang and Ban Mueang Phong, between the Se Champhon and the Se Xang Noi.

Two sites have been identified much further inland, in the basin of the Se Tha Moak; at this stage, they should be considered marginal, as they do not fit in the network of sites identified on the Mekong, but further research may lead to identifying such places as stopovers. Ban Se Tha Moak and Mueang Phin are indeed positioned on an overland route crossing the Annamite range at the nearby Lao Bao Pass. A base with a mortise of clearly Khmer style has been discovered in the Lao temple of Ban Se Tha Moak, but we have no information about its place of origin. It might be appropriate to examine whether there is a link between this item and a square pedestal found together with a partially buried sandstone block (a dado?) 11 kilometres to the south-east, close to Mueang Phin. However, these two remains protrude from a mound covered with vegetation together with five *sema* stones decorated with the *stūpa* image, thus suggesting that this region adjacent to Quang Tri province in Vietnam received influence from both ancient Mon and Khmer cultures.

Whereas the Savannakhet plain opens widely out onto the lower basin of the Chi and the Mun rivers, the scanty lowland spaces bordering the Mekong in Khammuan province, upstream from the confluence of the Se Bang Fai, represent – in terms of physical geography – a continuation of the Nam Songkhram and Nam Kam basins (Thai provinces of Nakhon Phanom and Sakon Nakhon). The Angkorian culture that spread across the region has left some traces on the left bank of the Mekong, but no certain conclusion can be drawn as to their origin. The angle antefixes in the form of *nāgas* and the beautiful stele reused in Lao time, which were found in the immediate vicinity of That Sikhot, raise questions about the internal structure of the monument, which could well be much older than is generally assumed. The origin of a door jamb (likewise reused for a modern Lao inscription) found in Ban Xieng Vang Tha, about 20 kilometres downstream, is also challenging. The presence in the same area of two straight earth levees, running parallel and continuously over 750 metres, linked by perpendicular sections distributed at regular intervals and thus creating compartments, as well as large *trapeang/barai*-type basins, may indicate that this has been an area of settlement in ancient times, comparable to Nong Hua Thong located at a distance of about 20 kilometres. However, no firm conclusion can be drawn at present as no datable remains are available.

General Interpretation

This brief review of the pre-Angkorian archaeological evidence made available for southern and central Laos – in relation to that in the neighbouring regions of Thailand and Cambodia – highlights the importance of certain areas that would already have been prime candidates by mere examination of a topographical map. Similar to what had been noticed for Cambodia, the lowlands represented a privileged space for settlement, the more so when the area concerned lay close to a waterway. In this connection, the banks of the Mekong played an essential role. Contrary to what happened during the Angkorian period, we observe an undeniable continuity of occupation along the river in the pre-Angkorian era, and there was no major difference in the type of settlements both downstream and upstream of the Khone falls. However, the distance separating individual sites was variable and we observe that uninhabited areas were maintained between the settlement clusters. Champassak province, with its regular line of sanctuaries distributed over some 100 kilometres (*circa* 20 spots between Khong island in the south and Phu Malong in the north), is comparable – in terms of wealth in religious sites – to the area of about 50 kilometres in length between Thma Kre and Koh Krieng, in the adjacent Khmer districts of Kratie and Sambor. Because of an apparent lack of remains, this latter cluster is isolated from that of Stœng Treng/Thala Borivat located 60 kilometres upstream. Two territories characterised by a comparable paucity – one extending from Stœng Treng up to Khong, the other, further north, from the Phu Malong site up to the confluence with the Mun – cover

the same distance. Savannakhet province displays a regular series of pre-Angkorian sanctuaries between Ban Na Khu and That In Hang over about 60 kilometres, and then presents an area devoid of archaeological remains of about 40 kilometres up to the next cluster, that in the confluence of the Se Bang Fai (Nong Hua Thong/That Phanom).

Whereas islands were sometimes preferred to establish sanctuaries (Khong and Don Sai in Laos), not all sites were located very close to the riverside. It is worth noticing that, when the river flows in vast plains, the ancient communities seem to have preferred erecting the monument in a place slightly removed from the banks of the river. There is no evidence that systematic settlement of riverbanks was sought, probably because of flood risk or enhanced exposure to specific dangers such as invasions. Nevertheless, the Mekong was the key artery for communication in mainland Southeast Asia up to the beginning of the modern era, and many sites owe their importance to this river. The Wat Phu complex, apart from its being located at the foot of a mountain with sacred status, would probably not have developed to the extent that it has if it had not been erected close to the Mekong, especially during the pre-Angkorian era. Later, the site became the goal of a SW-NE-oriented land route coming from Angkor. With this new route, travellers came closer to the Dangrek range and could also reach Preah Vihear via an additional branch. It is likely that, with the westward shift of the seat of power that occurred at the time, the role of the river sharply declined, including in religious terms.

Even if the investigations carried out by prehistorians have not to date proven the existence of important settlements on the banks of the Mekong, it cannot be denied that, in the first centuries of the Common Era, the river, as a major link for communication, had led to the development of large entities. Attention has so far been paid almost exclusively to sites located near the coast, such as Oc Eo and Angkor Borei in southern Vietnam and Cambodia, which are associated with the Funan culture (without any certainty as to the part played by the Khmer component in their development). The shortcomings of research in this area is evident: whereas older studies in art history have already demonstrated the importance of clusters of monuments built on the banks of the Mekong – e.g. Sambor and Stœng Treng/Thala Borivat – no historical study has yet attempted to make their specificity explicit.

The ancient city adjoining Wat Phu has also been largely ignored in the work of many authors. Among the ancient remains that have been found there, it is particularly surprising that the large Devānīka (Wat Luang Kau) stele that, according to Cœdès (1956: 211), dates back to the second half of the fifth century CE, did not spark more questions. It seems more appropriate to consider that the "king of kings" who ordered the inscription and "came from far away" originated from downstream in Funan rather than in a territory to the east (Campā), or even to the west (Si Thep) as has sometimes been claimed (Jacques & Lafond 2007: 69). As the new evidence above demonstrates, Wat Phu sanctuary in its earliest phase was far from being isolated. It was part of a network of sites located along the banks of the Mekong that extended from the Delta up to a limit that might have reached the confluence with the Se Bang Fai at a very early time. It would be no surprise if the pre-Angkorian temples (or the simpler structures that preceded them) – in addition to being stopping places on popular routes – had indeed been erected along much older exchange routes, especially those used to transport prized merchandise. We can for instance observe a fairly high degree of correspondence between the location of the first historic sites in the Mekong middle valley and the places where the bronze drums, whose major production centres were in northern Vietnam, have been discovered (Eiji 2005). A significant number of these ceremonial objects have been found in the Se Bang Hieng basin (Phin, Phalanxai and Xonburi districts), not far from the Annamite range, but also on the banks of the Mekong up to the confluence with the Mun, and its basin.

We also know that the Khorat Plateau in Thailand experienced an important development in the Iron Age, paired with the emergence of numerous sites displaying a complex layout (Higham 2002). These were related to the emergence of chiefdoms for which assertion of power was associated with the accumulation of wealth of various origins. Supposing that there was shift from the numerous "moated sites" that appeared on the Khorat Plateau in protohistoric times to the quadrangular cities with a moat on all four sides that developed during the pre-Angkorian period – with the same purpose of having good control on water resources –, the process that brought about this change has not been much investigated. In Laos, the only two large sites surrounded by earth levees are the ancient city of Wat Phu and Nong Hua Thong, both located close to the river bank. In the former case, the borderlines are quadrangular whereas, in the latter one, a semi-circular enclosure was combined – probably at a later stage – with a straight double wall. We have to turn to Cambodia to identify structures comparable to the model displayed by the city of Wat Phu, namely at Sambor Prei Kuk, which seems to have been erected somewhat later, or possibly at Banteay Prei Nokor, to which Parmentier gave special importance in his last writings (1948: 93-94).

Laos does not present the type of large sites with a curved shape and moats that exist in Thailand on the western flank of the Khorat Plateau, such as Si Thep (Phetchabun province) and Dong Si Mahosot (Prachin Buri province), nor the type of protohistoric sites such as Noen U Loke, Ban Non Wat or Nong Mueang Kao (Nakhon Ratchasima province). However, due to their layout, a number of sites on the left bank of the Mekong may be related to more modest places belonging to an early period, such as Ban Tamyae, Pit Tong and Nong Phayu in the lower basin of the Mun (Si Sa Ket province). I refer here to dozens of villages in some specific parts of the Lao provinces of Saravane, Khammuan and Savannakhet, corresponding to areas where pre-Angkorian ruins have also been found (Lorrillard 2013b). These villages become clearly visible with aerial photography, due to the oval or quadrangular green belt enclosing them and hinting at the possible existence of a former moat that was fed by a stream.

Some Historical Markers

Whereas pre-Angkorian dynastic history remains to a large extent unknown in Cambodia, certain amounts of data delivered by studies in epigraphy and art history provide precious historical markers. The

Figure 9: *Wat Luang Kau or Devānīka stele (K. 365), Face D, Wat Phu Museum, Champassak province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Laos 21533a].*

seventh century seems to have been a period of relative unity, at least up to the reign of Jayavarman I who died *circa* 680. The inscriptions for this period are much more numerous and informative than those of the eighth century which has often been described as a period of great instability related to a lack of central authority (Dupont 1943-46). Michael Vickery (1994), however, has questioned this political turmoil in the eighth century and the subsequent split into "Land" and "Water Zhenla" after Jayavarman I's death. He says that if it did exist "it was not the type of division that has traditionally been postulated," and he strongly believes that Cambodia was in fact at peace during the last century of the pre-Angkorian period (1994: 209-210). It appears that northern parts of the Khmer realm preserved indeed a political autonomy for decades. It was certainly the case for Śambupura in the Kratie-Sambor region (Vickery 1998: 379-393), and was likely the same a few hundred kilometres further upstream in Savannakhet province, and in the Mun, the Se Kong and the Se Don valleys in modern-day Thailand and Laos.[7] At any rate, the intensity of creative activities was probably not much affected by the "political turmoil" as shown by the number of monuments built until the advent of Jayavarman II, in 802, as the first king of the Angkorian era (Boisselier 1968; Bénisti 1971).

The Inscriptions

We have drawn attention to the specific features of the pre-Angkorian inscriptions in the Mun basin and the questions raised by them. As for Champassak province, it offers a high number of epigraphic sources relative to its territory, along with an impression of historical continuity. I have already pointed out above that it was in the ancient city of Wat Phu that the famous Wat Luang Kau inscription (K. 365) was found **[Figure 9]**. Its text refers in particular to the consecration of a great pilgrimage site (*mahātīrtha*) named Kurukṣetra. Another inscribed stele (K. 477), very large in size, has been discovered in the early twentieth century in the same area (Parmentier 1913: 54, 56; Cœdès 1966: VIII, 154). It can be surmised, due to the resemblance in shape and the apparently archaic form of the script used, that it could also date back to the period of King Devānīka (fifth century). Unfortunately the text has eroded and become illegible. Two inscribed pedestals (K. 1173 and K. 1174) serving originally as a base for a stone bull were also found very close to the Wat Luang Kau (Jacques 1993). They had been ordered by Mahendravarman (*circa* late sixth, early seventh century) after his coronation and pay tribute to his father and his uncle in a territory where they may have reigned. These two bases were probably related to a nearby monument whose foundations were discovered in 1993 (Santoni & Souksavatdy 1999: 190). A third Mahendravarman inscription has been located on the left bank of the Mekong at Phu Lakkhon (K. 366), almost exactly opposite the confluence with the Mun **[Figure 10]**, about 70 kilometres upstream of Wat Phu (Barth 1903). None of the sixteen inscriptions now assigned to this ruler indicates that his "kingdom" extended downstream from the Khone falls and we can assume that the middle Mekong valley was the territory he preferred.[8] As for his son Īśānavarman I (r. ca 612?-637?), he seemingly did not leave any inscriptions in Laos or northward of the Dangrek range, perhaps because he was busy consolidating his power westward

Figure 10: *Phu Lakkhon stele (K. 366), Champassak province, Laos [Photograph by Michel Lorrillard].*

Figure 11: *Inscription on a silver plate (K. 1264), Nong Hua Thong, Savannakhet province, Laos [Photograph courtesy of Viengkeo Souksavatdy].*

and southward from Sambor Prei Kuk. Jayavarman I (r. ca 655?-680?) came back to the Champassak region and committed himself to developing this territory, as testified in a few inscriptions (K. 367, K. 1197, K. 1201, K. 1224).[9] This may also have applied to his predecessor, Bhavavarman II (r. ca 637?-655?), as both are mentioned together in a rock inscription near Wat Phu attributable to a royal servant (K. 1059).[10] At least eight other inscriptions prior to the ninth century have been found in the same area.

No ancient inscriptions have been found so far in Attopeu province, although it can be assumed that the region has played a major role in the regional network of communication. It was reported to Aymonier (1901: 173) at the end of the nineteenth century that an ancient stele in Ban Sok had slipped into the Se Kong. It was never recovered. A local resident who was recently asked by the present author about the Se Su site mentioned the existence of an inscription but the information was too vague to spot the object. Unearthing the large sandstone slabs that are partially buried in this site, however, is still a desideratum.

Savannakhet province, in which the presence of major ancient sanctuaries has also been established, has recently revealed some epigraphic documents of great interest. A large base on which a line in pre-Angkorian characters dating back to about the eighth century has been engraved can be seen among other sandstone blocks in Ban Na Khu, a site in ruins; the Sanskrit text is too damaged and does not allow accurate deciphering, but it is probably the expression of an offering involving a king (*nṛpa*).[11] Three inscriptions have been identified in Nong Hua Thong on the edge of silver plates and bowl belonging to a "treasure hoard" unearthed in 2008. According to Claude Jacques (pers. comm.), one of these inscriptions (K. 1264), written in Sanskrit, refers to a person who donated land, slaves, cows and money to ensure Śiva worship **[Figure 11]**. It appears on palaeographic ground to date from the eighth century. The other two (K. 1262 and K. 1263), which are short donative formulas in Khmer, have been engraved using a script that probably dates back to the ninth century. It is then necessary to move up to the Vientiane plain to find inscriptions prior to the fourteenth century, but these are related to the Mon culture and the Angkorian period (Lorrillard 2013b).

Architectural Decoration

The lintels – and to some extent the colonettes and low-relief brick decoration representing miniature edifices (also called "flying palaces")

Figure 12: *Lintel from Ban Sakhae, Attopeu province, Laos [Photograph by Michel Lorrillard].*

Figure 13: *Lintel 1 from Upmung Se Su site (now in Ban Fang Daeng), Attopeu province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Laos 21928, dated 1903].*

Figure 14: *Lintel 2 from Upmung Se Su site (lost), Attopeu province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Laos 21927, dated 1903].*

– are the only architectural components that make it possible to assign a date with reasonable accuracy to the pre-Angkorian sanctuaries. For a long time, just seven lintels were the only decorative pieces mentioned in the studies on early art history in Laos, and comments were very brief.

The first three were found in Attopeu province in the early twentieth century and did not attract much attention (Anonymous 1903: 141-143). Recent surveys have shown that two of them still exist. The lintel found in Ban Sakhae **[Figure 12]**, with its three pieces now glued together with cement, was made in "vegetal" style that developed in the setting of the Kompong Preah style during the eighth century (Le Bonheur 1995: 78). Two more lintels have been found 20 kilometres to the south on the banks of the Se Su (see *supra*). The first one also displays the Kompong Preah style **[Figure 13]**; however, because of the large central figure of Garuḍa, it has a very special character whose model may be sought in Campā (Le Bonheur 1995: 78-79; Boisselier 1968: 130). The second one, which seems to have disappeared **[Figure 14]**, is related to a sub-category of the Prei Kmeng style (Le Bonheur 1995: 77), possibly a late form that can be dated to the second half of the seventh century.

Parmentier referred in 1927 (233-234) to two other lintels found in Savannakhet province; however, they were never mentioned thereafter, except briefly in his posthumous work on Lao art (1988: 148,153). The lintel of That Phon is hardly visible because it has been re-used in ancient times as a door jamb of the sanctuary **[Figure 15]** and partly disappeared in a layer of concrete cast to make a threshold step behind a heavy wooden door that usually remains closed. Due to its vegetal decoration, it undeniably belongs to the Kompong Preah style (eighth century). The second lintel, of which a fragment was still visible in the early twentieth century in That In Hang has now disappeared. Parmentier, who left a picture of it **[Figure 16]**, suggested that it should be assigned to the Sambor Prei Kuk style – although the presence of a *makara* cannot be established – and therefore assessed it as a model that could be dated from the mid-seventh century.

The other two lintels that have already been mentioned in previous studies originate from the province of Champassak. The first one, discovered in Huei Tomo, was described by Parmentier (1927: 231) as "a tangle of foliage made in a spirit of fun, typical of the primitive Khmer art style with capitals" **[Figure 17]**. It also belongs to the Kompong Preah style and is reminiscent of some eighth-century lintels found in Cambodia, for example in Ak Yum (cf. Boisselier 1968: fig. 20). The second lintel was brought to the attention of Mireille Bénisti (1974: 154-155) with a photograph that Jean Filliozat had taken in 1970 in the old city of Wat Phu, perhaps after uncontrolled excavation work

Figure 15: *Lintel/door jamb from That Phon, Savannakhet province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Parmentier, PAR00564, dated 1911].*

Figure 16: *Fragment of lintel from That In Hang, Savannakhet province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Parmentier, PAR00474, dated 1911].*

Figure 17: *Lintel from Huei Tomo, Champassak province, Laos [Photograph courtesy of Bruno Bruguier, Cisark, ref 871_Bruguier_2009_10].*

Figure 18: *Lintel (allegedly) from Huei Tomo, Pakse Museum, Champassak province, Laos [Photograph by Michel Lorrillard].*

Figure 19: *Lintel from Veun Kaen, Pakse Museum, Champassak province, Laos [Photograph by Michel Lorrillard].*

Figure 20: *Colonettes from Wat Kaeng Toi, Ubon Ratchathani National Museum, Thailand [Photograph by Michel Lorrillard].*

Figure 21: *Silver mitred Viṣṇu head (lost), found near Wat Phu, Champassak province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Giteau, GITM01783, dated 1969].*

had led to the unearthing of the item. Bénisti considered it evidence that may be essential for a better understanding of the development of pre-Angkorian style. Because of its heterogeneous character, this lintel may be assessed as a transitional model which, according to the standards of Thala Borivat, introduced innovations that were subsequently maintained and developed into the Sambor standards. Bénisti concluded finally that the Champassak lintel was not sufficient evidence to deliver a final opinion on this issue, for it was stylistically unique at the time she wrote.

However, over the past twenty years, field surveys have revealed the existence of twelve other lintels in Champassak province, close to Wat Phu. All of them can be traced to the beginning of the pre-Angkorian period, thus opening new perspectives, not only concerning the history of these types of architectural decoration, but also that of the propagation of the decorative motifs originating from India. These lintels, often very simple in appearance, do not display the complex shapes of those visible in Cambodia, raising the question whether this should be seen as forms of degeneration due to a marginal position or rather an archaic trait. All of these belong to the founding styles of Thala Borivat, Sambor Prei Kuk and Prei Kmeng, though they also display many original features. For instance, they may deliver valuable data when studying the transition between the *makara* figure and the "fleuron" motif. The real provenance of a few pieces is not always

certain. For example, a nice lintel in Sambor Preah Kuk style **[Figure 18]** is also reported to come from Huei Tomo, Pathumphon district, but it is not found in Parmentier's list. The Prei Kmeng style is represented by an elaborate lintel from Veun Kaen **[Figure 19]**, about 50 kilometres downstream to Wat Phu – and in an even more surprising manner by an exceptional lintel that was found in Thailand in Phibun Mangsahan district, Ubon Ratchathani province, in the lower basin of the Mun, at the same place as a lintel in Thala Borivat style (Le Bonheur 1995: 79-80). Other decorated pieces discovered in the vicinity (Dhida 2536: 93), such as colonettes in Prei Kmeng style **[Figure 20]** in Wat Kaeng Toi (Don Mot Daeng district, Ubon Ratchathani province) and a beautiful decorated base found in Don Mueang Toei (Kham Khuean Kaeo district, Yasothon province) show that this region was far from being isolated from the sculpture workshops where innovative stylistic forms emerged from the seventh century onwards.

The Statuary

It is much too early to submit a comprehensive assessment about the traditions applying to the sculptures that developed in southern Laos as the near totality of the artefacts have been discovered only in and around Wat Phu and the process of inventorying local museum collections has just started.

Christine Hawixbrock (2013) has provided evidence of the wealth and variety of the collections at the Wat Phu Museum, with special emphasis on the significant number of sculptures dating back to the pre-Angkorian era and the very ancient character of some of them. Śaiva sculpture is represented mostly by a large number of *liṅga*s that were found in various scattered places, and some bull statues representing Śiva's mount. However, no human representation of the god has been discovered to date, including in the specific form of Harihara that is so well represented in pre-Angkor Cambodia (Lavy 2003). Vaiṣṇaiva sculpture seems to have been much favoured in Wat Phu. Several figures of Viṣṇu have been found, including a magnificent silver head **[Figure 21]**, now lost;[12] these are either standing, with a long *dhotī* or a short *sampot*, or riding Garuḍa who sometimes appears separately. To these we should perhaps add a large sandstone *cakra* and a stone image of a mitred female divinity **[Figure 22]**.[13] The wealth of ancient Buddhist sculpture at Wat Phu has been the cause of an even greater surprise. It displays features seemingly betraying not only relationships with Dvāravatī art – with for instance a large pendant-legged fragment of a seated Buddha[14] **[Figure 23]** – but also specific links with images from southern Vietnam and Angkor Borei (Funan), especially regarding the head features **[Figure 24]**.[15] Recent excavation work and surveys have also revealed the existence of at least two ancient sanctuaries inside and in the close vicinity of the old city of Wat Phu that seem to have been devoted to Buddha worship, namely Nong Vienne (Santoni & Hawixbrock 1998: 388) and Wat Lakhon in Champassak town.

Further to the north, in Savannakhet province, Parmentier (1927: 235) already mentioned the existence of a statue associated with That In Hang tower, but its unexpected style led him to write "that it cannot be assigned with certainty to primitive Khmer art." This

Figure 22: *Mitred female divinity, Wat Phu Museum, Champassak province, Laos [Photograph courtesy of Stanislas Fradelizi, DPV].*

Figure 23: *Pendant-legged fragment of seated Buddha, Wat Phu Museum, Champassak province, Laos [Photograph by Michel Lorrillard].*

Figure 24: *Buddha head from Wat Lakhon, Wat Phu Museum, Champassak province, Laos [Photograph courtesy of Stanislas Fradelizi, DPV].*

Figure 25: *Brahmanical (?) image, That In Hang, Savannakhet province, Laos [Photograph courtesy of EFEO photographic archives, Fonds Parmentier, PAR00481, dated 1911].*

statue broken in two pieces corresponding to the head and the torso has sunk into oblivion since it is now secluded in the pre-Angkorian sanctuary. It is perhaps one of the early rare human representations of Śiva, whose *jaṭāmukuṭa* is composed on the front side of a chignon with three horizontal plaits **[Figure 25]**. However, the poor condition of the figure and the advanced deterioration of the stone make it impossible to spot details – e.g. a third eye or the moon crescent – to validate this identification.[16] Hindu or Brahmanical iconography is illustrated in the same area by the three decorated metal plates belonging to the treasure found in 2008 in Nong Hua Thong **[Figure 26]**. These might date back to the eighth century, just like one of the inscriptions engraved on a plate belonging to the same treasure. They may be associated with the rather similar plates reportedly found around Si Thep in Thailand and currently housed at the Norton Simon Museum in California (Woodward 2003: 90). In a recent conference paper (Lorrillard 2012), I have suggested that an overland road may have existed between Si Thep and Nong Hua Thong via Mueang Fa Daet and Kantharawichai to explain such artistic similarities between the two areas.

Conclusion

The number and variety of historical sites dating back to the first millennium CE that have been identified primarily in southern and central Laos but also in their neighbouring regions of modern-day Thailand and Cambodia lead to revisiting the current views about both the role of this continental region in the so-called "Indianisation process" and the movements that marked the dawn of Khmer history. The most recent findings confirm the importance of the Wat Phu region in the early period, and also the existence of a link between its earliest archaeological remains and those which were found much further downstream in Cambodia and southern Vietnam, thus encroaching on the coastal cultural area of Funan.

The Mekong has to a large extent facilitated the first wave that disseminated the ideas and practices from India. Further upstream from Wat Phu, the major tributaries on the right and left banks have contributed to the maintenance of this dissemination up to a certain limit after which the overland routes took over this function. It is now widely recognised that the extraordinary development of the Khmer and Mon cultures from the first millennium CE is to be assigned to the major impact of Indic beliefs and customs on the already well-organised "inland" protohistoric communities. The middle Mekong valley, at a time when Khmer history was apparently rather turbulent (eighth century), certainly continued to play a crucial role, due in particular to the transverse routes that at all times served to connect the western and eastern parts of the Indochinese Peninsula. If, as inferred by Chinese annals and the paucity of inscriptions, a clear distinction between "Land" and "Water Zhenla" is to be given some credit for the period just before the emergence of the Angkorian empire, the territories extending upstream from the Khone falls, i.e. north of present-day Cambodia, certainly offers a rich potential for future archaeological research and should spur more collaborative works amongst scholars of Laos, Thailand and Cambodia.

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Figure 26: *Brahmanical image on metal plate, Nong Hua Thong, Savannakhet province, Laos [Photograph courtesy of Viengkeo Souksavatdy].*

Endnotes

1 This city is sometimes called, after Cœdès, "Śreṣṭapura." A more appropriate name, according to the inscriptions, seems to be "Liṅgapura" or even "Kurukṣetra."

2 Contributions in the *Bulletin de l'École française d'Extrême-Orient* (Lorrillard 2013a-b) provide more detailed data in French on all the discovered sites. A paper presented at the 14th EurASEAA Conference also dealt with specific issues concerning the ancient Mon Buddhist culture in Laos (Lorrillard 2012).

3 This type of iconography is rare. For a rather similar artefact dating back to second half of the seventh century and found in a nearby area (Sambor), see Baptiste & Zéphir (2008: 48).

4 Concerning Tham Pet Thong, Cœdès (1966: 160) refers both to K. 513 and K. 514, dating back to the same period, but the texts are short and not very informative. A third inscription found on the same site has been edited and published (FAD 2529: I, 153-154). This inscription mentions the name Citrasena, so that the total number of known inscriptions commissioned by this prince/king could to date be seventeen.

5 Personal communications with Arlo Griffiths and Dominic Goodall (EFEO rubbing no. 1350). The name was read by Cha-em Kaeoklai as "Mahipativarman" (FAD 2529: I, 286). Two kings named Nṛpendrādhipativarman (father and son?) appear in another inscription (K. 388) from Nakhon Ratchasima province, some 300 kilometres away to the west, which has been variably attributed from the sixth to the ninth century CE.

6 This pre-Angkorian inscription mentions a genealogy of kings who reigned in Saṅkhapūra, i.e. Pravarasena, Kroñcabahu and Dharmasena; no link could be established with the rulers of Cambodia (Jacques 1995: 43).

7 The specific artefacts found in these areas are sufficient to raise new questions about various entities which are mentioned in Chinese annals for the eighth century. On this issue, see Woodward (2010).

8 The two documents found in Cambodia in Chroy Ampil (K. 116) and Thma Krê (K. 122) in Kratie province, both sites being close to the banks of the Mekong, just mention Citrasena's princely name. On the basis of more recent inscriptions found in Cambodia (K. 149, K. 151, and K. 153) in which Mahendravarman is mentioned together with his brother and his son, it could be extrapolated and claimed that this king had reigned on regions such as Sambor Prei Kuk.

9 Santoni & Hawixbrock (1999: 396), according to information provided by Jacques.

10 The chronology of pre-Angkorian rulers is not firm. The dates of the reigns which are given here rather follow Vickery's appreciations (1998).

11 Personal communication with Dominic Goodall.

12 Madeleine Giteau (2001: 9, 64) dates this head to the beginning of the eighth century.

13 Christine Hawixbrock (forthcoming) and Valérie Zaleski (2012: 28) identify it as a representation of goddess Śrī, but John Guy (unpublished report) recognised in this sculpture the goddess Umā (Śiva's wife), an identification which is reported on the Museum caption. Paul Lavy (pers. comm.) also suggests a Śaiva affiliation and proposes more precisely an identification with Durgā.

14 On this iconography, see Revire (2011).

15 See Zaleski (2012: 60). This Buddha head, like others found in Champassak province, can especially be compared with sculptures found in the Mekong Delta which could date back to the fifth or sixth century (cf. Baptiste 2008: 22-23).

16 Paul Lavy (pers. comm.) shares Parmentier's doubts about the Khmer origin of this image and suggests an affiliation with Cham sculpture, especially Khuong My and Tra Kieu styles of the tenth century. The possible artistic influences of Campā in this part of the middle Mekong valley, especially regarding the site of That Phanom, has already been pointed out by Boisselier (1965: 153), Woodward (2003: 133-135) and Piriya (2012: 122).

References

Anonymous (H. Parmentier?)
1903 Laos (chronique Indochine). *Bulletin de l'École française d'Extrême-Orient* 3(3): 141-143.

Aymonier, Étienne
1901 *Le Cambodge II. Les provinces siamoises*. Paris: Ernest Leroux.

Baptiste, Pierre & Zéphir, Thierry (ed.)
2008 *L'art khmer dans les collections du musée Guimet*. Paris: Réunion des Musées Nationaux.

Barth, Auguste
1902 Stèle de Vat Phou près de Bassac (Laos). *Bulletin de l'École française d'Extrême-Orient* 2(3): 235-240.

1903 Inscription sanscrite du Phou Lokhon (Laos). *Bulletin de l'École française d'Extrême-Orient* 3(3): 442-446.

Bénisti, Mireille
1968 Recherches sur le premier art khmer I : les linteaux dits de Thala Borivat. *Arts Asiatiques* 18: 85-101.

1970 *Rapports entre le premier art khmer et l'art indien*. Paris: École française d'Extrême-Orient.

1971 Recherches sur le premier art khmer III : aux confins des styles de Prei Kmeng et de Kompong Preah. *Arts Asiatiques* 23: 93-134.

1974 Recherches sur le premier art khmer VI : linteaux inédits et linteaux méconnus. *Arts Asiatiques* 30: 131-172.

Boisselier, Jean
1955 *La statuaire khmère et son évolution*. Saigon: École française d'Extrême-Orient.

1956 Arts du Champa et du Cambodge préangkorien – La date de Mi-so'n E-1. *Artibus Asiae* 19(3/4): 197-212.

1965 Récentes recherches archéologiques en Thaïlande. *Arts Asiatiques* 12: 125-174.

1968 Les linteaux khmers du VIIIe siècle – Nouvelles données sur le style de Kompong Prah. *Artibus Asiae* 30: 101-144.

Charuek Wilaikaeo
2550 Leng borannakhadi don khum ngoen (Don Khum Ngoen Archaeological Site). *Silpakorn Journal* 50(2): 16-39. [In Thai; 2007 CE]

Cœdès, George
1918 Le site primitif du Tchen-la. *Bulletin de l'École française d'Extrême-Orient* 18(9): 1-3.

1928 La tradition généalogique des premiers rois d'Angkor d'après les inscriptions de Yaçovarman et de Rājendravarman. *Bulletin de l'École française d'Extrême-Orient* 28: 124-144.

1956 Nouvelles données sur les origines du royaume khmèr : la stèle de Văt Luang Kău près de Văt Ph'u. *Bulletin de l'École française d'Extrême-Orient* 48(1): 209-220.

1937-66 *Inscriptions du Cambodge*. Eight Volumes. Hanoi-Paris: École française d'Extrême-Orient.

Dhida Saraya
2536 *Mueang Ubon*. Bangkok: Muang Boran Publishing House. [In Thai; 1993 CE]

Dupont, Pierre
1943-46 Études sur l'Indochine ancienne : 1. La dislocation du Tchen-la et la formation du Cambodge angkorien. *Bulletin de l'École française d'Extrême-Orient* 43: 17-55.

1952 Les linteaux khmers du VIIe siècle. *Artibus Asiae* 15(1/2): 31-83.

1955 *La statuaire préangkorienne*. Ascona: Artibus Asiae Supplementum.

Eiji, Nitta
2005 Heger I Drums, Bronze Halberds and Rang Societies in the Mekong Basin. *Bulletin of the Indo-Pacific Prehistory Association* 25: 125-128.

Fine Arts Department (FAD)
2529 *Charuek nai prathet thai (Inscriptions of Thailand)*. Five Volumes. Bangkok: National Library of Thailand. [In Thai; 1986 CE]

2535 *Borannakhadi khuean pak mun (Archaeology of Pak Mun Dam)*. Bangkok. [In Thai; 1992 CE]

Giteau, Madeleine
2001 *Art et archéologie du Laos*, Paris: Picard.

Groslier, Bernard-Philippe
1997 Prospection des sites khmers du Siam. In Dumarçay, Jacques (ed.), *Mélanges sur l'archéologie du Cambodge*. Paris: École française d'Extrême-Orient, pp. 189-220. [First published in *Coûts et profits en archéologie*, Sophia-Antipolis: CNRS, 1980, pp. 33-61].

Hawixbrock, Christine
2013 Le musée de Vat Phu et les collections archéologiques de Champassak. *Bulletin de l'École française d'Extrême-Orient* 97-98. [for 2010-11]: 271-314.

Higham, Charles
2002 *Early Cultures of Mainland Southeast Asia*. Bangkok: Rivers Books.

Higham, Charles & Rachanie Thosarat
2012 *Early Thailand: From Prehistory to Sukhothai*. Bangkok: River Books.

Jacques, Claude
1962 Notes sur l'inscription de la stèle de Văt Luang Kău. *Journal Asiatique* 250(2): 249-256.

1976 La stèle du Baphuon, K. 583. *Bulletin de l'École française d'Extrême-Orient* 63: 351-368.

1986 Le pays khmer avant Angkor. *Journal des savants* 1(3): 59-95.

1993 Mahendravarman's Campaigns in North-East Thailand: New Evidence from the Inscriptions of Wat Phu. Paper presented at the *Symposium on Thai Studie* held in London on 5-9 July 1993. [Unpublished]

1995 Les Khmers en Thaïlande : ce que nous disent les inscriptions. In Silpakorn University (ed.), *Actes du Premier Symposium franco-thaïlandais. La Thaïlande des origines de son histoire au XVème siècle*. Bangkok: Silpakorn University, pp. 38-44.

Jacques, Claude & Lafond, Philippe
2007 *The Khmer Empire: Cities and Sanctuaries from the 5th to the 13th Century*. Bangkok: River Books. [Originally published in 2004 as *L'empire khmer. Cités et sanctuaires, V-XIIIe siècles*]

Kongkaeo Wiraprachak
2549 Charuek phop mai thi changwat roi et (A New Inscription from Roi Et Province). *Silpakorn Journal* 49(3): 108-109. [In Thai; 2006 CE]

Le Bonheur, Albert
1995 L'architecture pré-angkorienne en Thaïlande et au Laos. In Silpakorn University (ed.), *Actes du Premier Symposium franco-thaïlandais. La Thaïlande des origines de son histoire au XVème siècle.* Bangkok: Silpakorn University, pp. 58-100.

Lévy, Paul
1970 Thala Bŏrivăt ou Stu'ñ Trèñ : sites de la capitale du souverain khmer Bhavavarman Ier. *Journal Asiatique* 258(1-2): 113-129.

Lorrillard, Michel
2012 A New Chapter in the History of Laos: Mon Buddhist Culture in the First Millennium. Paper Presented at the 14th EurASEAA Conference, held in Dublin on 18-21 September 2012. [Forthcoming with the Proceedings]

2013a Du centre à la marge : Vat Phu dans les études sur l'espace khmer ancien. *Bulletin de l'École française d'Extrême-Orient* 97-98 [for 2010-11]: 187-204.

2013b Par-delà Vat Phu : données nouvelles sur l'expansion des espaces khmer et môn anciens au Laos (I). *Bulletin de l'École française d'Extrême-Orient* 97-98 [for 2010-11]: 205-270.

Murphy, Stephen A.
2010 *The Buddhist Boundary Markers of Northeast Thailand and Central Laos, 7th-12th centuries CE: Towards an Understanding of the Archaeological Religious and Artistic Landscape of the Khorat Plateau*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished]

2013 The Distribution of *Sema* Stones throughout the Khorat Plateau during the Dvaravati Period. In Klokke, Marijke J. & Degroot, Véronique (eds), *Unearthing Southeast Asia's Past: Selected Papers from the 12th International Conference of the European Association of Southeast Asian Archaeologist, Volume 1*. Singapore: NUS Press, pp. 215-233.

Parmentier, Henri
1912 Laos (chronique). *Bulletin de l'École française d'Extrême-Orient* 12(9): 195-197.

1927 *L'art khmer primitif*. Paris: G. Van Oest.

1948 *L'art architectural hindou dans l'Inde et en Extrême-Orient*. Paris: G. Van Oest.

1988 *L'art du Laos*. Paris: École française d'Extrême-Orient. [Reprint; First published in 1954]

Piriya Krairiksh
2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Raknga o haeng sinlapa thai*, 2553 (2010 CE)]

Revire, Nicolas
2011 Some Reconsiderations on Pendant-legged Buddha Images in the Dvāravatī Artistic Tradition. *Bulletin of the Indo-Pacific Prehistory Association* 31: 37-49.

Sanderson, Alexis
2003-04 The Śaiva Religion among the Khmers. *Bulletin de l'École française d'Extrême-Orient* 90-91: 349-462.

Santoni, Marielle & Hawixbrock, Christine
1998 Fouilles et prospections dans la région de Vat Phu (province de Champassak, sud du Laos). *Bulletin de l'École française d'Extrême-Orient* 85: 387-405.

1999 Prospections 1999 au sud de Vat Phou : du Houay Khamouane à la frontière cambodgienne. *Bulletin de l'École française d'Extrême-Orient* 86: 394-405.

Santoni, Marielle & Souksavatdy, Viengkeo
1999 Fouilles sur le site de Vat Phou-Champassak. In Bizot, François (ed.), *Laos – Restaurer et préserver le patrimoine national* (colloque EFEO 1996). Vientiane: Édition des cahiers de France, pp. 167-200.

Stark, Miriam
2006 Pre-Angkorian Settlements Trends in Cambodia's Mekong Delta and the Lower Mekong Archaeological Project. *Bulletin of the Indo-Pacific Prehistory Association* 26: 98-109.

Vickery, Michael
1994 Where and What was Chenla? In Bizot, François (ed.), *Recherches nouvelles sur le Cambodge. Études thématiques 1*. Paris: École française d'Extrême-Orient, pp. 197-212.

1998 *Society, Economics, and Politics in Pre-Angkor Cambodia: The 7th-8th Centuries*. Tokyo: The Centre for East Asian Cultural Studies for Unesco/The Toyo Bunko.

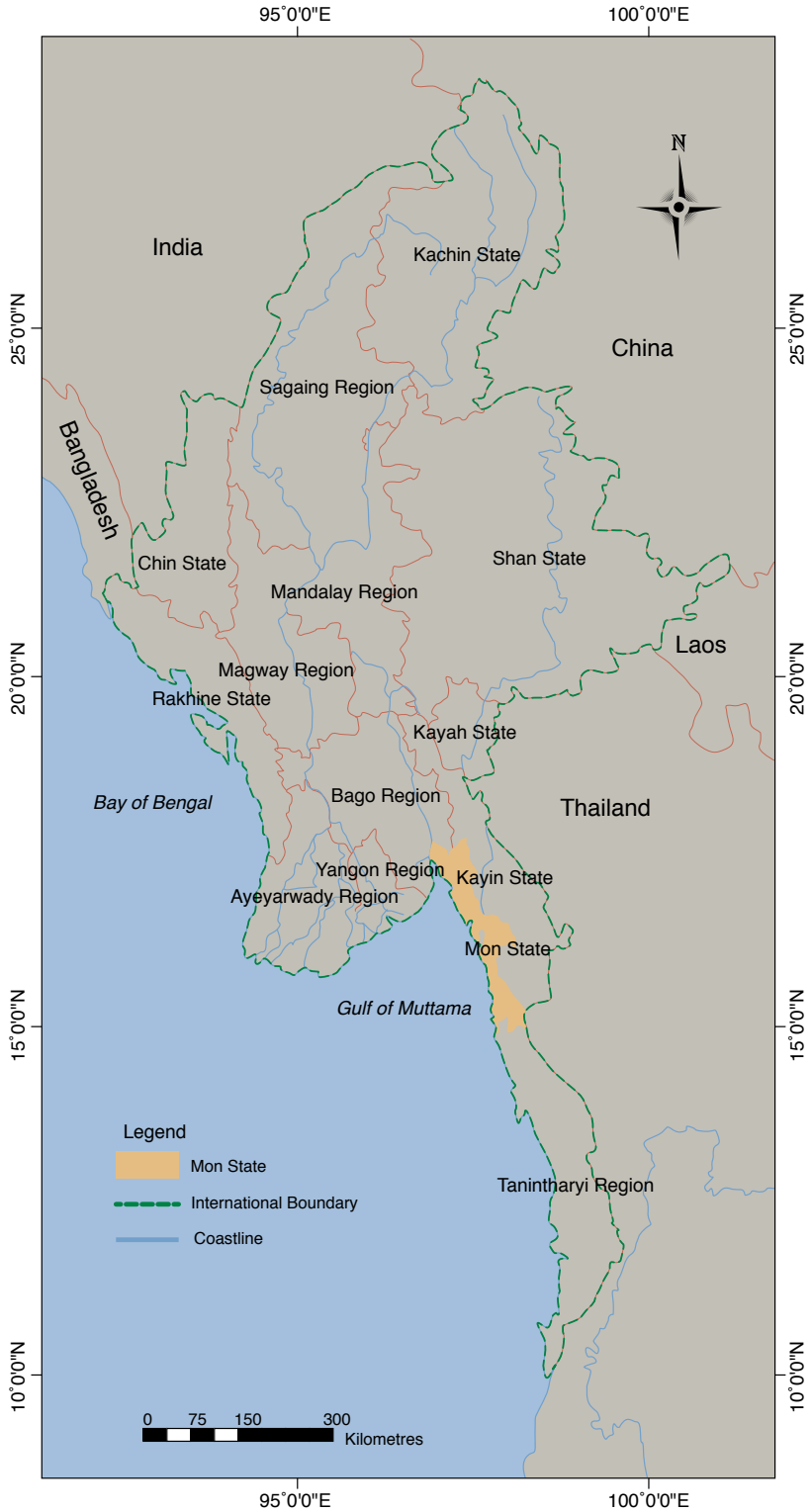
Woodward, Hiram
2003 *The Art and Architecture of Thailand. From Prehistoric Times through the Thirteenth Century*. Leiden-Boston: Brill.

2010 Dvaravati, Si Thep and Wendan. *Bulletin of the Indo-Pacific Prehistory Association* 30: 87-97.

Zaleski, Valérie
2012 *Collections du musée de Vat Phu/Vat Phu Museum Collections*. Vientiane: Département du site du patrimoine mondial de Vat Phu (DPV). [With contributions from C. Hawixbrock, C. Jacques, M. Santoni & V. Souksavaty]

Website

Carte interactive des sites archéologiques khmers (Cisark): http://www.site-archeologique-khmer.org



Map 1: *Overall map of Myanmar with the location of Mon state [Adapted from drawing courtesy of Thazin Kaing].*

Sampanago: "City of Serpents" and Muttama (Martaban)

Elizabeth H. Moore & San Win

Introduction

The discourse between riverine and maritime sites in lower Myanmar during the late first and early second millennium CE has received little attention, with literature focusing on single sites and their dependence upon upper Myanmar **[Map 1]**. However, as we explain in this essay, it was the variety and fluctuations between a series of sites that sustained the economic and religious significance of this area.

Our argument is epitomised by the archaeology and chronicles of Sampanago (Campānāga) or "City of Serpents" (16°40'5.91"N, 97°35'46.90"E) **[Figure 1]**. Artefacts recovered inside and around Sampanago, 15 kilometres north of Muttama (Martaban, 16°32'13.92"N, 97°36'6.67"E), date occupation to *circa* the seventh to the eighteenth century. This longevity is supported by five successive toponymns situating Sampanago with a network of sacred and mercantile sites on the lower reaches of the Thanlwin (Salween) river **[Map 2]**. The artefacts and continual "naming" are concentrated along a relatively short span of the Thanlwin, suggesting that "Muttama" did not, as previously suggested, spread all along the coast from the Thanlwin to the Isthmus of Kra under Sukhothai and Ayutthaya control from the late thirteenth-sixteenth century (Gutman 2001: 111).

The names, such as Muttama-Dhañyawaddy and Sampanago-Lakunbyin, instead reflect a distribution of loosely linked towns over a 45 kilometre stretch of the river from Muttama to Pa-an (Hpa-an, 16°52'45.42"N, 97°38'28.77"E) and thence inland to Lampang (18°17'25.54"N, 99°30'37.43"E) and Phrae in Thailand (18° 9'0.75"N, 100° 9'12.67"E). We compare this riverine-maritime configuration to the Lampang-Phrae and U Thong-Nakhon Pathom-Khu Bua networks to highlight the synergy of maritime, riverine and overland interchange between lower Myanmar and Thailand (Dhida 1999: 46).

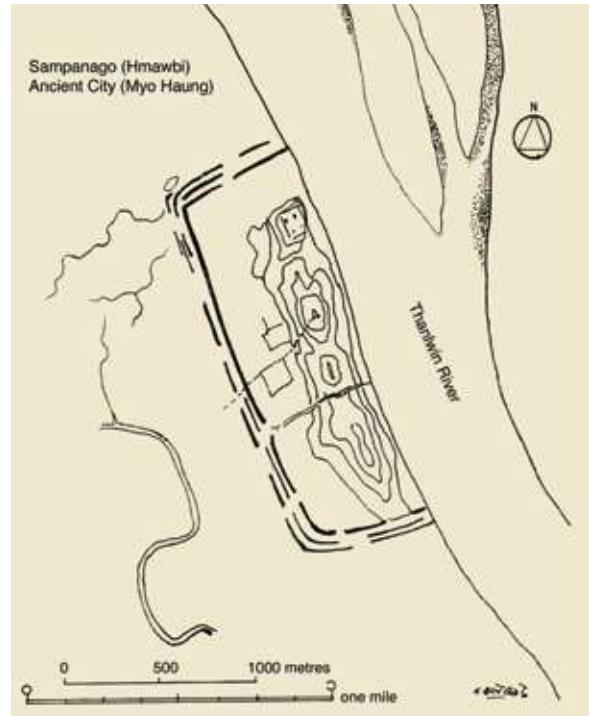
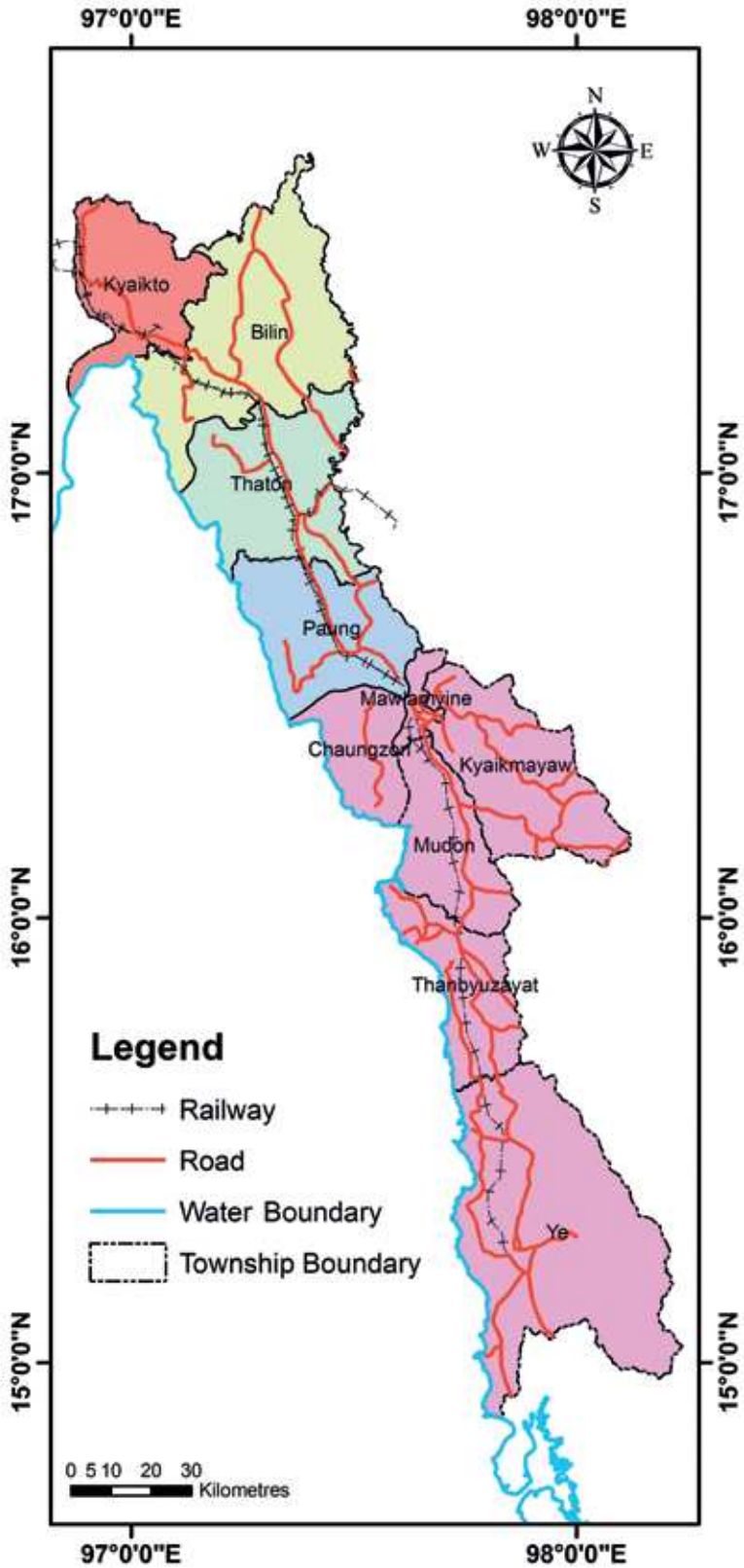


Figure 1: *Walled site of Sampanago, aerial view [Drawing courtesy of Aung Myint 2542: 256].*



Five River Confluence: Geographical Context

The ecological niche of Sampanago, called Puñjaluin in Mon is striking and a vital factor in understanding its longevity. The site is safely guarded from the drop into the Gulf of Muttama (Martaban), adjacent to the confluence of the Thanlwin, Attaran, Jaing, Dontami and Hlaingbwe rivers. The area is hilly, pocketed with swamp and flood areas. River meanders are common along this lower stretch of the Thanlwin with isolated limestone hills and caverns scattered along the ravine such as Kaw gun, Yathebyan, Pa-gat and Bingyi caves.

The surrounding hills are a continuation from those at Thaton, which stretch southward into two ranges **[Map 3]**. The eastern chain stretches from north to south-southeast to the confluence of Thanlwin and Dontami rivers at Sampanago. The southern more westerly range starts from Zimkyaik (Zingyaik) just south of Thaton and Kalama taung, summits with an average height of 914 metres. It continues south as the "Martaban hills," connecting to the Taungnyo hills of Mawlamyaing (Moulmein) and the Ye area opposite Muttama. The end of this chain is rocky terrain called Muh Tamo' in Mon (Muttama in Myanmar language) where chronicles record that King Wareru (r. 1287-96) founded the city Ratanapura in 1287.

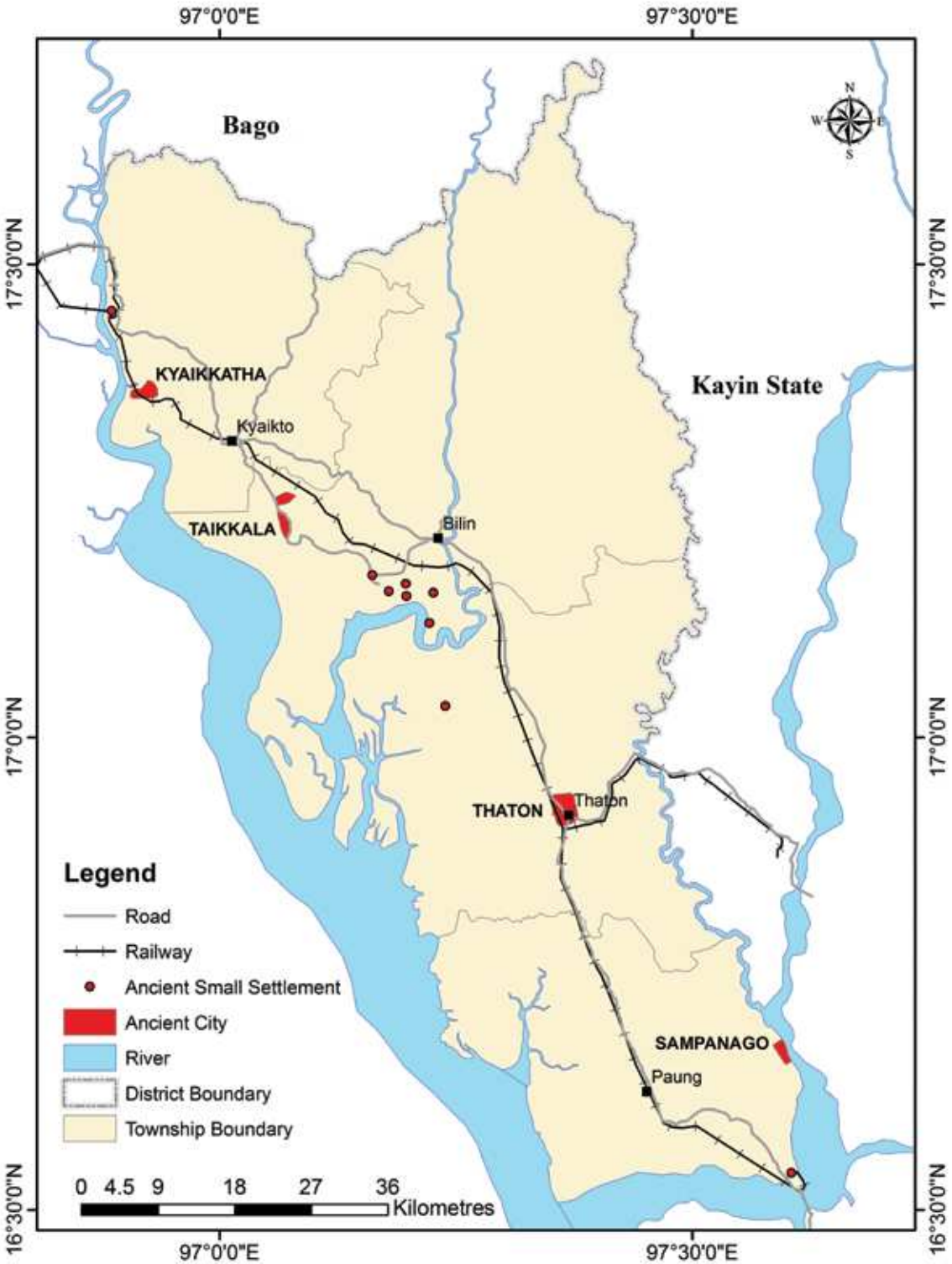
Between two ranges is the alluvium of the lower Thanlwin valley with cultivation of various crops in a region of stream beds, meanders and islands.[1] As these details highlight, Sampanago was part of a vital nexus near to egress into the bay. The area was fertile, and not being directly on the tip of the landmass. "Kin Ywa" or revenue village, 3 kilometres upriver from the walled site, was probably a fortified way station for goods prior to shipment by sea or overland.

Walled Site Description

Sampanago is isolated, with no tarmac roads or railways near and around the city. The population consists of a small village at the west foot of the central hill, Dhat taw ywa, inhabited by Kayin (Karen) people but the rest of the site is covered with thick forest and bamboo glades. It is 19 kilometres east of Paung, the township headquarters, 38 kilometres south from Thaton, the district headquarters and 22 kilometres north from the capital of Mon state, Mawlamyaing. The site is easily accessible by boat from Mawlamyaing and Pa-an, the capital city of Kayin state, 23 kilometres north along the Thanlwin. It can also be reached overland via village tracks along the west bank of the river. The nearest sizeable town is Natmaw village, a ferry and local administration head-quarters 3.2 kilometres north at the confluence of Thanlwin and Dontami rivers.

The east wall of Sampanago is the Thanlwin (Salween) river with newly deposited sandbanks on the opposite side indicating erosion of the west bank. The walled site, first documented by Aung Myint from aerial photography, remains well preserved (2542: 255-261). Three ramparts (15-25 metres wide, 2-4 metres high) and moats enclose the site, best preserved on the inner wall on the southwest side **[Figure 2]**. The wall measures 620 metres in length on the north, 2000 metres on the west and 500 metres on the south (126 hectares). A long earthen hill on the east side near the river is said by villagers to be an ancient reclining

Opposite Map 2: *Mon state and Ye township [Drawing courtesy of Thazin Kaing].*



Opposite Map 3: *Ancient city sites mentioned in text [Drawing courtesy of Thazin Kaing].*

Figure 2: *Moat on southwest of site [Photograph by San Win].*

image of the Buddha, with scattered laterite carvings around the site including a seated image of the Buddha (66 cm. height). The earthen and laterite ramparts are mixed with large (46 x 23 x 8 cm.) burnt bricks, including a number with finger-markings (Berliet 2011: 85; San Win 2530 and 2556) **[Figure 3]**. There are also brick reinforcements of later historical periods. Notably, however, large finger-marked bricks pointing to first millennium CE habitation have been found *in situ* throughout this area, including Kin Ywa to the north and Kyauksarit to the west.

The use of the moats to control water to flooded rice fields is seen on the southwest of the site where cultivation of *mayin* (summer paddy) has flattened the enclosing walls. The river comes close to the foot of the small range (ca 2.4 km.) within the walls that runs parallel to the river. This accounts for the slight widening of the site at points and the obtuse rounded angle of the southwest corner with possible remnants of a walled guard post extending to the southwest. The rectangular site is divided by a partition wall crossing from east to west two-thirds of the distance from the north to the south that may mark the limit of the original site subsequently extended south.

Ground Survey

The elevated area traditionally called the "palace site" and principal *stūpa* are in the northern part on a flattened area of about 0.4 hectares on the summit of the hill (40 metres) **[Figure 4]**. Six ruined *stūpa*s were found on the summit during 2012 survey of the site, the largest, Dhat taw hpaya (relic *stūpa*) having been repaired in 2000 during one of the author's previous trips to the site. From one *stūpa* on the southern hill of the complex under repair, a baked tablet (*mye-bon-hpaya* or "terracotta earth sacred image") (7.6 x 5 cm.) was recovered from

Figure 3: *Dhat taw hpaya or* stūpa, *"Palace" site within the walled site [Photograph by San Win].*

a relic chamber that had been destroyed by treasure hunters.[2] The tablet was broken in the top portion by the looters, showing a seated image of the Buddha on the front while on the back a name "Shyan Mi" (*shan mi*) was inscribed, probably a monk who donated the tablet. Although only one tablet was found in the ruined *stūpa*, this type of tablet is seen in large numbers on the walls of Kaw gun cave where they are dated to the fifteenth to seventeenth century. The script on the back is Middle Mon probably dating to the fifteenth-sixteenth century era of the Muttama 32 *myo*s or cities (Aye Kyaw 2514: 141-145; Shorto 1963).

At the foot of the hills, where the plains spread to the west walls, are the *ledawya* or royal rice fields. A number of beads dated to the early to middle first millennium CE were collected by one of the authors from surface survey, including barrels, short barrels, cylindrical ring and cylindrical examples made of bone, carnelian, agate and amber. The colours ranged from orange-yellow, orange and black, brown to yellow, bluish, and brown banded. Some had evenly spaced black and white line decorations although others were plain **[Figure 5]**. One large barrel-shaped bead, closely comparable to a bead from U Thong, had a black mid-section and orange ends (45 mm. in length, 12 mm. at mid-diameter with an end diameter of 6 mm.) (Dhida 1999: 99; Moore & Aung Myint 1993: fig. 58) **[Figure 6]**. Another was zoomorphic, a carnelian lion in a jumping or crouched position in orange colour about 40 mm. long with a hole penetrating the neck and tail. A villager in this area, U Chit Aye, reported recovering iron objects and ten stone beads at a depth of 1.8 metres from a well in front of his house, which he gave to the township office in Paung township. U Khin Shwe from this office showed one of the authors the beads but these were unfortunately lost during 1988 riots in Paung township. Similar beads are kept at the Ministry of Culture Museum in Mawlamyaing, some recently looted examples, and comparable from upper Myanmar include sites such as Maingmaw (Pinle), Taungdwingyi, Halin, Śrīkṣetra and Beikthano. Other parallels can be seen in beads from central and southern Thailand, including Thung Tuek on the west coast (Boonyarit & Rarai 2552).

A significant number of pottery finds were also made during surface survey. These include an intact jar, 40 cm. high with a tall neck, flaring body and flat base (Naw Yuzana Win 2009) **[Figure 7]**. While the rim of the jar has broken, in form, decoration and finish, it closely recalls an unglazed stoneware baluster jar (52 cm.) dated to the fourteenth to fifteenth century Sukhothai or Ayutthaya period from the Ban Bang Pun kilns, Suphan Buri province, western-central Thailand kept in the Freer-Sackler collection.[3] Larger glazed "Martaban" jars have been found in nearby regions, one over a metre in height, with its glaze well preserved, and recent documentation of a road cut exposing numerous vessels and an associated kiln structure **[Figures 8-9]**. Other surface finds from survey in 2012, yielded a mixture of similar ironware and thinner, red-orange pottery incised with curvilinear wave and V-shaped designs **[Figure 10]**. These recall Dvāravatī wares from Khu Mueang, Sing Buri province (Phasook 2528: figs 16, 17, 20). The dating of a terracotta model of an elephant, however, remains open to discussion **[Figure 11]**. The 6 cm. model, decorated with rows small circular and tear-drop shaped stamped motifs on the back and flank recalls similar zoomorphic figures documented at Thung Tuek and in the

Figure 4: *Finger-marked bricks from area of Sampanago [Photograph by San Win].*

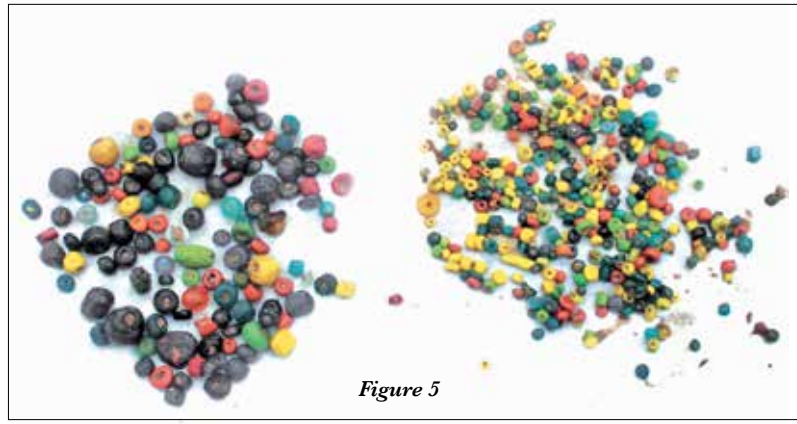


Figure 5

Figure 6

U Thong National Museum where elephants of comparable size decorate the top of covers or lids for pots (Boonyarit & Rarai 2552; Podjanok Kanjanajuntorn, pers. comm.).

Figure 5: *Recent bead finds at Mupun, Mawlamyaing/Moulmein [Photograph by San Win].*

Figure 6: *Barrel bead from Sampanago, black mid-section with orange ends separated from middle section by a white line; 45 mm. length, mid-diameter 12 mm., end diameter 6 mm. [After Moore & Aung Myint 1993: fig. 58].*

Comparison with Other Walled Sites

Thailand

The form of Sampanago is similar to the Dvāravatī sites of Khu Bua (13°29'30.72"N, 99°49'56.36"E) and U Thong (14°22'32.00"N, 99°53'32.00"E) although neither is on a river and neither encloses substantial upland area (Dhida 1999: 61, 96-97). However, small artefacts such as beads and the elephant terracotta model mentioned above are common at Khu Bua and U Thong, with links between the brick architecture of these sites to structures such as Winka near Sampanago (Moore & San Win 2007). As discussed below, there are historical links to the later cities of Lampang and Phrae although the moats, walls and topography again differ in enclosing a flat rather than hilly area.

The strongest comparisons, however, are with other sites in lower Myanmar which like Sampanago were designed to cope with the strong variations in the seasonal monsoons. These include the closely distributed walled sites of Muttama, Thaton, Don wun, Winka, Ayetthama, and Bago (Pegu).

Muttama

Muttama (Martaban, 97 hectares) is located on the east part of the 152 metre high Martaban range mentioned earlier. The town site faces the river on the east, while the west wall runs along the hillocks with Kyaikphyinku "pagoda" on the south-west. The only visible portion of the wall is that running from the mountain to the river on the north, today known as the Sezon quarter. However, on the northwest the corner is visible and Kyaik Kalunpun *stūpa* sits on the southwest edge of a 0.5 kilometre long oval-shaped rampart. While Muttama is widely known for trans-shipping of large "Martaban" glazed jars, the origins of the city

Figure 7: *Baluster jar with line decorations on shoulder from the site compared with 14th to 15th century jar from central Thailand [Photograph courtesy of Yuzana Win].*

Figure 9: *Section of road cut near Mawlamyaing showing* in situ *vessels [Photograph courtesy of Thazin Kaing].*

Figure 8: *Glazed jar found at In-yar, Paw-kyu-kone, near Mawlamyaing [Photograph courtesy of Nan Kyi Kyi Kyaing].*

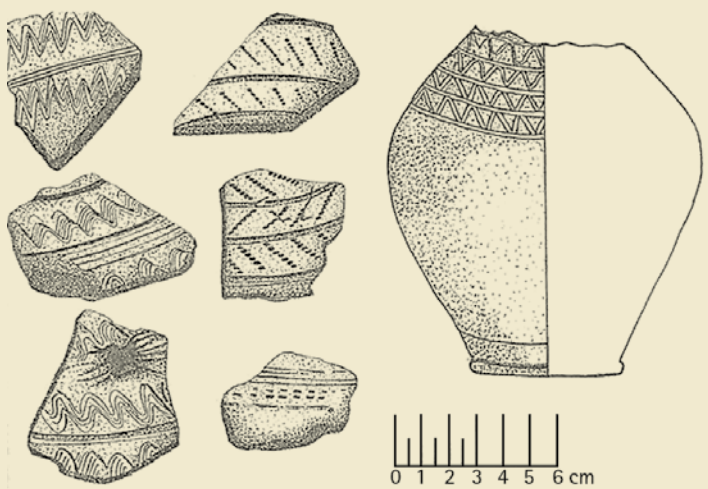


Figure 10: *Sherds and pot [Drawing by San Win].*

are hazy. It has also been proposed that Sampanago was the Kalaśapura or "City of Pots" referred to in a seventh century CE Sanskrit inscription found at Śrīkṣetra. References to Kalaśapura and its king, Śrī Parameśvara, hint at a southern port for the Pyu (Gutman 2001: 109, n. 1).

Figure 11: *Model of elephant (6 cm.) from Sampanago [Photograph by San Win].*

Thaton

Thaton (286 ha., 16°54'30.46"N, 97°22'8.16"E) is laid out on the escarpment of laterite high ground or *myenigon*,[4] red-earth soil which is slightly elevated from the surrounding rice fields. The site naturally fortified on the east by the 2.4 kilometre long Myathabaik hills with the lowland swamp of Leik-in (Tortoise-lake) on the west, perhaps remnants of the Old Thaton harbour. This may have connected with the Sa Chaung or Thaton river, an old canal parallel to the railway which extends 16 kilometres to the northwest. Numerous small town sites such as Hsin Phyu Kyun (16°56'16.56"N, 97°20'29.14"E), Mayangon (16°59'7.26"N, 97°15'6.71"E), Seik Kyun (17° 0'1.66"N, 97°14'47.10"E), Kadaikgyi (17° 2'2.59"N, 97°14'20.40"E) and Kadaikgaleh (17° 3'18.26"N, 97°13'49.18"E) are located on isolated mounds of laterite high ground 80-160 metres above the surrounding rice fields on the west of this canal with artefacts such as pottery, beads and *mye-bon-hpaya* tablets dating to the first millennium CE.

Don Wun

Don wun (17° 8'35.26"N, 97°16'30.09"E), 16 kilometres north of Thaton, dates to the fifteenth-sixteenth century Hanthawaddy period of the "32 *myo*s" or cities, but the site is linked to Thaton and Muttama, referred to in the *Chronicle of the Mons* as "Wun" and the trader Makuta who befriended the king of Sukhothai and eventually became Wariraw of Muttama ("Rock Slab City") (Tun Aung Chain 2010: 32-46).

Bago and Other Sites

Similar artefacts have been recovered in Taikkala (Ayetthama, 17°14'39.48"N, 97° 3'44.24"E and Winka, 17°13'34.42"N, 97° 4'16.07"E), Kyaikkatha (269 ha.), another of the 32 *myo*s (satellite towns) of the sixteenth century kingdom of Hanthawaddy, Sittaung (72 ha., Kyaikkalun Pon Hpaya) and its sentinel site, Kawhtin (16 ha.).

The outer wall of Bago (Ussā-Hanthawaddy) (17°20'2.97"N, 96°30'42.38"E, 120 ha.) located adjacent to the northeast wall of Bayinnaung's sixteenth century city, encloses a hillock approximately 1,500 x 800 metres called Hinthagon ("resting place of goose") **[Figure 12]**. The length of the hillock is similar to that at Sampanago but its height, at 28 metres, is only 10 metres above the surrounding terrain while that at Sampanago, 39 metres is twice that of the surrounding area. It is however, the only site paralleling the unusual topography of Sampanago. The Bago "pagoda," the Shwemawdaw *Thamaing* or chronicle history dates the city to 825 CE with a line of seventeen kings linked to Sampanago starting from Thamala, Wimala and Assakumma.[5]

Figure 12: *The near square 16th century palace enclosure at Bago with the remains of the earlier oblong city of Ussā-Hanthawaddy to the east [Photograph courtesy of Williams-Hunt Collection (SOAS); geo-referenced by S. Lertlum].*

Site Distribution

In short, Sampanago was part of a network of walled sites extending for some 100 kilometres from northwest to southeast, their form primarily determined by the coastal region terrain between the Sittaung and Thanlwin rivers. Thaton, Hsin Phyu Kyun, Don wun and other sites parallel Sampanago's proximity to water transport routes.

Walled enclosures reflecting the lateritic landscape are seen throughout the area, including Kyaikkatha, Sittaung and Kadaikgyi while the construction of ramparts around a markedly elevated area is seen at Ussā-Bago. Within this network, sites of different sizes and shapes profile a distinct regional adaptation, fluctuating site hierarchy and chronology of at least the middle to late first millennium CE. Combining this archaeology and chronicle records, Sampanago may have been the successor of Thaton and immediate predecessor of Ussā-Bago. This is supported by the size of the site, as Sampanago-Lakunbyin (126 ha.) is larger than others of the Muttama 32 *myo*s such as Wagaru (2,000 metres circumference) or Don wun and larger than Sittaung (72 ha.) although smaller than Kyaikkatha (369 ha.) and Thaton (259 ha.) with their well-developed central palace site.

The most viable context within which to understand the long chronology and multiple names referring to Sampanago, however, is that of an inter-linked trade and pilgrimage network linking this lower part of the Thanlwin both to the sea and overland to Thailand.

Origins of Sampanago

The name "Sampanago" is thought to derive from the Pāli element "sampa" (*sappa*) (Htoke Sein 1978: 640). Pronounced as "thampa" in Myanmar, it is distinct from words such as *zabegyi*, boa constrictor and *zabaoun*, python (Myanmar Language commission 1993: 103). At present, written references for Sampanago are limited in two chronicle tales, one of a *nāga*-queen, the mother of princes Thamala and Wimala, the founders of Bago and the other of a Khmer *nāga*-princess who comes to Bago. In both cases the accounts are understood here as not an actual reptile but reference to a local female lineage and fecundity, possibly associated with serpent veneration.

In the first of these, it is said that when King Theinnaginga was ruling in Dhañyawaddy (Old Muttama) he mated with a maiden, the queen, who was born from an egg laid by a female *nāga.* She gave birth to two sons, the twin brothers of Thamala and Wimala, founded Hanthawaddy city. Another traditional account holds that prince Assa, the successor of King Wimala at Bago (Ussā, Ussi)[6] was famed as a warrior in fighting with Indian merchant groups. His renown spread to Khmer regions and in due course, a Khmer princess of the same *nāga* race as prince Assa, came to Bago to be married to this prince (British Burma Gazetteer 1879; Tin Gyi 1931).

It has been argued that the Assa story is a later tale, but the relevance here is the repeated use of the *nāga* metaphor in relation to the Muttama-Sampanago and Bago (Aung-Thwin 2005: 94). Notably, the Sampanago name survived into the colonial era, mentioned as a deserted village circle (Tsampa-na-go) in the Martaban (Muttama) township, Amherst (Moulmein, Mawlamyaing) district. The location is correct for Sampanago, lying on the right bank of the Thanlwin (Salween) below the Bheng Laing or Dontami river with a population of 4,402 in 1877-78 being assessed for the British capitation tax for Rs. 4,327 and land revenue was Rs. 3,893 (British Burma Gazetteer 1879: II, 834). After that the village was deserted and the population shifted to nearby villages with only the name Sampanago remaining on the British One Inch map of Burma (No. 94, H, 10) between Nathmaw village in the north and Hmawbi in the south.

Written accounts combining Sampanago with "Lakunbyin" occur in 1783 and 1874 orders of King Bodawpaya (Badon), the *Muttama 32 myos sittan* (The Revenue Inquest of King Bodawpaya for Muttama 32 *myo*s) where one of the palm leaf manuscripts notes that:

> […] lakunbyin town being set up a palace (for kings), (it was called), "Sampanago-Lagwanprañ" and by the Mon they called it as "Lakunbyin," King Sitta ruled over it. (Yangon, National Library Palm-leaf manuscripts, no. 2272, "ku" leaf, back face; lines 8-9)

From citations such as these, we suggest that Sampanago and Lakunbyin refer to the same place, with the former being the original name and the latter an additional one. Further, as discussed below, the name "Lagwamprañ" or "Lakunbyin" recurs in the later alleged Mon migration of Haripuñjaya.

Origins of Lakunbyin

The name "Lakunbyin" (Laganphen in Mon) is also given to a site near Hlegu in Bago with both possibly connected with the often-cited Mon migration from the Haripuñjaya Mon kingdom of Queen "Samadevi" (Cāmadevī) in the tenth or eleventh century (Woodward, this volume). This migration is best known from the *Cāmadevīvaṃsa*, a northern Thai chronicle written some time between 1410 and 1417 by a monk named Bodhiraṃsī, who noted as follows:

> At that time the early tenth century the people of Haripuñjaya suffered from a widespread cholera epidemic […] the remaining population of Haripuñjaya, in order to save their own lives, fled to a city named Sudhamma [Thaton] and settled there. The city of Haripuñjaya consequently fell into decline and was abandoned [...]. The king of Pukam [Bagan or Pagan] observing the masses of weak and starving people, was moved to pity and out of his compassion restored the city of Sudhamma for them to occupy. Unable to bear their suffering any longer, the people of Haripuñjaya left Sudhamma [Thaton] and went to Haṃsavati [Bago or Pegu] […] where they continued to live. At that time the king of Haṃsavati seeing the [needs of the] people of Haripuñjaya, […] gave them many necessities, including clothing, jewelry, paddy, rice, various salty and sour foods, and dwelling places. (Swearer & Sommai 1998: 105-106)

There are many ambiguities in this statement such as why the people left Thaton for Bago. However, while the account has been queried due to the later date of extant copies it is generally agreed that the migration came from the area of Lamphun, Lampang and Phrae in upper-central Thailand (Aung-Thwin 2005: 92).[7] Their route would have taken them across the Thanlwin at Dakwin near Pa-an and continued along the upper reaches of Bilin river and valley of the Yanzalin river that joins the Thanlwin near Myaing-gyi-ngu opposite Kamamaung in Kayin state. From there, they could easily reach Sampanago-Lakunbyin. Accepting the traditional occupation of Thaton by Aniruddha in 1057, we postulate that the city may have been governed by an appointee of Bagan [Pagan], mentioned in the legend of Queen Cāma as the "king of Pukam." The presence of a Bagan governor and depopulation from the occupation may have made Bago (Haṃsavatī) a more secure and prosperous refuge for the Mons from Haripuñjaya:

> The inhabitants of Haripuñjaya and of Haṃsavati came to know and love each other. Even their languages were the same […]. When the disease was brought under control those who want to return to Haripuñjaya departed and dwelt again in the city […]. The people of Haṃsavati, who still love their friends and relatives in Haripuñjaya often, visited them bearing many letters. (Swearer & Sommai 1998: 105-106)

In brief, the name Lakunbyin at Bago and Muttama (Thaton) may derive from this Mon migration from central Thailand with "lakun" recalling Lamphun and "byin" for Phrae. In any case, the name survived into later records, at times paired with Sampanago and at others mentioned as Lakunbyin. For example, in a royal order dated 10 February 1806, "[…] Yehtinbala, the servant of Sakaingmin, is appointed to be Myosa, Governor of Lakunbyin, in Muttama confederation" which suggests that Lakunbyin was a satellite town or in the revenue circle of Muttama.

In the *Muttama 32 myos sittan* revenue inquest of Bowdawpaya noted above, dated the eighth waxing day of Nattaw in 1145 (Myanmar Era = 1783 CE)[8] soon after he had ascended the throne on the fourteenth waning day of Tapotwe, Monday, in 1144 (1782 CE) the names of the 32 *myo*s included Lakunbyin (Pinnya 2462-81: 28).[9] Lakunbyin appears again in Aye Kyaw's work (2514: 141-145), where he divided the Muttama region into two parts, west and east of the Thanlwin. Lakunbyin, although not exactly located, is included in the western group.

A different name is given in Nai Pan Hla's editing of the *Rajadhiraj Ayedawpun Kyan*, where he notes it as "Lagwanbyin" in Myanmar and "Dun Laganphen" in Mon. The importance of the site in this work was its strategic position in the connections between Muttama and Zimme (Chiang Mai) and Bago (Hanthawaddy or Haṃsavatī) in the fourteenth century. Three years after the accession of King Banya-Oo (r. 1348-1383), father of Rajādhiraj, the rebellion of Saw-ai-dit and Baw-kray broke out in Don wun. When the rebels were defeated they fled to Chiang Mai for asylum but returned to attack Muttama with the help of Chiang Mai. Although the attack failed, many lesser towns along the way to Muttama such as Sittaung, Taikkala, Don wun, Yinnyain and Lakunbyin were destroyed by the rebels (Nai Pan Hla 2541: 48-49). Taking this order in its geographical context, Lakunbyin was not far from Muttama.

Again, fifteen years into Banya-Oo's Muttama reign another rebellion broke out. The king, in distress because of the death of his white elephant, went up to the forest in search of good elephants, taking his ministers, armed men and family. This time, the rebel leader was his brother in law, Brat Htaba, the governor of Muttama to whom he entrusted guardianship of his throne. Brat Htaba had three brothers, Eiprabun, the governor of Lakunbyin, Lokphya, the governor of Myaungmya and U-lo, the governor of Mawlamyaing. They also armed their towns against Banya-Oo. As King Banya-Oo could not defeat this rebellion, he abandoned Muttama and lived in exile in Don wun for six years before re-establishing Bago (Hanthawaddy) in 731 (1369 CE). During his stay at Don wun (Ton Wun) his chief queen Śrī Māyā (Medaw) gave birth to a son Apason or Banya Nwe, later who become King Rajādhiraj (Nai Pan Hla 2541: 68).

As soon as Rajādhiraj became king in 745 (1383 CE) in Bago he attacked his rivals in the lower Myanmar 32 *myo*s and started to fight Don wun, Tayai, Thanmaung and Lakunbyin. In the battle of Lakunbyin, Rajādhiraj ordered the whole town to be set on fire. As the governor of Lakunbyin, Baw-la-gun, was busy fighting a fire on his elephant's back, Rajādhiraj's men cut him down and killed him on the spot. Rajādhiraj then occupied the town, made Lakunbyin his base to attack Muttama and conquered Muttama, Mawlamyaing and all the 32 cities in the region. A similar event occurred in a battle of Muttama during the reign of King Tabinshwehti of Taungoo (Toungoo, 1530-1550 CE). In 899 (1537 CE), soon after becoming the king of Hanthawaddy (Bago),

Tabinshwehti marched on the Muttama 32 *myo*s. The *Maharajawanthit* ("The Great New Chronicle") compiled by Maha-sithu U Tun Nyo records the name of Lakunbyin (Lakwnphyan, Lawan) upstream of Muttama (Kyaw Win 2551: 39, 60).

The Muttama defence lines were strong with walls made along the sides of the hills. On the river side were seven ships armed with cannons that destroyed the troops of Tabinshwehti. Tabinshwehti's fleet as well, some 3,000 war boats and 130,000 armed men, could not manage to advance. The siege lasted for two months with attacks by river and land until at last, Tabinshwehti appointed Thamain Maru as his admiral and made Lakunbyin his headquarters. The admiral ordered his men to build a bamboo raft measuring 189 metres in length and 91 metres in width, on which they piled firewood up to a height of 9 metres. Another bamboo raft was built bigger than the former measuring 549 metres in length and 110 metres in width on which they built a stockade higher than the walls of Muttama. They arranged battlements, railings and cannons on the stockade and after setting fire to the piles of firewood on the raft, set the two bamboo rafts afloat upstream from Lakunbyin so they would move downstream to Muttama at dawn when tidal current started to retreat. As a result, all seven ships at Muttama harbour were burnt, and as there were no ships to guard the river side on the east of Muttama, the raft with the stockade approached the city and fired its cannons. The troops guarding the city fled from their defence lines and Tabinshwehti occupied Muttama (Kyaw Win 2551: 34-35). As all these accounts underscore, Lakunbyin was an ideal military base as it was only a short way from Muttama with its defences sustained in subsequent centuries.

Dhañyawaddy and Du'Wop

With Dhañyawaddy and Du'wop, we bring Kaw gun cave into the Sampanago-Lakunbyin network. The link is vital as Kaw gun, the most significant archaeological and religious site in this region, probably stood more closely to Sampanago-Lakunbyin than Muttama. It is not only Kaw gun for there are further caverns of note less than 3 kilometres to the northwest, at Yathebyan (16°50'28.83"N, 97°33'50.70"E) with further caves in the area at Hpa-gat, Bingyi (Bayinnyi) and Dhatkyaik. Finger-marked bricks (46 x 41 x 5 cm.) recorded from Kaw gun suggesting a first millennium CE date supported by the iconography of many of the *mye-bon-hpaya* tablets and carvings in the cave as well as palaeographic dating of the epigraphy.

All the caves in this area have long been a matter of study, with the first British visit in 1827 by the envoy John Crawford. At Kaw gun, the entire outer and inner surface of the walls and ceiling are covered with *mye-bon-hpaya* tablets of Sukhothai style dated to the thirteenth to fourteenth century CE **[Figure 13]**. Over time, they have been arranged symmetrically to make terraces and spires, many painted brown and golden colours (Nai Pan Hla 2007: 68). The plaques and other carvings in stone bear many images of Buddha in regalia seated in meditation or with legs pendant (Than Tun 2002: 23-24). There are also images of the reclining Buddha, all framed with floral designs and arches and pediments as well as dancing half-bird figures (*kinnarā-kinnarī*). One standing image of the Buddha is in the fearless

Figure 13: *Overhang at Kaw gun cave showing the reliefs and images donated by pilgrims over the centuries [Photograph by San Win].*

hand gesture (*abhayamudrā*), others flanked by royally dressed figures, or ones bearing a human head on a lion body or two lively *yakṣa*s. It is within this cave that several significant early inscriptions for our study of Sampanago-Lakunbyin are found, one including the phrase "*dun du' wop*" that we connect to Dhañyawaddy.

The compound-word "Dhañyawaddy" derives from the Sanskrit *dhānya* for rice or paddy and *vatī* for town site. It was a common name for any site with suitable or arable rice lands. So while in Myanmar this name is often linked to the Buddhist walled site in Rakhine state (Arakan), it may also be a reasonable referent to the walled site north of Muttama, Sampanago-Lakunbyin. The name is used for the Muttama region in the Mon chronicle, as "Dhañña vatī-Mottama" linked with "Suvaṇṇabhūmi-Sudhammavatī" (Thaton) and Hanthawaddy (Haṃsavatī or Bago/Pegu) through the Gavampati tradition of the Buddha's visit to the Mon lands (Tun Aung Chain 2010: xxviii).

Dhañyawaddy may also be connected to the name Du'wop, mentioned in an Old Mon inscription engraved on the inner hem of the adorned so-called "Jambūpati Buddha" found in Kaw gun cave, 17 kilometres north of Sampanago. Scholars agree that Mon phonology, grammar and lexicon changed considerably over time, some contending a linguistic evolution which is unparalleled elsewhere in Southeast Asia (Shorto 1971: ix). In this context, we suggest that "Du' wop" in Old Mon comes from the Sanskrit *dhānya* or Pāli *dhañña* and *vatī*, with the first changing to "*du*" and the second to "*wop*" to accord with local pronunciation and scripts. Nai Pan Hla has noted a similar pattern of shortening in Indic words when brought into Old Mon (2007: 107-110) **[Appendix 1]**.

The inscription, as seen below, also mentions Sampanago (Campānagara or Campānāga) with Nai Pan Hla (2007: 70) connecting Du'wop to this site:

> The name of the city given in the Old Mon inscriptions engraved on the inner hem of the Jambupati Buddha found in Kaw gun cave is entirely unknown. We cannot trace the name of a city called Du' Wop in any Mon chronicles. The nearest city name known as Campānagara [Campānāga] is located about five miles north of Martaban [Muttama] and some 25 miles south of Kaw gun cave.

The Kaw gun image, described by Nai Pan Hla as Jambūpati, may in fact depict the descent of the Buddha from Tāvatiṃsa, with a second similar image also found at Kaw gun having been identified in this manner (Naw Yuzana Win 2009: 51; San Win 2556: 89).

Remarkably, there is a duplicate of the Kaw gun inscription at Thaton, like the Kaw gun example, not bearing a date (Chit Thein 2509: 9-10). A duplicate of it was placed in the *dhammayon* of the Thaton Shwesayan "pagoda" by Taw Sein Ko in the early twentieth century and still kept in an inscription shed in the "pagoda" compound. Thus, even though we are not able to give a precise date, the similar palaeography temporally pairs Kaw gun and Thaton while the inscription itself puts Sampanago into the same timeframe and site network. The inscription, according to Nai Pan Hla (2007: 70), reads as follows:

> This image of Lord Buddha, it was I, queen Muh Tah residing in the city of Du'wop who carved and made this Holy Buddha. Stone and clay Buddha situated either in this city or outside the kingdom were made by one together with my followers who were skilled in carving stone images. Many other teachers and craft men appear to carve Buddhas of stone!

The Old Mon inscription from Kaw gun is dated by Nai Pan Hla (2007: 68) to the tenth century, correlating it with a Hindu *trimūrti* stone relief bearing similar Mon writing identifying the piece as Viṣṇu. Moreover, a three line old inscriptions referring to Śrī Parameśvara is inscribed on the wall of the Kaw gun cave audience hall in Sanskrit mixed with Mon. Palaeographically, this undated inscription is ascribed in the seventh century (Nai Pan Hla 2007: 67).

As noted above, along with the proper name, queen Muh Tah, the inscription also contains a place name, "Don du'wop," where we follow Nai Pan Hla in connecting to Sampanago-Lakunbyin not later than tenth century. Many scholars have long debated the location of Du'wop, with Gordon Luce locating it near Pa-an in Kayin state (1953: 5 and 1985). Michael Aung-Thwin included it in a table of forty urban, sacred/mythical and natural sites in lower Myanmar all of which he dates to the eleventh-thirteenth century.[10] Du'wop, despite Luce's identification as an urban site, is estimated as fourteenth century in reference to the reign of an unnamed queen. As the inscription described above is without a written date, he postulates that queen Muh Tah was the fifteenth century Shin Saw Bu (Aung-Thwin 2005: 59, Table 1).[11]

Conclusion

While problems have been raised on drawing connections between Thaton, Muttama and Bago (17°18'34.77"N, 96°29'41.73"E), the Myanmar landscape we describe is more complex, drawing in Kaw gun caves (16°49'36.59"N, 97°35'8.85"E) and Winka (17°13'34.79"N, 97° 4'16.07"E) to the northwest of Sampanago (Aung-Thwin 2005: 79-103). We bring together legends and artefacts to define the trading networks of the Mon state in the late first millennium and early second millennium CE. An ancient town site of Sampanago-Lakunbyin may also have been called Dhañyawaddy, a name derived from Du'wop in Old Mon. Because it is built beside the rocky mountain it was also called Muh Tamo' or Muttama (Martaban), a name well-known in the thirteenth century.

The site thus appears to have been referred to as Sampanago-Lakunbyin, Muttama, Dhañyawaddy and Du'wop. Each reflects the different conditions, with Sampanago and Lakunbyin for example, perhaps different groups of Mon-Khmer speaking people. Dhañyawaddy, a Sanskrit-derived word, recalls the local ecology and appears to have survived in inscriptions such as those at Kaw gun cave as Du'wop, a Mon derivation of Dhañyawaddy. Recalling their mother's *nāga* lineage, Thamala and Wimala, the legendary founders of Hanthawaddy-Bago are said to have migrated from Sampanago, the "City of Serpents," in the sixth century. The next Mon influx would have been from Haripuñjaya or Lamphun with its associations to the name Lakunbyin. Other chronicles and traditional stories call it Dhañyawaddy (blessed place) with Sanskrit origins, Muttama and Du'wop, the last possibly a Mon derivation of Dhañyawaddy.

Artefacts from ground survey supporting a sixth to ninth century culture include coins, beads and finger-marked bricks paralleling finds from Khu Bua, U Thong and other early sites in Kanchanaburi, Thailand. Sampanago's location on the Thanlwin thus facilitated trade eastwards as well as to the north, west and to the coast. Sampanago-Lakunbyin did not exist in isolation, with artefacts, sculpture, chronicles and inscriptions from Thaton (Sudhamma) and Kaw gun (Kotgon) cave defining the significant role of the Mons in lower Myanmar in the second half of the first millennium CE.

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Appendix 1: Glossary of Place Names

Amherst: Headquarters of a district in the Tenasserim division of lower Myanmar (14° 56'-17° 2' N, 97° 27' - 98° 51' E). It is called Kyaik-kha-mī in Mon with the Myanmar name the same. The city was named in honour of Lord Amherst (1773-1857 CE), the British Commissioner who first governed in Kyaik-kha-mī.

Attaran: A tributary entering the Salween (Thanlwin) at their confluence, which Mon people call "bīkatat" meaning the river where fishes spawn.

Ayetthama (Ayassma): A village located on the north of Mt Kelāsa, Bilin township, Mon state, lower Myanmar. Ayetthama and Winka are traditionally considered part of the first "Suvaṇṇabhūmi" later shifting to Thaton.

Bago: Myanmar pronunciation for Pegu which was formerly known as Haṃsavatī ("City of the Brahman Ducks;" see Hinthagon). The Mons also called Upéku, carrying the sense of being helped by a stratagem (*upāya* in Pāli means stratagem) and Ussā (after Orissa in India). Thamala and Wimala, the twin sons of Theinnaganga, the legendary king of Dhañyawaddy in 592 CE, who were exiled from their father's kingdom when it was discovered that their mother was of *nāga* parentage, traditionally founded the city.

Bheng Laing: The upper reaches of Dontami river near Sampanago are called "Bhan-luin" in Mon. There was an old town site with the same name.

Bingyi: A limestone cave in the Kaw gun group near Thaton with numerous Buddha statues inside dated to be Muttama period of the thirteenth century CE onwards.

Dhañyawaddy: In Pāli *dhañña* meaning uncooked grain, in Sanskrit *dhānya*, to bring in or bestowing wealth and good fortune; auspicious, virtuous. An old name of Muttama, also known as Sampanago-Lakunbyin.

Dhatkyaik: A limestone cave near Thaton called Thuim-dhāt-kyāk in Mon meaning the "cave enshrined with the Buddha relic." Finger-marked bricks have been found in that cave indicating its use in the first millennium CE.

Dhat taw ywa: A village of Kayin people located inside the walled site of Sampanago on the western slope of the central hill where a *stūpa* called Dhat taw ceti is located.

Dontami (Tontami): A river named after a town site called Dun-taṁ in Mon, which means the new town. It flows into the Thanlwin (Salween) north of Sampanago.

Don wun (Tonwun): An old town site near Thaton. "Donwān" in Mon means "Laterite City" from *don* meaning town or city and *wān* meaning laterite.

Du'wop (Du'wop'): A short form of Mon probably derived from Dhañyawaddi, the old Muttama town site probably at Sampanago.

Hinthagon: A small hillock located inside the walled site of Hanthawaddy. The word derives from "Haṃsa Hill" where according to the chronicles the two Brahman ducks, male and female, rested one on top of the other, at the time of Lord Buddha who foretold that on this spot Hanthawaddy city would be built.

Hlaingbwe: "Lhuin blai" in Mon, used to designate a river and an old town site near Thaton now located in Kayin state.

Hmawbi: Derived from *mhow bī* in Mon, meaning river ferry port, now a small village on the west bank of Thanlwin (Salween).

Hsin Phyu Kyun: From *tka' cin btān* in Mon meaning the island of the white elephant, located on the north-west part of the walled site of Thaton.

Jaing: A river joining together with Thanlwin (Salween) called "Bīgrān" in Mon.

Kadaikgaleh: This ancient site is called "Little Kadaik" in Myanmar and "Katak tot" in Mon. (*katāk* means a shark-like fresh water catfish and *tot* means little). It is a village built on laterite high ground surrounded by walls and a moat located on the east bank of Bilin river.

Kadaikgyi: A village 1.6 kilometres east of Kadaikgaleh called "Katāk jnok" in Mon ("Big Kadaik"). The ancient site is built on a large area of laterite high ground surrounded by walls and a moat.

Kalama taung: The name means "Mountain of Indian Lady" (914 metres in elevation), the highest place in the Thaton-Muttama region and a continuation of Mt Zingyaik (797 metres in elevation). First millennium CE habitation sites have been documented on its slopes and summit.

Kaw gun (Kotgon): A celebrated Buddhist limestone cavern near a village called Kaw gun located on the west bank of Thanlwin (Salween) in Kayin state. Other caverns of the same type are found in the area including the group of Pagat, Yathebyan, Bingyi, and Dhatkyaik.

Kyaikphyinku: This site name refers to a *stūpa* known in Mon as "Kyāk plan pau" which is built on the peak where the Buddha and his Arahats first came during the Buddha's journeys to Suvaṇṇabhūmi (Thaton) related in the Mon Chronicle. The *stūpa* is located in the southwest corner of the present Muttama old city.

Kyaik Kalunpun: This refers to a *stūpa* called "Kyāk klam ban" in Mon, said that to have been built on the spot where the Buddha and his Arahats were prevented from continuing their journey by a hundred ogres standing with their hands clasped. The name means the "pagoda" embraced by a hundred ogres with their outstretched arms located in the northwest corner of the walled site of old Muttama.

Kyaikkatha: The name of a *stūpa* located in a village of the same name after the legendary hero Smaṅ Assh of the Bago (Pegu-Haṃsāvatī) dynasty with remains of the earlier Old Mon (Thaton) period.

Kawhtin: This site is known as "Ko' hteiṅ" in Mon, which is a village and a small walled town site just south of Kyaikkatha.

Kyauksarit: This place name is "Tmo' krah" in Mon, meaning "pebble." It is a small river joining the Dontami and the name of a village located southwest of Sampanago. A brick structure with finger-marked bricks indicating its antiquity was found at Kyauksarit village.

Lakunbyin (Lagunbyin): One of the historically documented "32 *myos*" or towns of Muttama which was built on the site of the Mon Sampanago-Dhañyawaddi town of the later Mon period (thirteenth century CE).

Mayangon: The village of Mayangon (in Myanmar) means a high ground where the Mayan trees (*Bouea burmanica*) grow located close to Kadaikgyi and Kadaikgaleh. The Pāli for Mayan is *muragaṅ*. The Mons call it "Maruiksabum." In 2006, 137 Neolithic polished stone implements were documented at the village following dredging works.

Mawlamyaing: This site was known as Moulmein in English, now the capital city of the Mon state. The Mons call it "Mat ma Luim" and in Pāli it is Rammāvatī.

Muttama: This site is Martaban in English, "Muh Tamo'" in Mon and the Myanmar call it "Madama," meaning "Rock Slab City." The *Chronicle of the Mons* (Tun Aung Chain 2010: 7-8) states that "the Lord Buddha, [...] then went [flying] through the sky with 500 arahats, and, in the seven cities of Dhañṅavatī, Kasavatī, Pupphavatī, Hanthawaddy (Hamsāvatī), Rammavatī, Karanaratthavatī and Rock Slab City where he arrived, he attained the achievement of fruition (phalasamāpatti) and foretold that the religion would be established there [...]."

Nathmaw: A village located on the west bank of Thanlwin north of Sampanago. The Mons call it "Nehah mhoaw" meaning ferry port.

Pa-an (Hpa-an): This place name is "Bhā aṅ" in Mon, meaning the monastery built of wood (*Dipterocarpus tuberculatus*) and in Pāli, *pāvana* (Pinnya 2471: 106). It is now the capital city of Kayin state on the east bank of Thanlwin river, lower Myanmar.

Puñjaluin: This word is a combination of Pāli, *pañca* meaning five and Mon, *luiṅ* (Mon) meaning to flow. It is the name of the confluence of Thanlwin in its estuary, which ends into the Gulf of Muttama (Martaban) where five rivers join together: the Thanlwin, Jaing, Attaran, Hlainbwe and Dontami. A small island at the mouth is also called "Ko' (kaw) puñjaluin" (Gaung hsay kywan in Myanmar) referring to its traditional use by the Muttama kings for boat races and the Head-washing ceremony.

Ratanapura: A name derived from Śrī Ratanapura, the formal title of Muttama old city founded by King Wareru (Makadu) in 1287 CE.

Sa Chaung: The meaning of this name in Myanmar is a salty-creek or channel use for salt production. It flows north to south (not east to west like the natural streams of the local landscape) connecting Thaton to the mouth of Bilin river. It may have been an outlet or waterway for the port of Thaton in earlier centuries. The *Thaton Chronicle* mentions it as the Musarani or the Thaton river.

Sampanago: A walled site and village recorded in the *British Burma Gazetteer* (1879) located near Muttama. It is referred to as Campānagara or Campānāga in Pāli/Sanskrit, in this essay as "City of Serpents."

Seik Kyun: This means "ferry-port island" in Myanmar, located near Mayangon village in the Kadaikgyi group of sites.

Shwesayan: "Shwesayan" in Myanmar is a common name for a *zedi* (*ceti*) or *stūpa* with this example located at the ancient site of Thaton. The *Chronicle of the Mons* noted that the Buddha, at the request of Venerable Gavampati, visited Thaton (Suvaṇṇabhūmi) during the winter of the year 111 Mahā Era (507 BCE?), and had first given his hairs for worship to hermits who dwelled on various mountains and to Siharāja, king of Thaton. Then, when he entered the Final Decease in Kusinara (in India) the Mahāthera Gavampati took four teeth from the wooden casket to give to Siharāja. It is said that King Siharāja built Shwesayan to enshrine the Hair Relic and Tooth Relic for veneration (Shwe Naw 1931).

Sittaung: This is also known as Sittagaun, the name of a river, an old town site and a village within the old walls located north of Kyaikkatha.

Taikkala: This is an ancient site of archaeological significance in Bilin township, Mon state, which lasted until the British occupation of lower Burma (Myanmar). Excavations were made during 1975-78 CE at the site of Mt Kaletha (Kelāsa) to document ancient Taikkala (Suvaṇṇabhūmi) 40 kilometres northwest of Thaton.

Thaton: A district of Mon state in lower Myanmar. This is the historical site of so-called Suvaṇṇabhūmi where King Aniruddha of Bagan (Pagan) is said to have attacked and occupied in 1057 CE. The ruins of Thaton can be traced in and around the modern Thaton town.

Ussā: This is one of the names of Bago (Haṃsavatī) following the example of Orissa in South India. (see Bago).

Winka: This is a town site of ancient "Suvaṇṇabhūmi" (Thaton-Thudhammavatī), excavated during 1975-78 by U Myint Aung. The name "Win Ka" in Mon means the "lagoon for fish." It is located at the southeast foot of Mt Kelāsa in Bilin near many ancient sites of archaeological interest, such as Kyaikhtizaung, Hsindat-Myindat, Zokthoke and Muthin. It was also called Taikkala (Winka) within the documented ancient laterite culture of lower Myanmar.

Zimkyaik (Zingyaik): This mountain is called "Zingyaik" in Myanmar referred to a mountain peak and a large village at the foot of it. The Mons refer to it as "Kyāk braṅ nab," the pagoda of the female *nāga* which was built on the peak. It is said that the legendary King Siharāja of Thaton and his foster father, the hermit Tissa, built this *stūpa* to enshrine the Buddha's sacred hair relic, which was given to the hermit for veneration.

Endnotes

1 Makyi-Kyun, Mainmahla-Kyun, Kappli-Kyun, Dawe-Kyun, Pat Kyi-Kyun, Kula-Kyun, Khaung-hse-Kyun, Zweya-Kyun with Mon names such as Kaw-Lamu, Kaw-Hla, Kaw-Min, etc. (*kaw* is island in Mon).

2 A monk staying in a monastery on top of the hill where Dhat taw hpaya was under repair reported that he found a stone box when they dug up the relic chamber of the ruined *stūpa*. The box contained two human figures resembling a king and queen, the man being stout and fat. However, the box was re-buried again in the repaired chamber. Whether apocryphal or fact, the anecdote highlights the absence of records on artefacts found during successive "pagoda" repairs at the site.

3 Southeast Asian ceramics collection (inv. no. S2005.238). See the collection online: http://seasianceramics.asia.si.edu.

4 A Myanmar name for red-earth or laterite soil found on high ground. Most of the settlements in lower Myanmar are located on this type of red-earth elevated land in a region where the heavy rainfall and tidal activity are common.

5 Another Mon chronicle gives the date of 592 CE for the founding of Bago by Thamala and Wimala.

6 Odradeśa, "land of the Orissans."

7 Michael Aung-Thwin notes that the *Cāmadevīvaṃsa* does not mention the language of the Sudhamma population but only that of Haṃsavatī and cites various locations for Sudhamma including Haripuñjaya (2005: 91).

8 Here and after in the chronicles, the dates are traditionally given in Myanmar or Burmese Era starting in 638 CE.

9 Kon Myo, Zaya Myo , Banhlaing Myo, Wakharu Myo, Mawlamyaing Myo, Wanyaw Myo, Lakunbyin Myo, Ye Myo, Tonwun Myo, Kyait Myo, Tontami Myo, Kaw Myo, Bilukywn Myo, Attaran Myo, Myaing Myo, Winyaw Myo (16), Eibric Myo, Zami Myo, Taung bo' Myo, Taikkala Myo, Dharai Myo, Thagaing Myo, Zweya Myo, Htakyaing Myo, Yannyein Myo, Ei'we Myo, Hlaing Bwe Myo, Yin-On Myo, Kaw' Pain Myo, Lamaing Myo, Myawaddi Myo, Paung Myo (32). With the addition of Muttama, the capital, the number becomes 33 *myo*s.

10 Of these, Bassein, Bilin, Du'wop, Bago, Sittaung and Thaton are urban; Kelatha is called natural and Kyaik Talan and Kyaik Te sacred/mythical. Thaton is given an estimated date of 1479 CE in reference to Dhammazedi's Kalyāṇī inscription (Aung-Thwin 2005: 59, Table 1).

11 Aung-Thwin qualified this, noting the link Luce had made to the queen as ruler of Muttama living in Du'wop and suggests that if Muttama dates to 1176 CE rather than 1326 as Luce cites then it could have been contemporaneous (Luce 1953: 5 and 1969). He also suggests that it may have existed in 1292 CE, although his argument relates to evidence to support a kingdom and concludes with the Shin Saw Bu identification: "Du'-wop may have existed in 1292 if the Rāma Gamheri [Ramkhamhaeng] inscription's identification of Martaban with the Tai 'Mo an …n' is correct, in which case Du'-wop could not have emerged earlier than 1292." (Luce 1969: 2 and 1985: 1372; Department of Archaeology of Myanmar 2516-31: I, 345).

References

Aung Myint
2542 *Myanmar She-haung-myo-daw-mya* (*Myanmar Ancient Cities from Aerial Photos*). Yangon: Ministry of Culture. [In Myanmar; 1998 CE]

Aung-Thwin, Michael
2005 *The Mists of Rāmañña: The Legend That Was Lower Burma*. Honolulu: University of Hawai'i Press.

Aye Kyaw
2514 Muttama 32 Myos Sittan (Account of the 32 Myos). *Takkasuil Paññapadesa Sasaung* 5(1). [In Myanmar; 1970 CE]

Berliet, Ernelle
2011 *Territoires et urbanisation en Birmanie des origines (IIe s. av J.-C.) à la fin du XIIIe siècle*. Paris: Brepols.

Boonyarit Chaisuwan & Rarai Naiyawat
2552 *Thung tuek chut chueamyong sen thang sai mai thang thale/ Thung Tuk: A Settlement Linking Together the Maritime Silk Route*. Hat Yai: Trio Creation. [In Thai and English; 2009 CE]

British Burma Gazetteer
1879 *The British Burma Gazetteer*. Rangoon: Government Press.

Chit Thein
2509 *Mon Kyauksa Paungkhyup* (*A Compilation of Mon Inscriptions*). Yangon: Department of Archaeology. [In Myanmar; 1965 CE]

Department of Archaeology of Myanmar
2516-31 *She Haung Myanmar Kyauksa Mya* (*Ancient Inscriptions of Myanmar*). Five Volumes. Yangon: Yangon University. [In Myanmar; 1972-87 CE]

Dhida Saraya
1999 *(Sri) Dvaravati: The Initial Phase of Siam's History*. Bangkok: Muang Boran Publishing House.

Gutman, Pamela
2001 The Martaban Trade: An Examination of the Literature from the Seventh Century until the Eighteenth Century. *Asian Perspectives* 40(1): 108-118.

Htoke Sein
1978 *The Universal Burmese-English-Pali Dictionary*. Rangoon: U Tun Aung Lin, Daily Gazette Press.

Kyaw Win (ed.)
2551 *Maharajwanthit* (*The New Chronicle of Kings*). Yangon: Amyinthit Sape. [Second Edition in Myanmar; 2007 CE]

Luce, Gordon H.
1953 Mons of the Pagan Dynasty. *Journal of the Burma Research Society* 36(1): 1-19.

1969 *Old Burma-Early Pagan. Volume I: Text*. Locust Valley, NY: J.J. Augustin Publisher. [In collaboration with Bo-Hmu Ba Shin]

1985 *Phases of Pre-Pagan Burma: Languages and History*. Oxford: Oxford University Press.

Moore, Elizabeth H. & Aung Myint
1993 Beads of Myanmar (Burma): Line Decorated Beads Amongst the Pyu and Chin. *Journal of the Siam Society* 81(1): 54-87.

Moore, Elizabeth H. & San Win
2007 The Gold Coast: Suvannabhumi? Lower Myanmar Walled Sites of the First Millennium A.D. *Asian Perspectives* 46(1): 202-233.

Myanmar Language Commission
1993 *Myanmar-English Dictionary*. Yangon: Ministry of Education.

Nai Pan Hla
2541 *Yazadarit Ayedawbon Kyan* (*The Yazadarit Ayedawbon Treatise*). Yangon: Myawaddy Press. [Translated in Myanmar; Second Edition; 1997 CE]

2007 A Short Mon History. Paper Presented at the *First International Conference on Mon History, 10-13 October 2007*, Chulalongkorn University, Bangkok, Thailand. [Unpublished]

Naw Yuzana Win
2009 *Study about the Arts of Wall Decoration of Kotgon Cave*. Yangon: University of Yangon.

Phasook Indrawooth
2528 *Dachani phachana dinphao samai thawarawadi* (*Index Pottery of Dvāravati Period*). Bangkok: Silpakorn University Press. [In Thai with English Summary; 1985 CE]

Pinnya
2462-81 *Muttama Yazawin* (*Muttama Chronicles*). Thaton: Suvannavai Pitakat Press. [In Myanmar; 1918-37 CE]

2471 *Thaton Yazawin* (*The Thaton Chronicle*). Thaton: Suddhammawati Press. [In Myanmar; 1927 CE]

San Win
2530 *Sittaung hnit Thanlwin Myit-hnit-thehsat-kya-shi She-myo-haung-mya-ah pannama let-la-kyet* (*Field Survey and Study of Ancient Sites in the Region of the Sittaung and Thanlwin Rivers*). Master Thesis. Yangon: University of Yangon. [Unpublished in Myanmar; 1986 CE]

2556 Sanpanago-Lakunbyin (Sampanag-lakyunbyin). *Myanmar Historical Research Journal* 22: 72-102. [In Myanmar; 2012 CE]

Shorto, Harry L.
1963 The 32 "Myos" in the Medieval Mon Kingdom. *Bulletin of the School of Oriental and African Studies* 26(3): 572-591.

1971 *A Dictionary of the Mon Inscriptions from the Sixth to the Sixteenth Centuries Incorporating Materials Collected by the Late C.O. Blagden*. London: Oxford University Press.

Shwe Naw, Sitkeyi
1931 *Mon Rajawan* (*The Chronicle of the Mons and the Collected Historical Accounts of Their Pagodas*). Yangon: Hanthawaddy Pitakat Press.

Swearer, Donald K. & Sommai Premchit (trans.)
1998 *The Legend of Queen Cāma: Bodhiramsi's* Cāmadevīvaṃsa. *A Translation and Commentary*. Albany: State University of New York Press.

Than Tun
2002 *Buddhist Art and Architecture with Special Reference to Myanmar*. Yangon: Monywe Press.

Tin Gyi
1931 *Burma Gazetteer, Thaton District (Vol. A)*. Yangon: Superintendent, Government Printing and Stationery.

Tun Aung Chain (trans.)
2010 *A Chronicle of the Mons*. Yangon: SEAMEO Regional Centre for History and Tradition.

PART III

Early Buddhist Practices, Landscapes and Artefacts

Glimpses of Buddhist Practices and Rituals in Dvāravatī and Its Neighbouring Cultures

Nicolas Revire

Introduction

The study of Dvāravatī has developed significantly since its beginning in the first half of the twentieth century, but little still is known about the history, political organisation, or the geographical extent of this polity.[1] What we do know derives mainly from archaeological remains, such as *stūpa* or *caitya* (T. *chedi*) foundations, stone and bronze sculptures, clay and stucco artefacts, and a fair amount of inscriptions, mostly religious in character. Although Buddhist practices and art have been inseparable since Buddhism arrived in the region, to the casual observer it can be difficult to make sense of this – often fragmentary – material culture, and the complex relationships between art, ideology and rituals that are at its basis.

In this essay, I shall explore this constant dialogue between the material and ritual cultures, as gleaned from archaeological and epigraphic evidence. The purpose is to examine the kind of Buddhist practices and liturgies that were observed in the Dvāravatī culture of today's central Thailand and beyond in the neighbouring regions and near contemporary cultures of east and northeast Thailand. In doing this, I will review early archaeological material and inscriptions to reconstruct certain religious activities of the period spanning approximately the seventh and eighth centuries with some extension into the ninth and tenth centuries.[2] It should be stated from the outset that nearly all artefacts and inscriptions under scrutiny are clearly the products of the ideology of merit (Skt, *puṇya*; P., *puñña*). While this concept is common in Indic religions,[3] a closer look at the details as well as the regional distributions of these artefacts and inscriptions may be revealing.

Previous pages: *Ritual tray found in Nakhon Pathom, 7th-8th c. Currently in the Bangkok National Museum, stone, 15 cm. high, inv. no. K 133/4 [Photograph courtesy of Paisarn Piemmettawat].*

The Bases of Meritorious Actions in Buddhism

The ideology of merit is an intrinsic concept in Buddhism and has been a major motivation for the production of art since its inception in India and Southeast Asia. Merit can, of course, be gained in a number of ways and the Pāli Canon identifies several bases of merit, the most basic of which is showing humility and paying respect (*apacayana*) to the three gems or *tiratana* (i.e. the Buddha, the Dhamma, and the Saṅgha).

Probably echoing this belief, the seventh century-Chinese travelling monk Yijing (635-713) reported for mainland Southeast Asia that "the inhabitants of all these countries greatly [pay] reverence [to] the Three Jewels (Ratnatraya) [*sic*]" (Takakusu 1998: 10). Archaeological evidence

Opposite Figure 1: *Terracotta relief from U Thong showing three standing Buddhist monks going on an alms round, 7th-8th c. (?); 20 cm. wide x 16 cm. high. Currently located in the U Thong National Museum, inv. no. 65/2509 [Photograph by Nicolas Revire].*

supports this statement. A clay Buddhist tablet found in Khok Mai Den, Nakhon Sawan province **[Figure 2a]**, is engraved in Pāli with the following homage: *namo buddhassa namo dhammassa namo saṅghas(sa)*, i.e. "Homage to the Buddha, Homage to the Dhamma, Homage to the Saṅgha" (FAD 2529: I, 287-291) **[Figure 2b]**.[4] Another "eulogy inscription" of uncertain date,[5] found at Noen Sa Bua, Prachin Buri province, gives a similar salutation to the three gems in ornate Pāli verses (PCh 14/K. 997).[6] These verses come from the opening homage of the Sinhalese *Telakaṭāhagāthā* and, because of this correspondence, various attempts have been made to demonstrate the early "establishment of Sri Lankan Buddhism" in Thailand during the so-called Dvāravatī period. This effort, however, has not been devoid of important biases and methodological problems and the above assertion has ultimately been refuted (Revire 2012a).

In addition to showing humility, the following three foundations of meritorious actions have been identified in the *Puññakiriyavatthusutta* (A IV 239; D III 218; It 51): giving (*dāna*), virtue or morality (*sīla*), and mental development or meditation (*bhāvanā*). The first, *dāna*, is of greatest relevance to the present essay. While the importance of the other two foundations cannot be denied, archaeological remains do not usually speak to their presence. The practice of *dāna*, however, has had considerable social and economic significance in all Buddhist cultures and has left a large corpus of archaeological material and inscriptions for study.[7] "Giving" is, in fact, essential to the production of any Buddhist artefact, image, or monument. In order to be produced, all material objects must have patrons and donors as sponsors who thus obtain merit depending on the recipients of the donation. The value of any act of giving depends not just on the person making the gift, but on the beneficiary as well, that is to say, more merit is accrued by giving to Buddhas and other enlightened or worthy beings. Since the death of the Buddha, however, only certain spiritually qualified members of the Ariyasaṅgha are technically described as the worthiest "field of merit" (*puññakhetta*), that is, people can only obtain great positive karmic results in giving to them. But in reality, "giving" has always been a key method

Figure 2a: *Obverse of a clay Buddhist tablet found in Khok Mai Den, Nakhon Sawan province, 7th-8th c. Currently located in the Bangkok National Museum, inv. no. 923/2508 [Photograph courtesy of Disapong Netlomwong].*

Figure 2b: *Base detail of Fig. 1a, engraved in Pāli with homage to the three gems (NW 6) [Photograph courtesy of Disapong Netlomwong].*

for providing economic support to all monks and nuns alike and to Buddhist establishments for centuries.

A fragmented terracotta relief from U Thong shows three standing monks going on an alms round (*piṇḍapāta*) **[Figure 1]**. The relief may well echo this ancient exercise combined with one of the austerities known as *dhutaṅga* in Pāli. This is the austerity of eating only what is donated as alms, regardless of amount or taste.[8] Common today among the forest monks of the Theravāda tradition, it was also practised in various Indian Buddhist lineages or *nikāya*s of the past (Ray 1994: 294ff). Yijing reported that many of the monastics present in Dvāravatī performed "the begging *dhūta*" (Takakusu 1998: 9-10, 56, n. 3). Accordingly, the laity gives food and other requisites to monks and nuns through daily alms rounds[9] or through making offerings at monasteries. Monks and nuns, in exchange, offer the gift of teaching (*dhammadāna*) or blessing, often exalted as the highest gift.

The act of giving is also emphasised in ancient Buddhist stories and tales. It is the supreme virtue perfected by all Bodhisattvas in their long path toward perfection (*pāramitā*) and the perfect self-enlightenment (*sammāsambodhi*). These stories, such as *jātaka*s and *avādana*s, clearly serve a didactic purpose by presenting to laity the moral ideal of living a life conducive to the highest realisation, through the action of doing good deeds and perfecting one's virtues (e.g. giving). Celebrated acts of a Bodhisattva's generosity include occasions in which he offers up his limbs, his eyes, and even his life to those in hunger or in need. Fine artistic examples of this ideology can be seen in the famous series of *jātaka* plaques from Chedi Chula Prathon in Nakhon Pathom (Piriya 2517) or from Khok Mai Den, Nakhon Sawan province **[Figure 3]**. Several *sema* stones from northeast Thailand, dated to the eighth-ninth centuries, seem to depict the *Vessantarajātaka* where the act of giving is the central theme of the narrative plot (Murphy 2010: 249-253; Murphy, this volume, figs 12-13). The lesson of these stories is that a Bodhisattva is willing to give more than material objects, even his wife, his children, parts of his body, and even to sacrifice his life (Dayal 1970: 172-188). Naturally, the average layperson is not expected to make so great a sacrifice. For most people, the practice of *dāna* is limited to material support in order to make merit.

Sustaining Monasteries as an Act of Merit

While Buddhist texts stress the need for generosity, a number of ancient Mon, Khmer, and Sanskrit donation inscriptions dedicated by individuals (common people, kings or high officials) relate to lists of meritorious offerings for the benefit of monasteries or Buddhist communities (Prapod 2010: 86-90). This, again, should be understood within the context of the relationship of the near complete dependency of monks and nuns on gifts and the alms of laypersons. Records of such gifts underline the importance of lay and royal patronage in the establishment, development, and preservation of Buddhism in pre-modern Thailand and neighbouring Buddhist countries.

A few examples drawn from the list given in **Table 1** suffice to illustrate this ideology prevalent in central and northeast Thailand during the first millennium. What is significant in these inscriptions is the record of common people in donations. The epigraphs are often written

Figure 3: Jātaka *plaque from Khok Mai Den (*Chaddantajātaka*?), Nakhon Sawan province, 7th-8th c. Currently located in the Bangkok National Museum, terracotta, inv. no. 813/2508 [Photograph by Nicolas Revire].*

in Old Mon, while royal donations are recorded in Sanskrit with the list of offerings sometimes given in Old Khmer. The donors are identified either by proper names or titles; the recipient can be a Buddha image, a *stūpa*, a community of monks, or a monastery. In Old Mon, these terms are given as, or preceded by, the word *ḳyāk* which equally refers to any sacred object or person [i.e. *phra* in Thai]. Among the common offerings, we find items suitable for alms, such as plots of rice fields, cattle, and so on, as well as the donation of "slaves"[10] as, for example, on the inscribed pillar from San Sung, Lop Buri province (LB 1/K. 409) **[Figure 4]**, or the Ban Thalat inscription, written in Old Mon, from the Vientiane valley in Laos (HPK I/33). A recently discovered inscription from Sakon Nakhon in Old Mon (SN 10) even seems to refer to the offering of "doors and windows" to a local monastery (Kongkaeo 2550).

The epigraphic corpus also often provides information regarding the expected results of such donations. Most of the time, making merit is the main purpose. The belief in merit was, and still is, a cornerstone for sustaining the Saṅgha and their monasteries. Monastic donors were relatively few in number when compared to laity in local inscriptions found in pre-modern Thailand. This is only too natural for whilst the monk is expected to follow the highest teaching of the Buddha, having renounced the world and directed his activity toward meditation and the gaining of *nirvāṇa* or *nibbāna*, the immediate concern of lay Buddhists is not *nirvāṇa* but rather the accumulation of merit.

Two exceptions, however, are found from Nakhon Ratchasima province. One of the Hin Khon inscriptions (NM 31/K. 389) states that the fruits of merit from this donation to a royal monastery would ultimately lead the donor, most likely a prince who became a monk (*rājabhikṣu*), and all living beings to attain omniscience (*sarvajña*) and become a Buddha. Similarly, the well-known Bo Ika inscription (NM 24/K. 400) found at Mueang Sema refers to a donation to the local Buddhist community by the king of Śrī Canāśa, who hopes to achieve *bodhi* or "Buddhahood" by this gift.

These statements seem at odds with the rigid tenet which asserts that *bodhi* can be realised only through meditation and, on the contrary, support the idea that self-enlightenment was also attainable by all including by making merit or giving. At any rate, the king who is commemorated in the Bo Ika inscription probably saw himself as a Bodhisattva and was hence supposed to practise diligently the perfection of giving (*dānapāramitā*).

Making Buddha Images or Shrines as an Act of Merit

Other dedicatory inscriptions and inscribed artefacts related to this ideology of merit through the production of Buddha images, miniature tablets or shrines, or the sponsorship of Buddhist buildings are listed in **Table 2**. Repeatedly, the word "merit" appears on these, albeit in variant spellings such as *puñ*, *piñ*, *piñña*, *puṇya*, or *puṇa*. A few significant examples are given below.

The short seventh century inscription from Khao Ngu, Ratchaburi province (RB 1), found at the feet of a Buddha image, is possibly a mixture of Old Mon-Khmer and Sanskrit; it was first read by George Cœdès as follows: *puñ vraḥ ṛṣi … śrī samādhigupta*, i.e. "the meritorious deed of the Holy hermit ... Śrī Samādhigupta" (1961: 19).[11] This reading, however, cannot be confirmed since only the first word *puñ(·)* and the last word *samādhigupta* are certain. It is likely that *samādhigupta* refers here to a name and an adept of Buddhist meditation (a recluse monk?) and that merit was thus generated because of his practice or his dedication.[12] It is one of the few epigraphs that also relate directly to an iconic form, a pendant-legged Buddha image carved on the cave wall.[13]

A few other inscriptions in Old Mon or Sanskrit are found on the bases or pedestals of standing Buddha images dated on stylistic grounds from the seventh or eighth century. Two well-known examples from Lop Buri have been published by Cœdès and the Fine Arts Department (FAD). The first one is from Wat Khoi (LB 9/K. 695) where the reading is, according to Cœdès (1961: 6), rather uncertainly as follows: […]*rlla* (…)*ñ kauñ vi*(…)*y cyāga*. While Cœdès provided no translation, he deduced that the language was probably Mon. The FAD, however, later proposed a slightly improved reading: […]*rll maṅ koñ vijhay cyāga* and offered the following translation: "A grand father and his grand children beautified the Buddha image" (2529: II, 37). The Thai translation is not without problems because the FAD epigraphists interpreted the word spelt *cyāga* as a variant of *kyāk* (i.e. "Buddha image") which remains so far unattested in the whole corpus of Mon inscriptions. In fact, the word *ḍyāga* is most likely a blend-form of *cāga* in Pāli and *tyāga* in Sanskrit which means "abandoning, giving up, renunciation" and the like. But given the fragmentary nature of the inscription, a proper translation cannot yet be offered. The second dedicatory inscription is clearly in Sanskrit and was found long ago in Wat Mahathat, Lop Buri province (LB 5/K. 577). It records the installation of a *pratimā muneḥ* (Buddha Śākyamuni?) by a certain nāyaka Ārjava, ruler of the Taṅgur people and son of the king of Śāmbūka (Cœdès 1961: 5; FAD 2529: I, 231).[14]

Figure 4: *Wheel pillar from San Sung, Lop Buri province, inscribed in Old Mon (LB 1/K. 409). Currently located in the National Library, Bangkok [Photograph by Nicolas Revire].*

One so far unpublished example from Sung Noen district, Nakhon Ratchasima province, is far less ambiguous. The inscription, in a script paleographically datable to the seventh or early eighth century, is found on the lower base of a standing Buddha now kept in the Phimai National Museum (14/2536) **[Figure 5a]**. It is fragmentary and can only be read on the Buddha's proper right. The reading in Old Mon is *ḳyāk puṇya* […] **[Figure 5b]** which may roughly be interpreted as "this 'Holy One' [*ḳyāk*, i.e. "Buddha image"] is the merit of […]" where the title and/or the name of the donor is lost with the break on the proper left of the image. A comparable inscription is found on the reverse of two clay tablets found in Chon Buri province (DV 36, DV 38) **[e.g. Figure 6]**. The inscription reads: *ḳyāk puñ* […] (*t*)*rala*, i.e. "this Buddha image is the work of merit […] (of) Lord […]" (Bauer 1991b: 63). Similarly, the proper name of that "lord," the donor, is missing due to the incomplete nature of the inscription. As we shall see from the following examples, however, an alternative translation for the standard Mon expression *ḳyāk puṇya* is possible.

At least three reported bilingual inscriptions in Old Mon and Pāli were found on miniature earthenwares[15] from Thap Chumphon, Nakhon Sawan province, dated on paleographic grounds to the

Figure 5a: *Standing Buddha bearing an Old Mon inscription at its base (Fig. 5b). Currently located in the Phimai National Museum, inv. no. 14/2536 [Photograph by Nicolas Revire].*

Figure 5b: *Detail of Fig. 5a with the Old Mon inscription reading* kyāk puṇya *[Photograph by Nicolas Revire].*

eighth-ninth centuries **[e.g. Figure 7]**.[16] The inscriptions comprise two lines around the lower rim in Mon and Pāli. On one occasion (NW 7), the first line is written *ne' kyāk puṇa tra*[*la*] […] *wihār* in Old Mon, translated as "this stupa is the work of merit of the lord (of) […] *vihāra*" (Bauer 1991b: 65). While this interpretation is within the realm of possibility, it does not really account for the presence of the word *vihāra*.[17] Another more complete example, although still unregistered by the FAD (NW i), could perhaps shed light on the matter. It has been read as *ne' kyāk puña tara tra' jrap vihāra*, and rendered in Thai as "this is the holy merit [*phra bun*]: *sālā* and *vihāra*" (Kannika & Phongkasem 2542: 145). If this rendition is correct, we would then have an occurrence where the Mon term *kyāk* does not refer to the actual object on which it is inscribed, for example here a terracotta fragment, but acts as a prefix to qualify what follows, i.e. *puña*, hence the "holy" merit[18] obtained by the gift or the sponsorship of a *sālā* and a *vihāra*. Moreover, given the many examples where the word *trala*, *trala'*, *tarla'*, *tirla'* or other minor variants occurs in this context in Old Mon inscriptions as a title or honorific meaning "lord" or "master" (Bauer 1991b: 61-63), it is tempting to amend the reading to *tara tra'* for *trala*, *tarla'*, or the like. All in all, we would thus have something like "this is the 'holy merit' [*kyāk puña*] of the 'lord' [i.e. *trala*] of the *sālā* and *vihāra*." According to Bauer, the pronoun *ne'* i.e. "this," found in the two above examples, may be a Khmer calque since it is rarely attested in Old Mon inscriptions, where *wo'* or '*awo'* normally occurs in its place (1991a: 40-42). It could also point to Khmer-Mon bilingualism (Bauer 1991b: 66-67). A third example (LB 26) is similarly inscribed with one line in Old Mon, but has unfortunately become much deteriorated. Only two words remain: *puṇa* and *vihāra* (Phimphan 2013: 13). The second line engraved on all these earthenwares is the Pāli *ye dhammā* verse, to which I shall return in a subsequent section.

Figure 6: *Reverse of a clay tablet found in Chon Buri province, bearing an inscription in Old Mon. Currently located in the Phra Narai National Museum, Lop Buri, inv. no. DV 36 [Photograph by Nicolas Revire].*

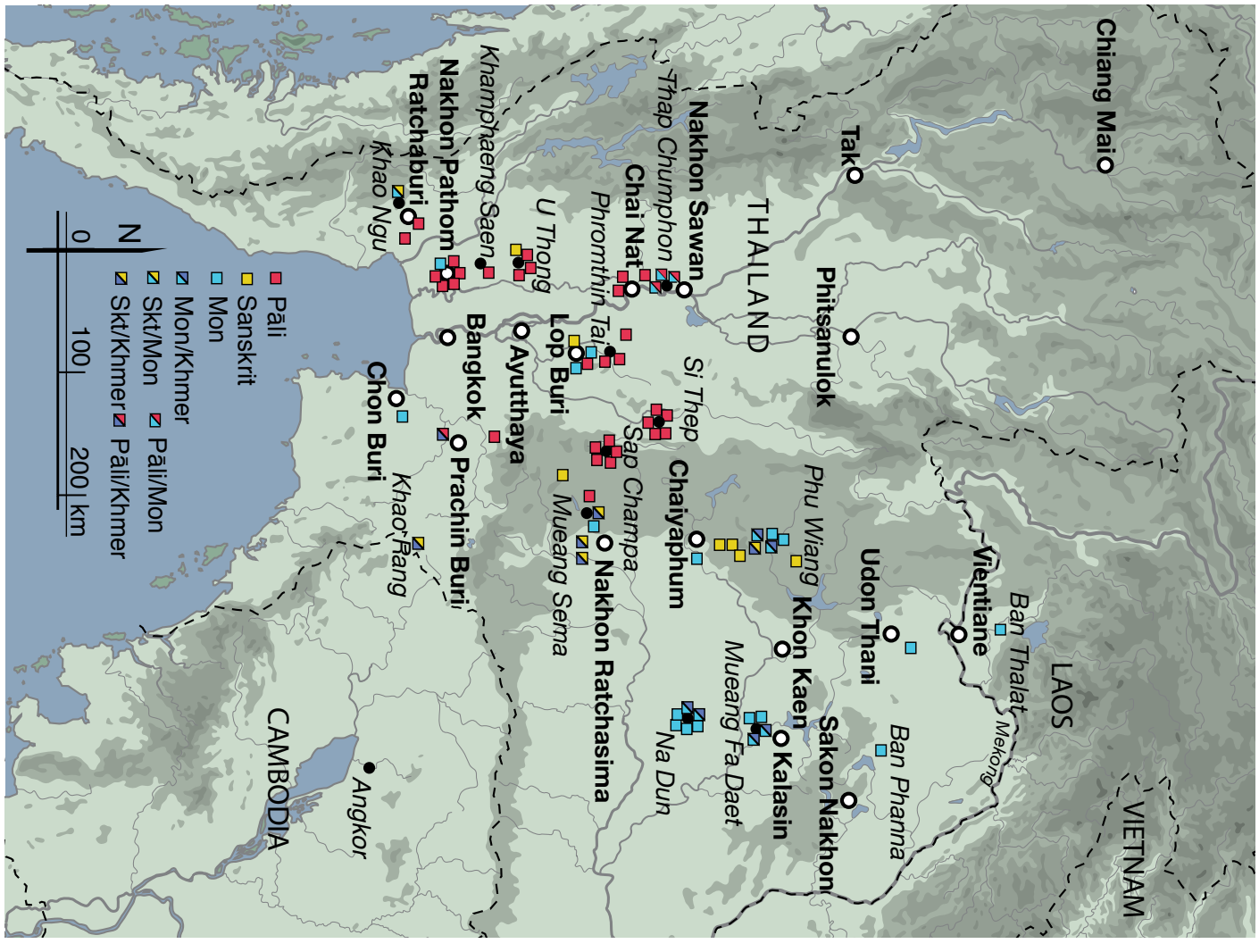
The above short dedicatory inscriptions in Old Mon found on stone or clay images or hollow terracotta fragments seem to link to similar inscribed miniature tablets and *sema* stones originating from the Khorat Plateau, where the most frequent words are *kyāk* and *puṇya*, "holy" and "merit." Put another way, if *kyāk* is taken to be a Buddha image, a *caitya*, or a sacred object, it is thus merely produced for *puṇya*. Two clay tablets from Mueang Fa Daet in Kalasin province (KS 1, KS 2), dated stylistically to the eighth or ninth century, come to the fore in this regard. These have been published several times but the inscriptions on their backs have never been fully translated in English. The inscription as *wo'*[or *wo*] *kyāk piñ* ('*u*)*pajhāy 'ācāRyya guna wikhyāt* [or *wikhyā*(*t*)] is virtually the same on both tablets (Bauer 1991a: 66). According to Bauer, this is the first time that the variant spelling *piñ* for "merit" is attested in Old Mon. The terms '*upajhāy* '*ācāryya* in Old Mon are evidently derived from Pāli (*upajjhāya*) and Sanskrit (*ācārya*) and refer to a monk's preceptor and a religious teacher. The two inscriptions may thus be approximately translated as "this is the 'holy merit' of the preceptor and/or teacher who is/are well known by his/their virtue." It is not known if the inscriptions refer to one or two distinct individual(s) in this case.

A number of other inscribed tablets from Mueang Fa Daet (KS 4, KS i) and Na Dun (MKh i, iv, vii), similarly dated to the eighth or ninth century on stylistic and paleographic grounds, record in Old Mon the merit of certain lords (*tala* or *tarla*), rulers or even self-proclaimed universal kings or *cakravarti* (MKh iii). The inscription numbered MKh 2 (and possibly also MKh 3) reads *nai vo' puṇya kamrateṅ pdai karom'or skuṁ das jāti smar* (Bauer 1991a: 42) and could be translated as "this is the work of merit of the king. May I not be born to a mean existence." Bauer argues that the term *nai'* for "this" may be a variant of a similar Khmer word which again would suggest contact with Khmer populations in this region. This is certainly reinforced by the use of the Khmer royal title *kamrateṅ p(h)dai karom* which appears here for the first time in Mon inscriptions (Bauer 1991a: 46).

Several inscriptions on *sema* stones mostly found in Chaiyaphum, Kalasin, and Khon Kaen provinces refer to merit-making activity performed by kings, monks, or commoners from the eighth to the tenth centuries.[19] Some donors also express the wish "to be reborn again in the time of Ārya Maitreya," the future Buddha (KhK 16 and perhaps KhK i). The inscriptions often display the use of a hybrid Mon-Khmer language. The inscription from Wat Pho Chai (KS 7), for example, reads *puṇya pragata kanmun kasmuṅ kyāk cak* and has been translated as "this is the work of merit bestowed by King Cak" (Uraisi 1995: 200). Here, the word *pragata* has been interpreted by Bauer as Khmer (1991a: 43). It also occurs in the Khao Rang inscription from Prachin Buri province (PCh 1/K. 505). The title *kasmuṅ* or *ka smuṅ*, possibly a variation of *smiṅ'* ("king," "prince"), is found on another *sema* stone from Kalasin, albeit with the variant spelling *ksmuṅ* (KS ii), and is understood as a Khmer-Mon contact word (Bauer 1991a: 46). Likewise, the title *kuruṅ* ("king," "to rule"), attested on *sema* inscriptions from Chaiyaphum (ChY i) and Khon Kaen (KhK 17), appears in profusion in Khmer inscriptions. The distribution of such terms or titles as *pragata* or *kuruṅ* in inscriptions from northeast Thailand suggests that these may be Khmer loan words in Old Mon (Bauer 1991a: 44-47).[20] They could also indicate Mon-Khmer bilingualism in the region.

While cases of multilingualism are thus possibly attested in central and northeast Thailand, it may be significant that not a single donation or dedicatory inscription in Pāli is recorded during the first millennium CE **[Tables 1-2]**.[21] Most epigraphs recording this ideology of merit are written in Mon, sometimes with Khmer and Sanskrit or, to a lesser extent, Pāli loan words, while a few donations or installations are written in Sanskrit alone[22] or in association with Khmer in east and northeast Thailand. In what follows, however, I shall deal only with Pāli inscriptions of a different kind. These have been found essentially in central Thailand **[Map 1]** and are roughly dated to the seventh and eighth centuries. They are almost exclusively "canonical" and are often related to the *paticcasamuppāda* and *ye dhammā* verses, closely connected to the teaching of the Four Truths of Buddhism.

Figure 7: *Miniature earthenware from Thap Chumphon, Nakhon Sawan province, bearing an inscription in Old Mon and Pāli. Currently located in the Phra Narai National Museum, Lop Buri, inv. no. 286/2504 [Photograph by Nicolas Revire].*



Map 1: *Buddhist inscriptions in central and northeast Thailand, mid-late first millennium CE [Drawing by Nicolas Revire].*

Table 1: Buddhist Donation Inscriptions Found in First-Millennium Thailand

Inscr. no./ Inv. no.	Provenance/ Location	Date	Languages	Donors	Offerings	Recipients	Expected Results	References
NTh 9/ 40/2519	Wat Pho Rang, Nakhon Pathom/ Phra Pathom Chedi National Museum	6th-7th c.	Old Mon	unknown	list of gifts: land, silver vase	Buddha (*ḳyāk*) or a "holy monastery" (*kyāk vihār* or *bihār*)	missing (fragmentary)	Cœdès (1952); FAD (2529: II, 27-33); FAD (2548: 196-197)
PCh 1/ K. 505	Khao Rang, Sa Kaeo prov./National Library, Bkk	561 *śaka* = 639 CE	Sanskrit and Old Khmer	a certain *sināhv* (name or title? pious hermit?)	32 workers: couples and children as "slaves" (*khñuṃ*) and guardians	monastery (*vihār*)	not expressed	Cœdès (1937-66: V, 23-24); FAD (2529: I, 35-39); Vickery (1998: 129-130, 259, 280-281, n. 66)
PCh 14/ K. 997	Noen Sa Bua, Prachin Buri prov./ Prachin Buri National Museum	11th c. (?) (probably 983 *śaka* = 1061 CE)	Old Khmer and Pāli	a certain *kamrateñ* Vuddhasiri	cows	temple	make a wish	FAD (2529: I, 179-186); Prapod (2010: 82-84); Revire (2012: 153-154)
LB 1/ K. 409	San Sung, Lop Buri prov./ National Library, Bkk	7th-8thc.	Old Mon	list of names and titles: Cāp Dyaṅgan, [.]idayya, Saṅgha Pathāk, upājhāy, Cāp Sumbaṅ, Ju Smac Yu (householder) and Cāp Inda	list of "slaves" (*ḍek*), robes, cattle, and carriages	"pagoda," i.e. temple, *stūpa*, or monastery (*ḳyāk*)	merit (*puṇya*)	Halliday (1930: 82-85, pl. VIII); Cœdès (1961: 7-9, inscr. XVIII); FAD (2529: II, 57-66); Brown (1996: 113-114)
NM 28/ K. 388	Hin Khon, Nakhon Ratchasima prov./current location unknown	8th-9th c.	Sanskrit and Old Khmer	a certain *rājabhikṣu* or *upādhyāya* (religious title) also known as Nṛpendrādhipativarman (local prince or king)	10 monasteries (*vihāra*) with a list of "slaves" (*dāsa*), food, clothes, betel, garden, etc.	local Buddhist community (*saṅgha*)	merit (*puṇya*)	Cœdès (1937-66: VI, 73-77); FAD (2529: I, 251-262); Kannika (1995: 279, pl. 34)
NM 31/ K. 389	Hin Khon, Nakhon Ratchasima prov./current location unknown	8th-9th c.	Sanskrit and Old Khmer	a certain *upādhyāya* of a royal monastery (*rājavihāra*); probably same as in NM 28/K. 388	list of "slaves" (*dāsa*), lands, cattle (10 pairs of cows), ritual implements, etc.	a temple or a deity? (*vraḥ* or *vraḥ kamrateñ añ*)	fruits of merit (*vipākapuṇya*) + all beings reaching omniscience (*sarvajña*) and become a Buddha	Cœdès (1937-66: VI, 73, 78-79); FAD (2529: I, 263-266)
NM 24/ K. 400	Mueang Sema, Nakhon Ratchasima prov./Phimai National Museum	Face A (7th-9th c.) [Face B 790 *śaka* = 868 CE]	Sanskrit (Face A)	king of Śrī Canāśa (Face A)	10 male and female "slaves" (*dāsa* and *dāsī*), cattle (50 cows and 20 female buffaloes with their calves)	local Buddhist community (*saṅgha*)	reaching enlightenment (*bodhi*)	Cœdès (1937-66: VI, 83-85); FAD (2529: III, 23-29); Kannika (1995: 280, pl. 35)

Table 1: Buddhist Donation Inscriptions Found in First-Millennium Thailand (Continued)

Inscr. no./ Inv. no.	Provenance/ Location	Date	Languages	Donors	Offerings	Recipients	Expected Results	References
SN 10	Ban Phanna, Sakon Nakhon prov./Ban Chiang National Museum	9th-10th c.	Old Mon	members of Mipa Suraya family	doors and windows (?)	a local monastery (*vihāra)*	not expressed	Kongkaeo (2550)
HPK I/33	Ban Thalat, Laos/ Vat Ho Phra Keo, Vientiane	8th-9th c.	Old Mon	a certain lord (*trala*) Waṇṇa	cattle (cows and buffaloes), list of "slaves" (*ḍek*)	a "pagoda," i.e. *stūpa*, (*kyāk*) or Buddha (?)	merit (*puṇya*)	Gagneux (1972: 92-96); Guillon (1974: 341-344)

Table 2: Buddhist Dedicatory Inscriptions Found in First-Millennium Thailand

Inscr. no./ Inv. no.	Provenance/ Location	Date	Languages	Category of Objects/Material/ Condition	Donors/ Beneficiaries	References
RB 1	Khao Ngu, Ratchaburi prov./ *in situ*	7th c.	Old Mon-Khmer and Sanskrit (?)	Buddha image/ cave wall/ fragmentary	Samādhigupta (?)	Cœdès (1961: 19, inscr. XXII); FAD (2529: I, 68-71); Revire (2012b: 94-95, fig. 2)
LB 5/K. 577	Wat Mahathat, Lop Buri/Phra Narai National Museum	7th-8th c.	Sanskrit	a "*pratimāmuneḥ*" (i.e. Buddha image)/ stone	a certain nāyaka Ārjava, ruler (*adhipati*) of Taṅgur people, son of the king (*īśvara*) of Śāmbūka	Cœdès (1961: 4-5, inscr. XVI); FAD (2529: I, 229-231)
LB 9/K. 695	Wat Khoi, Lop Buri/ Wat Benchamabophit, Bkk	7th-8th c.	Old Mon (?)	Buddha image/ stone/fragmentary	a certain lord (*tirla* or *trala*) (?)	Cœdès (1961: 6, inscr. XVII); FAD (2529: II, 34-37)
LB 26	Thap Chumphon, Nakhon Sawan prov./Chai Nat Hospital (?)	8th-9th c.	Old Mon and Pāli [*ye dhammā* cf. Table 4]	earthernware/ fragmentary	missing	FAD (2524: 38-40); FAD (2529: I, 244-246); Phimphan (2013: 13)
NW 7	Thap Chumphon, Nakhon Sawan prov./ Phra Narai National Museum, Lop Buri	8th-9th c.	Old Mon and Pāli [*ye dhammā* cf. Table 4]	earthernware	a certain lord or master (*trala*?)	FAD (2524: 34-37); FAD (2529: II, 95-99); Bauer (1991a: 42); Bauer (1991b: 65-66); Phimphan (2013: 13)
unregistered/ NW i	probably Thap Chumphon, Nakhon Sawan prov./ Wat Nong Kradon, Nakhon Sawan	8th-9thc.	Old Mon and Pāli [*ye dhammā* cf. Table 4]	earthenware	a certain lord or master (*trala*?)	Kannika & Phongkasem (2542); Phimphan (2013: 12-13)
unregistered/ 14/2536	Sung Noen dist., Nakhon Ratchasima prov./ Phimai National Museum	7th-8th c.	Old Mon	Buddha image/ stone/fragmentary	missing	unpublished

Table 2: Buddhist Dedicatory Inscriptions Found in First-Millennium Thailand (Continued)

Inscr. no./ Inv. no.	Provenance/ Location	Date	Languages	Category of Objects/Material/ Condition	Donors/ Beneficiaries	References
unregistered/ DV 36 + DV 38	Mon Nang, Chon Buri prov./ Phra Narai National Museum, Lop Buri	8th-9thc.	Old Mon	moulded tablets/ fired clay/ fragmentary	a certain lord or master (*trala*)	Bauer (1991b: 63)
AN 2	Mueang Bueng Khok Chang, Uthai Thani prov./unknown	7th c.	Old Mon or Prakrit (?)	stone	unknown	FAD (2529: II, 48-52)
MKh 2/ 712/2522	Na Dun, Maha Sarakham prov./ Khon Kaen National Museum	8th-9th c.	Old Mon with Khmer loan words	moulded tablet/fired clay	a certain king (*kamrateṅ pdai karom*?)	FAD (2529: II, 77-81); Bauer (1991a: 42, 46, 66); Uraisi (1995: 198, fig. 2); Kannika (1995: 254, pl. 11)
MKh 3/ 1106/2522	Na Dun, Maha Sarakham prov./ Khon Kaen National Museum	8th-9th c.	Old Mon with Khmer loan words	moulded tablet/ fired clay/ fragmentary	a certain king (*kamrateṅ*?)	FAD (2529: II, 82-84); Bauer (1991a: 42, 46); Uraisi (1995: 198, fig. 4); Kannika (1995: 255, pl. 12)
unregistered/ MKh i	Na Dun, Maha Sarakham prov./ Khon Kaen National Museum	8th-9th c.	Old Mon	moulded tablet/fired clay	a certain universal king (*cakravarti*) and a certain lord (*tarla*) Swayāga	Bauer (1991a: 66); Uraisi (1995: 198, fig. 6); Kannika (1995: 256, pl. 13)
unregistered/ MKh iii	Na Dun, Maha Sarakham province. Now at Khon Kaen National Museum	8th-9th c.	Old Mon	moulded tablet/fired clay	a certain "holy Pārvati" (*kyākpāravati*)	Bauer (1991a: 80); Uraisi (1995: 198, fig. 9); Kannika (1995: 258, pl. 15)
unregistered/ MKh iv	Na Dun, Maha Sarakham province. Now at Khon Kaen National Museum	8th-9th c.	Old Mon	moulded tablet/ fired clay	a certain lord or master (*tarla*)	Uraisi (1995: 198-199); Kannika (1995: 259, pl. 16)
unregistered/ MKh vii	Na Dun, Maha Sarakham prov./ Khon Kaen National Museum	8th-9th c.	Old Mon	moulded tablet/ fired clay/fragmentary	a certain lord or master (*tarla*)	Bauer (1991a: 66); Uraisi (1995: 198, fig. 8); Kannika (1995: 257, pl. 14)
KhK 16	Wat Non Sila, Khon Kaen prov./ *in situ*	8th-9th c.	Old Mon	*sema*/stone	a few men and women named Ko'Naḥ Pu, Ko'Māṅ Daraṅ, Ko' Maṅ Subāhu and Ko' Man Mreṅ	FAD (2529: II, 67-72); Bauer (1991a: 65, pls 16-18); Uraisi (1995: 199-200, fig. 15); Kannika (1995: 248, pl. 5)
KhK 17	Wat Non Sila, Khon Kaen prov./ *in situ*	8th-9th c.	Old Mon with Khmer loan words	*sema*/stone	a certain Mahā Yuta Draṅgana, Ko' Kuruṅ and Ko' 'Upajhāy Vrahma	FAD (2529: II, 73-76); Bauer (1991a: 65, pls 19-20); Uraisi (1995: 200, fig. 16); Kannika (1995: 249, pl. 6)
unregistered/ KhK i	Wat Non Sila, Khon Kaen prov./ *in situ*	8th-9th c.	Old Mon	*sema*/stone	a certain Jiv Pāl Maṅ Bnaḥ	Bauer (1991a: 65-66, pl. 21); Kannika (1995: 250, pl. 7)
KhK 25	Phu Wiang mountain, Khon Kaen prov./*in situ*	8th-9th c.	Hybrid Sanskrit (?)	Buddha image/ stone wall	unknown	Cha-em (2544)

Table 2: Buddhist Dedicatory Inscriptions Found in First-Millennium Thailand (Continued)

Inscr. no./ Inv. no.	Provenance/ Location	Date	Languages	Category of Objects/Material/ Condition	Donors/ Beneficiaries	References
KS 1+ KS 2	Mueang Fa Daet, Kalasin prov./ current location unknown	8th-9th c.	Old Mon	moulded tablets/ fired clay	a certain *'upajhāy'ācāṟyya* (preceptor and/or teacher)	Prasan (2511: 110-111); FAD (2529: II, 85-94); Bauer (1991a: 66); Kannika (1995: 246-247, pls 3-4)
KS 4 + KS i (unregistered)	Mueang Fa Daet, Kalasin prov./ current location unknown	8th-9th c.	Old Mon	moulded tablets/ fired clay	a certain lord or master (*tala*) Āditya	Prasan (2511: 108-109)
KS 7	Wat Pho Chai, Kalasin prov./ *in situ*	8th-9th c.	Old Mon with Khmer loan words	*sema*/stone	a certain King Cak (*kasmuṅ kyāk cak*)	FAD (2529: II, 100-103); Bauer (1991a: 43); Uraisi (1995: 200, fig. 18); Kannika (1995: 245, pl. 2)
unregistered/ KS ii	Wat Sawang Watthanaram, Kalasin prov./*in situ*	8th-9th c.	Old Mon with Khmer loan words	*sema*/stone/ fragmentary	a certain king or prince (*ksmuṅ*)	Bauer (1991a : 46); Uraisi (1995: 200, fig. 19); Kannika (1995: 244, pl. 1)
KhK 19	Ban Don Kaeo, Udon Thani prov./Khon Kaen National Museum	8th-9th c.	Old Mon	*sema*/stone/ fragmentary	missing	Bauer (1991a: 66); Uraisi (1995: 200, fig. 20); Kannika (1995: 260, pl. 17)
ChY 1/ K. 404	Phu Khiao, Chaiyaphum prov./ Chaiyaphum City Hall	9th-10th c.	Sanskrit	stone/fragmentary	King Jayasiṅghavarman	Cœdès (1937-66: VII, 73); FAD (2529: III, 57-59)
ChY 4/ K. 965	Ban Hua Khua, Chaiyaphum prov./6th FAD Regional Office, Nakhon Ratchasima	8th-9th c.	Sanskrit	*sema*/stone/ fragmentary	a certain Candrādityā	Cœdès (1958: 131); Cha-em (2537b)
ChY 5	Kaset Sombun, Chaiyaphum prov./6th FAD Regional Office, Nakhon Ratchasima	913 *śaka* (= 991 CE)	Sanskrit	*sema*/stone/ fragmentary	the monk (*bhikṣu*) Amarasiṃha	Cha-em (2537a)
unregistered/ ChY i	Wat Phra That Nong Sam Muen, Chaiyaphum prov./*in situ*	8th-9th c.	Old Mon with Khmer loan words	*sema*/stone/ fragmentary	a certain king (*kuruṅ*)	Bauer (1991a: 60, pl. 14); Uraisi (1995: 201, fig. 22); Kannika (1995: 252, pl. 9)
unregistered/ ChY ix	Ban Kut Ngong, Chaiyaphum prov./*in situ*	8th-9th c.	Old Mon	*sema*/stone/ fragmentary	a certain teacher (*'ācāṟyya*)	Bauer (1991a : 60, pl. 8)
unregistered/ ChY xi	Wat Phra That Nong Sam Muen, Chaiyaphum prov./*in situ*	8th-9th c.	Old Mon with Sanskrit loan words	*sema*/stone/ fragmentary	a certain king (*śrīrāja*)	Bauer (1991a: 60-61, pl. 13); Uraisi (1995: 201, fig. 22); Kannika (1995: 253, pl. 10)

The *Paṭiccasamuppāda* and the Four Truths

"Dependent Origination"[23] (Skt, *pratītyasamutpāda*; P, *paṭiccasamuppāda*) is a Buddhist description of how the human state of suffering comes about and how one can extinguish it. This exposition is given in a verse usually divided into twelve links and contains a significant teaching of the Buddha closely connected to his awakening experience. It is found throughout all Buddhist traditions and their correlated texts, including the Pāli Canon.[24] For example, the Theravāda tradition portrays Sāriputta, the Buddha's chief disciple, as saying that "whoever sees conditioned genesis [i.e. *paṭiccasamuppāda*] sees *dhamma*, whoever sees *dhamma* sees conditioned genesis" (M I 190f; trans. Horner 1954: 236-237).

According to the *Udāna*, the genesis of the verse took place with the Buddha at Uruvelā, at the root of the *bodhi*-tree on the bank of the river Nerañjarā, just after he had reached enlightenment (Ud 1-3). While the Lord was seated there for seven days and experiencing the bliss of liberation, he suddenly emerged from that concentration in the first watch of the night and paid attention to "dependent co-arising in direct order and reverse order" (trans. Masefield 1994: 3). Seven weeks after his enlightenment, the Buddha decided to preach the doctrine at the Deer Park in Isipatana (i.e. Sarnath, India). This "First Sermon" or *Dhammacakkappavattanasutta* (Discourse on "Turning the Wheel of the Law") explained to his first disciples the path to salvation via the so-called "Four Noble Truths" (*cattāri ariyasaccāni*). Accordingly, the Buddha's diagnosis of life sees everything as suffering (*dukkha*); suffering has an origin (*samudaya*), namely craving (*taṇhā*), which can be extinguished (*nirodha*) only through the "Path" (*magga*). In this specific context, a description of the "Four Truths" is also understood in terms of the causal theory of Dependent Origination since this complex chain of causation always gives rise to suffering. Alternatively, the deactivation of any of the twelve links of this chain is bound to break the causal process of *saṃsāra* and to eliminate suffering, the ultimate soteriological goal of Buddhists.

That both Dependent Origination and the Four Truths are found inscribed in Pāli on some *cakras*, *cakra* pillars or *cakra* bases from the Dvāravatī realm (e.g. Brown 1996: 99-113; Phasook 2008: 24-29; Gallon, this volume, fig. 3) is probably not pure coincidence and the wheel symbolism should be clear.[25] Yet, as Robert Brown wrote regarding the spoke-fragment found at Wat Mahathat, Lop Buri, inscribed with a portion of the *paṭiccasamuppāda* (LB 14):

> […] it is interesting that an inscription has been used on the wheel that refers to the Buddha before he went to Sārnāth, and that gives a doctrine that is only thought, not yet taught, by the Buddha. The chain of causation can be seen, however, as proposing, only in more detail, the same arguments for the origin of suffering and for its cessation as in the four noble truths. (1996: 104)

More precisely, the second truth concerned with the arising of suffering is simply explained by the *paṭiccasamuppāda* in direct order (*anuloma*), while the third truth of cessation of suffering is defined by

Figure 8: *Pāli inscribed spoke-fragment found at Sap Champa, Lop Buri province. Currently located in the Phra Narai National Museum, Lop Buri, inv. no. 86/2529 [Photograph by Nicolas Revire].*

Dependent Origination in reverse order (*paṭiloma*). A similar inscribed spoke-fragment has been found at Sap Champa, Lop Buri province (Phuthon 2529: 18, fig. 14), and is now kept at the Phra Narai National Museum in Lop Buri **[Figure 8]**. One side of the inscribed spoke tentatively reads the following passage from the verse in reverse order:[26]

Face A: **(1)** (*ta*)[*ṇ*](*hā*)[*niro*](*dhā*)
(2) *upādānanirodho*

Brown identifies another surviving sample where other excerpts of the *paṭiccasamuppāda* possibly appear. It is inscribed on a circular stone base or pedestal from Si Thep (PhCh i) which may or may not have belonged to a wheel (1996: 105, fig. 41). A further unregistered Pāli inscription from Si Thep, similarly found on a circular stone base or pedestal (FAD 2550: 127) and possibly dating to the seventh or early eighth century on paleographic grounds, argues for the same identification with Dependent Origination despite its fragmentary aspect. Since I have not been able to see the piece myself, my transliteration of the inscription is from the eye-copy **[Figure 9]** as follows:[27]

(1) […] *vedanānirodho vedanānirodhā taṇhāniro*(*dho*) *ti*[…]
(2) […] (*pa*)*ccayā jarāmaraṇa*[*ṃ*] *sokaparidevadukkhadom*[…]

If the reading is correct, then a good portion of the first line (*vedanānirodhā taṇhānirodho*) is identical with that of Face B from the Wat Mahathat spoke-fragment discussed above (LB 14) and translated as "from the cessation of feeling [*vedanā*] there is a cessation of craving [*taṇhā*]" (Brown 1996: 104). In this light, I suspect that the final *ti* in the eye-copy is an error. The last portion can indeed be reconstructed as *taṇhānirodhā* where only the initial *t-* subsists, probably followed by *upādānanirodho* as in Face A of the Sap Champa fragment (86/2529); the rest of the sentence would then be *upādānanirodhā bhavanirodho*, *bhavanirodhā jātinirodho* and so on, that is, "from the cessation of craving (*taṇhā*), there is a cessation of grasping (*upādāna*); from the cessation of grasping, there is a cessation of becoming (*bhava*); from the cessation of becoming, there is a cessation of birth (*jāti*)" and so forth. The second line connects to the conditions (*paccayā*) that lead to suffering (*dukkha*) with reference to old age (*jarā*), dying (*maraṇa*), grief (*soka*), and lamentation (*parideva*). Had the break not occurred, we should read *jāti-* (birth) on the left side, preceding *-paccayā*, and the compound *-domanassupāyāsā* on the right side, that is dejection and despair. According to the theory of Dependent Origination, birth is a prerequisite of old age, sickness, and death, and is fraught with sorrow, pain, and disappointment. This line basically quotes the *paṭiccasamuppāda* in direct order pertaining to the cause of suffering while the first line is in reverse order explaining the cessation of suffering.

Figure 9: *Pāli inscription from Si Thep on a circular stone base or pedestal (0996) [Courtesy of the "Inscriptions in Thailand Database Project"].*

Examples of other Pāli inscriptions, all found in central Thailand, are listed in **Tables 3 and 4** and are located on **Map 1**. I will deal with the *ye dhammā* inscriptions separately below, but besides the Dependent Origination and the Four Truths – always inscribed on stone *cakra*s or their related components – other canonical verses appear, namely from the *Udāna* (Ud 1ff; also found in Vin I 2)[28] and from the *Dhammapada* (Dhp 153f, 191).[29] For example, one inscribed pillar (LB 17),

possibly two (LB 22), found at Sap Champa, jointly displays Ud 1-3 and Dhp 153-154. We have already seen the canonical connection between these verses from the *Udāna*, as the Buddha sat under the *bodhi*-tree just after reaching enlightenment, and the origin of the *paṭiccasamuppāda*. Accordingly, Ud 1, as we have it in Pāli but also in other Sanskrit parallels, came to be regarded in all Buddhist traditions as the first "stanza of joy" or *udāna* expressed by the Buddha (Skilling 2002: 164-167, 175). There is no narrative description in the Pāli Canon, however, as to where and when Dhp 153-154 was uttered. Despite this fact, and for some unknown reason, later commentarial sources (e.g. Dhp-a III 127-129; Sp 17; Sv 16; Ud-a 4) seem to consider that Dhp 153-154 was the real "first utterance" of the Buddha (*paṭhamabuddhavacanaṃ*), thus seemingly giving it precedence over Ud 1. One of the justifications given for accommodating such a view (Pj I 13) is that the *Dhammapada* verse was only spoken in the mind whereas that from the *Udāna* was uttered in actual speech but only at a later stage. The inscription found at Phromthin Tai (LB 24), also in Lop Buri province, is equally quoted from Ud 1 as well as from the *Suttanipāta* (Sn 558) which likewise relates to an episode of the life of the Buddha shortly following his enlightenment when he meets and talks with the Brahmin Sela (Brown 1996: 118-119) **[Figure 10]**. The same verse (Sn 558) is also attested on Face C of a four-sided inscription from Nakhon Pathom province (NTh.i; Skilling 1997: 126). The

Figure 10: *Pāli inscription found at Phromthin Tai, Lop Buri province (LB 24). Currently located in the Phra Narai National Museum, Lop Buri [Photograph by Nicolas Revire].*

importance of these verses for the Theravādins is obviously that they were conceived by many as among the "first words" recited by the newly enlightened being.

All in all, I totally adhere to Brown's own assertion (1996: 115) regarding the corpus of Pāli inscriptions found on Dvāravatī wheels and pillars:

> The passages used from these [Pāli textual] sources deal with the Buddha's realization of the chain of causation and the four noble truths, Śākyamuni's fundamental understanding that coincided with his enlightenment at Bodhgayā, and with the subsequent first teaching of this insight at Sārnāth. The appropriateness of the subject to the wheels is apparent, yet it is important to realize that the verses were carefully selected, and in some cases edited, from these sources; particularly interesting are the stanzas from the *Dhammapada*, placed beside the parallel "first" words of triumph [i.e. Ud 1] of the just enlightened Buddha on the Sab Champa pillar.

That these inscriptions may have been edited, adapted, or shortened sections from the Pāli Canon is interesting. Cœdès (1956: 225-226), for instance, had already observed that the Four Truths inscribed on the Nakhon Pathom wheel (KTh 29) are not actual excerpts taken verbatim from the *Tipiṭaka* as we have it. On the contrary, Skilling (1997: 135-150) has confirmed that various details related to the truths as we find them in several other inscriptions (SPh 1; ChN 14; ChN 15; LB 17; LB 22) are found only in later fragments of commentaries or literature from the

fifth century onwards. It is also possible that the Dvāravatī inscriptions quote from a different source which is now lost to us (Prapod 2010: 77) or else, as Brown suggests (1996: 103), "that the inscriptions were composed from memory and would not necessarily have exact textual counterparts."

The *Ye Dhammā* Verse

This canonical *gāthā* or verse scarcely needs an introduction. Technically, it is not *buddhavacana* or the word directly "uttered" by the Buddha although it has assumed such a function in all Buddhist traditions. The Pāli *Vinaya* refers to the successive conversions of Sāriputta and Mogallāna, two of the most prominent disciples of the Buddha, just by hearing this stanza first uttered by the venerable Assaji (Vin I 39f). Here is the canonical four-line verse or "terse expression of the *dhamma*" recorded on that occasion in Pāli, followed by its English translation:

Ye dhammā hetuppabhavā
Tesaṃ hetuṃ tathāgato āha |
Tesañ ca yo nirodho
Evaṃvādī mahāsamaṇo ti ||

Those things which proceed from a cause,
Of these the truth-finder [i.e. Tathāgata] has told the cause,
And that which is their stopping –
The great recluse has such a doctrine. (trans. Horner 1951: 54)

It is said that, having heard this verse and the purport of the Dharma in brief, both Sāriputta and, later, Mogallāna immediately attained the "deathless" state, that is, the knowledge that lead to liberation or the Dharma-eye (*dhammacakkhu*), before joining the Buddha's Order (Horner 1951: 52-56). The connection here between the awakening experience of the two monks and the verse is explicit. The *ye dhammā gāthā* was the source of their enlightenment as it represents a shorter version of the *paṭiccasamuppāda* and allows one to see the Four Truths referred to above. In the following centuries, its written presence at any particular Buddhist site rendered, by extension, that site equal to the traditional source of enlightenment. It therefore began to be inscribed in variant recensions and languages on *stūpa*s (or enshrined therein) and on images and miniature clay tablets and *caitya*s from the fifth or sixth century CE onwards, first in northern and western India (Boucher 1991), then beyond in ancient Myanmar and Thailand, the Malay Peninsula, southern Vietnam, and Indonesia (e.g. Skilling 1999, 2003-04 and 2008; Griffiths 2011: 142-146, figs 1a-b).

Figure 11: Ye dhammā *inscription on a brick from Nakhon Pathom province. Currently located in the Bangkok National Museum, inv. no. 22/10 [Photograph by Nicolas Revire].*

The verse thus came to be abundantly found, albeit exclusively in Pāli, in the Dvāravatī cultural sphere inscribed, stamped, or engraved on several objects of different material: on clay tablets, on bricks or terra-cotta fragments and stone sculptures of *caitya*s, *cakra* pillars, Buddha images or pieces of stone tablets. These seventh-eighth century inscriptions clearly attest to the pan-Asian Buddhist practice of writing the sacred *gāthā* on various artefacts.[30] An up-to-date list of *ye dhammā* inscriptions found in central Thailand is given in **Table 4**. According to Skilling's textual classification framework (1999: 180-184), they fall in two distinct groups depending on whether the first word of the second line is *tesaṃ*, as in the canonical version (see above), or *yesaṃ*, a regional peculiarity only attested so far in central Thailand.

New *ye dhammā* inscriptions continue to be found in Thailand. One recent discovery published in Thai occurs on another stone fragment from Sap Champa (LB 54), and reads as follows on two sides of the stone (Amon 2551: 56-60):

Face A: (**1**) […] *hetuṃ*
(**2**) […] *āha*

Face B: (**1**) *tesañ ca yo* […]
(**2**) *nirodho ca* […]

Being fragmentary, it cannot be said with certainty in which group the inscription falls,[31] but we can notice, however, a variant reading in line 2 of Face B with the addition of *ca* after *nirodho*. At least one inscription (NTh 10), possibly two (LB 16), offer a similar variant reading in Nakhon Pathom and Lop Buri provinces; both belong to the *yesaṃ* group (Skilling 1999: 181).

Several other *ye dhammā* inscriptions are still unpublished. One inscription on a brick said to be from Nakhon Pathom province, currently kept in the Bangkok National Museum, is nearly illegible but the syllable *ye* at the beginning of the second line is clear and allows us to classify it in the *yesaṃ* group **[Figure 11]**. In addition to the few bilingual terracotta fragments (Mon and Pāli) allegedly from Thap Chumphon, Nakhon Sawan province (LB 26, NW 7, NW i), two similar earthenwares reported from Nakhon Pathom province are solely inscribed in Pāli with the *ye dhammā gāthā* [**Figure 12**; Ray, this volume, fig. 4]. Although, a close reading was not possible at the time of writing, these inscriptions seem to fall in the *yesaṃ* group.[32] In addition to the corpus, a broken image in stone, presumably a standing Buddha of which only the feet remain, has a nearly illegible inscription on the pedestal (LB i). Though the few letters that remain on the first line allow for identification with the ubiquitous verse, yet it is not sufficient to say whether it belongs to the *tesaṃ* or *yesaṃ* group **[Figure 13]**.

Figure 12: *Miniature earthenware from Wat Phra Ngam, Nakhon Pathom, inscribed with the* ye dhammā *verse. Currently located in the Phra Pathom Chedi National Museum, Nakhon Pathom, inv. no. 305/2519 [Photograph by Nicolas Revire].*

Figure 13: *Broken image in stone (standing Buddha?) bearing the* ye dhammā *inscription on the pedestal (LB i). Currently located in the Phra Narai National Museum, Lop Buri [Photograph by Nicolas Revire].*

Last but not least, a significant number of clay moulded tablets bearing the *ye dhammā gāthā* in Pāli have been found in central Thailand. While the exact number and precise provenance of these tablets often elude us, suffice it to say that they are mainly of two kinds, both rectangular plaques with a complex iconography depicting various figures around a central seated Buddha. The first type has predominantly been found in Nakhon Pathom at Wat Phra Men (Dupont 1959: I 47-49, II figs 34-40) **[e.g. Figure 14]**.[33] On these tablets, the verse is directly stamped along the base, below the main scene,

Figure 14: *Clay moulded tablet bearing a truncated* ye dhammā *verse, from Wat Phra Men, Nakhon Pathom. Currently located in the Bangkok National Museum, inv. no. DV 6-2 [Photograph by Nicolas Revire].*

and is repeatedly made from the same mould. According to Pierre Dupont (1959: 49), it reads as follows in two lines:

(**1**) *ye dhammā hetupprabhavā*
(**2**) *tesaṃ hetuṃ tathāgato āha*

It is noteworthy that only the first part of the verse (l. 1-2) is given here, leaving the rest (l. 3-4) intentionally missing. Although the reading on the tablets is rather obscure, a double *pa* and a subscript *ra* seem to appear, making the compound *-ppra* in *hetupprabhavā* clear. The inscription would thus be slightly sanskritised since *hetuppabhavā* is expected in "correct" Pāli. The verse apparently falls in the *tesaṃ* group, but the reading is hard to confirm towards the end of line 2 and is therefore not absolutely certain. For Dupont, the inscription of *tathāgato* is presented in a more condensed way almost as a monogram to engrave all signs on the material available and it is possible that we are dealing here with an abridged version of the stanza.

The second type of tablet bearing the entire *ye dhammā gāthā* has been mainly found in Ratchaburi, Nakhon Pathom, and Suphan Buri provinces.[34] In this group of tablets, the verse is always inscribed on the back in a rather cursive hand and thus difficult to read, probably made while the clay was still wet. The reading proposed here is based on a fine sample kept in the collection of Wat Matchimawat, in Songkhla, but probably originating from Thailand's central region **[Figure 15b]**:

(**1**) *ye dhammā hetuppabhavā*
(**2**) *yesaṃ hetuṃ tathāgato*
(**3**) *āha tesañ ca yo niro-*
(**4**) *-dho evaṃvādī mahāsama-*
(**5**) *-no*

Probably for reasons of equal distribution of *akṣara*s over lines, the inscription occupies here five lines, instead of the usual four, with a slight deviation of the expected final syllables in lines 2, 3 and 4. It belongs to the *yesaṃ* group with a variant reading at the end of the verse, omitting the *ti* after *mahāsamano* which is spelt with a dental *n* rather than the standard retroflex *ṇ*. This spelling peculiarity is rather common with other occurrences of *ye dhammā* inscriptions belonging to this *yesaṃ* group (e.g. NTh 5, LB 26, NW 7, NW i) and cannot, therefore, be simply accounted as scribal error.

An overall pattern seems to emerge in the regional distribution of the two variant Pāli spellings of the sacred verse in Thailand **[Table 4]**. While we find most inscriptions from the canonical group (*tesaṃ*) restricted to Nakhon Pathom with just one *tesaṃ* specimen from Phetchaburi (PhB 2) and another one from U Thong (SPh 2), the inscriptions from the *yesaṃ* group appear to be far more numerous and widespread in the central provinces of Ratchaburi, Nakhon Pathom, Suphan Buri, Nakhon Sawan, Lop Buri, and as far away as Si Thep in Phetchabun (LB 23) (Ray, this volume, fig. 5), and possibly Mueang Sema in Nakhon Ratchasima (K. 987) and Nong Bua Daeng in Chaiyaphum (K. 1166?). This basic observation could indicate that the two recensions also have some distinct geographical realities with the latter *yesaṃ* inscriptions marking the furthest extension of ancient Pāli literacy in northeast Thailand.

Figure 15a: *Obverse of a clay moulded tablet bearing the* ye dhammā *verse on its reverse (Fig. 15b), probably originating from central Thailand [Photograph by Nicolas Revire].*

Figure 15b: *Reverse of Fig. 15a. Currently located in the collection of Wat Matchimawat, Songkhla, inv. no. MW/458 [Photograph by Nicolas Revire].*

The Ritual and Cultic Functions of Pāli Verses

The Pāli inscriptions studied above, all closely related to the Four Truths of Buddhism, point to a well-known group of discourses by the Buddha frequently presented as "citation" or "quotation inscriptions" (Skilling 2002; Prapod 2010: 72-81).

Presumably, the content of these passages, a written expression of the Dharma, would be used in a context in which it would be unseen by most people. The various verses would manifest a presence believed to be highly beneficial for the patrons, donors, and worshippers and would extend its protection to the place or object that contained it. In this vein, the *ye dhammā gāthā* should be understood as an abbreviated version of the *paṭiccasamuppāda* which is, in turn, intimately related to the Four Truths preached by the Buddha at Sarnath.[35] It does not really matter how long or complete the sacred verses were, and we certainly have seen examples of truncated versions above. In other words, these selected Buddhist texts may well be fragmentary and, yet, embody the whole Dharma.

The *gāthā*s used for such ritual purposes and inscribed on material objects often no longer functioned as a means for communicating their verbal contents. On the contrary, these inscriptions were frequently "hidden" in small characters, often on the back of the artefacts, be it a Buddha image or a miniature clay tablet often enshrined in a larger *stūpa*. At any rate, common people could not read the inscriptions and only a few scholars or learned monks equipped with the necessary language skills and paleographic knowledge could decipher or engrave them.

There is ample archaeological evidence, however, that the practice of ritually inscribing and presumably reciting such *gāthā*s on clay, brick, stone, metal objects, and so on, was well established in South Asia by the middle of the first millennium CE and slightly later in Southeast Asia. The engraving of such verses was probably conducted by ritual specialists, but whether these were laymen or monastics cannot be said. In recent decades, a number of scholars have also underlined the sacralising power of inserting these verses in *caitya*s, *stūpa*s, Buddha images, or other sacred items, as part of a consecrating ceremony devised to empower the artefacts (Boucher 1991; Bentor 1996: 42, 114-117, 217; Skilling 2008: 507). The *paṭiccasamuppāda* and *ye dhammā gāthā*s, in particular, have been seen as closely connected to *stūpa* construction and the cult of relics. Because they epitomise the very essence of the Buddha's teaching, they may also represent the notion of *dharmakāya* (i.e. "Dharma-body) or *dharmadhātu* (i.e. "Dharma-relic") and thus echo the earlier equation, first expressed in the Pāli Canon, as "He who sees me [i.e. the Buddha] sees the Dhamma; he who sees the Dhamma sees me" (S III 120).[36] In other words, the verses must be honoured and respected as if they were a relic since they may represent the Buddha himself.

Once these *gāthā*s were accepted as a substitute for the Buddha, they could then be inscribed onto the artefacts at a particular spot. The inscription, along with its incantation, would presumably have the effect of authoritatively legitimising the object and that spot as a sacred and cultic centre. Skilling (2002: 173) has proposed "ritual practices" to answer the question as to why identical Pāli texts were inscribed at different sites throughout central Thailand and neighbouring Myanmar and Cambodia during the first millennium CE. In a different fashion, Cœdès had made clear in his seminal article on so-called "votive tablets" that the *ye dhammā gāthā* "must rapidly have acquired in the eyes of the ancient Buddhists a sort of magic virtue, and may well have seemed to them a quite irresistible charm for the conversion to the faith of any who had not heard it" (1926-27: 6). For all these reasons, these verses seem to represent something more than mere "citation inscriptions" excerpted from the Pāli Canon. Because of their shared sacredness, it appears that these stanzas found only in Pāli in the Dvāravatī cultural sphere, as well as in Prakrit and Sanskrit elsewhere in Southeast Asia, were deliberately chosen for their "ritual" and "cultic" nature, and thus also for their alleged supernatural power.[37]

In this light, it might be worth recalling Lunet de Lajonquière's early interpretation of the Dvāravatī wheels (1909: 36, fig. 17) as possibly serving the function of *sema* stones, that is, to mark the consecration of a Buddhist sanctuary. Although this theory was hastily rebutted by Cœdès (1956: 225), it could make some sense if we accept their frequent association with the Pāli verses described above as having the ritual and cultic function of sacralising an artefact or a monument which, in turn, may sanctify a religious spot or piece of land.

Lastly, this also brings us to the question of Pāli literacy at the time compared to the situation today. Interesting observations can certainly be made about the ancient use of Pāli language in certain rituals in the past and today. A few Buddhist scholars (e.g. Skilling 2002: 166, 173-174; Swearer 2004: 88ff, 107, 115-118, 218-219) have observed that chanting certain sacred Pāli verses or *paritta*s – some of which are already attested in the Dvāravatī culture (i.e. Ud 1ff; Dhp 153f) – occurs regularly during consecration of Buddha images and *ched*is in Thailand and is seen as a form of protection against spirits, to ward off evil or deflect negative power. This may well be an indication of ritual continuity from the first millennium to this day.

Copying and Reciting Sacred Pāli Verses as an Act of Merit

We have seen that an investment in ritual actions may eventually yield great results. An additional important function of these sacred verses concerns the religious merit generated by copying and reciting them. The merit accrues for both the scribe who engraves them and the person who recites the *gāthā*s. We do not know when and where exactly this practice was first employed in India, but Yijing, in the seventh century, has described this tradition as concomitant with the making of Buddha images:

> The priests and the laymen in India make *caitya*s or images with earth, or impress the Buddha's images on silk or paper, and worship it with offerings wherever they go. […] Any one may thus employ himself in making the objects of worship. Again, when the people make images and *caitya*s which consist of gold, silver, copper, iron, earth, lacquer, bricks, and stone, or when they heap up the snowy sand (lit. sand-snow), they put in the

images or *caitya*s two kinds of *sarīra*s [i.e. relics]. 1. The relics of the Great Teacher. 2. The *gāthā* of the Chain of Causation [i.e. *ye dhammā* or *paṭiccasamuppāda gāthā*s]. […] If we put these two in the images or *caitya*s, the blessings derived from them are abundant. This is the reason why the *sūtra*s praise in parables the merit of making images or *caitya*s as unspeakable. (Takakusu 1998: 150-151; with minor stylistic changes)

By this time, copying a verse (*gāthā*), just as copying an image (*pratimā*), was clearly perceived as a beneficial act of merit in itself, not only for the scribe or the image-maker but also for the donor who sponsored the act of copying. This is also to say that this practice of duplicating a religious object was no longer motivated by the intention of preserving the "exact word" or "likeness" of the Buddha but rather was primarily aimed at merit-making.[38] Hence, producing and copying a large number of Buddha images, for example miniature clay tablets or earthenwares (Guy 2002; Skilling 2009: 108-109), and engraving them with such Pāli verses will necessarily result in great benefits.

Conclusion

The analysis of these Buddhist practices and rituals as gleaned from the archaeological and epigraphic records of Dvāravatī and to a lesser extent its neighbouring cultures has now come full circle. In the spirit of reassessing past scholarship, I have attempted to re-examine the corpus of ancient material and inscriptions from both a historical and doctrinal angle. The study has clearly demonstrated the essential Buddhist ideologies of gift-giving and dedicating that are conducive to merit-making, often directed toward a good "rebirth" in a future existence. The purpose of accumulating merit has become the most important goal of the modern follower of Buddhism in Thailand.

We have also seen how the crucial ritual elements include the act of producing and, at times, inscribing the objects with certain sacred verses deemed most effective. This also adds to our understanding of the essential Buddhist approaches to merit-making. Particularly instructive are the regional distribution of such artefacts and the language of the epigraphs **[Map 1]**. Among the Buddhist artefacts found in profusion are the objects inscribed in Pāli, from present-day central Thailand **[Tables 3-4]**, or in Old Mon, mainly from the contemporary northeast **[Table 2]**. Sanskrit and Old Khmer are also attested in a few donation inscriptions **[Table 1]** found in the outskirts of the Dvāravatī cultural sphere where cases of regional bilingualism (e.g. Mon-Pāli, Mon-Sanskrit, Mon-Khmer) are indicated. These linguistic trends may be an indication of the two major ethnic groups living in the region (i.e. Mon and Khmer) and of the sacred languages used (Pāli and Sanskrit). Although it cannot be definitely established that the Dvāravatī rulers of central Thailand were Buddhists, several inscriptions show that a significant portion of the population at least supported Buddhist temples and monasteries by the seventh and eighth centuries. This is a clear indication that Buddhism firmly took root in Thailand only from this period onwards and not as far back to the time of King Asoka, *circa* 250 BCE, as often accounted in local traditions and school textbooks (Revire 2011).

Table 3: Pāli Citation Inscriptions Found in First-Millennium Thailand (Except *Ye Dhammā*)

Inscr.no./ Inv. no.	Provenance/ Location	Date	Category of Objects/ Material/Condition	Contents of Citations	References
KTh 29	Phra Pathom Chedi, Nakhon Pathom/Bangkok National Museum	7th-8th c.	*dharmacakra*/stone	First Sermon/Four Truths	Cœdès (1956); FAD (2529: I, 59-64); Brown (1996: 99-103, figs 5a-b); Skilling (1997: 149-150); Phasook (2008: 24-25); Prapod (2010: 76-77)
unregistered/ NTh i	Nakhon Chaisi, Nakhon Pathom prov./Culture Hall Project, Silpakorn University, Nakhon Pathom (?)	7th-8th c.	stone bar	list of the Four Truths and the 12 links of Dependent Origination (Face A); list of the 37 factors conducive to enlightenment (Face B); Sn 558 (Face C); Dhp 191 and D II 123 (Face D)	Naiyana *et al.* (2534); Skilling (1997: 123-133)
SPh 1/ 37/2541	Khampaeng Saen, Nakhon Pathom prov./ Phra Pathom Chedi National Museum	7th-8th c.	*cakra* base/stone	Four Truths	FAD (2529: I, 98-99); Brown (1996: 108, fig. 64b); Skilling (1997: 149-150); FAD (2548: 136); Phasook (2008: 26);
unregistered/ SPh i	U Thong, Suphan Buri prov./ U Thong National Museum	7th-8th c.	brick/fragmentary	Dhp 191(Face A); [*ye dhammā* on Face B; cf. Table 4: SP 2]	Prasan (2509: 82); Skilling (1991: 243-244)
LB 8	Sap Champa, Lop Buri prov./ Phra Narai National Museum	7th-8th c.	*cakra* pillar/stone/ fragmentary	First Sermon/Four Truths	FAD (2524: 26-27); FAD (2529: I, 103-105); Brown (1996: 113); U-tain (2556)
LB 14	Wat Mahathat, Lop Buri/ Phra Narai National Museum	7th-8th c.	*cakra* spoke/ stone/fragmentary	Dependent Origination	FAD (2529: I, 109-111); Brown (1996: 104-105); Phasook (2008: 28)
unregistered/ 86/2529	Sap Champa, Lop Buri prov./ Phra Narai National Museum	7th-8th c.	*cakra* spoke/stone	Dependent Origination	Phuthon (2529: 18, fig. 14)
LB 17/ L. 2166-67	Sap Champa, Lop Buri prov./ Phra Narai National Museum	7th-8th c.	*cakra* pillar/stone	*ye dhammā*; Four Truths; Ud 1-3; Dhp 153f	Uraisi & Anchana (1975); FAD (2529: I, 116-122); Brown (1996: 109-111); Skilling (1997: 149-150); Phasook (2008: 26-27); Prapod (2010: 78)
LB 19/ L. 2161	Wat Mahathat, Lop Buri/ Phra Narai National Museum	7th-8th c.	*dharmacakra*/stone/ fragmentary	First Sermon/Four Truths	Boisselier (1961); FAD (2529: I, 123-125); Brown (1996: 103, fig. 33); Phasook (2008: 28)
LB 22	Sap Champa, Lop Buri prov./ Phra Narai National Museum	8th-9th c.	*cakra* pillar/stone/ fragmentary	*ye dhammā*; Four Truths; Ud 1-3; Dhp 153f (?)	FAD (2529: I, 241-243); Brown (1996: 111)
LB 24	Phromthin Tai, Lop Buri prov./ Phra Narai National Museum	8th-9th c.	stone slab/fragmentary	Ud 1; Sn 558	FAD (2529: I, 237-240); Brown (1996: 118-119); Prapod (2010: 78-79)
ChN 14	Ban Hang Nam Sakhon, Chai Nat prov./current location unknown	7th-8th c.	*dharmacakra*/stone/ fragmentary	First Sermon; Commentary on the Four Truths (?)	Bauer (1991a: 48, 52-55; pls 1-3); Skilling (1997: 133-151); Phasook (2008: 29, fig. 36)
ChN 15	Ban Hang Nam Sakhon, Chai Nat prov./current location unknown	7th-8th c.	*cakra* pillar/stone/ fragmentary	Commentary on the Four Truths	Bauer (1991a: 48, 52-55; pl. 4); Skilling (1997: 146-148)

Table 3: Pāli Citation Inscriptions Found in First-Millennium Thailand (Continued)

Inscr.no./ Inv. no.	Provenance/ Location	Date	Category of Objects/ Material/Condition	Contents of Citations	References
unregistered/ PhCh i	Si Thep, Phetchabun prov./ Ramkhamhaeng National Museum, Sukhothai	7th-8th c.	circular base or pedestal(?)/stone/ fragmentary	Dependent Origination	Brown (1996: 105, fig. 41); Skilling (2002: 168-169); FAD (2550: 126)
unregistered/ 0996	Si Thep, Phetchabun prov./ current location unknown	7th-8th c.	circular base or pedestal (?)/stone/fragmentary	Dependent Origination	FAD (2550: 127)
unregistered/ 82.183	Si Thep, Phetchabun prov./ Newark Museum, NJ (USA)	7th-8th c.	*dharmacakra*/stone	First Sermon/Four Truths	Brown (1996: 106-108, figs 6a-b)

Table 4: *Ye Dhammā* Inscriptions Found in First-Millennium Thailand

Inscr. no./ Inv. no.	Provenance/ Location	Date	Category of Objects/Material/ Condition	Recension Type	References
RB 2	Wat Plaeng/Wat Mahathat, Ratchaburi prov.	7th-8th c.	Buddha image (head stolen)/stone	*yesaṃ* group (variant ending: *mahāsamano ti*)	FAD (2529: I, 72-74); Skilling (1999: 173, 180); Skilling (2003-04: 274-275, figs 1-3)
PhB 2	provenance unknown/ rubbing at National Library, Bkk	7th-8th c.	probably stone/lost	*tesaṃ* group	FAD (2529: I, 65-67); Skilling (1999: 180)
NTh 2/ 76/2519	Phra Pathom Chedi, Nakhon Pathom/ Phra Pathom Chedi National Museum	7th-8th c.	stone slab/ fragmentary	*tesaṃ* group	FAD (2529: I, 75-78); Skilling (1999: 180); FAD (2548: 195)
NTh 3	Phra Pathom Chedi, Nakhon Pathom/ Bangkok National Museum	7th c.	stone *caitya*/ fragmentary	*tesaṃ* group	FAD (2529: I, 79-82); Skilling (1999: 180)
NTh 4	Phra Pathom Chedi, Nakhon Pathom/*in situ*	7th-8th c.	stone slab	*tesaṃ* group	FAD (2529: I, 83-85); Skilling (1999: 180)
NTh 5	Nakhon Pathom prov./ National Library, Bkk	7th-8th c.	stone slab	*yesaṃ* group (variant ending: *mahāsamano*)	FAD (2529: I, 86-88); Skilling (1999: 180)
NTh 6	Nakhon Pathom prov./ National Library, Bkk	7th-8th c.	stone slab	*yesaṃ* group	FAD (2529: I, 89-91); Skilling (1999: 180)
NTh 10	Phra Pathom Chedi, Nakhon Pathom/ current location unknown	7th-8th c.	stone slab	*yesaṃ* group (variant ending: *nirodho ca… mahāsamano ti*)	FAD (2529: I, 92-94); Skilling (1999: 181)
unregistered/ 22/10	Nakhon Pathom prov./ Bangkok National Museum	7th-8th c.	brick	*yesaṃ* group	unpublished
unregistered/ DV 1-1	Phra Pathom Chedi, Nakhon Pathom/ Bangkok National Museum	8th-9th c.	earthenware/ fragmentary	*yesaṃ* group	unpublished
unregistered/ 305/2519	Wat Phra Ngam, Nakhon Pathom/ Phra Pathom Chedi National Museum	8th-9th c.	earthenware/ fragmentary	*yesaṃ* group	Finot (1910: 148); Cœdès (1912: 29); L. de Lajonquière (1912: 113, fig. 21); FAD (2548: 198)

Table 4: *Ye Dhammā* Inscriptions Found in First-Millennium Thailand (Continued)

Inscr. no./ Inv. no.	Provenance/ Location	Date	Category of Objects/Material/ Condition	Recension Type	References
NW 7, NW I + LB 26	Thap Chumphon, Nakhon Sawan prov./ Phra Narai National Museum, Lop Buri; Wat Nong Kradon, Nakhon Sawan; Chai Nat Hospital (?)	8th-9th c.	earthenwares/ fragmentary	*yesaṃ* group (variant ending: *mahāsamano*)	FAD (2524: 34-40); FAD (2529: I, 244-246; II, 95-99); Kannika & Phongkasem (2542); Phimphan (2013: 12-13)
unregistered/ L. 4348	Nakhon Pathom prov./ Bangkok National Museum	7th c.	*cakra* pillar/ fragmentary	unknown	Finot (1910: 148); Cœdès (1912: 29); L. de Lajonquière (1912: 112, fig. 19); Brown (1996: 108)
unregistered/ NTh ii	Chaiya province (?)/Phra Pathom Chedi Temple Museum, Nakhon Pathom	7th-8th c.	Buddha image/ stone/ fragmentary	unknown	Skilling (2003-04: 280, n. 17)
unregistered/ DV 5-2 + DV 6-2	Wat Phra Men, Nakhon Pathom/ Bangkok National Museum	7th-8th c.	moulded tablets/ fired clay	*tesaṃ* group	Dupont (1959: I 47-49, II figs 34-40)
unregistered/ MW/458	Probably central Thailand/ Wat Matchimawat, Songkhla	7th-8th c.	moulded clay/ fired clay	*yesaṃ* group	unpublished
SPh 2	U Thong, Suphan Buri prov./ U Thong National Museum	7th-8th c.	brick/fragmentary	*tesaṃ* group (Face B)	Prasan (2509: 81); Skilling (1999: 180)
SPh 4	U Thong, Suphan Buri prov./ National Library, Bkk	7th-8th c.	brick	*yesaṃ* group	FAD (2529: I, 100-102); Skilling (1999: 180)
unregistered/ NN i	Dong Lakhon, Nakhon Nayok prov./ current location unknown	8th-9th c.	bowl (?)/terracotta/ fragment	unknown	Bandhit (2542: 531-532)
LB 16/ 143/2525	Phromthin Tai, Lop Buri prov./ Phra Narai National Museum	7th-8th c.	stone slab	*yesaṃ* group (variant ending: *nirodho ca* (?) *mahāsamano*)	FAD (2529: I, 106-108); Skilling (1999: 181)
LB 23	Si Thep, Phetchabun prov./ Phra Narai National Museum, Lop Buri	7th-8th c.	stone slab	*yesaṃ* group (variant ending: *mahāsamaṇo*)	FAD (2529: I, 132-134); Skilling (1999: 181); FAD (2550: 125)
LB 54	Sap Champa, Lop Buri prov./ current location unknown	8th-9th c.	stone slab/ fragmentary	? (variant ending: *nirodho ca*)	Amon (2551: 56-60)
unregistered/ LB i	Lop Buri prov./ Phra Narai National Museum	7th-8th c.	Buddha image/ stone/fragmentary	unknown	unpublished
unregistered/ PhB i	Si Thep, Phetchabun prov./ Ramkhamhaeng National Museum, Sukhothai	7th-8th c.	Buddha image/ stone/fragmentary	? (variant ending: *mahāsamaṇo*)	Skilling (2002: 169); Skilling (2003-04: 280-281, fig. 9)
unregistered/ K. 987/ 323/2497	Dan Khun Tot or Mueang Sema (?), Sung Noen dist., Nakhon Ratchasima prov./ Maha Viravong National Museum, Nakhon Ratchasima	8th-9th c.	Buddha image/ stone	*yesaṃ* group	Cœdès (1937-66: VII, 162); Skilling (1999: 173-174, 181); Skilling (2003-04: 276-278, figs 4-6)
unregistered/ K. 1166/ 46/2536	Nong Bua Daeng, Chaiyaphum prov. or Mueang Sema, Nakhon Ratchasima prov. (?)/Phimai National Museum	8th-9th c.	stone slab	*yesaṃ* group	Skilling (2003-04: 278-279, figs 7-8)

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Abbreviations

Pāli references are made to PTS publications only.

A	*Aṅguttaranikāya*
D	*Dīghanikāya*
Dhp	*Dhammapada*
Dhp-a	*Dhammapada-aṭṭhakathā* (Commentary on Dhp)
It	*Itivuttaka*
M	*Majjhimanikāya*
Pj I	*Paramatthajotikā* I (Commentary on *Khuddakapāṭha*)
S	*Saṃyuttanikāya*
Sn	*Suttanipāta*
Sp	*Samantapāsādikā* (Commentary on Vin)
Sv	*Sumaṅgalavilāsinī* (Commentary on D)
Ud	*Udāna*
Ud-a	*Paramatthadīpanī* (Commentary on Ud)
Vin	*Vinaya*

Endnotes

1 In this essay, "Dvāravatī" refers to both an archaeological typology and a cultural entity vaguely located in west-central Thailand *circa* the seventh and eighth centuries CE.

2 The archaeological material and inscriptions presented here do not pretend to be exhaustive or, in most cases, original. The majority of these have been edited or published in Thailand, albeit rarely or satisfactorily in English. Several readings of inscriptions and their published translations in print or available online through the "Inscriptions in Thailand Database Project" website warrant caution and emendations. All translations from Thai and French publications in this essay are mine.

3 The notion of merit-making is shared by several Indian religions but in this essay, I will focus only on the "Buddhist concept" of merit.

4 A brick retrieved from Suphan Buri is inscribed in Sanskrit with the following similar verse: *namo vuddhāya*, i.e. "Homage to the Buddha" (Kongkaeo 2541: 45).

5 The date given in the opening Khmer portion of the inscription has usually been given as 683 *śaka* (761 CE), but a tenth or eleventh century date is much more likely (Revire 2012a: 153, n. 2).

6 In this essay, I give first the registration numbers of the inscriptions as recorded in Thailand by the Fine Arts Department (FAD), followed by the K. numbers if known in the "Corpus des inscriptions du Cambodge." When the inscriptions are not recorded as such, I give the artefact inventory numbers or an arbitrary number. For further information and references to the inscriptions cited here, see **Tables 1-4**.

7 For ancient India, see for instance Nath (1987); for pre-modern and modern Thai traditions, see Gabaude (2003) and Arthid (2012).

8 Often, the *bhikkhu* observing this *dhutaṅga* declines invitations to take meals at the houses of lay people.

9 In certain *vinaya*s, the *khakkhara*-staff was considered one of the eighteen possessions of wandering monks. For Yijing, the function of using such a staff was merely "to keep off cows or dogs while collecting alms in the village" (Takakusu 1998: 191). The *khakkhara* was also a familiar object in Dvāravatī and neighbouring cultures (Revire 2009 and forthcoming).

10 The terms *dāsa* or *dāsī* in Sanskrit, *ḍek* in Old Mon or *kñum* in Old Khmer have often been translated as male or female "slaves" but perhaps "servant" would be a better rendering. In the same vein, see Vickery (1998: 225-227, 439-440).

11 The eye-copy provided by Cœdès (1961: inscr. XXII) is clearly not faithful to the original. For another, yet likely incorrect, reading and translation, see FAD (2529: I, 68-71). For a published rubbing and the relationship between the image and the inscription, see Revire (2012b: 94-95, figs. 1-2).

12 Another short inscription from Mueang Bueng Khok Chang, Uthai Thani province (AN 2), whose reading and language are not certain, refer to a similar cultivation of merit where the word *puñ*(·) or *puña* seems to appear but not the name of the agent (FAD 2529: II, 48-52).

13 See also the inscription (KhK 25) above the head of a large reclining Buddha located on top of Phu Wiang, Khon Kaen province. The word *puṇya*(*ṃ*) is clear at the end of line 2 (Cha-em 2544: eye-copy on p. 58).

14 Another fragmentary inscription in Sanskrit, found at the base of an alleged "Buddha image" from Kalasin province (KS 5), has been erroneously linked to the donor's aspiration of "transferring happiness to all mankind" (FAD 2529: I, 278). The inscription, a *śārdūlavikrīḍita* stanza, is in fact dedicated to Śiva and shows some similarities with K. 1214 dated to 648 *śaka* (Griffiths 2005). I thank Arlo Griffiths for checking the reference and drawing this parallel to my attention.

15 I prefer to avoid the term *stūpa* (i.e. a reliquary) often used in the literature and which implies a funerary function. Could these terracotta fragments be finials? The hollow structure and flat base could suggest that these were used in an architectural capacity.

16 From my personal observation, I have noted that more bilingual inscribed earthenwares of this kind have survived, but have been left unnoticed and are not registered as inscriptions by the FAD. At least two are kept in the Bangkok National Museum (277/2504 and 278/2504) and one is in the Prachin Buri National Museum (129/2526). There are also several models or fragments kept at the Phra Narai National Museum, Lop Buri (e.g. 281/2504 and 286/2504), and I suspect that there could be more in museum storages, temple or private collections. See also Bauer (1991: 49, fig. E) for a tentative list of these inscribed objects.

17 The same inscription has been misinterpreted as "this *stūpa* [*kyāk*] was made for the three ancestors near the *vihāra*," (FAD 2529: I, 98) giving rise to speculations that these so-called "terracotta *kumbha*-type stūpas" possibly served as funeral urns (e.g. Woodward 2003: 101-102).

18 A possible parallel in Sanskrit would be *brāhmapuṇya*, meaning "sublime merit" (cf. Skilling 2008: 512).

19 Stephen Murphy recorded twenty-six inscriptions in total on *sema* stones from northeast Thailand with the languages employed including Mon, Khmer, and Sanskrit (2010: 90-95, Appendix 1, Table A5). Many of these inscriptions, however, are very worn and therefore still unread and/or left without a proper translation.

20 The reverse situation is equally possible. For example, at least two Khmer inscriptions from Nakhon Ratchasima (NM 28/K. 388 and NM 31/K. 389) also show traces of Mon loan words such as *kyāk*.

21 The Pāli portion in the Noen Sa Bua inscription (PCh 14/K. 997) cannot be considered "donative" in this regard since only the Khmer portion relates to the donation of cows to a temple and the installation of a *buddhapāda*. Prapod (2010: 82-83) classifies the Pāli section as a "eulogy inscription" citing an extra-canonical text.

22 See in particular the few panegyric inscriptions from Chaiyaphum province (ChY 1, ChY 4 and ChY 5). Other Buddhist Sanskrit inscriptions from northeast Thailand are tentatively listed by Bauer (1991a: 56, fig. H).

23 Also translated in English as "dependent co-arising," "chain of causation," "conditioned co-production," "conditioned genesis," and so on.

24 See Brown (1996: 104, n. 44) for a near complete list of Pāli texts where the verse occurs, to which list one can add the *Udāna* from the *Khuddakanikāya*. See Masefield (1994) for a recent English translation of that text.

25 See in particular inscriptions KTh 29, NTh 1, SPh 1, SPh i, LB 19, ChN 14, ChN 15, PhCh i, and 82.183 **[Table 3]**. An inscription on a fragmentary *cakra* pillar from Sap Champa (LB 8), first identified as written in Sanskrit (FAD 2524: 26-27), has recently been reassessed and identified as a portion of the First Sermon in Pāli (U-tain 2556).

26 My emendations and restorations of the nearly illegible or missing letters or syllables (*akṣara*s) are given in parenthesis and square brackets respectively. While the letters are very clear on line 2, my reconstruction of line 1 is very much tentative and based on the strong assumption that it quotes the *paṭiccasamuppāda*.

Unfortunately, I have been unable to see the reverse Face B of this spoke-fragment.

27 I wish to thank Arlo Griffiths for his assistance in restoring the proper reading.

28 Other occurrences of Ud 1-3 were found in Angkor Borei, lower Cambodia, and Kunzeik, lower Myanmar, thus attesting to the popularity of the verses in the seventh-eighth century Theravāda tradition of mainland Southeast Asia (Skilling 2002: 162-164).

29 Dhp 191, which summarises the Four Truths, is inscribed on a terracotta fragment from U Thong (Sph.i: Face A; Prasan 2509: 82; Skilling 1991: 243-244) and on a stone bar from Nakhon Pathom province (Nth i: Face D; Skilling 1997: 129-130). A parallel version of Dhp 191, albeit in so-called "hybrid Pāli-Sanskrit," is found in line 2 of the gold-plate inscription from Go Xoai, southern Vietnam (Skilling 1999: 172-173, 175), and also in Prakrit from Guntupalle, Andhra Pradesh, in India (Skilling 1991).

30 The practice of writing this sacred verse on precious metals is so far unattested in Dvāravatī although it surely existed in neighbouring regions. See for example the engraved gold-plates from Go Xoai, southern Vietnam (Skilling 1999: 171-177, fig. 1), the one of unknown provenance kept at the Musée Guimet in Paris (MA 4649B; Skilling 2003-04: 284, fig. 13), and another sample from Palembang, Sumatra (Griffiths 2011: 143-145, fig. 1a).

31 The FAD author who deciphered the inscription reconstructs it as belonging to the *yesaṃ* group (Amon 2551: 59) but the reasons behind such classification, while likely on the basis which follows, are not clearly stated.

32 Finot (1910: 148) read *yesaṃ* on the "vase en terre cuite" from Phra Pathom Chedi but Cœdès (1912: 29) proposed to read *tesaṃ*. The eye-copy published upside-down by Lunet de Lajonquière (1912: 113, fig. 21), however, clearly reads *yesaṃ*. I thank Laurent Hennequin for sending these references.

33 A complete tablet of this type is kept at the Nakhon Si Thammarat National Museum (19/246/kho) and was transferred from the Bangkok National Museum but its exact provenance is not known. In addition, a fragment found in Khu Bua is currently on display at the Ratchaburi National Museum (inv. no. unknown), and another fragment, presumably from Nakhon Pathom, is kept at the Chaiya National Museum (DV 244).

34 See Baptiste & Zéphir (2009: 56, 106, cats 13-14) for fine illustrations of two samples, one from Ratchaburi (242/2533) and the other from Suphan Buri provinces (64/2511). In addition, one tablet probably originating from Nakhon Pathom is kept at the Bangkok National Museum (151/2511), with an additional one on display at the Phra Narai National Museum, Lop Buri (225/2526), and yet another one at the Ashmolean Museum in Oxford (EAX. 170). For a recent iconographic study on the obverse of these tablets **[e.g. Figure 15a]**, see Woodward (2009).

35 In Thailand, King Mongkut or Rama IV (r. 1851-1868), an ex-monk and Buddhist scholar in his own right, first proposed that the *ye dhammā gāthā* was a précis of the *paṭiccasamuppāda* and the Four Truths. See the inscription left in Thai by the king in 1856 at Phra Pathom Chedi in Nakhon Pathom and reproduced *in extenso* on pages 43-45 of Cœdès 1961 (Thai edition).

36 The full quote is: *yo kho* [*vakkali*] *dhammaṃ passati so maṃ passati yo maṃ passati so dhammaṃ passati*. See also M I 190f and It 91.

37 That the *ye dharma gāthā* was later blurred with a type of mantra is clearly attested in the abbreviated Sanskrit form *oṃ ye te svāhā* found in (Pen)insular Southeast Asia (Cruijsen *et al.* 2013: n. 50). In the Tibetan tradition, Atiśa (ca 982-1054) also referred to the mantric use of this verse in his *Ritual for Making Miniature Clay Stūpas of the Vehicle of Perfections* (Bentor 1996: 115; Skilling 2008: 514).

38 For a similar analysis regarding the "conceptual copying" of a revered icon during the later Sukhothai period (1238-1438) in Thailand, see Pattaratorn (2009: 176-181).

References

Amon Chaosuan
2551 Charuek phop mai thi mueang boran sap champa (New Inscription Found at Sap Champa Ancient Town). *Silpakorn Journal* 51(5): 52-61. [In Thai; 2008 CE]

Arthid Sheravanichkul
2012 Narrative and Gift-giving in Thai Ānisaṃsa Texts. In Skilling, Peter & McDaniel, Justin (eds), *Buddhist Narrative in Asia and Beyond, Volume One*. Bangkok: Chulalongkorn University, pp. 37-46.

Bandhit Liuchaichan
2542 Bat phra: lakthan thang prawatisat lae borannakhadi (The Food Bowl and Its History). In *Sangkhom lae watthanatham nai prathet thai/Thailand: Culture and Society*. Bangkok: Maha Chakri Sirindhorn Anthropology Centre, pp. 525-537. [In Thai with English Abstract; 1999 CE]

Bauer, Christian
1991a Notes on Mon Epigraphy. *Journal of the Siam Society* 79(1): 31-83.

1991b Notes on Mon Epigraphy II. *Journal of the Siam Society* 79(2): 61-79.

Bentor, Yael
1996 *Consecration of Images and Stūpas in Indo-Tibetan Tantric Buddhism*. Leiden: Brill.

Boisselier, Jean
1961 Un fragment inscrit de Roue de la Loi de Lop'buri. *Artibus Asiae* 24(3/4): 225-231.

Boucher, Daniel
1991 The *Pratītyasamutpāda-gāthā* and Its Role in the Medieval Cult of the Relics. *Journal of the International Association of Buddhist Studies* 14(1): 1-27.

Brown, Robert L.
1996 *The Dvāravatī Wheels of the Law and the Indianization of South East Asia*. Leiden: Brill.

Cha-em Kaeoklai
2537a Charuek kaset sombun (The Kaset Sombun Inscription). *Silpakorn Journal* 37(3): 59-65. [In Thai; 1994 CE]

2537b Charuek ban hua khua (The Ban Hua Khua Inscription). *Silpakorn Journal* 37(6): 90-95. [In Thai; 1994 CE]

2544 Charuek phra phuttha saiyat phu wiang (An Inscription Found on the Reclining Buddha Image of Phu Wiang). *Silpakorn Journal* 44(3): 56-61. [In Thai with English Abstract; 2001 CE]

Cœdès, George
1912 Compte rendu de Lunet de Lajonquière, 1912. *Bulletin de l'École française d'Extrême-Orient* 12: 29.

1926-27 Siamese Votive Tablets. *Journal of the Siam Society* 20(1): 1-23.

1952 À propos de deux fragments d'inscription récemment découverts à P'ră Păthŏm (Thaïlande). *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 96(1): 146-150.

1956 Une roue de la loi avec inscriptions en pāli provenant du site de P'ră Păthŏm. *Artibus Asiae* 19: 221-226.

1961 *Recueil des inscriptions du Siam. Pt. II. Inscriptions de Dvāravati, de Çrīvijaya et Lāvo*. Bangkok: Fine Arts Department. [Second Revised Edition; First Edition 1924. In Thai and French]

1937-66 *Inscriptions du Cambodge*. Eight Volumes. Hanoi-Paris: École française d'Extrême-Orient.

Cruijsen, Thomas, Griffiths, Arlo & Klokke, Marijke
2013 The Cult of the Buddhist Dhāraṇī Deity Mahāpratisarā along the Maritime Silk Route: New Epigraphical and Iconographic Evidence from the Indonesian Archipelago. *Journal of the International Association of Buddhist Studies* 35(1-2), pp. 71-157.

Dayal, Har
1970 *The Bodhisattva Doctrine in Buddhist Sanskrit Literature*. Delhi: Motilal Banarsidass. [Reprint; First Edition 1932]

Dupont, Pierre
1959 *L'archéologie mône de Dvāravatī*. Two Volumes. Paris: Publication de l'École française d'Extrême-Orient.

Fine Arts Department (FAD)
2524 *Charuek boran run raek phop thi lop buri lae klai khiang* (*The Earliest Inscriptions from Lop Buri and Its Surrounding Areas*). Lop Buri: Fine Arts Department. [In Thai; 1981 CE]

2529 *Charuek nai prathet thai* (*Inscriptions of Thailand*). Five Volumes. Bangkok: National Library of Thailand. [In Thai; 1986 CE]

2548 *Borannawatthu nai phiphithaphan sathan haeng chat phra pathom chedi* (*Ancient Artefacts from the Phra Pathom Chedi National Museum*). Nonthaburi: Fine Arts Department. [In Thai; 2005 CE]

2550 *Uthayan prawatisat si thep* (*Si Thep Historical Park*). Lop Buri: Fine Arts Department. [In Thai with English Summary; 2007 CE]

Finot, Louis
1910 Inscriptions du Siam et de la Péninsule malaise (Mission Lunet de Lajonquière). *Bulletin de la Commission archéologique de l'Indochine* (1910): 147-154.

Gabaude, Louis
2003 Le don ou *dāna* comme fenêtre sur les mentalités bouddhistes thaïes. Paper presented at the Conference *Buddhist Legacies in Southeast Asia: Mentalities, Interpretations and Practices*, Bangkok, 18-20 December 2003. [Unpublished]

Gagneux, Pierre-Marie
1972 Vers une révolution dans l'archéologie indochinoise : le Buddha et les stèles de Thalat, Vientiane. *Bulletin des amis du royaume lao* 7-8: 83-105.

Griffiths, Arlo
2005 La stèle d'installation de Śrī Tribhuvaneśvara : une nouvelle inscription préangkorienne du musée national de Phnom Penh (K. 1214). *Journal Asiatique* 293(1): 11-43. [In collaboration with J.C. Eade & G. Gerschheimer]

2011 Inscriptions of Sumatra: Further Data on the Epigraphy of the Musi and Batang Hari Rivers Basins. *Archipel* 81: 139-175.

Guillon, Emmanuel
1974 Recherches sur quelques inscriptions môn. *Bulletin de l'École française d'Extrême-Orient* 61: 339-348.

Guy, John
2002 Offering Up a Rare Jewel: Buddhist Merit-making and Votive Tablets in Early Burma. In Green, Alexandra & Blurton, T. Richard (eds), *Burma: Art and Archaeology*. London: The British Museum Press, pp. 23-33.

Halliday, Robert
1930 Les inscriptions môn du Siam, éditées et traduites. *Bulletin de l'École française d'Extrême-Orient* 30: 81-105.

Horner, Isaline Blew (trans.)
1951 *The Book of the Discipline (Vinaya-Piṭaka), Volume IV (Mahāvagga)*. London: Pali Text Society and Luzac & Co.

1954 *The Collection of the Middle Length Sayings (Majjhima-Nikāya), Volume I*. London: Pali Text Society and Luzac & Co.

Kannika Wimonkasem
1995 Étude paléographique des inscriptions mônes découvertes dans le nord-est de la Thaïlande. In Silpakorn University (ed.), *Premier symposium franco-thaï, 18-24 juillet 1988. La Thaïlande des débuts de son histoire jusqu'au XVe siècle*. Bangkok: Silpakorn University, pp. 236-319.

Kannika Wimonkasem & Phongkasem Sonthithai
2542 Charuek than sathup din phao wat nong kradon (The Earthenware Stūpa Inscription of Wat Nong Kradon). *Phasa-Charuek* 6: 143-149. [In Thai; 1999 CE]

Kongkaeo Wiraprachak
2541 Charuek bot namasakan bon phaen it samai thawarawadi (Dvāravatī Brick Inscription of Homage). *Silpakorn Journal* 41(4): 44-47. [In Thai; 1998 CE]

2550 Charuek bai sema ban phanna (Sema Inscription at Ban Phanna). *Silpakorn Journal* 50(2): 53-57. [In Thai; 2007 CE]

Lunet de Lajonquière, Étienne Edmond
1909 Le domaine archéologique du Siam. *Bulletin de la Commission archéologique de l'Indochine* (1909): 188-262.

1912 Essai d'inventaire archéologique du Siam. *Bulletin de la Commission archéologique de l'Indochine* (1912): 19-181.

Masefield, Peter (trans.)
1994 *The Udāna*. Oxford: Pali Text Society.

Murphy, Stephen A.
2010 *The Buddhist Boundary Markers of Northeast Thailand and Central Laos, 7th-12th Centuries CE: Towards an Understanding of the Archaeological, Religious and Artistic Landscapes of the Khorat Plateau*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished]

Naiyana Prongthura *et al*.
2534 Charuek rup thaeng si liam akson pallawa thi khrongkan ho watthanatham mahawithayalai sinlapakon phraratchatwang sanam chan nakhon pathom (An Inscription on a Rectangular Bar in Pallava Script in the Cultural Project Centre, Silpakorn University, Sanam Chandra Palace Campus, Nakhon Pathom). *Phasa-Charuek* 3: 40-44. [In Thai; 1991 CE]

Nath, Vijay
1987 *Dāna: Gift System in Ancient India (c. 600 B.C.-c. A.D. 300). A Socio-economic Perspective*. New Delhi: Munshiram Manoharlal.

Pattaratorn Chirapravati, M.L.
2009 From Text to Image: Copying as Buddhist Practice in Late Fourteenth Century Sukhothai. In Berkwitz, Stephen C. *et al*. (eds), *Buddhist Manuscript Cultures: Knowledge, Ritual and Art*. New York & London: Routledge, pp. 172-188.

Phasook Indrawooth
2008 *Dvāravati Dharmacakra/ Thawarawadi thammachak*. Bangkok: Silpakorn University. [In English and Thai; 2551 BE]

Phimphan Phaibunwangcharoen
2013 Buddhist Doctrine (Dhamma) Found in Early Days Thailand. Paper presented at the International Conference titled *The Origin of Buddhism in Southeast Asia: Dhamma and Archaeology*, Nakhon Si Thammarat, 12-13 January 2013. [Unpublished]

Phuthon Phumathon
2529 *Mueang boran sap champa (The Ancient City of Sap Champa)*. Lop Buri: Lop Buri Conservation of Ancient Monuments, Objects and Environments Club. [In Thai; 1986 CE]

Piriya Krairiksh
2517 *Phuttha sasana nithan thi chedi chula pathon/Buddhist Folk Tales Depicted at Chula Pathon Cedi*. Bangkok: Private Publisher. [In Thai & English; 1974 CE]

Prapod Assavavirulhakarn
2010 *The Ascendancy of Theravāda Buddhism in Southeast Asia*. Chiang Mai: Silkworm Books.

Prasan Bunprakhong
2509 Charuek bon phaen din phao lae thi than phra phuttharup (Inscriptions on Terracotta and at the Base of a Buddha Image). *Silpakorn Journal* 10(1): 81-82. [In Thai; 1966 CE]

2511 Kham an charuek thi than phra phuttharup akson lae phasa mon boran (Reading Inscriptions on the Base of Buddha Images in Old Mon Language and Script). *Silpakorn Journal* 11(6): 108-111. [In Thai; 1968 CE]

Ray, Reginald A.
1994 *Buddhist Saints in India: A Study in Buddhist Values & Orientations*. New York: Oxford University Press.

Revire, Nicolas
2009 À propos d'une « tête » de *khakkhara* conservée au Musée national de Bangkok. *Aséanie* 24: 111-134.

2011 Facts and Fiction: The Myth of Suvaṇṇabhūmi through the Thai and Burmese Looking Glass. *Mahachulalongkorn Journal of Buddhist Studies* 4: 79-114.

2012a Compte rendu de *Raignanphonkan wichairuangkan pradisathan phraphutthasasana chak lankathawip nai dindaen prathet thai samai watthanatham thawarawadi/ Research Report on: The Establishment of Sri Lankan Buddhism in Thailand during the Dvaravati Period*, Bandhit Liuchaichan *et al.*, Bangkok: Fine Arts Department of Thailand, 2553 [2010 CE], 320 p., en thaï avec résumé en anglais. *Aséanie* 29: 151-157.

2012b A Comprehensive Study of Bhadrāsana Buddha Images from First-Millennium Thailand. *Rian Thai: International Journal of Thai Studies* 5: 91-152.

Forthcoming Re-exploring the Buddhist "Foundation Deposits" at Chedi Chula Prathon, Nakhon Pathom. In Lammerts, Christian (ed.), *Buddhist Dynamics in Pre-modern Southeast Asia*. Singapore.

Skilling, Peter
1991 A Buddhist Verse Inscription from Andhra Pradesh. *Indo-Iranian Journal* 34: 239-246.

1997 New Pāli Inscriptions from Southeast Asia. *Journal of the Pali Text Society* 23: 123-157.

1999 A Buddhist Inscription from Go Xoai, Southern Vietnam and Notes Towards a classification of *Ye Dharma* Inscriptions. In Silpakorn University (ed.), *80 pi sattrachan dr. prasoet na nakhon: ruam bot khwam wichakan dan charuek lae ekasan boran (80 Years: A Collection of Articles on Epigraphy and Ancient Documents Published on the Occasion of the Celebration of the 80th Birthday or Prof. Dr. Prasert Na Nagara)*. Bangkok: Silpakorn University, pp. 171- 187.

2002 Some Citation Inscriptions from South-East Asia. *Journal of the Pali Text Society* 27: 159-175.

2003-04 Traces of the Dharma: Preliminary Reports on Some *Ye Dhammā* and *Ye Dharmā* Inscriptions from Mainland South-East Asia. *Bulletin de l'École française d'Extrême-Orient* 90-91: 273-287.

2008 Buddhist Sealings and the *Ye Dharmā* stanza. In Gautam Sengupta & Sharmi Chakraborty (eds), *Archaeology of Early Historic South Asia*. New Delhi: Pragati Publications, pp. 503-525.

2009 Des images moulées au service de l'idéologie du mérite. In Baptiste, Pierre & Zéphir, Thierry (eds), *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des Musées nationaux, pp. 107-113.

Swearer, Donald K.
2004 *Becoming the Buddha: The Ritual of Image Consecration in Thailand*. Princeton & Oxford: Princeton University Press.

Takakusu Junjirō (trans.)
1998 *A Record of the Buddhist Religion as Practiced in India and the Malaya Archipelago*. New Delhi: Munshiram Manoharlal. [Reprint; First Edition, 1896]

Uraisi Varasarin
1995 Les inscriptions mônes découvertes dans le nord-est de la Thaïlande. In Silpakorn University (ed.), *Premier symposium franco-thaï, 18-24 juillet 1988. La Thaïlande des débuts de son histoire jusqu'au XVe siècle*. Bangkok: Silpakorn University, pp. 196-211.

Uraisi Varasarin & Anchana Imsombat
1975 Une nouvelle inscription de la région de Lopburi. In Fine Arts Department (ed.), *Art and Archaeology in Thailand, Volume II*. Bangkok: Fine Arts Department, pp. 70-76.

U-tain Wongsathit
2556 Kham an lae kantit khwam mai charuek sao paet liam 2, sap champa (New Reading and Interpretation on the Octogonal Pillar no. 2 from Sap Champa). Electronic Paper published in the website of the Maha Chakri Sirindhorn Anthropology Centre on 6 February 2013. [Available online in Thai: http://www.sac.or.th/main/content_detail.php?content_id=311]

Vickery, Michael
1998 *Society, Economics, and Politics in Pre-Angkor Cambodia: The 7th-8th Centuries*. Tokyo: The Centre for East Asian Cultural Studies for Unesco/The Toyo Bunko.

Woodward, Hiram, Jr
2003 *The Art and Architecture of Thailand. From Prehistoric Times through the Thirteenth Century*. Leiden-Boston: Brill.

2009 A Dvāravatī Tablet Reconsidered. *Aséanie* 23: 63-75.

Website

The Inscriptions in Thailand Database Project: http://www.sac.or.th/databases/inscriptions

Dvāravatī *Cakra*s: Questions of Their Significance

Pinna Indorf

Introduction

Carved stone *cakra*s (wheels) found at Dvāravatī sites in Thailand, once mounted on columns (*stambha*), are generally agreed to be *dharmacakra*s representing the Turning of the Wheel of the Law, i.e., the Buddha's First Sermon. They are considered unique to the Mon Dvāravatī culture since no other place or time has left a comparable abundance of such remains. There are, however, many *cakra*s throughout the early Buddhist world. *Cakrastambha*s were part of a broader Indian tradition, so were *dhvajastambha*s (banner-columns) of diverse types, and the *cakra* is one of the treasures of a *cakravartin*. A *stūpa* facing panel from Jaggayyapeta (Zimmer 1984: pl. 37) depicting the treasures of a *cakravartin* shows both wheel- and gem-*stambha*s. Gupta period coins show kings holding a small staff crowned with a *cakra*, said to be a palladium (Gutman 1986: 282-284). The period of the sixth-ninth centuries CE, the age of Dvāravatī's prominence in the Chao Phraya Delta, was a time of tremendous development for both religions and states, and the two spheres were inter-related. For these reasons, and since the remains are numerous, it seems there should be more to learn from them and their diversity of detail. This essay re-evaluates this diversity and questions its significance regarding a potential socio-political role.

Clues relevant to this possible significance emerged from four aspects, namely:

1. The range of types of *cakra*s and *dhvajastambha*s and their contexts.
2. Details in the *Dīghanikāya* (D III 59-76) regarding the Celestial Wheel of a *cakravartin*.
3. The significance of the base ornament and numbers of spokes on the *cakra*s themselves, facets not yet typologically documented.
4. Rituals revealed in historical records, which might reflect cultural survivals of Mon Buddhism or Dvāravatī kingship practices.

*Cakra*s and *Dhvajastambha*s among Dvāravatī's Neighbours

A few *cakra*s can be found among the remains of Dvāravatī's predecessors and contemporaries. Most significantly, a fragment of a stone *cakra* in the Funan collection of the Museum of History, Ho Chi Minh City shows a striking similarity to one found at Yarang (B #38).[1] Louis Malleret (1959: pl. LXXXIVb) shows one (diameter 50 cm.) from Oc Eo, southern Vietnam, which has a lotus motif on its hub and three incised lines around the felly.[2] Another fragment of a *cakra* exists from

Opposite: Cakra *from Nakhon Pathom with Sūrya and dwarves at the base, ca 8th century, diameter 72 cm. Bangkok National Museum, inv. no. DV 4 [Photograph courtesy of Paisarn Piemmettawat].*

Figure 1a: *The south tympanum brick shrine at Hanchey (late 6th or mid-7th c.) bears traces of two* cakrastambha*s flanking a weathered form [Photograph by Pinna Indorf].*

Figure 1b: *Detail of the Hanchey tympanum, highlighting the two* cakrastambha*s [Drawing by Pinna Indorf].*

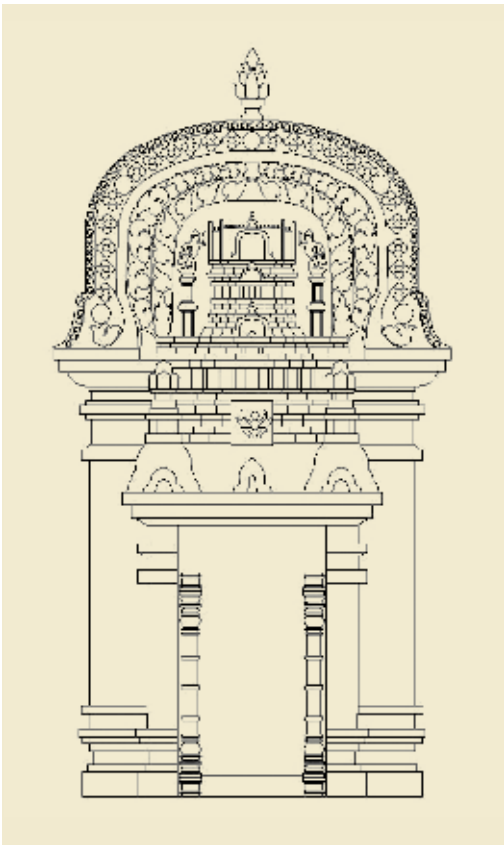
Top opposite Figure 2: *The tympanum of the west* bhadra *of Sambor Prei Kuk N1 had a low-relief of* dhvajastambha*s crowned by* vidhyādhara*s flanking a shrine [Drawing courtesy of Keo Sophal, after Tranet 1997: I, 125].*

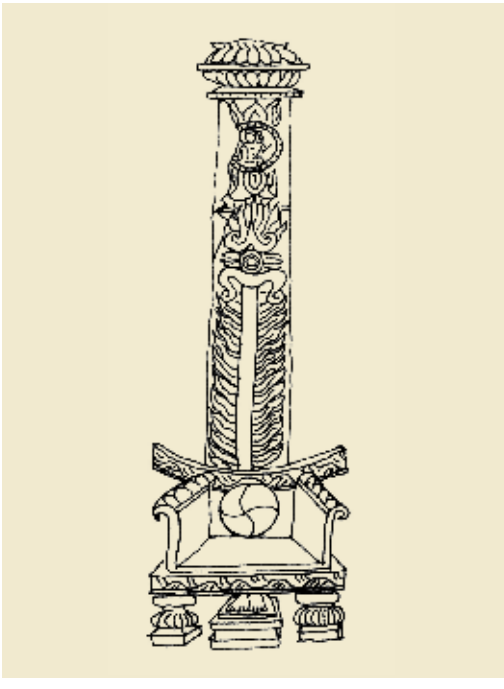
Wat Phu, southern Laos,[3] with eight low-relief spokes and a felly band of indistinct ornament. Its triangular edge motifs are similar to some on one from Lingarajupalem **[Table 1: Andhra Pradesh]** and one from Nakhon Si Thammarat (B #42). Vaiṣṇava *cakra* motifs turned up in what may be royal graves of Funan (Dao Lin Côn 1994: 114, fig. 7). Evidence of *cakrastambha*s also survives from Zhenla on the south *bhadra* tympanum of the Śaiva sanctuary at Hanchey **[Figures 1a-b]**, which has door frame inscriptions from the reign of Bhavavarman.[4] The low-relief shows a pair of *cakrastambha* flanking what was probably a shrine. This arrangement is also seen in the west *bhadra* tympanum of Sambor Prei Kuk N1 **[Figure 2]** where the *dhvajastambha*s were crowned with *vidhyādhara*s.

To Dvāravatī's west, an inscription from a Pyu site mentions a *cakra* (Gutman 1976: 77) and two column capitals from Rakhine state (Arakan) have *cakra*s fronted with figures of Indra (Gutman 1986: 282-284). These examples show the regional co-existence of Buddhist and Brahmanical *cakra* symbols. Viewed from the perspective of tenth century CE and later texts and practices, the mix of elements is hard to reconcile. However, if they are viewed in terms of early "syncretic,"

transitional practices, for example, when the Pāśupatas and multi-deity worship evolved, absorbing and replacing varied traditional practices (Maxwell 1997; Mus 2001), then perhaps emerging cultural powers were able to apply thematic elements of the different streams of influence to different levels of their evolving practices, e.g., at one level, in statecraft ritual; another, as personal model for the individual "king;" and yet another, as personal religion.

*Dhvajastambha*s in a Buddhist context in India also show various themes, which by example, allowed Dvāravatī's elite to find equally varied expression. A third century inscription in Andhra Pradesh mentions a *buddhunikambha*, a column crowned with a Buddha image (Rao *et al*. 1998: 176-178). Peter Harvey (1990: 81-82) explains a column fringed by flame represented the body of the Buddha and spiritual energy. A low-relief pillar from Sarnath is crowned with a *pūrṇaghaṭa* (marked by a circular lotus), a *triratna*, a *cakra* and an umbrella (Harvey 1990: fig. 4). Other low-relief plaques show flaming, luminous columns of various forms (Rosen Stone 1994: pl. 123; Phasook 2008: 30-31, figs 13-15) adorned with so-called *triratna* symbols including a *cakra* **[Figure 3]**. A fifth century pillar from Sāñcī was crowned with an image of the Bodhisattva Vajrapāṇi. Susan Huntington (1985: 56-57, fig. 10.14) notes this *stambha* signals an important shift in focus from the Buddha as the enlightened being to the potential for all to be enlightened. These examples may suggest that Dvāravatī's *cakra*s could have specifically symbolised aspects of enlightenment attainable by many not just the notion of the preaching of the First Sermon. John Irwin (1990: 14) in fact argues that the early worship of the Buddhist wheel-pillar **[Figure 4]** is not explained by the "Turning of the Wheel of the Law" (i.e., the First Sermon), but by its association with the moment of enlightenment because it can be seen as parallel with the cosmic act of Viṣṇu or Indra (also know as Śakra or Sakka) in a creation myth, i.e., the beginning of a new era. There is also cause to argue that Dvāravatī's so-called "Phanasbodi" Buddha images **[e.g. Figure 7]** may have been part of its *dhvajastambha* tradition. The fiery or foliated column, as a symbol of the enlightened being, has its parallel in the cosmic axis of the *rājasūya* ritual. When the initiate (king) raises his arms to assume the role of cosmic pillar, he is said to be mounted by either Indra or Mitra-Varuna plus Sūrya (Heesterman 1957: 12-13, 102-103, 114). This has its conceptual parallel in the Ajanta Buddha with the crown being held above his head (Huntington 1985: fig. 12.4). The "Phanasbodi" image is often associated with the Buddha's ascent to the Heaven of the Thirty-three (Skt, Trāyastriṃśa; P., Tāvatiṃsa) to preach the *dharma*, which can be associated with the *bodhisattvābhiṣeka* confirming the Buddha as manifestation of the Universal (Huntington 1985: 245, 247). Sarah Tiffin and Martin Stuart-Fox (2002: 58-59) also discuss "Phanasbodi" images as signifying both





Below opposite Figure 3: Triratna *column in low-relief from a* stūpa *at Gummididurru, Andhra Pradesh, India, now in the Cincinnati Museum of Art [Drawing by Pinna Indorf, after Rosen Stone 1994: pl. 123].*

Figure 4: *A low-relief panel on the railing around the* bodhi-*tree at Bodhgayā, India, showing a* cakrastambha *in a* caityagṛha *flanked by two* dhvajastambha*s and two devotees paying their personal respects [Photograph by Pinna Indorf].*

Bodhisattva-hood and the descent from Trāyastriṃśa.[5] They suggest *cakra*s functioned, as did Aśokan pillars, as "signposts" of power, and they also draw parallels with the *abhiṣeka* rituals of kingship. The "Phanasbodi" images mounted in the column capital of a *cakrastambha* as proposed by Robert Brown (1996: fig. 4) or on the front of a pillar, like the *triratna* motif of Andhra Pradesh (Rosen Stone 1994: fig. 123), would have the same dual significance **[Figure 3]**. This duality would be appropriate if Dvāravatī had dual models of kingship as Dhida Saraya (1999: 200-203) argues. Such duality would have echoed the Pyu practice, which seems to have merged Bodhisattva and kingship ideals (Gutman 1996: 166-167; Tiffin & Stuart-Fox 2002: 64). It would increase the need and, when combined with other motifs such as the base detail and number of spokes, also the potential for nuanced significance of the *cakra* as a symbol.

The *Cakra* of a Buddhist *Cakravartin*

The story told in the *Dīghanikāya* (D III 59-76) is of a *cakravartin* who, on advice that the luster of his "Celestial Wheel" was fading, stepped down from his throne, handing it over to his son. Once his son was on the throne, the Celestial Wheel disappeared and the father told his son that this was normal, and the son's own Celestial Wheel would appear only when the time was right, when he had ruled wisely. And so it did. He claimed it and followed it throughout his kingdom. From this story, several significant details emerge:

- The Celestial Wheel, as *cakkaratana* ("Wheel Treasure," in Pāli), is unique to each king. A son cannot inherit his father's wheel.
- The Celestial Wheel only appears some time after the king ascends the throne, after he rules wisely, not when he ascends the throne.
- When the wheel does appear, it appears in a monastic context where the king is present and the king, thus a new *cakravartin*, then performs an *abhiṣeka* ceremony for the wheel. The *abhiṣeka* of a *stūpa* is shown in a column capital at Kaṇherī (Dehejia 1972: 184, pl. 77), confirming that the ceremony was performed for significant monuments in India **[Figure 5]**.

The implications of this are clear. Each *cakkaratana* represents only one king, related to his wise kingship. This need for uniqueness is also true in the case of the more ancient traditions of leadership incorporating spirit of ancestor and place practices as explained by Paul Mus (2001: 74-80). In those ancient traditions, specifically in the context of India and Southeast Asia, each spirit or ancestor stone (located at the centre of the domain) represented a unique spiritual intermediary for a community. In the transition to kingship based on Indian traditions, the *cakra* as a unique palladium, could be mapped over the notion of the old intermediary of earlier practices, the ancestral spirit stones. The importance of dwarves on Dvāravatī monument bases seems to hint of those earlier place spirit practices.[6] Could the two large stones with quincunx arrangements of auspicious motifs, from Dvāravatī sites, one in

the Phra Pathom Chedi National Museum in Nakhon Pathom **[Figure 6]** and another in the Bangkok National Museum, be such transitional ancestor stones? Were they replaced with *cakra*s having specific references to aspects of Buddhist virtues and wisdom set up at a sacred place, a royal monastery? A ritual *abhiṣeka* would not necessarily have been connected to the coronation.[7] First the king had to establish his sacred place or demonstrate his meritorious deeds, also giving him time to get his *cakra* ready for an *abhiṣeka* ceremony. If Brahmanical or Buddhist neighbours were using the common, shared symbolic vocabulary in royal ritual, Dvāravatī's *cakra*s must be made specific supraregionally.

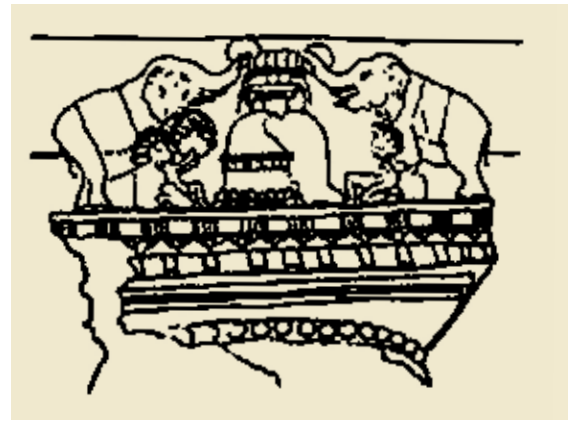


Figure 5: *Column capital at Kaṇherī, India, which shows the* abhiṣeka *of a* stūpa *[Drawing by Pinna Indorf, after Dehejia 1972: 184, pl. 77].*

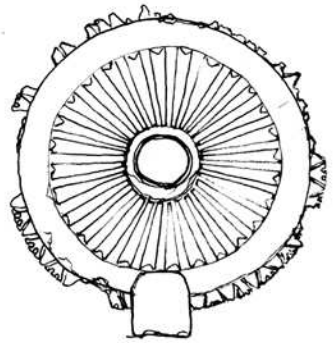
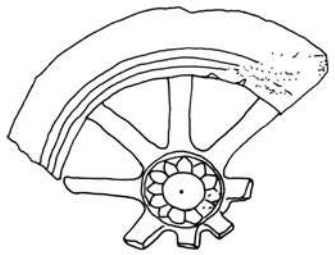
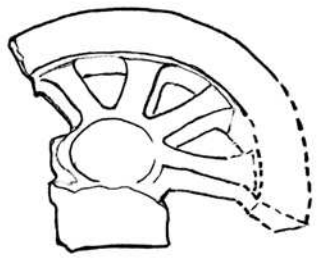
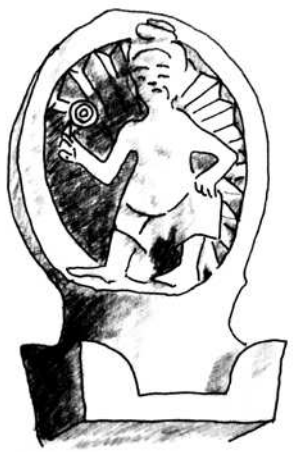
Symbolic Significance of the Base Element and Number of Spokes

Phasook Indrawooth (2008: 34) has specifically proposed that Dvāravatī *cakra*s were meant to convey that Dvāravatī "kings" were *cakravartin*s through the Dharma (*dharmavijaya*). This notion can be taken a step further with the ideals of a proposed dual kingship model, Bodhisattva as *cakravartin* (Dhida 1999; Tiffin & Stuart-Fox 2002: 64). The model of the Bodhisattva would emphasise the practice of Dharma, but does not stop there; it is the practice of Dharma as leading toward enlightenment and to the ability to help others also attain enlightenment. Earlier studies have shown, for example, that some (Phasook 2008: 30-33) or all (Indorf & Reddy 2007 and 2009) Buddhist *cakra*s of Dvāravatī address specific aspects of enlightenment as represented by their inscriptions and ornament (see also Revire, this volume). The symbolism was shown to be varied, rich and nuanced, but the main aspects can be summarised briefly as follows.

Sūrya on the *cakra*s **[Table 1: MKV]**, as mentioned above, may allude to the *bodhisattvābhiṣeka* or the Buddha as the Supernal Sun,[8] the Great Awakening and the nascent notion of Vairocana.[9] The Gaja-Lakṣmī **[Table 1: MKII.B]** or "*abhiṣeka* of Śrī" motif, usually taken simply as a symbol of prosperity, when in a symmetrical composition, can refer to enlightenment. In the *Viṣṇupurāṇa* (XII) Mahālakṣmī is said by Indra (Śakra) to be "great knowledge, mystic knowledge, and spiritual knowledge which confers eternal liberation" (Boner 1990: 74). The Brahmanical Gaja-Lakṣmī motif, according to Albert Grünwedel (1974: 39-40), was taken into Buddhism in full iconographical form. Another deity, shown emerging from a lotus pericarp (B #35) **[Table 1: MKII.A]**, could be the Earth Goddess bearing witness to the Buddha's great virtue at his enlightenment. Finally, the Kala face **[Table 1: KIII]**, also known as Kīrtimukha, is associated with cycles of Time and *saṃsāra* (Wheel of Life), which is also expressed in the Chain of Causation in the Buddhist teachings. It could be expressed in the twelve or twenty-four spokes found on the Kala face *cakra*s. That is, the twelve-factor formulation of the Chain of Causation (e.g., S II 21) as it first moves forward in *saṃsāra* and then in reverse order as the elements are destroyed

Figure 6: *Stone (68 x 79 cm.) carved with an elephant and auspicious motifs, now in the Phra Pathom Chedi National Museum, Nakhon Pathom, inv. no. 32/2530 [Photograph courtesy of G. Swati Reddy].*

Table 1: *Cakra* Types, Determined by Base Element and Felly Patterns

Regional precedents		
Type Definition	**Typical Base and Felly detail**	
Andhra Pradesh *Cakra* Plain felly and cut spokes, felly edged with sculpted motifs. Plain stele form base element	 Lingarajupalem, ca 4th century, edged with triangles and a form identified as a *triratna*. The base is supported with a stele form overlapping the felly [Drawing by Pinna Indorf, after ASI 1960: pl. LVII.C]	
Funan *Cakra*s Plain or relatively plain felly and cut spokes. No examples of base treatment have so far been found	 Oc Eo, Mekong Delta, Vietnam, 6th century [Drawing by Pinna Indorf, after Malleret 1959: 401, pl. LXXXIVb no. 129]	 Mekong Delta, Vietnam History Museum, Ho Chi Minh City, ca 6th century (?) [Drawing by Pinna Indorf]
Rakhine *Cakra* Plain felly and low-relief spokes. Figural element at base extends up in front of *cakra*	 Capital of Rakhine Indrakila, 6th century [Drawing by Pinna Indorf, after Gutman 1986: pl. 2a]	

Note: Felly group numbers and *cakra* numbers follow Brown (1996): e.g. B #21 = Brown's *cakra* #21

Table 1 (Continued)

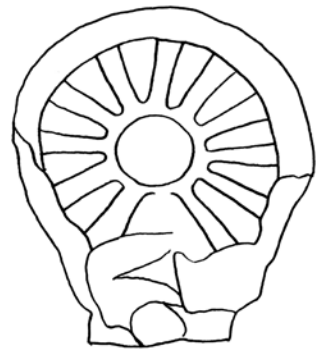
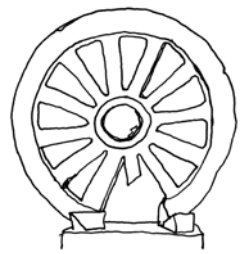
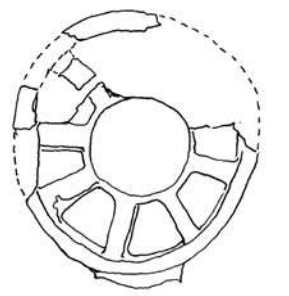
Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)		
Type Definition	**Typical Base and Felly detail**	
Type F = Funan Base 1B, 1C or 2A + Felly group 6 Plain felly (group 6) and spokes, with: FI: Base of plain felly raised (base 1B) FII: Base has figural motif (2A) just overlapping felly or also spokes	 FI.A: *Cakra*, ø 20 cm., from Yarang (B #38), which has a raised rectangle at the felly base (1C) with a plain prism and sphere below [Drawing by Pinna Indorf, after Phasook 2008: 174, bottom]	 FII.C: *Cakra* with low-relief spokes, which seems to have a raised arm at the base (2A) thus making its base similar to the Rakhine *cakra*s. Its find-site is not known [Drawing by Pinna Indorf, after Dhanit 1990: 13]
FIII: Plain felly continues uninterrupted at base (1B) with plain tenon below	 FIII.A: *Cakra* from Sing Buri (B #39), with cut spokes, which could have had a thicken felly (base 1B or 1C?), or perhaps a small base element, as in the Andhra Pradesh *cakra*, but appears similar to the one shown at right [Drawing by Pinna Indorf, after Gosling 2004: 58]	 FIII.B: *Cakra* from Nakhon Pathom (B #40), with plain felly, low-relief spokes and a base type 1B with a tenon below [Drawing by Pinna Indorf, after Dhanit 1990: 12]
Type K = Khmer Base 1B, 1C, 2A or 2B + felly group 1 Felly with lozenge and floral motif (group 1), having the following base treatments: KI: Felly continues uninterrupted at the base (1B)	 KI.C: *Cakra* at Khao Khlang Nai, Si Thep with base 1B [Photograph by Pinna Indorf]	 KI.C: Detail of the felly pattern (group 1) of the *cakra* at Khao Khlang Nai, Si Thep shown to the left [Photograph by Pinna Indorf]

Table 1 (Continued)

Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)		
Type Definition	**Typical Base and Felly detail**	
KII: Base has non-figural male energy symbol (2A), floral column or triangulated, foliated flame	 KII.B: Triangulated flame column (2A) at the base of a *cakra* (B #5) from Nakhon Pathom, in the Bangkok National Museum [Photograph by Pinna Indorf]	 KII.B: Felly detail of the *cakra* shown to the left, showing a clear lozenge and floral motif (group 1) [Photograph by Pinna Indorf]
KIII: Base has figural male energy symbol (2B), a Kala face	 KIII.B: Detail of a Kala face base (2B) on a *cakra*, now in Guimet Museum, Paris (B #10) [Photograph by Nicolas Revire]	 KIII.B: Felly detail (group 1) of *cakra* shown to the left now in Guimet Museum, Paris [Photograph by Nicolas Revire]
KIV: Base of felly is thickened (1C) and carved with low-relief motif	 KIV.C: Base (1C) detail of a *cakra* from Nakhon Pathom (B #14) [Drawing by Pinna Indorf, after Phasook 2008: 144, bottom]	 KIV.C: Felly detail on the same *cakra* as base shown to the left. Showing lozenge and floral motif (group 1) in which spirals in reflected symmetry are dominant [Drawing by Pinna Indorf, after Phasook 2008: 144, top left]

Table 1 (Continued)

Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)		
Type Definition	**Typical Base and Felly detail**	
Type M = Mon Base 1A, 1B or 3A + felly group 2, 4, or 5 Felly with bead bands and floral motifs with spirals (group 2) in reflected or cyclical symmetry, or translated leaves or spirals (group 4), or plain bands edged by beads on one or both sides (group 5) MI: Felly group 2 or 5. Base of felly is often missing, thus unknown; when present, it shows a continuous felly band, some with a lotus below (1A, 1B)	 MI.E: Detail of *cakra* from Ban Nong Chik, Khao Yoi dist., Phetchaburi prov., in the Bangkok National Museum. The felly pattern (group 5) continues uninterrupted at the base (1B) [Photograph by Pinna Indorf]	 MI.A2: Fragment of felly (group 5) from Chai Nat in which the plain band had been inscribed [Drawing by Pinna Indorf, after Bauer 1991: pl. 2] MI.F: Felly ornament has floral motif incorporating spiral (group 2), turning outward in reflected symmetry, on a *cakra* fragment (B #19) at Wat Borommathat, Chaiya [Drawing by Pinna Indorf, after Brown 1996: drawing 8b]
	 MI.J: *Cakra* (B #23) in the Bangkok National Museum, with continuous felly band (group 2) and (on one side only) a single row of lotus petals below (base 1A) [Photograph by Pinna Indorf]	 MI.J: Detail of the felly (group 2) of *cakra* shown to the left with a floral motif incorporating spirals in cyclical symmetry. Note the hub band with radial curled tip leaves, a motif element used in at least two *cakra* fellies [Photograph by Pinna Indorf]

Table 1 (Continued)

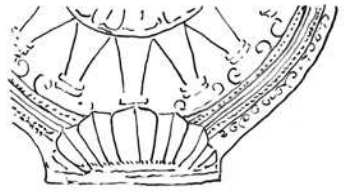
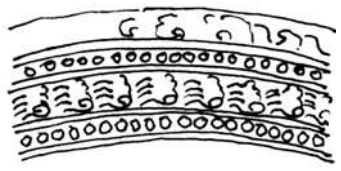
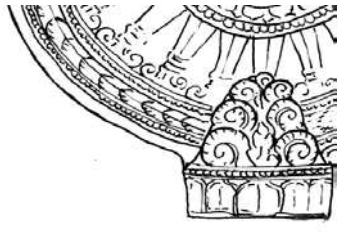
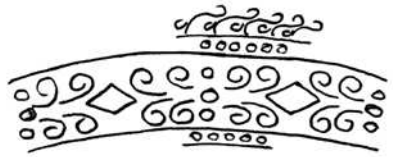
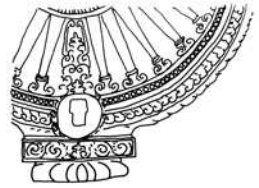
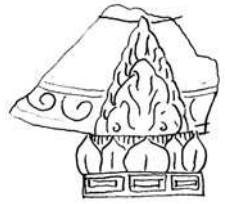
Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)	
Type Definition	**Typical Base and Felly detail**
MII: Felly group 2, 4 or 5. Base with a floral stele form (3A)	 MII.A2: *Cakra* from Nakhon Pathom (B #21) in the Phra Pathom Chedi National Museum, with floral stele base (3A) and a felly motif (group 2) with extended spirals in cyclical symmetry [Drawing by Pinna Indorf, after Brown 1996: fig. 21a, drawing 23]
 MII.H: *Cakra* (B #31) in the Phra Pathom Chedi National Museum, with floral stele base (3A) (Photograph by G. Swati Reddy)	 MII.E: *Cakra* (B #34) from Nakhon Pathom with plain felly band (group 5) and a lotus petal fan as a base stele (3A) [Drawing by Pinna Indorf, after Dhanit 1990: 17]
	 MII.G: Translated curl-tipped leaf motif between bead bands (group 4) on *cakra* fragment (B #32) from Nakhon Pathom [Drawing by Pinna Indorf, after Phasook 2008: 142]
	 MII.H: *Cakra* (B #31) with translated straight-tipped leaf band felly (group 4) and articulated floral stele base (3A) [Drawing by Pinna Indorf, after Phasook 2008: fig. 18]
	 MII.B: *Cakra* (B #20) with an articulated floral stele base (3A) and felly band motif (group 2) with spirals in cyclical symmetry [Drawing by Pinna Indorf, after Brown 1996: 154, fig. 20]

Table 1 (Continued)

Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)		
Type Definition	**Typical Base and Felly detail**	
Type MK = Mon-Khmer The base and felly elements of types K, and M are mixed in this type. The base generally has a lotus motif below the felly MKI: Felly with lozenge and floral motif (group 1) continuous felly band, as in KI, but with a lotus below (base 1A) as in some M	 MKI.B: Large *cakra* (B #15) in the Bangkok National Museum from Nakhon Pathom, with detail of felly pattern (group 1) of lozenge and floral motif (right) in which spiral leaves are dominant at the expose of the lozenge [Photographs by Pinna Indorf]	 MKI.B: Detail of large *cakra* shown at left with double lotus base and continuous felly (base 1A) [Photograph by Pinna Indorf]
MKII: Felly with lozenge and floral motif (group 1) or plain bands (group 5), female figure as base (3B). In MII, the group 5 felly is used with non-figural female element, but not a figural element. A figural base element is used in KIII *cakra*s	 MKII.A: *Cakra* from Kamphaeng Saen, Nakhon Pathom (B #35) with plain bands on felly (group 5) and a female figure base (3B) [Photograph by G. Swati Reddy]	 MKII.A: Detail of base figure (3B) on *cakra* shown at the left [Photograph by G. Swati Reddy]
	 MKII.B: The Gaja-Lakṣmī *cakra* (B #16) in the Phra Pathom Chedi National Museum, Nakhon Pathom [Photograph by Nicolas Revire]	 MKII.B: Details of *cakra* to the left: upper – felly pattern (group 1); lower – Gaja-Lakṣmī base motif (3B) [Photographs by Nicolas Revire]

Table 1 (Continued)

Dvāravatī Period *Cakra*s of Thailand (see Table 2-A for information on additional examples)	
Type Definition	**Typical Base and Felly detail**
MKIII: Felly with lozenge and floral motif (group 1), used in type K. Base has stele form with floral motif (3A), as used in MII	 MKIII.A: Details of a *cakra* (B #18) from Dong Si Mahosot, Prachin Buri, felly above (group 1) and floral stele (base 3A) below. Similar floral elements were found at Chedi Chula Prathon, Nakhon Pathom, dated ca 7th century (Dupont 1959: nos. 226, 233, 235) [Drawing by Pinna Indorf, after Phasook 2008: 165]
	 MKIV.A: Detail of a *cakra* from Nakhon Pathom (B #30) with a felly band of translated curled-tip leaves (group 4) and a floral flame at the base above an *amalaka* [Drawing by Pinna Indorf, after Phasook 2008: fig. 19]
MKIV: Translated spiral motifs (group 3), or leaves (group 4) on felly as in MII, although the leaves appear here to be in radial order. Base motif is a flame column (2A), as in KII, a narrow attenuated or triangulated floral motif	 MKIV.B: *Cakra* base fragment (B #25) with a triangulated flame stele (base 2A) and translated (?) spirals on the felly (group 3?) [Drawing by Pinna Indorf, after Brown 1996: fig. 25]
MKV: Felly ornament incorporates a motif with spirals (group 2) as in M, in reflected symmetry or alternating as in a vine motif (group 3). Base has a figure of Sūrya, a male figural element (2B) as in KIII	MKV.B: *Cakra* (B #22) from Nakhon Pathom with Sūrya and dwarves at the base (2B) and felly motif (group 2) with spirals in reflected symmetry, turning inward [Photograph by Pinna Indorf; Drawing by Pinna Indorf, after Brown 1996: drawing 13]
	MKV.C: *Cakra* base (2B) fragment from Nakhon Pathom, with winged deity [Drawing by Pinna Indorf, after Dhanit 1990: 24]
	MKV.D: *Cakra* (B #24) in the Phra Pathom Chedi National Museum with Sūrya base (2B) and spirals on the felly (group 3) [Photograph by G. Swati Reddy]

by enlightenment. In addition, Heinrich Zimmer (1984: 315) notes that the Kala face is also known as "Vanaspati" in Indian tradition and "Banaspati" in Javanese lore (T., "Phanasbodi"), and it was originally equated with the devouring aspect of Agni. The Kala face *cakra* **[Table 1: KIII]** can thus be seen as the devouring of defilements, which brings about enlightenment. It is a different expression, but could embody similar significance as the Dvāravatī Buddha images with "Phanasbodi" **[Figure 7]** or Sūrya as mount.

A number of *cakra*s have carved foliage motifs within a more or less triangular form or rounded stele form overlapping the felly. The triangular forms are detailed as central tapered columns or triangles edged with foliated motifs. They are thematically similar to flaming columns in Andhra Pradesh, which represent the Buddha or the Triple Gem at Amarāvatī (ca 300 CE) and Nāgārjunakoṇḍā.[10] This suggests that the tapered column or triangular form with apex upward, which in the *śilpaśastra*s is a male symbol (Boner 1990: 170), represents an enlightened male being (*arhat*, Bodhisattva or Buddha). The rounded stele could be a form of *śrī* (or *śakti*) symbol representing Lakṣmī or the Earth Goddess (Gutman 1978). Similar symbols can be seen on Gupta coins (Gutman 1978: fig. 1.8) and on *śakti* ritual plaques (Sarma 1994: 92, pl. 120A). The Pāli Canon also gives additional basis for considering these motifs as related to enlightenment. In the *Dīghanikāya* (D III 64), the "Wheel Treasure" is presented as lighting up the front of the palace hall.[11] This splendor may be represented simply by floral motifs or flame-like foliage motifs. Thus the *śrī* symbol, as base stele of a wheel, may represent the illuminating aspects of enlightenment.

The number of spokes further particularises references to enlightenment or its enablement, modes of attaining enlightenment **[Table 2-B]**. To find this significance, the numbers must sometimes be broken into components, e.g., five times four. Some numbers have several possible interpretations which may be clearer if all the *cakra*'s details are considered carefully together. All, however, can be related directly to some mode, aspect, means or process of enlightenment. These numbers doubled or tripled (a formula known as "Three Knowledges"[12]) to represent a process and/or increased by one for the final, enlightened state, are as follows:

- Eight for the Eightfold Path (S V 358).
- Being endowed with "Ten Powers" and "Four Confidences" (thus fourteen qualities), the Buddha turns the "Divine Wheel" or *brahmacakka* (S II 23-24).
- The Chain of Causation doctrine, can be represented by several different numbers, depending on the text source and the basis of the causal chain. The most common, twelve-factors related to *khandha*s,[13] is in Ud 1-3, S II 21, 23-24 and Vin IV 1-2 and is linked to *saṃsāra* (Vism 207, 666). It was also expressed in the *ye dhammā* verse which is very prevalent in inscriptions (Revire, this volume).[14]
- Purified modes of experience provide: seven factors of enlightenment (S V 85-109), nine "gradual abiding," or nine facets of wisdom (A IV 269-270), all leading to enlightenment. As a process they result in fourteen, eighteen, twenty-one or twenty-seven and/or add one.

Figure 7: *An image of the Buddha mounted on a "monster" (known as "Phanasbodi") with two flanking figures now in the Bangkok National Museum, inv. no. 270/2511 [Photograph by Nicolas Revire].*

- Application of "Five Powers"[15] in several modes: twenty-five as applied to five *khandha*s, thirty-five as applied to seven factors of enlightenment,[16] and twenty related to four aspects of enlightenment or the "Four Noble Truths."
- The moment of enlightenment as the four-fold *maggasacca* ("Path-Truth") of the sixteen-fold "Noble Truths" (Vism 809, 811) is expressed through an inscription on Brown's *cakra* #5 **[Table 1: KII.B]** and thus probably also in sixteen spokes. But it could be marks of the birth of a Bodhisattva (D II 8-13).

And this does not exhaust the numbers with significance in Buddhist teachings, which means that *cakra*s would have been able to express particular aspects of enlightenment to serve as royal ritual implements.

With this variety in the significance, not only could *cakra*s have represented particular kings, common themes expressed in a similar way on several wheels could indicate lineage branches, while the felly ornament represented wider ancestral lines. A "gigantic golden wheel" is said in the *Traiphum* written by Lithai (or Lüthai) of Sukhothai (r. ca 1346/47-1368/74), to accompany a *cakravartin* on his cosmic journey (Gosling 1991: 63, 69) as is also recorded in the *Dīghanikāya* (D III 59, 64), i.e., it served as a palladium, personally associated with the king (D III 69). Sinhalese kings used the Buddha's Tooth Relic as a palladium and Sukhothai kings used a Buddha image. An Indrakila, also said to be a *vajra* (i.e., Indra's thunderbolt or stake), represents the unshakeable nature of the enlightened mind full of *dharma*, as well as the cosmic axis (Harvey 1990: 95; A I 124). One was also erected in one of Lithai royal monasteries (Gosling 1996: 135).[17] A *cakra* on a column, in miniature, served the Gupta kings and was depicted on their coins (Gutman 1986: 282-284).[18] The royal palladium tradition is also seen as early as the end of the fourth century CE in the royal *liṅga* (Śiva Bhadreśvara) of My-son, central Vietnam, and in later royal *liṅga*s of the Khmers (Cœdès 1972: 64, 89), and perhaps also in one established by a certain Harṣavarman at U Thong in the seventh century (Higham 2002: 26). The Khmer kings of ninth century Angkor seem to have used the *liṅga* as a kind of personal palladium (Cœdès 1968: 30, 101, 103, 112, 119; Kulke 1986: 14; Wolters 1979: 441), but in 921 CE, for the first time, it was ascribed a wider significance and became a symbol of universal monarchy (Cœdès 1972: 98-99). Perhaps there was a similar personal palladium in Dvāravatī tradition. Nuanced, particularised references to enlightenment on *cakra*s could thus have defined the individual king's wisdom and virtue for the spiritual well-being of his kingship and the security and prosperity of the kingdom.

Contexts for Rituals

Little has been written about the possible rituals associated with the *cakra*s. Karel van Kooij (1995: 33-35) has pointed out that low-reliefs of India show two types of Buddhist ritual. One type is the public festival (*manas*) held to honour relics, consecrate monuments and for certain periodic ceremonies. The other is the individual homage paid to sacred objects. Considering the *cakra*s depicted and found in Buddhist India, *cakra*s played both roles:

1. *Cakra*s represent the Buddha or the Dharma and are thus objects of personal respect. In the monastic complex, they stand alone like the columns at Sarnath and Sāñcī, perhaps surrounded by a railing or are housed in *caityagṛha*s as shown on the Bodhgayā railing **[Figure 4]**. Given this prominence, they were also the object of festive ritual (*manas*) as shown in Andhra Pradesh *stūpa* drum slabs (Rosen Stone 1994: pls 36, 72).
2. Framing an important structure or monument in pairs as seen in the dome plaque from Site 3, Nāgārjunakoṇḍā (Rosen Stone 1994: pl. 148), they take a secondary position in the hierarchy of the complex and may have been object of individual homage, but perhaps were less likely to be the focus of a major public festival.

The *cakrastambha*s shown on the tympanum at Hanchey **[Figures 1a-b]** and *dhvajastambha*s at Sambor Prei Kuk N1 **[Figure 2]** indicate that the Zhenla culture used the *stambha*s in the second mode. Unfortunately the placement of Dvāravatī *cakra*s in their original site context is unclear. However, they seem generally associated with *stūpa* sites. Many *cakra*s were deposited over the years at Phra Pathom Chedi, Nakhon Pathom, which had been renovated in the Ayutthaya and Rattanakosin periods (FAD 2548: 24). In contrast, three *cakra*s from U Thong were found at three different *stūpa* sites (Phasook 2008: 154-156). A large *cakra* (diameter 1.80 or 2.0 m.) found at U Taphao, Chai Nat province, was supported on an inscribed octagonal column, mounted on a large circular brick base (diameter 7 m.) (Phasook 2008: 110, 162-163). It is not entirely clear how it related to other structures, but the base shows its significance. So far, there is no indication in Dvāravatī remains that the *cakra*s were secondary elements enhancing the *chedi*s.[19] It thus seems likely they were independent, significant structures in the religious complex. Perhaps, as with the Indrakila of the Mango Grove Monastery of Sukhothai (Gosling 1996: pl. 4.76), they were clustered, side by side with other elements of the monastery, but not subsumed into the composition of the major monument.

Historic accounts of rituals in seventeenth century Myanmar (Aung-Thwin 1983: 66-69) and in fourteenth century Sukhothai (Gosling 1983: 302-306) may contain cultural survivals providing some insight into elements of earlier royal rituals. While Myanmar's later cultures are thought to have had Mon Buddhist influences, Sukhothai is thought to have had Mon-Khmer, Khmer and perhaps "Burmese" influences (Gosling 1983: 5, 16, 112-114; 1996: 135). Betty Gosling (1983: 263) also compared these rituals of Sukhothai to the later rituals of Luang Prabang, which involved four monasteries at the four directions. Such comparisons are more relevant in terms of understanding the regional reliance on adaptations of Indian models in general than the particulars of a given precedence and can only help frame hypotheses. Even though there may not have been direct Mon influence, Sukhothai rulers were no doubt familiar with the ritual traditions of the region and would conduct their own using similar strategies and elements as they saw fit. Michael Aung-Thwin (1983: 66-69) describes the investiture ceremonies of kings in seventeenth century Myanmar as found in inscriptions and the *Great Chronicle* (*Mahāvaṃsa*). During the ceremony, the king sat on a throne made of wood from a *bodhi*-tree, which was decorated with lotuses and flanked by Brahmā and Indra (Sakka). These details seem to be a direct

reference to the *bodhisattvābhiṣeka* tradition. After these rites in the palace, there was a grand procession by the king and his entire court and army. They first visited the king's "royal good deed" where the ceremony for installing the spire was conducted. The entourage then circled the city on royal barges before entering and taking possession of the city. In the thirteenth-fourteenth centuries, Sukhothai rituals to periodically renew the spiritual validity and energy of kingship included festive processions. Ramkhamhaeng's route for a biweekly ritual connected his throne in the Sugar Palm Grove at the centre of the city next to his palace to a sacred hill (now Wat Saphan Hin). Lithai's processional route to and from that hill also took him by his newly constructed Mango Grove Monastery, in which he had erected the Indrakila (Gosling 1983: 302-306; 1996: 135). Lithai's Indrakila, like the Rakhine state (Arakan) *stambha* **[Table 1]**, may have included a *cakra*.

Although different in their details, the Sukhothai and "Burmese" processions linked together one or more sources of spiritual energy at sacred sites outside the city with the palace inside the city. Such rituals align the hierarchy of temporal powers with a religious or spiritual hierarchy and with the physical domain (Wolters 1979: 432). In Myanmar, the sacred site was the new "good deed" of the king, and in Sukhothai, both Ramkhamhaeng and Lithai had gone to a sacred hill before returning in a festive procession to the palace near the centre of the city. In the case of Myanmar, the procession involved a route encircling the city before returning to the palace. This, in fact, echoes the *Dīghanikāya* in that the wheel of the *cakravartin* rolls to the four directions covering the entire domain of the new king. The Sukhothai inscriptions do not seem to say the route encircled the city, however, it may have as other sites, like "the *acan* statue" (Wat Si Chum) and the *prāsāda* (Phra Pai Luang) to the north are mentioned.

Whether or not the route circled the city does not, however, change the implications for Dvāravatī *cakra*s, and indeed for the locations of some Dvāravatī sacred sites. Some of the many Dvāravatī *cakra*s at Phra Pathom Chedi may have originated there. The site is located outside the old walled city of Nakhon Pathom to the west, more or less on an extension of its east-west axis. Southeast of Phra Pathom Chedi is another significant monument, Wat Phra Men (Meru), more or less aligned with the southwest corner of the old city (Revire 2010: fig. 1). Noen Phra, a few kilometres outside the city, south of the centre, had a column, presumably of a *cakra*, still standing in the early twentieth century (Dupont 2006: pl. 316, map 3). This site and the Noen Hin site near the city centre seem to define the north-south axis of the city. The city plan seems to be a slightly bent rectangle. The eastern part is aligned with an axis from the northwest (around Wat Phra Ngam, outside the old city) to the southeast (around Wat Thammasala) passing through the centre around Noen Hin. The Phra Pathom Chedi and the centre of the city seem to be on an east-west axis perpendicular to a portion of the west wall. The presence of these sites on slightly shifted axes may signal phases in the city's development and corresponding ritual contexts. If such religious sites were the actual find sites of *cakra*s, it could suggest these sites were royal monasteries, either "good deeds" or "sacred hills" connected with the ritual renewal of the spiritual power of kingship.

The location of such major sites, e.g., the footprints on four hills around Sukhothai (Gosling 1991: 65-66) or Phra Pathom Chedi and Wat Phra Men at Dvāravatī's principal city, has puzzled some scholars, even Gosling. However, seen in this ritual context, which spans centuries and several kingdoms, locations of important religious sites would appear to reflect a ritual strategy. Through processions to and from such sites, encompassing specific sacred elements, a sacred domain with specific qualities could be defined. The procession revealed these to the population, which in joining the procession, was thereby also bonded with the sacred domain, kingdom and king. The Dvāravatī sites, are in some measure similar to the sacred sites of Sukhothai, including their distribution in the landscape. It seems likely that Nakhon Pathom, with sacred sites aligned with cardinal axes, may have had such a public festival tradition, including processions linking these sites. An Old Mon inscription of the sixth-seventh century at Saraburi clearly refers to a festive procession, which included the "ruler" and went to a sacred cave (Nai Pan Hla 1991: 16; Bauer 1991: 35, 38), confirming at least one Mon royal ritual procession to a sacred hill site.

Dvāravatī *cakra*s, perhaps representing the "king," were outside the city at least at one other Dvāravatī city. U Thong's sites 1, 2, and 11 with *cakra*s near to *stūpa*s are outside the city. It can be noted also that, at U Thong, sites 1 and 10 seem to form a cross axis to the central north-south axis[20] marked by site 2 at the north end (Piriya 1975: map 5; FAD 2545: 31). Site 10 is aligned with sites 9 and 11 and a prominent spur on the hill west of the city and may align with the crest of the range. It is not possible from published data to know if other sites fit this model,[21] but it does seem that two other oblong cities, Si Thep and Khu Bua had sacred sites outside the city and large hills relatively nearby to the west.[22] At Si Thep there are two sacred hill sites. One to the northwest, Khao Thamorat, is well known for its cave with low-reliefs of Buddhist figures, including a triad comprised of the Buddha flanked by a *cakrastambha* and a *stūpa* (FAD 2550: 54, 127). The other, known as Khao Khlang Nok, just outside the city to the north has remains of a *stūpa*, which is alleged as the find site of a large *cakra*.[23] At U Thong, Nakhon Pathom and Khao Khlang Nok, Si Thep, the hills are quite near. If this ritual context is correct, as both the *Dīghanikāya* (D III 62-63) and the Sukhothai inscription show, each king may have ensured his own spiritual power source with periodic ritual processions, which inscribed that heritage onto the landscape including a sacred hill or monument outside and a sacred centre inside the city (Gallon, this volume). The Dvāravatī "king" quite likely had a palladium as the practice dates to the Gupta period (Gutman 1986: 282-284) and parallels the practices of the royal *liṅga* followed by the Khmers (Cœdès 1972; Higham 2002). The "Dvāravatī palladium" just might have been a *cakra*, a large copy of which, like Lithai's Indrakila, was established in a royal monastery.

Typology

The following typology shows Dvāravatī *cakra*s carry themes, which could represent several royal lineages concentrated in the central Delta regions of Thailand. Brown (1996) classified the felly ornament on about forty *cakra*s and determined only six categories. That number is obviously too small to represent Dvāravatī's individual "kings," but could

represent lineage groups and branches. Just as Gosling (1996) found, in classifying Sukhothai halls (T., *wihan*), a necessity to use more than one element in the classification of architectural types, perhaps so too with these *cakra*s. Therefore, base elements and felly patterns were compared. This resulted in the identification of four general types giving priority to base element motifs and their use with a felly pattern. No two are exactly alike, but they can be grouped by themes. All the types had two or more variations with others expressed in hub detail. Base and felly seem much more prominent and are thus analysed in this essay. Shoji Ito made a preliminary study of hub elements and bases, but failed to classify some themes such as the floral stele (1977: 1231, nos. 15, 25). On further study, the themes of the base elements fall into three groups **[Tables 1, 2-A]**:

1) Neutral bases, those in which the felly continues around the whole perimeter: 1A, with, or 1B, without a lotus below the felly, or 1C, those with only a raised rectangle on the felly, i.e., a thickening of the felly.
2) Male base elements, either: 2A, a tapered or triangulated flame column, or 2B, a figure, Sūrya or a Kala face.
3) Base elements which reflects a female energy, either: 3A, non-figural, floral *śrī* stele, or 3B, figural, e.g., Lakṣmī.

The lozenge and floral motif, Brown's (1996) group 1 felly pattern, was identified by him as influenced by Khmer culture. The presence of a "Khmer style" felly motif suggests the others could perhaps also have "cultural themes."[24] A small *cakra* fragment in the Museum of History in Ho Chi Minh City compared to a *cakra* from Yarang **[Table 1: F1.A]** suggested that some *cakra*s found in Thailand with very plain fellies may have resulted from direct Funanese cultural or aesthetic influence. For those not plain or "Khmer," a cultural style is not entirely clear, but in the context of Dvāravatī, with its Mon inscriptions, there could also be a "Mon" influence. Given the importance of the female ancestor spirits in Mon culture (Guillon 1991: 26-28), the female elements and associated spirals have been tentatively identified as "Mon." When a fragment lacks either the base or the felly, its type was designated based on closest similarity of the remaining part to others. About two-thirds of the *cakra*s published retained their base elements. Four general themes emerged **[Tables 1, 2-A]**, viz.:

F "Funan style": relatively plain (Brown's group 6), sometimes with beads or a thickened felly base and perhaps a figure below (base types 1B, 1C or 2B).
K "Khmer style": felly band ornament with lozenge and floral motif linked by a central line parallel to the band edges (Brown's group 1); if base elements are present, they are male symbols of energy (base types 1B, 1C, 2A or 2B).
M "Mon style": felly band ornament with only beads and/or foliage motifs including spirals (Brown's groups 2, 4 and 5) plus, when base elements are present, female symbols of energy (base types 1A, 1B or 3A).
MK "Mon-Khmer mixed style": combining or mixing the above elements, e.g., felly 1 with female base (3A or 3B), or felly 2 with male base (2A or 2B).

Table 2-A: Summary of *Cakra* Types

Base + Felly Type	References	FT	BT	Description: Felly motif/ base of felly detail/c. = cut spokes	Place reportedly found (current loc.)	Size: ø = diameter	No. of spokes	Phase
FI.A	B #38	6	1C	Plain/raised rectangle with prism and sphere below/c.	Yarang, Pattani (not given)	ht 35 cm., ø ca 20 cm.	8	1a
FII.A	B #42	6		Bead band, triangles on edge/ missing/c.	N. Si Thammarat (N. Si Thammarat N. Museum)	frag. spokes + felly ca 19 cm.)		1a
FII.B	Brown 1996: fig. 93	6	?	Plain/curved element/c.	Prachin Buri (Prachin Buri N. Museum)	ø 17 cm.	12	1a
FII.C	Dhanit 1990: 13	6	2A	Plain/arm of figure?/c.	?		12	1a
FIII.A	B #39	6		Plain/missing/c.	In Buri, Sing Buri (Wat Bot museum, Khu Mueang, In Buri)		12	1a
FIII.B	B #40	6	1B	Plain/continuous felly, broken tenon below?	N. Pathom (purported Phra Pathom Chedi, N. Pathom)	ø 42 cm.	8	1b
KI.A	B #9	1	1B	Loz. & Fl./ continuous felly/c.	Si Thep (private col.)			1b
KI.B	B #7	1	1B	Loz. & Fl./ continuous felly	Si Thep (Si Thep dist. office)	ø ca 178 cm.	29?	2
KI.C	Phasook 2008: 164	1	1B	Loz. & Fl./ continuous felly	Si Thep (Si Thep Historical Park)	ø 110 cm.	29	2
KI.D	B #6	1	1B	Loz. & Fl./ continuous felly	Si Thep (Newark Museum)	ø 114.8 cm.	23/24	2
KI.E	B #8	1	1B	Loz. & Fl./ continuous felly	Si Thep (private col.)		27	2
KII.A	B #3	1	2A	Loz. & Fl./flame column/c.	U Thong 11 (U Thong N. Museum)	ø 94 cm.	15	1b
KII.B	B #5	1	2A	Loz. & Fl./flame column/c.	N. Pathom (Bangkok N. Museum)	ø 94 cm.		1b
KII.C1	B #2	1		Loz. & Fl./ missing/c.	Lop Buri (Phra Narai N. Museum)	frag. ca 39 cm.		1b
KII.C2	Phasook 2008: 160, middle	1		Loz. & Fl./ missing/c.	Sap Champa, Lop Buri (Phra Narai N. Museum)	frag. 34 cm. long		1b
KII.C3	Phasook 2008: 160, bottom	1		Loz. & Fl./ missing/c.	Sap Champa, Lop Buri (Phra Narai N. Museum)	3 frags total 44 cm. long		1b
KII.D	B #1	1	2A	Loz. & Fl./flame column	U Thong 2 (U Thong N. Museum)	ht ca 105 cm.	11/12	2
KII.E	B #4	1	2A	Loz. & Fl./flame column	N. Sawan (Wat Thai Mai, Nakhon Sawan)	?		2

Note: Dimensions of a given *cakra* sometimes vary in different sources by 1 cm. or more.
FT = Felly Type according to Brown's (1996) group numbers; BT = Base Type; B #21 = Brown's *cakra* #21

Table 2-A (Continued)

Base + Felly Type	References	FT	BT	Description: Felly motif/ base of felly detail/c. = cut spokes	Place reportedly found (current loc.)	Size: ø = diameter	No. of spokes	Phase
KII.F1	Phasook 2008: 170, top right	1		Loz. & Fl./missing	Phetchaburi (Wat Pet Pli, Phetchaburi)			2
KII.F2	Phasook 2008: 160, top	1		Loz. & Fl./missing?	Sap Champa, Lop Buri (private col.)	frag.	24 or 28?	2
KII.G	B #17	1		Loz. & Fl./missing	U Thong 1 (U Thong N. Museum)	ø ca 77 cm.	20?	2
KIII.A	Dhanit 1990: 8	1	2B	Loz. & Fl./Kala face	Phetchaburi (Wat Mahathat, Phetchaburi)	ø 100 cm.	24	3b
KIII.B	B #10 = Higham 2004: 92	1	2B	Loz. & Fl./Kala face	"Thailand" (Guimet Museum)	ø ca 160 cm.	12	3b
KIII.C	Phasook 2008: 167	1		Loz. & Fl./missing	Mueang Sema monument no. 2 (not given; excavated 1999)			3b
KIII.D	B #11	1	2B	Loz. & Fl./Kala face	Mueang Sema (Wat Khlong Khwang, N. Ratchasima)	ø ca 150 cm.	12/13?	3b
KIV.A	B #12	1	1C	Loz. & Fl./ rectangle on felly	N. Pathom (Phra Pathom Chedi N. Museum)	ø 95 cm., ht 105 cm.	24	2
KIV.B	Dhanit 1990: 15	1	1C	Loz. & Fl./ rectangle on felly	N. Pathom (Phra Pathom Chedi?)	ø 104 cm., ht 114 cm.	24?	2
KIV.C	B #14	1	1C	Loz. & Fl./ rectangle on felly	N. Pathom (Phra Pathom Chedi N. Museum)		16	2
MI.A1	B #33	5		Plain & beads bands, inscription/ missing/c.	Lop Buri (Phra Narai N. Museum)	frag. ca 32 cm.		1b
MI.A2	Phasook 2008: 162 = Bauer 1991: 52, pls 1-2	5		Plain & beads bands, inscription/ missing/c.	U Taphao, Chai Nat (not given)			1b
MI.B	Phasook 2008: 157, second to the top	5		Plain & beads bands, beads elongated/ missing/c.	Khu Bua (not given)			1b
MI.C	Phasook 2008: 169, bottom	5		Plain & beads bands/missing/c.	Ban Nong Chik, Phetchaburi (not given)	felly frag.		1b
MI.D	Phasook 2008: 170	5		Plain & beads band/missing? (not shown)	Phetchaburi (?) (Collection Wat Pet Pli)	frag.		2
MI.E	Phasook 2008: 169, top	5	1B	Plain & beads bands/continuous felly, lotus below one side	Ban Nong Chik, Phetchaburi (NMB)	ø 94 cm.	18	2
MI.F	Phasook 2008: 174, centre = B #19	2	1A	Beads bands, reflected spirals motif/missing/c.	Chaiya (Chaiya N. Museum)	frag. spoke to felly edge 28 cm.		1b

Table 2-A (Continued)

Base + Felly Type	References	FT	BT	Description: Felly motif/ base of felly detail/c. = cut spokes	Place reportedly found (current loc.)	Size: ø = diameter	No. of spokes	Phase
MI.G	Dhanit 1990: 19	2	1A	Fillet bands & spiral motif, reflected symmetry/ continuous felly band	N. Pathom (not given)	ø 65 cm.	18	2
MI.H	B #36	5	1B	Plain & beads band/continuous felly, double lotus below	N. Pathom (Phra Pathom Chedi N. Museum)	ø 71 cm., ht 87 cm.	16	2
MI,J	B #23	2	1B	Floral motif, cyclical spirals/continuous felly, single lotus below	N. Pathom (Phra Pathom Chedi N. Museum)	ø 88 cm.	20/21	2
MI.K	Phasook 2008: 172, top	2		Floral motif, cyclical spirals/missing	Ban Lat, Phetchaburi (not given)	frags		2
MII.A1	Phasook 2008: 133	2	3A	Floral motif, cyclical spirals/floral Śrī stele	N. Pathom (Phra Pathom Chedi N. Museum)		25	2
MII.A2	Phasook 2008: 131, top = B #21	2	3A	Floral motif, cyclical spirals/ floral Śrī stele	N. Pathom (Phra Pathom Chedi N. Museum)	ø 67 cm.	26	2
MII.B	B #20	2		Floral motif, cyclical spirals/missing	? (not given)	ø 99 cm.	20	2
MII.C	B #27	4		Floral motif, cyclical spirals/missing	N. Pathom (Songkhla N. Museum)	ø 65 cm.	20?	2
MII.D	Phasook 2008: 157, top	2		Floral motif, cyclical spirals/missing	Wat Mahathat, Ratchaburi (*in situ*)			2
MII.E	B #34	5	3A	Plain & beads bands/floral stele, lotus petal fan	N. Pathom (Phra Pathom Chedi N. Museum)	ø 96 cm.	16	2
MII.F	B #37	5	3A	Plain & beads bands/trefoil floral stele	N. Pathom (Phra Pathom Chedi N. Museum)	frag.		2
MII.G	B #32	4		Beads bands, translated leaf, curled tip/missing	N. Pathom (Wat Phra Pathom Chedi Museum)	frags		2
MII.H	B #31	4	3A	Beads bands, translated leaf straight tip/floral stele, reflected spirals	N. Pathom (purported Bangkok N. Museum)	ø 90 cm.	22	2
MII,J	B #29	4		Beads bands, translated spirals/ missing/c.	Khu Bua (purported Wat Thong Chedi, Ratchaburi)	felly frag.		1b
MKI.A	Phasook 2008: 147 = B #15	1	1A	Loz. & Fl./ continuous felly, double lotus below (largely reconstructed)	N. Pathom (Wat Don Yai Hom, Nakhon Pathom)		23/24	3a
MKI.B	B #13	1	1A	Loz. & Fl./ continuous felly, double lotus below	N. Pathom (Bangkok N. Museum)	ø 195 cm.	35	3a

Table 2-A (Continued)

Base + Felly Type	References	FT	BT	Description: Felly motif/ base of felly detail/c. = cut spokes	Place reportedly found (current loc.)	Size: ø = diameter	No. of spokes	Phase
MKII.A	B #35	5	3B	Plain & beads bands/deity or Earth Goddess	N. Pathom (U Thong N. Museum)	ø 67 cm. ht 80 cm.	16	3b
MKII.B	B #16	1	3B	Loz. & Fl./ Gaja-Lakṣmī	N. Pathom (Phra Pathom Chedi N. Museum)	ø 65 cm.	16	3b
MKIII.A	B #18	1	3A	Loz. & Fl./ floral *śrī* stele	Mueang Si Mahosot, Prachin Buri (Khok Pip dist. Office)	ø 73 cm.	24?	3a
MKIII.B	Phasook 2008: 158	1		Loz. & Fl., with Si Thep type spirals/missing	Chansen (not given)	felly frag.		3a
MKIV.A	B #30	4	2A	Plain & beads bands, radial curled leaves/floral flame over mortise, *amalaka* below	N. Pathom (Phra Pathom Chedi N. Museum)	ø 104 cm.	32	3a
MKIV.B	B #25	3	2A	Fillet band, translated spirals?/ foliage triangle over single lotus below felly	? (Suan Pakkad Palace, Bangkok)	hub edge to base ca 65 cm.		3a
MKV.A	B #26	2	2B	Floral motif, reflected spirals/ Sūrya seated	Prachin Buri or Aranyaprathet (Prachin Buri N. Museum)	ø 103 or 95 cm.	14	3b
MKV.B	B #22	3	2B	Spirals reflected, translated (cropped vine?)/Sūrya seated	N. Pathom (Bangkok N. Museum)	ø 72 cm.	12/13	3b
MKV.C	Dhanit 1990: 24	3/2?	2B	? spirals/ Sūrya bust with wings (emerging from lotus)	N. Pathom (not given)	frag. 58 cm. wide x 60 cm.		3b
MKV.D	B #24	3	2B	Spirals reflected translated (cropped vine?)/ Sūrya seated	N. Pathom (Phra Pathom Chedi N. Museum)	ø 68 cm.	16/17	3b

In only thirty examples, just over half the *cakra*s studied, could the number of spokes be easily determined. Out of a total of eighteen different numbers or sets of numbers found **[Table 2-B]**, only six occurred on more than one type and four of these were on the mixed type (MK). This trend seems to support the idea that the numbers signified themes, which could have lineage and chronological implications.

Tentative Sequences and Chronology of Types

Robert Brown (1996) has considered the chronological implications of the aesthetics. His opinion forms the framework of this assessment, but has been considered in relation to several additional points. Most of his observations have been accepted, but not his agreement with H.G. Quaritch Wales that the plain bands combined with beads are a late degeneration of felly motifs. There are several reasons to differ. The first derives from the possibility that, as Kenneth Hall (1985: 60) has suggested, the Funanese were the catalyst for the development of Dvāravatī, and Funan *cakra*s were more or less plain **[Table 1]**. Brown's discovery of influence from Khmer ornament found on Dvāravatī *cakra*s, allows the possibility that plain Mekong Delta *cakra*s also influenced Dvāravatī *cakra*s. *Cakra*s with plain fellies (type F) may thus have initiated the practice. Furthermore, if *cakra*s were royal as well as religious symbols, only through time, once the tradition was more widely established and rival power centres competed for territory, did the need for specific identity impose a need for more elaborate symbolic ornament.

Another reason is related to structural considerations. There are two aspects to consider. Quaritch Wales and Brown concur that *cakra*s with cut spokes were, in general, earlier than those with low-relief spokes. It can be noted that the small Funan or Mekong Delta *cakra*s had cut spokes. It is quite clear that when large cut spoke wheels were made, problems of handling them, lifting them up onto columns, etc. may have subjected the *cakra*s to forces they could not withstand, resulting in breakage even when bases were reinforced. Therefore, a carved solid disk was used instead. These were also easier and faster to carve. The reinforced base provided a convenient place to add symbolic ornament and thus enhanced the ability to express very specific notions and thereby reflect the identity of a king. Felly patterns along with the base motif (themes plus details) would allow for hierarchical nuances of lineage branch and individual identity. These base elements were thus symbolically important and were retained on some solid disk *cakra*s.

As many of the early cut spoke *cakra*s are broken, treatment of all bases is not known. But it is clear that some base elements, for example flame columns (type KII), were on both cut spoke and solid disk *cakra*s. Brown identified six felly pattern groups, but it seems two broader early themes can be seen. In one theme, a plain or foliage band (including spirals) defined by fillets or beads is combined with a basal floral stele, which can be considered a *śrī* or female spiritual energy motif (type M). On the other hand, the lozenge and floral motif, when combined with a base motif, is found with a tapered or triangulated flame column or the Kala face, male motifs (type K). These two themes potentially define two broad and discrete lineages. What most clearly distinguishes the two groups is the lozenge and the central line in the one, Brown's

group 1 on type K. Through time, however, lineage identity could have become mixed as a result of marriage alliances. Offspring of these mixed-lineage marriages could have identified with one side or the other, but some may have attempted to express their link to both sides, resulting in the mixed use of motifs (type MK). It can be noted that the cut spoke *cakra*s are all in the "Funan," "Mon," or "Khmer" types, not in the "mixed" types, which would correlate with the scenario of mixed lineages emerging over time.

Although Brown and Quaritch Wales considered cut spokes early, on purely aesthetic grounds, they placed some with cut spokes in a late group because they had only plain bands and beads on the felly. It is proposed here that all with cut spokes belong in the early group. This remains tentative due to the fact that among them are *cakra*s with inscriptions, which at least some scholars (e.g. Bauer 1991: 52) date to the sixth century while others consider them eighth century (Brown 1996). Those that have low-relief spokes, but are of the same theme as a group with cut spokes, would probably follow them in time. Many of the *cakra*s, which Brown considered later, were those of the "mixed" group, type MK, none of which have cut spokes. It is suggested that the *cakra*s of the mixed groups thus comprise the latest phase of the *cakra* tradition. They can be divided into those with non-figural bases **[Table 1: MKI, MKIII, MKIV]** and with figural bases **[Table 1: MKII, MKV]**, which, as narrative elements have a very specific identity, are placed at the end. From the viewpoint of the aesthetic theory as followed by Brown, those with figural bases might be considered earlier as they are more complex. It might be argued that as the tradition endured, the need for complexity increased to enable distinctive identity. Given the location and apparent origin of the Kala face motif in Khmer territory of the Khorat Plateau,[25] it is possible that these figural bases reflect a phase, which led to the demise of the tradition due to the subjugation of the Dvāravatī territory to some level of Khmer influence or control. It is thus tentatively suggested that those with figural motifs are probably the latest of the *cakra*s.

The proposed sequences in **Table 3** show *cakra*s primarily in uninterrupted groups by types, but that is more a hypothetical model than a detailed sequence. It is meant to show the feasibility of a concept, that each *cakra* could represent one ruler within lineage groups, and is not meant to fix individual dates per se. Also, one branch's rule may have been interrupted by another, but, if they regained power, their earlier model could have reappeared. The sequence could thus be more complicated. Certain technical considerations could also alter the sequences. Although premature to assign dates to stylistic phases, the generally accepted dates for Dvāravatī remain the framework for this tentative chronology. Dates suggested by Robert Brown (1996) and Piriya Krairiksh (1975) have also been considered as well as the dates for major changes in Funan and Zhenla's history following Hall's suggestion (1985: 60). Thus this chronology starts in the mid-sixth century. Brown (1996: 124, 136) considered the most secure dates for *cakra*s to be 650-700 CE, and thought the overall production of *cakra*s to have been perhaps only about one hundred twenty years. However, he also admitted *cakra*s might have been made as late as the tenth century. Piriya suggested that Chedi Chula Prathon's first phase may have predated Sambor Prei Kuk.[26] Nakhon Pathom, however, may not have been

Table 2-B: Number of Spokes Related to *Cakra*s Types

Cakra Types	No.	8	18	22	25	26	11, 12	15	27	29	14	32	35	12	12, 13	16	20, 21	23, 24	24
		F	M	M	M	M	K	K	K	K	MK	MK	MK						
FI	1 of 1	•																	
FII	2 of 3													:					
FIII	2 of 2	•												•					
MI	4 of 13		:													•			
MII	7 of 11			•	•	:		•				•				•	:?		
KI	4 of 5								•	:?	•							•	•
KII	4 of 10						•	•									:?		
KIII	3 of 4													•					•
KIV	3 of 3															:			
MKI	3 of 3												•		•	•		•	
MKII	2 of 2																		:?
MKIII	1 of 2																		
MKIV	1 of 2											•							
MKV	3 of 4										•				•				

No. = number of examples with adequately complete spokes. In some cases (?) the number is tentative.

Table 3: Trial Timeline Sequence Graph, Relative to CCP & WPM & Other Dvāravatī Monuments

Key: • = monument at that location with characteristics similar to the phase at CCP, according to Piriya (1975).

Abbr.: NP = Nakhon Pathom; CCP = Chedi Chula Prathon; WPM = Wat Phra Men; W = West-central Thailand; P = Phetchaburi; R = Ratchaburi; KB = Khu Bua; N = Upper-central Thailand; U = U Thong; L = Lop Buri; SC = Sap Champa; Ct = Chai Nat; Cn = Chansen; S = Sing Buri; NS = Nakhon Sawan; E/NE = East & Northeast Thailand; Pr = Prachin Buri; ST = Si Thep; MS = Mueang Sema; PT = Peninsular Thailand; Ca = Chaiya; NST = Nakhon Si Thammarat; Y = Yarang (see Table 2-A for *cakra* ID information)

All dates for *cakra* groups are very tentative. Some *cakra*s at NP may have been relocated. Monument dates given by Piriya (1975): for phases at CCP: I = late 6th-early to mid-7th c.; II = mid-to end 7th c./7th decade; III = late 7th c.(8th decade)-2nd decade of 8th c. All three phases of WPM, Piriya (1975: 180) places in CCP phase II. Dupont's (2006) dating, based on images and comparison with other Buddhist monuments known to him in the Buddhist world were from 6th-11th/13th c.

	Timeline	550*	575	600	625	650†	675	700	725	750 **	775	800
NP	• CCP		Phase I			Phase II		Phase III	?			
	• WPM				Ph. I	Phase II	Phase III	?				
W	P		M	KII							KIII	
	R & KB			•	•	••	•	•***	•	•	•	
	NP		FIII	KII		M****	KIV	MK			?	?
N	U		KII		• ††			•	•	•	••	
	L & SC		KII									
	Ct & Cn											
	S	FIII										
	NS		•••	• KII				•				
E/NE	Pr		FII									
	ST		KI					?	?			
	MS									KIII	?	?
PT	Ca	M									†††	
	NST	FII										
	Y	FI										
Cakra phases:		Phase 1: Cut spokes			Phase 2: Low-relief spokes, M & K dominant			Phase 3: Low-relief spokes, MK, then return to K with KIII				

* End of Rudravarman's reign in Funan; ** Jayavarman II skirmishes with the "Chvea" until 802 CE (Vickery 1998); *** Total 44 monuments during CCP's Phase III;

**** If from around NP, these M & KIV types may have alternated at NP in Phase 2, or KIV types may have ended Phase 2 as they are said (Brown 1996) to be ca late 7th c.

† Jayavarman I expels Buddhists; †† Harṣavarman inscription 640 CE (change in kingship model?); ††† Śailendra/Śrīvijaya inscription, Ligor A, brick sanctuaries at Chaiya.

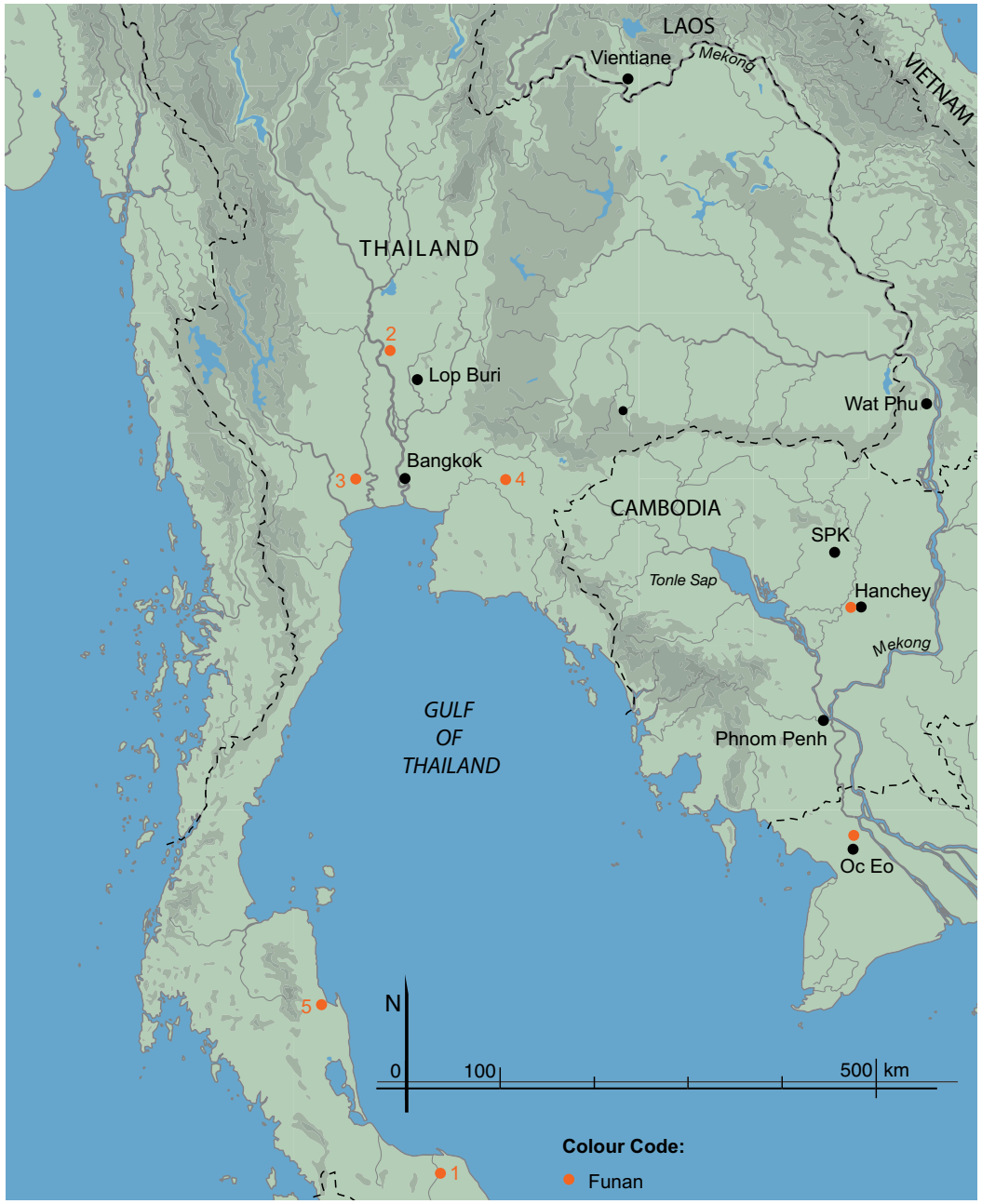
founded until the seventh century (Dhida 1999). Thus an early phase, including all Funan style and cut spokes *cakra*s, is tentatively placed *circa* 550-610 CE **[Phase 1, Table 3]**, with the first *cakra* at Nakhon Pathom toward the period's end. If the *cakra*s FIII.B (B #40) and KII.B (B #5) **[Table 1]** were indeed originally from Nakhon Pathom, this would suggest that Nakhon Pathom was founded by a lineage group using either the Funan or Khmer style *cakra* **[Maps 1-2]**. If corroborated with other archaeological data, this could have profound implications, proving Hall right, or more specifically, that the Funan to Khmer-Zhenla transition was a catalyst for Dvāravatī's development, perhaps providing also some of the participants in those developments.

If the Dvāravatī *cakra*s are deemed to begin only at the end of a catalyst phase comprising the Funan types **[Map 1]** in the late sixth century, then the one hundred twenty years suggested by Brown takes *cakra*s into the early eighth century. If all *cakra*s at Nakhon Pathom represented reigns there, the average reign span was about five years. It is entirely possible some *cakra*s could represent very short reigns, but to accomplish major monument construction, etc. some reigns would have been much longer. The possible number of *cakra*s at one site being considered, the dates *circa* 610-690/700 and 690-800 CE are suggested for Phases 2 and 3, not far off the timeframe suggested by Piriya (1975) for Chedi Chula Prathon **[Table 3; Maps 3-4]**. The suggested longer period of the *cakra* tradition would have ended close to the exile of Jayavarman II, who Michael Vickery (1998: 387) has suggested might have spent his "exile" fighting the "Chvae" (according to Vickery, perhaps Cham) on his frontier. Given the *cakra*'s possible role in developing statecraft, this would have important implications for the history of mainland Southeast Asia as well as Dvāravatī.

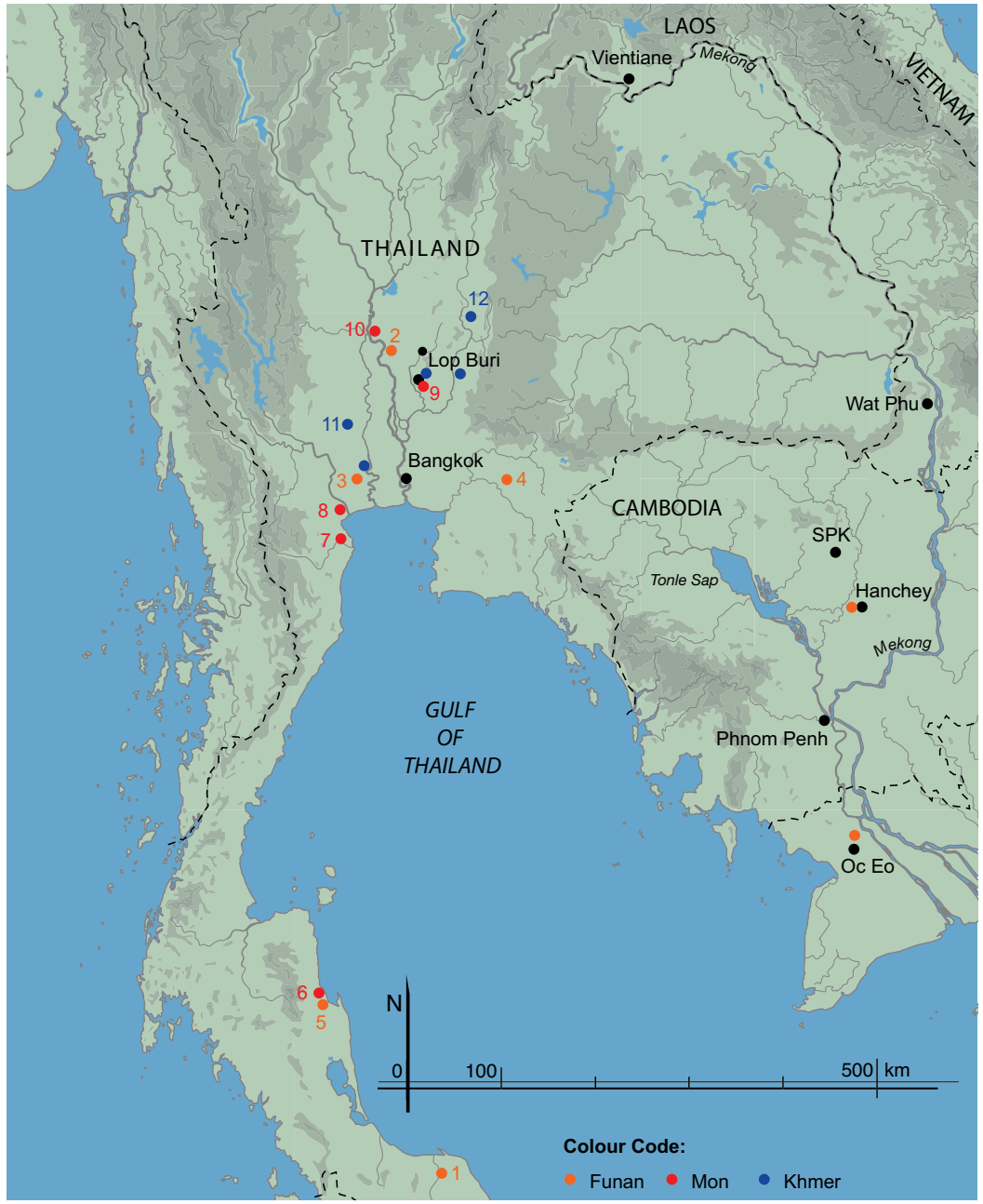
Conclusion

Although the details do not yet all add up, and the sequences within type groups and phases are far from fixed, the general outline they begin to sketch out is not unreasonable. Changes of lineage or style, perhaps with a "Khmer" interlude between Phases I and II of Nakhon Pathom's principal monuments **[Table 3]** could represent just renovation or perhaps destruction and rebuilding.[27] Robert Brown (1996: 179-181) suggested that the number of spokes was so varied they could not be expected to have significance and must have been left to the choice of the artisan. This might be so if the *cakra* simply represented the generic notions of the *cakravartin* and the turning of the Wheel of the Law. However, that great variety would be the very root of their effectiveness in the role Mus (2001) defined as particularising a royal intermediary. Some sites have two or more types. If the *cakra*s reflected royal lineage, leadership shifted, or there were shifts in aesthetic taste only. Given the importance of symbolism at the time, the latter does not seem likely.

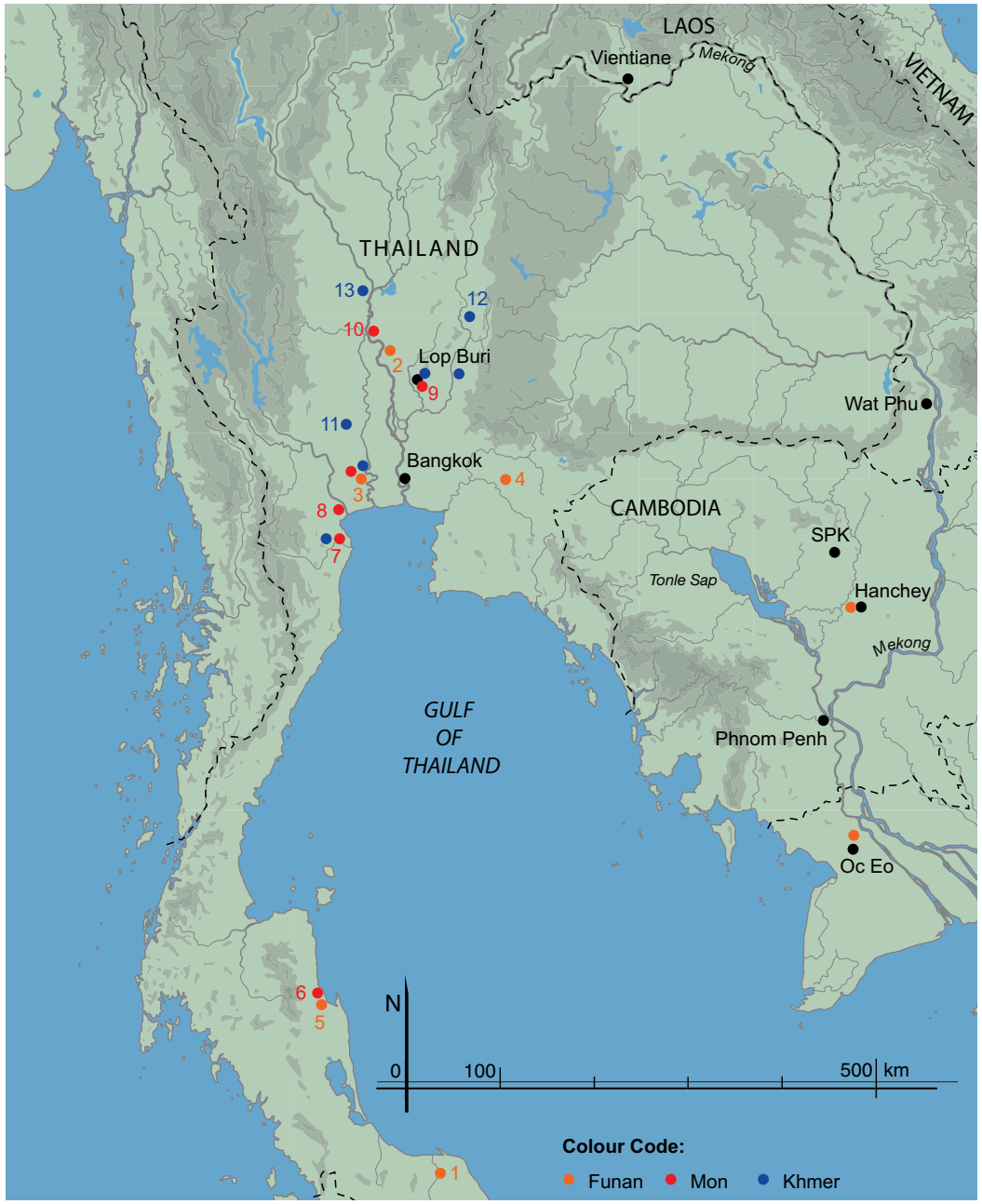
The distribution of types **[Maps 1-4]** also seems to place stylistic elements in places where language of inscriptions and other artefacts also indicate that cultural dominance. *Cakra*s of the same type in different locations could indicate co-rulers or subordinates (sons, brothers or vassals of a king) and seem to define lineage domains related to trade routes and rice production areas concentrated on the west and the north of the Chao Phraya Delta, which may or may not



Map 1: Catalyst phase.
Funan style cakras*: 1. Yarang (FI.A); 2. Sing Buri (FIII.A); 3. Nakhon Pathom (FIII.B); 4. Dong Si Mahosot (FII.B & FII.C?); 5. Nakhon Si Thammarat (FII.A).*
These might represent the earliest, catalyst phase of cakras*, following a Funan tradition (e.g. at Oc Eo) and may date between 550-600 CE [Drawing by Pinna Indorf].*



Map 2: Phase 1. *Early* cakras *with cut spokes in Mon and Khmer style may have followed or be contemporary with Funan style* cakras *(sites nos. 1-5): 1. Yarang (FI.A); 2. Sing Buri (FIII.A); 3. Nakhon Pathom (FIII.B); 4. Dong Si Mahosot (FII.B & FII.C?); 5. Nakhon Si Thammarat (FII.A).*
Mon style: 6. Chaiya (MI.F); 7. Phetchaburi (MI.C); 8. Khu Bua (MI.B & MII.J); 9. Lop Buri (MI.A1); 10. Chai Nat (MI.A2 & 3).
Khmer style: 3. Nakhon Pathom (KII.B); 9. Lop Buri (KII.C); 11. U Thong (KII.A); 12. Si Thep (KI.A).
Khmer style was also found at sites with other styles: Nakhon Pathom (site 3: KII.B).
Lop Buri, (site 9: KII.C1) and at Sap Champa, also in Lop Buri prov. (KII.C2-3).
Having cut spokes, these are all potentially early phase cakras*, ca 575-610 CE.*
The lower Mekong Delta has yielded at least two cakras *and the low-relief at Hanchey shows* cakras *on tall columns flanking a shrine. So far, there seems to be no indication that the Dvāravatī* cakras *were made as pair [Drawing by Pinna Indorf].*

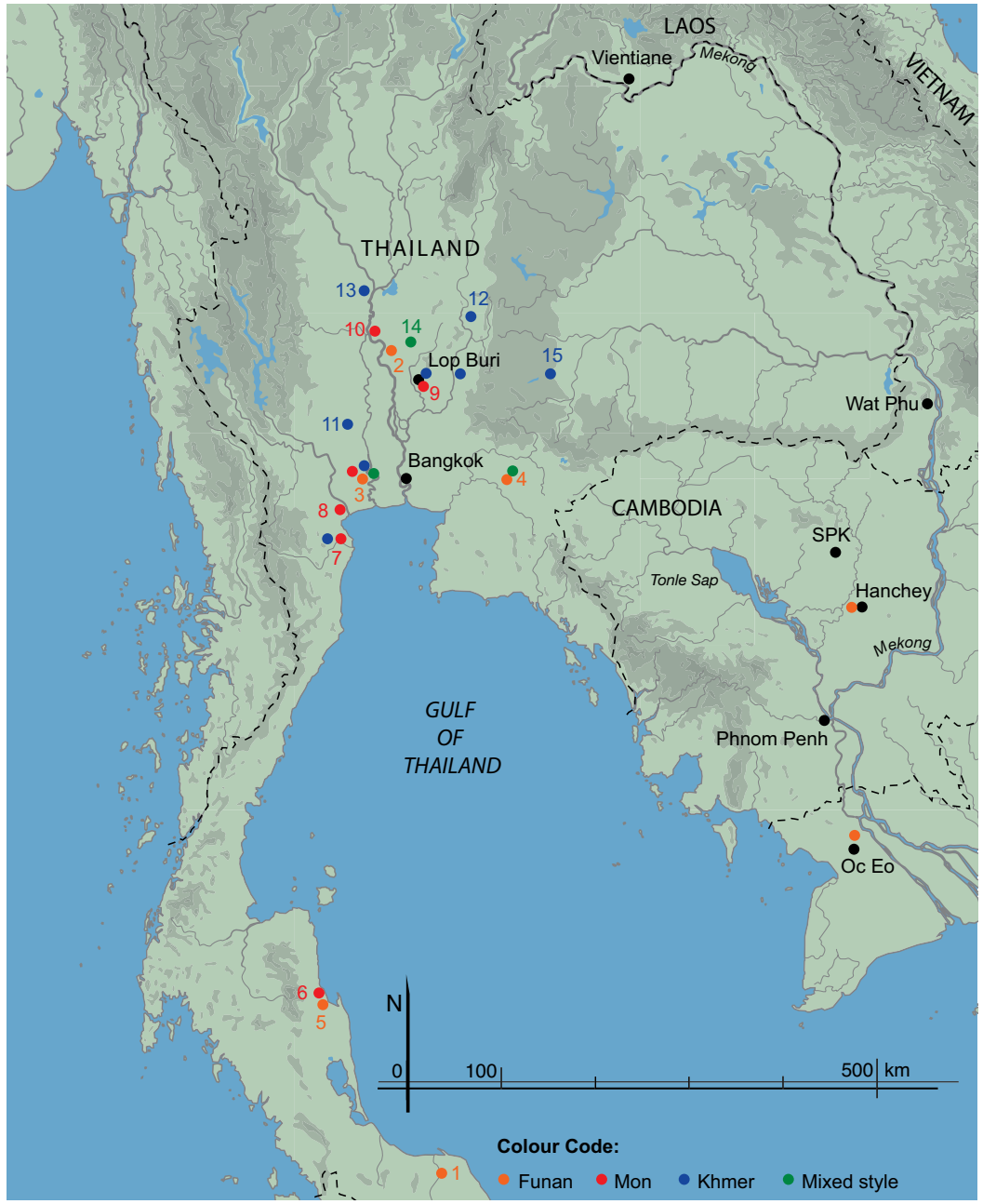


Map 3: Phase 2. *Phase 2, ca 610-690/700 CE, is the transition from cut-spoke* cakras *to low-relief spoke* cakras *of a similar type. They primarily appeared at the same sites as the earlier cut-spoke versions, but in some cases the styles at the site changed.*

Those of Khmer style with low-relief were from sites: 3. Nakhon Pathom (KIV.A-C) with earlier Funan and Khmer styles; 7. Phetchaburi (KII.F1) which earlier had Mon style; 9. Lop Buri and Sap Champa (KII.F2) which earlier had both Mon and Khmer style; 11. U Thong (KII.D & G) which earlier had the cut-spoke version of this style; 12. Si Thep (KI.B-E) which earlier had the cut-spoke version of this style; 13. Nakhon Sawan (KII.E) which had no earlier cakras.

Those of Mon style with low-relief spokes were from sites: 3. Nakhon Pathom (MI.G, H. J and MII.A, C, E-H) which earlier had Funan and Khmer style; 7. Phetchaburi (MI.D, E & K) had the earlier Mon style and also in this phase had Khmer style; 8. Ratchaburi (MII.D) which is near Khu Bua and which earlier had Mon style.

A cakra *fragment at Wat Phu with low-relief spokes and perhaps an eroded band of ornament on the felly could be similar to the end of this phase or Phase 3 [Drawing by Pinna Indorf].*



Map 4: Phase 3. *Phase 3, perhaps ca 690/700-800 CE or later, is the emergence of mixed style* cakras, *in two versions, one with non-figural and the other with figural base elements. The figural style also appears in a modified Khmer version, which appears at perhaps only two of the earlier sites and at one, possibly two new sites.*

Sites which have the mixed style cakras *are: With non-figural* cakras*: 3. Nakhon Pathom (MKI.A, B and MKIV.A). Another, MKIV.B, is from an unknown site; 4. Prachin Buri (MKIII.A) which earlier had Funan style; 14. Chansen (MKIII.B) which had no other* cakras.

With figural cakras*: 3. Nakhon Pathom (MKII.A-B, MKV.B-D); 4. Prachin Buri (MKV.A).*

Figural cakras *of modified Khmer style, 7. Phetchaburi (KIII.A); 15. Mueang Sema (KIII.D, B), which had no earlier* cakras. *Perhaps also at: 3. Nakhon Pathom (KIII.C), according to Higham (2004: 92), but not Brown (1996) [Drawing by Pinna Indorf].*

have been a bay or wetlands laced with navigable channels (FAD 2548: 33). The concentration of late *cakra*s at Nakhon Pathom may imply only a hoarding of early *cakra*s at the site, or a more unified kingdom, or simply that much of the territory no longer followed the royal tradition involving *cakra*s. As it stands, the typology and tentative sequence clues suggest Dvāravatī was a zone of contention by at least two, possibly more, lineage groups. Although more detailed investigation is needed for reliable historical interpretation, it is clear that the *cakra*s could have represented individual kings and their lineage groups over a period of two hundred years or slightly longer.

The ethnic make-up of Dvāravatī is presumed diverse, but dominated by Mon due in part to the Mon inscriptions (Bauer 1991). The presence of Khmer and Funan stylistic elements presents several historical problems. The typology, stemming from the identity of lozenge and floral motif as associated with Khmer art by Brown, has been presented here, very tentatively, in terms of three broadly identified ethnic affiliations. However, if:

1) as John Miksic (2003: 23) has suggested, the people of Funan were "proto-Mon,"
2) the Funan legends hint of real connections between the elite of the Mekong Delta and the people of the Thai-Malay Peninsula in the early centuries of the Common Era,
3) the shift from "Funan" to "Zhenla" was a shift away from those early mixed-lineage elite "proto-Mon" of Funan's coastal areas to a new inland branch of the elite with Khmer roots, and
4) given the "Khmer" style *cakra*s are dominant in areas which also have other Khmer style elements and Khmer inscriptions,

then, these ethnic categories may make sense. The "Funan" to "Zhenla" shift can be seen as transitions in the dominant lineage branches ruling the lower Mekong (Vickery 1998: 324-408). If in that shift, an old dominant branch of "Funan" elite fled to areas on the Gulf of Thailand coast where they had early lineage links, they may have been able to pursue their socio-political and economic aspirations, thus serving as the catalyst for Dvāravatī's development. In such a context, the Khmers would not have just stood by. As Vickery's work (1998: 387) seems to show, the "Chvae" of Khmer history from whom Jayavarman II fought to be free were a southern coastal group, it is possible they were the old elite of coastal "Funan."

It does not seem that the earliest "Khmer" *cakra*s of Dvāravatī represent direct rule from a strong Khmer Zhenla power centre, but local elite, local Khmer elite, e.g. King Harṣavarman (claiming to be Īśānavarma's grandson), who chose to emulate, and were taking advantage of, "Zhenla" developments. The *cakra*s with plain fellies or motifs involving floral spirals, cyclical symmetry and without the linking central line seem to represent coastal powers with early links to Funan. The Khmer-"Chvae" (perhaps Khmer-Cham) conflicts (of Jayavarman II) being an extension of the coastal-"Funan" and inland-Khmer conflict, thus may have had some impact on the Chao Phraya Delta. It is impossible to tell from the *cakra*s alone, why or how the tradition came to an end, but evidence in terms of distribution and stylistic elements on *cakra*s, is clearly suggestive that Khmer developments played a significant part. Khmer cultural elements seem to have infiltrated or influenced the elite lineages of the north and east, and they may have become dominant in the Chao Phraya Delta, ending the *cakra* tradition, but not the popularity of Buddhism. The end of the *cakra* tradition seems to end the role of the combined Bodhisattva-*cakravartin* ideal as the dominant element of political ideology, or at least one expression of it. The end of the *cakra* tradition does not mark the end of "Dvāravatī" as a cultural force, but probably marked the end of an era of state development and certain ruling lineages.

Acknowledgements

This essay developed as an outgrowth of research into the meaning and possible functions of ritual trays of Dvāravatī. Gudur Swati Reddy's collaboration in that earlier phase and also her occasional assistance in this investigation into the *cakra*s is greatly appreciated. I would also like to thank Nicolas Revire, Stephen Murphy, Tran Ky Phuong and Amarjiva Lochan for their helpful comments and moral support.

Abbreviations

Pāli text references are to PTS publications, except the *Visuddhimagga*, published by the Buddhist Publication Society, Kandy (Bhikkhu Ñāṇamoli 1975).

A	*Aṅguttaranikāya*
D	*Dīghanikāya*
Dhp	*Dhammapada*
M	*Majjhimanikāya*
S	*Saṃyuttanikāya*
Th	*Theragāthā*
Ud	*Udāna*
Vin	*Vinaya*
Vism	*Visuddhimagga*

Endnotes

1 B #38 = Brown's *cakra* #38 (1996: fig. 38); Brown's work is used as the primary identification for the *cakra*s when possible; see **Table 2-A** for other sources and a summary of the *cakra*s studied.

2 See **Table 1** illustrations of *cakra* types.

3 Nicolas Revire in personal communication, including a photo taken by Pierre Pichard. For an additional relief depicting a *cakrastambha* from southern Laos, see Lorrillard (this volume, fig. 2).

4 Probably Bhavavarman II (seventh century), the son of Īśānavarman I (ca 611-630 CE) of Sambor Prei Kuk or Īśānapura (Briggs 1951: 42-43, 53-54). Although it is a Śaiva shrine, the south *bhadra* may have been devoted to Viṣṇu in the multi-deity practices of the times (Maxwell 1997: 48-54, 81-83).

5 Tiffin and Stuart-Fox (2002: 59) seem to link the descent from Tāvatiṃsa to the Buddha's last birth before he became the Buddha. That descent, however, was from Tusita (fourth of six heavens) and not Tāvatiṃsa (second of six heavens). The descent from Tāvatiṃsa/Trāyastriṃśa was associated with the miracle at Śrāvasti and his preaching to his mother and the other gods from Sakka's throne. That occurred some years after his enlightenment (Malalasekera 1974: I, 1002, 1033; Huntington 1985: 72-73). It is this descent, which has symbolic parallels in the *rājasūya* ritual. However, the descent from heaven to take human birth might be symbolic of merit, as they suggest, or perfected virtues (*pāramitās*) of a Bodhisattva.

6 Pre-Aryan earth spirits or indigenous tutelary deities were called in Sanskrit "*yakṣa*s," and these also had to be dealt with during that transition in order to maintain order (Wolters 1979: 434-435). It can be noted that on the base of one of early Si Thep's monument, *yakṣa*s and dwarves are depicted as supporting it on their backs (FAD 2550: 88-91). Similar motifs are found on the base of Chedi Chula Prathon stage III, i.e., a dwarf identified as *yakṣa* (Dupont 2006: 58, pls. 201, see also 192, 294-296) and fragments with *yakṣa* heads found at Wat Phra Men, perhaps from stages I and II (Dupont 2006: 27, 29, 34, pls 17, 48, 49).

7 Johannes Heesterman (1957: 3, 7-9) emphasises the distinction between coronation of a king and the *abhiṣeka*, which is a consecration, instilling or confirming spiritual powers.

8 John Irwin (1990: 52, 60) also points out that the *cakra* originally symbolised the solar wheel.

9 Vairocana is associated with the Sun-disc and has the characteristic *mudrā* of turning the *dharmacakra*, (Maxwell 1997: 158-168), which is, however, not found in Dvāravatī Buddha images (e.g. Revire 2010).

10 For example, the drum slab from a *stūpa* at Gummididurru, Andhra Pradesh (India), now in the Cincinnati Museum of Art (Rosen Stone 1994: pl. 123) **[Figure 3]**. See also Rosen Stone (1994: pls 91, 92, and 97) and Phasook (2008: figs 13-15). The inspiration for this depiction, Phasook Indrawooth says (2008: 17, 31), could be the *Dhammapada* (Dhp 397) and the *Theragāthā* (Th 1095) where there are references to fiery energy. There is also a reference in the latter text to *paññā* (Skt, *prajñā*) as the sword of understanding. Swords can be seen on two of the wheels with Kala faces **[Table 1: KIII]**.

11 In *Aṅguttaranikāya* (A II 9-10), in a context where the wheel could be a *dharmacakka*, the Pāli term appears to have been *brahmacakka*. The term is used in the prose text to be the equivalent of a *dharmacakka* so termed in the verse summary of the passage (A II 9-10, note 3).

12 The three are *saccañāṇam*, *kiccañāṇam* and *katañāṇam*, being "present truth," "(truth) to be known," and "(truth) which has been known" as they appear repeated five times in an inscription on a *cakra* felly (Brown 1996: 101, citing Cœdès and *Vinaya*). This fivefold repetition of "three knowledges" implies application to the five *khandha*s, i.e., the path to enlightenment.

13 The term refers to all conditioned phenomena. The five *khandha*s are materiality (*rūpa*) and mentality (*nāma*) classified as four, viz., consciousness (*viññāṇa*), feeling (*vedanā*), remembrance/perception (*saññā*) and formations (*sankhāra*, all *cetasika*s except feeling and remembrance) (S XXII 5, 48, 56).

14 For eleven or ten factors based on good conduct, see *Aṅguttaranikāya* (A V 311-312 and A V 1-2 respectively). Also the Sanskrit *Nidānasūtra* has ten (Krishnan 2007: 78), but based on *khandha*s. For nine-factors related to *khandha*s, see *Dīghanikāya* (D II 55-56). *Cakra*s with ten or twenty spokes would be in conformity with the *saṁsāracakra* of the *Visuddhimagga* (Vism 207) and *Majjhimanikāya* (M I 55), which is based on the ten-factor formulation.

15 The Five Powers: faith, energy, mindfulness, concentration and insight or wisdom (A III 10).

16 See also Harvey (1990: 99) for numbers which correspond to the various components comprising the thirty-seven *bodhipakkhiyadhamma*s (things pertaining to enlightenment).

17 The top of the Sukhothai Indrakila is missing so its detail is not known. Betty Gosling (1996: 135, pl. 4.76) attributes the column to "Burmese influence," but it is not clear if this was the Rakhine *cakra*s fronted by Indra **[Table 1]**.

18 The Pyu may have used the *cakra* "palladium" since a mold for circular forms, which could be a miniature version like that on the Rakhine *cakra* **[Table 1]** and the Gupta coins, was found at Beikthano (Aung Thaw 1968: pl. LIVc).

19 In India, in Buddhist contexts, they occur flanking *caityagṛha* entrances and *ayaka* platforms (Huntington 1985: figs 9.12, 9.17, 9.24; Rosen Stone 1994: pl. 16).

20 The alignment is not on the cardinal axes, but shifted slightly (FAD 2545: 26, 31). If there was a monument toward the south or southwest end of this axis, it apparently has not yet been found.

21 It appears that Mueang Bon in Nakhon Sawan province (Dhida 1999: 182), which was a round city, has a river to the west and hills to the east.

22 Khao Thamorat and Khao Yai-Khao Lang San respectively; see Dhida (1999: 61, 104 for maps).

23 Stephen Murphy (pers. comm.) citing Baptiste & Zéphir (2009: 122, fig. 4). See also Table 1: KI.C; Dhida (1999: 103) and FAD (2550: 95).

24 Brown (1996) did not take this to be cultural influence, but more or less accidental transfer of aesthetic traits by the artisans.

25 The felly motifs are also less sharp, which tentatively may be a factor of workmanship perhaps of hasty production.

26 Known as Īśānapura, it was established by Īśānavarman I who reigned *circa* 611-630 CE (Briggs 1951: 46).

27 Also, the puzzling "gutters" in the foundation of Wat Phra Men's phase I (Dupont 2006: 21; Piriya 1975: 180, 187, 191), must have originally held large wooden foundation beams supporting wooden halls on the four sides of the solid core. These may have been damaged simply by fire or in war so badly as to make a rebuilding necessary.

References

Archaeological Survey of India (ASI)
1960 *Indian Archaeology 1959-60, A Review* (IAR). New Delhi: Archaeological Survey of India. [Reprinted 1996]

Aung Thaw
1968 *Report on the Excavations at Beikthano.* Rangoon: Ministry of Union Culture.

Aung-Thwin, Michael
1983 Divinity, Spirit, and Human Conceptions of Classical Burmese Kingship. In Lorraine Gesick (ed.), *Centers, Symbols, and Hierarchies; Essays on the Classical States of Southeast Asia.* New Haven, Connecticut: Yale University Southeast Asia Studies, pp. 45-86.

Baptiste, Pierre & Zéphir, Thierry (eds)
2009 *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des Musées nationaux.

Bauer, Christian
1991 Notes on Mon Epigraphy. *Journal of the Siam Society* 79(1): 31-83.

Bhikkhu Ñāṇamoli (trans.)
1975 *Path of Purification (Visuddhimagga)*. Kandy: Buddhist Publication Society.

Boner, Alice
1990 *Principles of Composition in Hindu Sculpture, Cave Temple Period.* Delhi & New Delhi: Motilal Banarsidass & Indira Gandhi National Centre for the Arts.

Briggs, Lawrence Palmer
1951 *The Ancient Khmer Empire.* Philadelphia: The American Philosophical Society.

Brown, Robert L.
1996 *The Dvāravatī Wheels of the Law and the Indianization of South East Asia*. Leiden: Brill.

Cœdès, George
1966 *Angkor, an Introduction.* Hong Kong: Oxford University Press.

1968 *The Indianized States of Southeast Asia*. Honolulu: University Press of Hawai'i.

1972 *The Making of South East Asia.* Berkeley and Los Angeles: University of California Press [Fourth Edition].

Dao Linh Côn
1994 The Oc Eo Burial Group Recently Excavated at Go Thap (Dong Thap Province, Viet Nam). In Manguin, Pierre-Yves (ed.), *Southeast Asian Archaeology 1994, Proceedings of the 5th International Conference of the European Association of Southeast Asian Archaeologists, Paris 24th-28th October 1994. Volume 1.* Hull: Centre for Southeast Asian Studies, pp. 111-117.

Dehejia, Vidya
1972 *Early Buddhist Rock Temples: A Chronological Study.* London: Thames and Hudson.

Dhanit Yupho
1990 *Dharmacakra or the Wheel of the Law*. Bangkok: Fine Arts Department. [Reprint]

Dhida Saraya
1999 *(Sri) Dvaravati: The Initial Phase of Siam's History*. Bangkok: Muang Boran Publishing House.

Dupont, Pierre
2006 *The Archaeology of the Mons of Dvāravatī*. English Translation by Joyanto K. Sen, with Extensive Annotations. Two volumes. Bangkok: White Lotus Press. [First published in French as *L'archéologie mône de Dvāravatī*, 1959]

Fine Arts Department (FAD)
2545 *Borannakhadi mueang u thong (Archaeology in the Municipality of U Thong)*. Bangkok: Fine Arts Department. [In Thai with English Summary; 2002 CE]

2548 *Phiphithaphan sathan haeng chat phra pathom chedi/Phrapathom Chedi National Museum*. Bangkok: Fine Arts Department. [In Thai and English; 2005 CE]

2550 *Uthayan prawatisat si thep (Si Thep Historical Park)*. Bangkok: Fine Arts Department. [In Thai with English Summary; 2007 CE]

Gosling, Betty (Elizabeth)
1983 *The History of Sukhothai as a Ceremonial Center: A Study of Early Siamese Architecture and Society.* Doctoral Dissertation. Ann Arbor: University of Michigan. [Unpublished]

1991 *Sukhothai: Its History, Culture and Art*. Bangkok: Oxford University Press/Asia Books.

1996 *A Chronology of Religious Architecture at Sukhothai, Late Thirteenth to Early Fifteenth Century.* Ann Arbor: Association for Asian Studies, Inc.

2004 *Origins of Thai Art*. Bangkok: River Books.

Grünwedel, Albert
1974 *Buddhist Art in India.* Varanasi: Bhartiya Publishing House.

Guillon, Emmanuel
1991 The Ultimate Origin of the World, or the Mulâ Muh, and Other Mon Beliefs. *Journal of the Siam Society* 79(1): 22-30.

Gutman, Pamela
1976 *Ancient Arakan, with Special Reference to Its Cultural History between the 5th and 11th Centuries.* Doctoral Dissertation. Sydney: Australian National University. [Unpublished]

1978 The Ancient Coinage of Southeast Asia. *Journal of the Siam Society* 66(1): 8-21.

1986 Symbolism of Kingship in Arakan. In Marr, David G. & Milner, A.C. (eds), *Southeast Asia in the 9th to 14th Centuries*. Singapore: Institute of Southeast Asian Studies.

1996 The Pyu Maitreyas. In Takkasui Myasamuin & Sutesana Thana (eds), *Traditions in Current Perspective: Proceedings of the Conference on Myanmar and Southeast Asian Studies 15-17 Nov. 1995, Yangon*. Yangon: University Historical Research Center, pp. 166-167.

Hall, Kenneth R.
1985 *Maritime Trade and State Development in Early Southeast Asia.* Honolulu: University of Hawai'i Press.

Harvey, Peter
1990 Venerated Objects and Symbols of Early Buddhism. In Werner, Karel (ed.), *The Indian and the Comparative Perspectives*. Durham: School of Oriental Studies, University of Durham, pp. 68-102.

Heesterman, Johannes Cornelis
1957 *The Ancient Indian Royal Consecration, the Râjasûya Described According to the Yajus Texts and Annotated*. 'S-Gravenhage: Mouton & Co.

Higham, Charles
2002 *Early Cultures of Mainland Southeast Asia*. Bangkok: River Books.

2004 *Encyclopedia of Ancient Asian Civilizations*. New York: Facts on File.

Huntington, Susan. L.
1985 *The Art of Ancient India*. New York: Weatherhill. [With contributions by John C. Huntington]

Indorf, Pinna & Reddy, Swati
2007 Three Enigmatic Trays or Plaques from South & Southeast Asia. Paper presented at the *SSEASR's 2nd Conference May 24-27, 2007* in Nakhon Pathom: Institute of Language and Culture for Rural Development, Mahidol University. [Unpublished]

2009 Ritual Trays of Dvāravatī: Their Place in the Context of Buddhism Across Asia. Paper presented at the *Buddhism Across Asia International Conference, 16-18 Feb. 2009* in Singapore: Institute of Southeast Asian Studies. [Unpublished]

Irwin, John C.
1990 Origins of Form and Structure in Monumental Art. In Werner, Karel (ed.), *Symbols in Art and Religion, the Indian and the Comparative Perspectives*. Durham: School of Oriental Studies, University of Durham, pp. 46-67.

Kooij, Karel van
1995 Remarks on Festivals and Altars in Early Buddhist art. In Kooij, K.R. van & Veere, H. van der (eds), *Function and Meaning in Buddhist Art, Proceedings of a Seminar Held at Leiden University, 21-24 October 1991*. Groningen: Egbert Forsten, pp. 33-43.

Krishnan, Gauri Parimoo, (ed.)
2008 *On the Nalanda Trail; Buddhism in India, China & Southeast Asia*. Singapore: Asian Civilisations Museum.

Kulke, Herman
1986 The Early and Imperial Kingdom in Southeast Asian History. In Marr, David G. & Milner, A.C. (eds), *Southeast Asia in the 9th to 14th Centuries.* Singapore and Australia: Institute of Southeast Asian Studies and Research School of Pacific Studies, Australian National University, pp. 1-22.

Malalasekera, G.P.
1974 *Dictionary of Pali Proper Names*. Two volumes. London: Pali Text Society/Routledge & Kegan Paul. [Reprint]

Malleret, Louis
1959 *L'archéologie du Delta du Mékong. Volume 1 : l'exploration archéologique et les fouilles d'Oc-Eo.* Paris: École française d'Extrême-Orient.

Maxwell, Thomas S.
1997 *The Gods of Asia, Image, Text and Meaning*. New Delhi: Oxford University Press.

Miksic, John N.
2003 The Beginning of Trade in Ancient Southeast Asia: The Role of Oc Eo and the Lower Mekong River. In Khoo, James C.M. (ed.), *Art and Archaeology of Fu Nan; Pre-Khmer Kingdom of the Lower Mekong Valley*. Bangkok: Orchid Press, pp. 1-34.

Mus, Paul
2001 The Religious Ceremonies of Champa. In Parmentier, Henri, Mus, Paul & Aymonier, Étienne. *Cham Sculpture, Religious Ceremonies and Superstitions of Champa*. Bangkok: White Lotus Press, pp. 67-95. [Originally published as "Cultes indiens et indigènes au Champa" in *BEFEO* 23: 367-410, 1934]

Nai Pan Hla
1991 The Major Role of the Mons in Southeast Asia. *Journal of the Siam Society* 79(1): 13-19.

Phasook Indrawooth
2008 *Dvāravati Dharmacakra/ Thawarawadi thammachak.* Bangkok: Silpakorn University. [In English and Thai; 2551 BE]

Piriya Krairiksh
1975 *The Chula Pathon Chedi: Architecture and Sculpture of Dvāravatī*. Doctoral Dissertation. Cambridge: Harvard University. [Unpublished]

Rao, B.S.L. Hanumantha *et al.* (eds)
1998 *Buddhist Inscriptions of Andhradesa*. Secunderabad: Ananda Buddha Vihara Trust.

Revire, Nicolas
2010 Iconographical Issues in the Archeology of Wat Phra Men, Nakhon Pathom. *Journal of the Siam Society* 98: 75-115.

Rosen Stone, Elizabeth
1994 *The Buddhist Art of Nāgārjunakondā*. Delhi: Motilal Banarsidass.

Sarma, I.K.
1994 *Parasurâmêsvara Temple at Gudimallam*. Nagpur: Dattsons.

Shoji Ito
1977 On the Date and Analysis of Stone *Dharmacakra* Found in Thailand. In *Proceedings, Seventh IAHA Conference, Volume 2*. Bangkok: Chulalongkorn University, pp. 1228-1237.

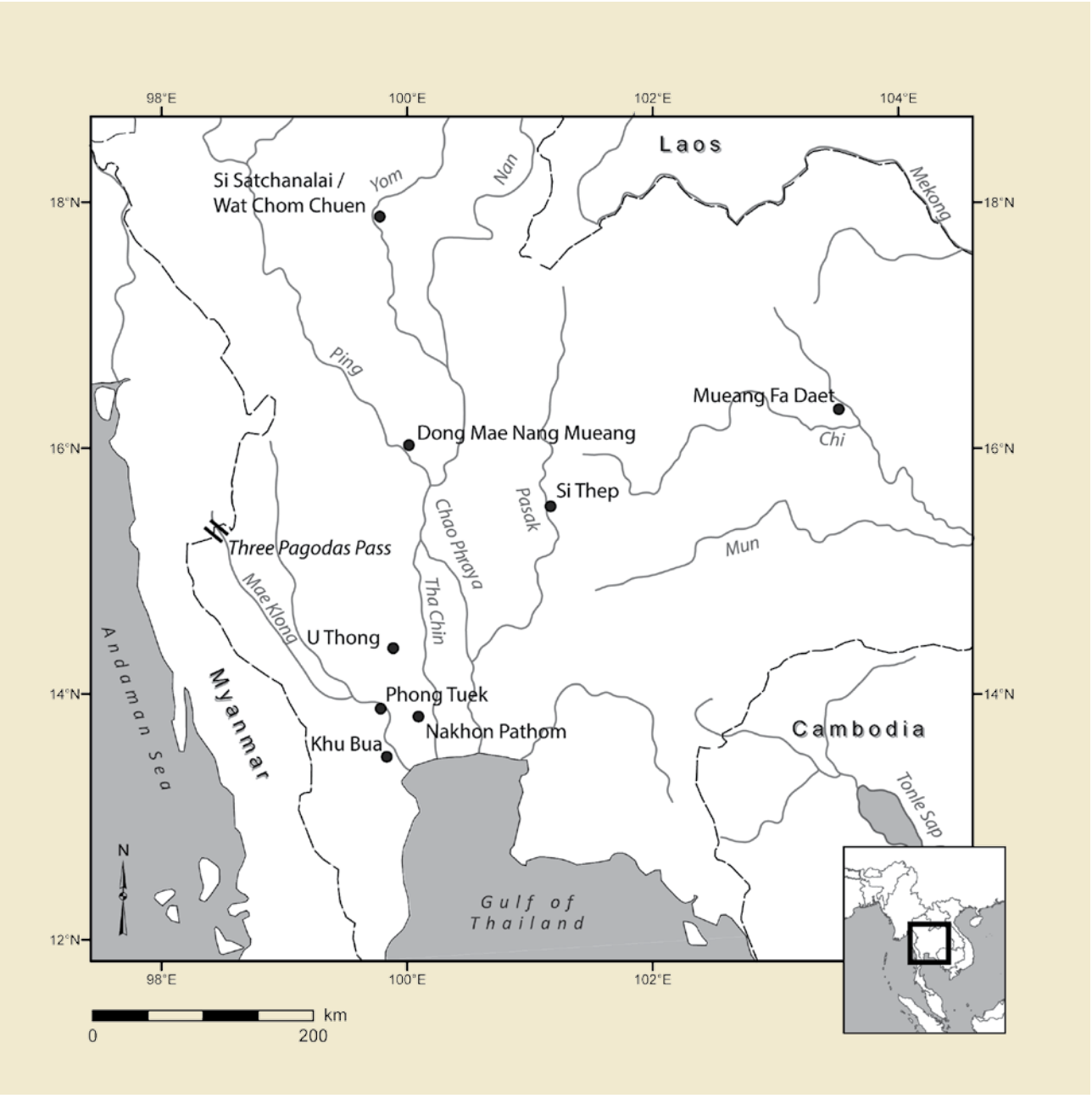
Tiffin, Sarah & Stuart-Fox, Martin
2002 The Dvaravati "Buddha on a Monster" Stelae: A Possible Interpretation. *Journal of the Royal Asiatic Society* 12(1): 47-65.

Tranet, Michel
1997 *Sambaur-Prei-Kuk, monuments d'Içanavarma I (615-628). Volume 1*. Phnom Penh: Foundation Toyota.

Vickery, Michael
1998 *Society, Economics and Politics in Pre-Angkor Cambodia: The 7th-8th Centuries*. Tokyo: The Centre for East Asian Cultural Studies for Unesco/The Toyo Bunko.

Wolters, W.O.
1979 Khmer "Hinduism" in the 7th Century. In Smith, R.B. & Watson, W. (eds), *Early South East Asia, Essays in Archaeology, History and Historical Geography*. Oxford: Oxford University Press, pp. 427-442.

Zimmer, Heinrich
1984 *The Art of Indian Asia, Its Mythology and Transformations*. Delhi: Motilal Banarsidass.



Map 1: *Location of Phong Tuek and other sites mentioned, including Three Pagodas Pass on the Thailand-Myanmar border [Drawing courtesy of Matthew Gallon].*

The Skeletons of Phong Tuek: Human Remains in Dvāravatī Ritual Contexts

Wesley Clarke

Introduction

The arrival of Buddhism and Brahmanism in the region of central Thailand, traditionally referred to as a period of "Indianisation," was originally presumed to bring with it a shift from prehistoric inhumation burial forms to cremations (Bronson 1976: 20-21; Glover 1980: 20, n. 1). The present essay has been prompted by a series of features that appear to combine Dvāravatī-era[1] ritual architecture with human remains in contradiction to this expectation. The information newly presented here is part of a larger reconsideration of Phong Tuek,[2] estimated to be a mid-to-late first millennium CE occupation in Kanchanaburi province, western Thailand, that was germinal to development of the Dvāravatī cultural concept **[Maps 1-2]**. During brief investigations by George Cœdès in 1927 and Horace Geoffrey Quaritch Wales in 1936, the rural hamlet of Phong Tuek yielded Buddha figures of various sizes and materials, so-called "votive tablets" and other ritual objects, ritual architecture and architectural terracotta, a limited domestic assemblage and information on at least thirteen inhumation burials (Cœdès 1928a, 1928b; Quaritch Wales 1936a, 1936b, 1937a, 1937b). Field reconnaissance by the present author in January 2008 produced additional information in all these categories, including descriptions of another structure with human remains associated (Clarke 2009, 2010 and 2011). The present essay focuses on the potential association at Phong Tuek of non-cremated human remains with the ritual architecture to which they are proximal, taking into consideration comparative data from other first millennium CE sites in Thailand labeled Dvāravatī by their investigators.

Phong Tuek was a key source of information for Cœdès' and Quaritch Wales' formulation of the "Dvāravatī concept," being one of the first sites where this cultural identification was applied. It also appears that the eleven burials excavated by Quaritch Wales in 1936 was the first systematically collected archaeological sample of human remains in Thailand (cf. Tayles & Oxenham 2006: 9). Even so, relatively little comment on these remains was offered by the original investigator or subsequent commentators, no doubt largely because Quaritch Wales asserted that the eleven burials he uncovered were not associated with the Dvāravatī component at the site.[3] Indeed, the investigative narrative for the human remains at Phong Tuek is a curious story of incomplete information, miscommunication, and dramatically shifting interpretation. The looted skeleton of a human "giant" noted by Cœdès (1928a: 195) was scattered and lost before it could be examined. None of the burials uncovered by Quaritch Wales were illustrated or

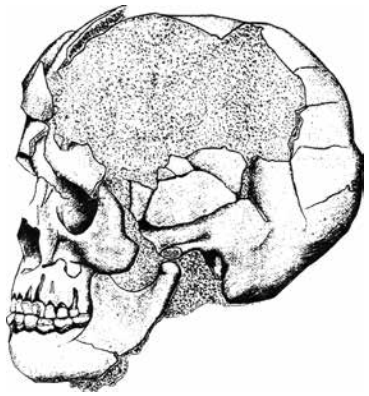


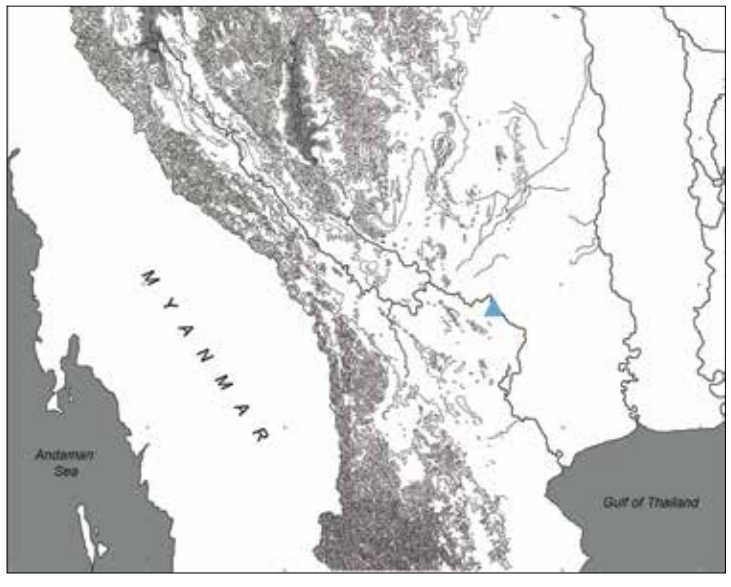
Figure 1: *Cranium excavated by Quaritch Wales at his "*stūpa *location" and placed with the RCS Museum in London [After Quaritch Wales 1937a: pl. F].*

described in even moderate detail; neither were their stratigraphic contexts diagrammed (Quaritch Wales 1936b). His assessment of the burials also wavered: Quaritch Wales initially suspected a connection between the burials and Dvāravatī architecture, but ultimately asserted that these were more likely to be "warriors killed in battle," residing in accidental proximity to the Phong Tuek structures (1936b: 46). A published consideration of three of the excavated crania, including one specimen purported to exhibit tooth-filing (Quaritch Wales 1937a) **[Figure 1]**, was revealed after many years to reflect a misunderstanding between Quaritch Wales and his London analyst which, however, could not be redressed because the three retained skulls had been destroyed by German bombs during World War II!

The minimal and irregular nature of the published mortuary data from Phong Tuek has been subsequently mitigated to some degree by the "rediscovery" of Quaritch Wales' field notes for his Phong Tuek explorations.[4] These notes provide significant new information on mortuary, architectural, stratigraphic, and other categories of information beyond that published by Quaritch Wales. On the other hand, the notes are relatively minimal, considering the amount of work undertaken, and visually sketchy to the point of being difficult to decipher in many instances. Drawings of feature plans are not to scale, but still convey spatial relationships totally lacking in the published reports, which border on the anecdotal. Of particular interest to the present evaluation, the burials' general layout, individual disposition, associated artefacts, and relationship to structural elements are recorded in the field notes.

The Site of Phong Tuek

The rural hamlets of Phong Tuek sub-district reside on the westward bank of the Mae Klong river in southern Kanchanaburi province,[5] Tha Maka district, western Thailand **[Maps 1-2]**. Phong Tuek has



Map 2: *Phong Tuek's position (blue triangle) intermediate to the Central Plain on the east and the Tenasserim Highlands on the west [Base map courtesy of Podjanok Kanjanajuntorn].*

maintained a rural character, dominated by stands of banana palms and fields of cultivated sugar cane, corn, and chili peppers. The site locality resides on an elevated late Pleistocene deltaic fan at the foot of a mountainous zone to the west (Tanabe *et al.* 2003: 790, fig. 1; Fukui 1976: figs 1-2). The well-drained, drier soils are not suited for rice cultivation, and modern farming methods have permitted the development of dryland crops (cf. Glover 1991: 351). Passes in the western mountains allow direct connections between west-central Thailand and lower Myanmar, and Phong Tuek resides in a valley leading directly to the main such crossing, namely the Three Pagodas Pass **[Map 1]**.

Based on reports of villager finds spectacular enough to raise interest 100 kilometres distant in Bangkok, George Cœdès, then General Secretary of the Royal Institute of Siam, organised subsurface explorations in 1927 (Cœdès 1928a). These "excavations" were focused on the most productive villager find-spots and several low mounds of structural rubble, and they uncovered significant architectural remains and several ritual artefacts. Field work was halted, however, after less than four months and before all the extant rubble-mounds were explored (Cœdès 1928a: 195, 198; Quaritch Wales 1936b: 43).

In January 1936, while waiting for the end of unseasonably late rains to gain passage to the walled urban centre of Si Thep, Quaritch Wales (1936b: 42-43) spent two weeks at Phong Tuek. This field work was part of a larger archaeological expedition organised by the Greater-Indian Research Committee (1936b: 42). Despite substantial looting by villagers during the nine years since Cœdès' visit, Quaritch Wales uncovered additional significant material data at the site, including structural foundations and adjacent inhumation burials.

The architecture and artefacts recovered by the 1927 and 1936 investigations, over a distance of 800 metres **[Figure 2]**, were interpreted by both Cœdès and Quaritch Wales to indicate "a city of the Buddhist kingdom located […] between Cambodia and Burma [i.e. central Thailand] and provisionally referred to […] under the name Dvaravati" (Cœdès 1928a: 208-209; Quaritch Wales 1936b: 42). Despite this urban attribution, the true nature of the Phong Tuek settlement, and its placement in a larger Dvāravatī settlement hierarchy or heterarchy, remains uncertain. The lack of adequate information on Phong Tuek's content and layout – indeed, even a general impression of its areal extent – is reflected by Pierre Dupont's observation that "we are unaware of its true importance because research there was stopped rather quickly" (2006: 77-78).

Phong Tuek was among the first sites to be attributed by Cœdès to a Dvāravatī cultural tradition; it was also long considered to be the earliest known "Dvāravatī" settlement, based on the attribution of a so-called "Amarāvatī style" Buddha figure and a Mediterranean-style lamp to the early first millennium (Cœdès 1928a: 204, 207-208; Briggs 1945: 99, 106). Subsequent reanalysis of these objects, however, has placed them later in time (Brown & McDonnell 1989; Borell 2008; Clarke 2011: 59-63).

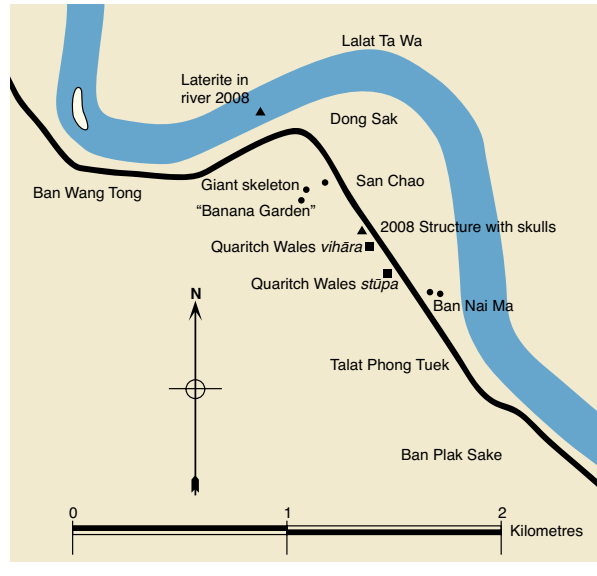


Figure 2: *Drawing showing Cœdès mounded architectural locations and locality designations (black circles), the Quaritch Wales site locations (black squares), and sites newly identified by the 2008 reconnaissance (black triangles) [Drawing adapted from Cœdès 1928a: pl. 1].*

The Field Notes

The relocation of the field notes for Quaritch Wales' investigation at Phong Tuek provides significant new information for interpretation of the site, and also new dilemmas. The field notes encompass sixteen unnumbered pages in approximately a 20 by 25 cm.[6] composition book. What is presumed to be Quaritch Wales' writing is in a heavy hand that is rather "slapdash" and often difficult to read. Maps and drawings are similarly sketchy and not done to scale. There is a second, minority set of notations in the field notes, in a lighter and readily intelligible hand that is suspected to belong to his wife, Dorothy, who accompanied him to Phong Tuek (Quaritch Wales 1937: 128). These secondary notes follow a pattern of adding clarification to the heavy-handed notes, in some cases correcting information or providing an alternative interpretation. For example, the primary notes repeatedly refer to iron implements found with certain burials as a "weapon" or "dagger," reflecting Quaritch Wales' interpretation that these were the remains of "warriors killed in battle" (1936b: 45-46). Written above the first hand's "weapon" for one of the burials, however, is the second hand's "cutting instrument," inserting a more prosaic utilitarian label (Quaritch Wales 1936a: 11).

Reconstructions presented in this essay are extrapolations from both the field notes and the published reports. There are inconsistencies both within the notes and between the notes and Quaritch Wales' published accounts, and no doubt alternative reconstructions are possible. The present analysis has tended to give greater weight to information in the field notes, since this source has a more direct relationship to the original observations.

Human Remains at Phong Tuek

Human remains were part of the Phong Tuek narrative from the first villager accounts in 1927. Among the reports of substantial finds drawing Cœdès' attention was the description of a "giant skeleton among gold and silver Buddha statues" (part of a headline in Bangkok's *Daily Mail* for July 28th, 1927, quoted in Cœdès 1928a: 195). The precious relics reported to have been found with these human remains apparently added to the frenzy of discovery at Phong Tuek, for by the time Cœdès arrived less than a month later the skeleton had been broken up and dispersed along with the associated artefacts, and additional villagers had "flocked to the place to dig for other treasures" (1928a: 195). Likewise, when Quaritch Wales arrived nine years later, he found evidence for much additional looting.

Structural Features with Human Remains

The Cœdès and Quaritch Wales field investigations of 1927 and 1936, and the present author's field reconnaissance in January 2008, resulted in the documentation of four instances of human remains at or near "Dvāravatī" levels and architecture. These include:

(1) A "giant" skeleton obtained from a "small cave in the ground" discovered by "a peasant tilling the soil in his farm" (Cœdès 1928a: 195). In the "cave," which was presumably a hollow architectural feature (burial or ritual vault?), the apparently extended body was lying next to a group of Buddha figures in gold, silver, and "brass." This feature was situated at the northern end of the Phong Tuek site locale, in a complex of ritual structures designated the "Banana Garden"[7] (Cœdès 1928a: 197, 199-200) **[Figure 2]**. Although little else can be related for the disposition and context of these human remains, it does appear to present a burial in association with a structure (the "cave"), as opposed to a simple mortuary pit, and with more substantial ritual structures close by.

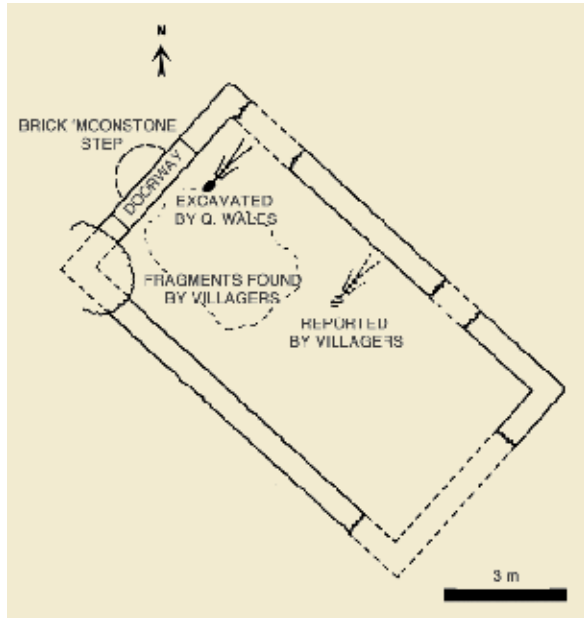


Figure 3: *Reconstruction of the rectangular* "vihāra *foundation" layout excavated by Quaritch Wales in 1936, including locations for the uncovered burials [Drawing by Wesley Clarke].*

(2) Quaritch Wales' short visit to Phong Tuek in 1936 focused on several brick rubble-mounds not examined by Cœdès (1936b: 43). The first of these, located approximately 450 metres southeast of the "Banana Garden" structures **[Figures 2-3]**, had been extensively and recently looted, but Quaritch Wales nonetheless uncovered a relatively intact rectangular brick foundation measuring 6.3 metres northeast-southwest by 11 metres northwest-southeast (1936b: 44 and 1936a: 2-7). The basal course of this foundation was 80 cm. below ground surface. Quaritch Wales indicated that he uncovered an extended inhumation burial "just within the walls;" verbal and sketched notations suggest that this burial was in the structure's northern corner, paralleling the outer wall with the head situated to the southwest. The skeleton measured 1.7 metres in "height" (length), and was not accompanied by any "objects that might have thrown light on its period." It appears that the vertical range of this burial deposit was between 1.2 and 1.4 metres below ground surface (Quaritch Wales 1936a: 2-3 and 1936b: 44). A second burial previously dug up by local residents apparently more-or-less paralleled the grave excavated by Quaritch Wales, being described as having its feet pointing to near the midpoint of the northeast wall (Quaritch Wales 1936a: 3).

Quaritch Wales interpreted this structure to be a monastic assembly hall or "*vihāra*" (1936: 44). Villagers reported that about two years previously fifteen small images (presumably of Buddha) had been found within this foundation, along with a limestone double lotus pedestal with feet attached, and twenty heads and other fragments of images (Quaritch Wales 1936a: 3). During his excavation, Quaritch Wales also found "small fragments of the limbs of images in the blue limestone characteristic of the Dvaravati period" (1936: 44).

(3) At a second rubble-mound 60 metres distant from the previous location **[Figure 2]**, and less disturbed by looting, Quaritch Wales uncovered the lower sections of "the first stupa of the Dvaravati period that has been discovered, of which anything more than a base remains" (1936b: 45). These structural remains were entirely of brick, and included two rectangular platforms at the base, surmounted by four recessive octagonal levels **[Figures 4-5]**. The outside dimensions of

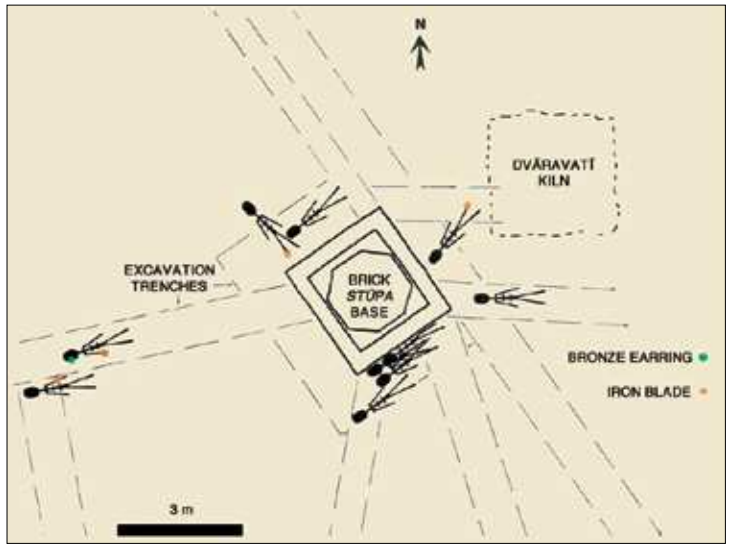


Figure 4: *Reconstruction of the "*stūpa *base" and surrounding burial layout excavated by Quaritch Wales in 1936. Trench outlines are estimated with dashed lines; the pottery kiln location is approximate, based on a description in the field notes [Drawing by Wesley Clarke].*

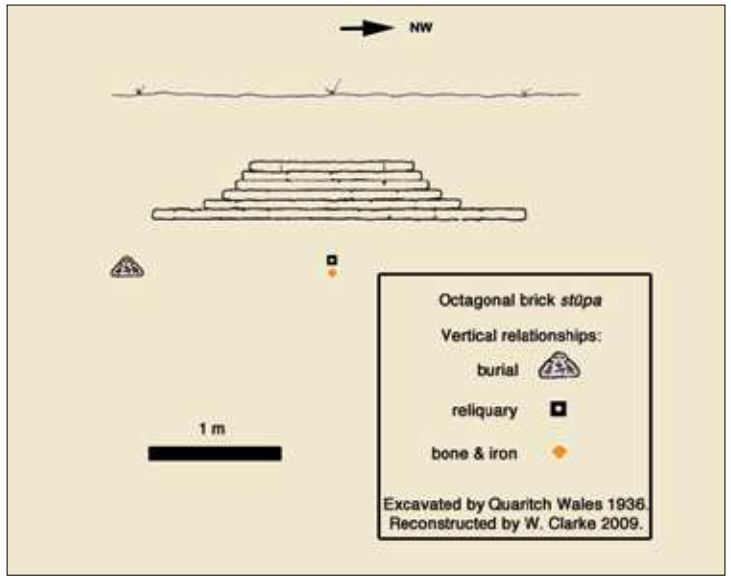


Figure 5: *Reconstruction of the vertical profile of the small "*stūpa*" excavated by Quaritch Wales in 1936 [Drawing by Wesley Clarke].*

the lowest rectangular platform were 2.9 metres northwest-southeast by 2.7 metres northeast-southwest; the largest octagonal level was 69 cm. long on each of the eight sides (Quaritch Wales 1936a: 10). The lowest course of brick rested at 97 cm. below ground surface.

Quaritch Wales excavated along the perimeter of the "*stūpa*" base to a depth of 1.8-2.1 metres below ground surface "with the object of ascertaining that natural soil had been reached;" he also dug at least nine radial trenches into the surrounding area (Quaritch Wales 1936a: 8-11; 1936b: 45). These explorations uncovered ten extended inhumation burials close to the "*stūpa*" (Quaritch Wales 1936a: 8; 1936b: 47). The burials resided in a vertical zone between 1.3 and 1.4 metres below ground surface (Quaritch Wales 1936a: 9-10; 1936b: 46), and were "lying full length" (1937a: 89), with none extending beneath the "*stūpa*" structure (Quaritch Wales 1936b: 45). There was a concentration of four burials adjacent to and paralleling the southeast margin of the "*stūpa*" platform, and what may be intentional pairs of inhumations on the northeast, northwest and southwest sides of the "*stūpa*." Among the paired inhumations, four included iron implements – which Quaritch Wales labeled "weapons" and "daggers" – and one also had a "copper ring," presumably bronze, at the area of the right ear. No other grave goods were noted among the ten burials.

The elevated central core of the "*stūpa*" remnant was composed of earthen fill and Quaritch Wales (1936b: 45) excavated this medial axis, encountering a ritual deposit at a depth of 1.3 metres below ground surface (33 cm. below the brick base).[8] Items in this deposit included "a small silver casket containing cremated human relics;" 10 cm. below the casket, an "iron object of unknown use,[9] as well as a piece of bone" were found at 1.4 metres below ground surface on the central axis – "hence at the level of the skeletons" (Quaritch Wales 1936a: 11; 1936b: 45-46). Despite the latter comment, Quaritch Wales did not speculate further on whether this iron and bone might represent a burial underneath the so-called *stūpa*.

(4) During the January 2008 field reconnaissance of Phong Tuek, the interview of elderly resident Khun Chuan Laochan resulted in the tentative identification of a new structural location with associated human remains (Clarke 2011: 169-170) **[Figure 2]**. A small, lightly built structural remnant had been uncovered *circa* 1949, and a crew of seven monks was dispatched from nearby Wat Dong Sak to retrieve the large bricks for use in constructing a stairway at the temple. The newly uncovered structure was described as a square platform of brick (one course thick) approximately 5 metres on a side, with remnants of a light wall laid in a simple overlapping bond around the perimeter **[Figure 6]**. On the brick floor inside, a human skull was present in each corner, facing inward, and one skull was placed at the centre. There was no recollection of associated artefacts. The base of the structure floor was estimated to be between 1.4 and 1.5 metres below ground surface. This small structure had light brick construction similar to that of Quaritch Wales' octagonal "*stūpa*," and appears to be a subterranean compartment at a maximum depth similar to the graves surrounding the "*stūpa*."

Khun Chuan Laochan reported that the central cranium was collected by the monks, due to its presence where bricks were being removed, and taken to nearby Wat Dong Sak, where it remained for about a year before it was burned as part of the annual mortuary cleansing of Chinese-style graves (surface vaults). The four corner skulls were said to have been left in place and reburied.

The ritual nature of the four structural locations described above is inferred from the associated ritual contents (the "giant's cave," excavated "*vihāra*" and "*stūpa*"), the architectural form (*stūpa*), or the arrangement of human remains and architecture (structure identified in 2008). Five additional structures documented for Phong Tuek **[Figure 2]** included a purported *vihāra* foundation at the "San Chao" location, composed of laterite (Cœdès 1928a: 200); a square laterite foundation at the "Banana Garden" location 100 metres southwest of the San Chao

"*vihāra*," with remnants of a brick superstructure, probably a small temple or shrine (Cœdès 1928a: 199); a square foundation of laterite at the "Ban Nai Ma" location approximately 800 metres southwest of San Chao, with square statue pedestal at the centre; a round foundation of laterite at the Ban Nai Ma location, interpreted to be a *stūpa* base (Cœdès 1928a: 198-199); and a deposit of large blocky laterite fragments in the Mae Klong river channel near the southern bank, approximately 488 metres northwest of the San Chao area, tentatively interpreted as the remains of a laterite structure eroded into the river (Clarke 2011: 166-168). One reason that human remains may not have been detected with these additional structures is the lesser depths of excavation at these locations. Photographs of the San Chao "*vihāra*" excavation indicate that subsurface exploration did not extend beyond the lowest construction course. This also appears to be the case at the "Banana Garden" structure. Photographs of the Ban Nai Ma structural excavations suggest that excavation continued to *circa* 25-30 cm. beyond the lowest foundation level, just short of the 30 to 56 cm. vertical separation between Quaritch Wales' excavated burials and foundations.

Collected Skulls

Quaritch Wales retained three crania from the "*stūpa*" burials and delivered them to the Royal College of Surgeons (RCS) Museum in London, to be stored there permanently as comparative specimens, and with the hope that they would "throw some light on the little understood ethnic structure of this region at the dawn of the historical period" (1936b: 47; 1937a: 90; 1964: 121). One of these skulls was determined to exhibit "tooth-filing," apparently on the upper medial incisors **[Figure 1]**. Quaritch Wales' request to the museum staff that a comparative study be made resulted in the assertion by curator A.J.E. Cave that "the skulls are certainly not Indian and they appear to be those of Thai people since they exactly resemble the Siamese skulls in the museum of the R.C.S., and show the same filing of teeth" (Quaritch Wales 1937a: 89). Quaritch Wales noted the startling nature of this information, suggesting as it did that "Thai colonies were already established in the Meklong valley […] in the early centuries of the Christian era," directly contradicting the belief (still supported today) that Thai groups did not enter the region of Siam until the late first millennium or early second millennium CE (Quaritch Wales 1937a: 90).

These assertions had to be withdrawn over twenty-five years later, however, when subsequent communication between Quaritch Wales and Cave revealed that the curator's Thai attribution was an extremely generalised identification, asserting only that crania used for comparison with the Phong Tuek specimen were "of a similar provenance [Thailand] even though this was not accurately indicative of their racial affinity" (Quaritch Wales 1964: 121). In other words, Cave's original report that the Phong Tuek skull with tooth-filing "exactly resemble[s] the Siamese skulls in the museum" was not asserting that these comparative "Siamese skulls" were Tai or Thai specimens; they could, he later said, have "represented Malays hailing from Siam rather than genuine Thai people." As for an up-dated study of the Phong Tuek specimens, "unfortunately these skulls are not available for re-examination, since they were destroyed when the R.C.S. museum was bombed in 1941." Quaritch Wales assured (1964: 121), however, that "more such skulls could probably be found at P'ong Tuk."

Most mortuary data from Thailand, and the concomitant dental information, is prehistoric. While tooth-filing is not prehistorically unknown on the Southeast Asian mainland, intentional dental alteration in the region appears to have mostly involved ablation, that is, tooth removal (cf. Tayles 1996; Pietrusewsky & Douglas 2002: 70; Domett & Tayles 2004). Unintentional alteration observed on Thailand specimens includes abrasion, notching, and surface wear (Domett & Tayles 2004).

Quaritch Wales and Cave asserted that the pattern observed on the illustrated cranium was intentional filing. Given the limited, now unverifiable, record available for this behaviour at Phong Tuek, this assertion must be considered tentative at best, even as it is worth noting for comparison with any additional data that may be generated from the site or region.

Spatial and Temporal Relationships

Quaritch Wales (1936b: 46) wavered in his evaluation of a potential connection between the excavated burials and the proximal architecture at Phong Tuek.

> I was at first inclined to think that there was indeed a relationship between the skeletons and the *stupa*, which might have been built over the shallow grave of warriors killed in battle as a memorial to the occasion. While not being able absolutely to rule out this explanation I am now more inclined to think that the juxtaposition of the ten skeletons and the *stupa* is a matter of coincidence, and that had I been able to dig many more trenches I might have found more skeletons. For we have to explain the finding of at least one other skeleton beneath the *vihara* 65 yards away and lying in a similar position at practically the same level. Moreover, the finding of the silver relic casket, buried a few inches above the level of the skeletons, seems to be a sufficient explanation of the *raison d'etre* of the *stupa.*

The factors that led Quaritch Wales to an opinion that the human remains and structural features were not directly related included: the absence of diagnostic Dvāravatī-era artefacts in association with the burials (1936b: 44; 1937a: 89); the broad distribution of skeletons, as if in a large cemetery zone (1936b: 46); differences in depth between the burials and architecture, which Quaritch Wales calculated to represent as much as five centuries difference in age (1936b: 47; 1937a: 89); and the functional identification of the remains at the "*stūpa*" as being those of "warriors," in contrast to the ritual and reliquary functions of the so-called *stūpa* (1936b: 46). On each of these points, the line of reasoning taken by Quaritch Wales has obvious alternatives, and in some cases his evaluation seems to be faulty.

The low incidence of artefacts among the so-called *vihāra* and *stūpa* graves excavated by Quaritch Wales provides no strong basis to confirm Dvāravatī affiliation, but neither do the iron tools and bronze earring contradict a Dvāravatī age in the mid-to-later first millennium CE. Perhaps more significant is the consistent sparseness of the mortuary

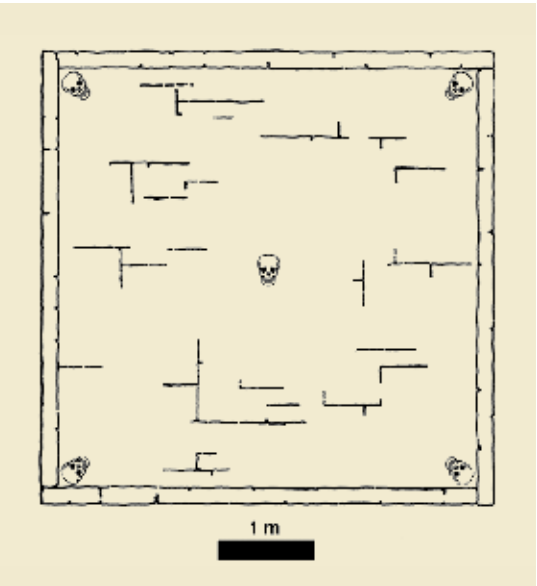


Figure 6: *Reconstruction of a brick structure and associated crania described by local informants during the 2008 reconnaissance at Phong Tuek [Drawing by Wesley Clarke].*

assemblage among the eleven excavated graves, a condition also present in the Dvāravatī-era graves at Dong Mae Nang Mueang, Nakhon Sawan province, and at Wat Chom Chuen, Sukhothai province, where human remains are also juxtaposed with ritual architecture (see *infra* and **Table 1**). One postulate would be that this limited material presence is an intentional aspect of a ritual association, with materialism de-emphasised in graves placed in these ritual contexts. The incidence of four similar, plainly formed iron tools in four of the "*stūpa*" graves **[Figure 7]** also raises a question as to whether this material repetition indicates a social or functional connection among these individuals. Quaritch Wales chose to extrapolate the function of "warrior" to all ten "*stūpa*" graves from these material patterns, but his "weapons" (Quaritch Wales 1936a: 11; 1936b: 46) for use by warriors could just as well be utilitarian or ritual "cutting instrument[s]" (an alternative label applied in the field notes) used by lay residents or monks.

Quaritch Wales cited the presence of a "skeleton beneath the *vihara* 65 yards [59 metres] away and lying in a similar position at practically the same level" in his reasoning against an intentional relationship between the human remains and ritual architecture (1936b: 46). This seems to suggest (but does not explicitly state) that the excavated burial distribution is a window on a larger cemetery pattern. No intervening burials, however, were encountered by Quaritch Wales' excavations, which included multiple long trenches **[Figure 4]**; nor were intervening graves reported by local diggers. Quaritch Wales suspected, however, that "had I been able to dig many more trenches I might have found more skeletons" (1936b: 46). He did not recognise that the discrete incidence of graves with architecture at a substantial interval could be an indicator of a functional pattern.

Alternatively, the close spatial relationships of the exposed graves and architecture are apparent in Quaritch Wales' sketches and on the reconstructed plans **[Figures 3-4]**. The location of the "*vihāra*" burials within the foundation is obviously proximal, and Quaritch Wales himself described the ten burials at the "*stūpa*" as close to and "fairly well distributed all round the building" (1936b: 45), perhaps unintentionally implying a distributional focus on the structural location. He also speculated that these burials might be "a shallow grave of warriors" (1936b: 46 – see quote *supra*), apparently recognising the possibility that these burials could be a functionally unified feature.

Other aspects of the burials' spatial disposition suggest relationships with their respective structures. Just as both of the Quaritch Wales' structures have a northwest-southeast axis, so also do nine of the eleven exposed burials, with heads to the southwest – and the remaining two have their heads in westward orientations **[Figures 3-4]**. Additionally, the concentration of four burials on the southeast margin of the "*stūpa*" is striking. Quaritch Wales stated that these inhumations "were closely pressed together, the *nearest being almost under the brick base*" (1936b: 45; my emphasis). This suggests that these remains were deposited close to an existing architectural feature, rather than prior to construction of the "*stūpa*," since Quaritch Wales indicated that they did not

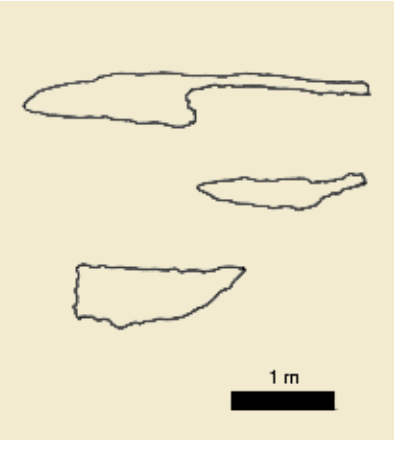


Figure 7: *Outlines of three iron tools illustrated by Quaritch Wales in the 1936 report, recovered from burials surrounding the excavated* "stūpa *base" at Phong Tuek [Drawing by Wesley Clarke].*

extend underneath the structural base. The possibility that the "*stūpa*" construction randomly missed, or was intentionally placed in the midst of a concentration of pre-existing graves is judged to be less likely than the burials being installed adjacent to the existing "*stūpa*" foundation. Indeed, it would seem a remarkable coincidence that the so-called *stūpa*, superimposed on an earlier cemetery, would narrowly miss so many closely situated graves.

The "*stūpa*" burials can be interpreted to reside as four groups at roughly the four sides of the structure's base, with paired inhumations on the northwest, northeast and southwest (the latter at a greater distance), and the "closely pressed" group of four on the southeast **[Figure 4]**. Two pairs each have one individual with an iron implement. The wealthiest pair at the southwest, with two iron implements and a bronze earring, are located furthest from the "*stūpa*;" the group of four, with no grave goods noted, are deposited closest to the "*stūpa*." Whether these observed patterns of content and spatial arrangement are intentional is uncertain, but they would be consistent with a ritual program where material impoverishment is a virtue.

Quaritch Wales also emphasised differences in vertical stratigraphic separation between the architecture and the burials. Much of this focus was based on his calculation of the rate of alluvial accretion in the Phong Tuek locality, a procedure that seems flawed.[10] Assigning a highly generalised date of the sixth century CE to a Dvāravatī stratum 97 cm. below ground surface at Phong Tuek, and an eleventh century age to a Khmer stratum 61 cm. deep "at a site three miles up river," Quaritch Wales calculated an accretion rate of "1 foot [30.5 cm.] every 450 years" to account for the 35.5 cm. separation of these Khmer and Dvāravatī levels (1936b: 46-47). Several factors make this calculation problematical at best. The one-century "periods" assigned to the Khmer and Dvāravatī occupations are vague and arbitrary, unsupported by absolute dates and ignoring the usual temporal variation from site to site. Also, using occupational depths from positions "three miles distant [ca 5 km.]," and at different positions on the river's course, ignores the typical variation in riverine and alluvial dynamics; rates of alluviation and depths of occupational burial by sedimentation can in fact vary significantly even within a single locale, all the more so between localities "three miles distant." Quaritch Wales' computation, then, utilises overly generalised temporal periods and site areas likely to have dissimilar fluvial dynamics.

Given the measurements recorded by Quaritch Wales, the range of elevation among the burials and structural features does not seem to be substantial, certainly not to the point of demonstrating significant temporal separation **[Figure 5]**. Quaritch Wales' temporal calculation in fact assumed that the human remains "were not artificially buried and that the level on which they were found was the level at which they lived" (1936b: 46). Given this presumption, differential depths of even a few centimetres take on greater significance. Given a greater likelihood, however, that the human remains were not left on an open living surface, but were placed in burial pits or grave shafts, differences in basal elevation do not necessarily reflect differences in age. Quaritch Wales himself implied a recognition of these stratigraphic principles, stating that if the "warriors" were "artificially buried," this could "place their death between the first century B.C. [the placement he calculated using

his alluviation rate] and the sixth century A.D. [the date he assigned to the architectural features]" (1936b: 46-47). Quaritch Wales therefore recognised that, if the excavated human remains were not lying on a living surface contemporaneous with their deposition – a stratigraphic interpretation for which he admitted "no evidence (as of potsherds, etc.) was obtained" (1936b: 46-47) – that these inhumations could just as well be contemporaneous with the nearby Dvāravatī architecture.

By Quaritch Wales' measurements at the "*vihāra*" structure, the excavated skeleton ranged 1.2 to 1.4 metres below ground surface (Quaritch Wales 1936a: 3; 1936b: 44), indicating a vertical separation from the architectural base of 41 to 56 cm., a difference readily accounted for by the excavation of a burial pit. At the "*stūpa*," the skeletal deposits ranged vertically between 1.3 to 1.4 metres, creating a vertical separation from the architectural base of 30 to 46 cm. (Quaritch Wales 1936a: 9-11; 1936b: 45). Perhaps most significantly, the axial ritual deposit excavated by Quaritch Wales at the so-called *stūpa* was recorded at 1.3 metres below ground surface, crossing into the vertical range of the burials. An iron object and bone fragment encountered a few centimetres deeper on this axis were even more firmly "at the level of the skeletons" (1936b: 46). It is therefore the case that a principal element of the "*stūpa*" configuration, the foundational ritual deposit, was positioned at essentially the same depth as the nearby burials **[Figure 5]**.

Quaritch Wales' functional attribution of the human remains as "those of warriors killed in battle" seems rather fanciful, by all accounts based on the presence of iron "weapons" with four of the ten "*stūpa*" burials. A secondary notation in the field notes, believed to be by Dorothy Quaritch Wales, suggested that these items be labeled a "cutting instrument," but Horace Geoffrey seems to have been fixated on the warrior theme: "It is impossible to say," he wrote, "whether a weapon was the cause of a mortal wound, since none was found penetrating bone, or whether the weapon was the warrior's own, having remained clutched in his hand after death" (1936b: 46). In light of the numerous Iron Age burials now documented with iron tools on the Southeast Asian mainland, there would seem to be no compelling reason to view the Phong Tuek artefacts as other than domestic items, particularly in the absence of other conditions that would support a militaristic attribution, for example other categories of weaponry, or wounds noted for the skeletal remains.

Single extended inhumations with varying amounts of grave goods are said to be the "most common burial ritual in Thailand during the pre-metal, bronze, and iron ages" (Pietrusewsky & Douglas 2002: 177). Inhumations without surviving grave goods also occur. It has been asserted that inhumation burials are a pre-Indianisation phenomenon – that is, essentially prehistoric (Glover 1980: 20, n. 1). As of 1976, Bennet Bronson stated that "not a single inhumation burial associated with Indianized protohistoric or historic period artifacts has ever been discovered in Thailand" (1976: 20-21). True to this principle, the small "casket" excavated by Quaritch Wales at the octagonal "*stūpa*" was described as containing "cremated human relics" (1936b: 45), though there is no indication that the human nature of these contents was objectively verified.[11]

It is possible that the juxtaposition of burials and ritual architecture at Phong Tuek is nothing more than the superimposition of structures on a pre-existing field of graves. For the reasons discussed above, however, the spatial relationships observed at these locations seem to favour an interpretation of contemporaneous association of the human remains and the ritual structures: burial orientations, and their horizontal and vertical positions, all appear to relate to the structural positions. Even so, it is still the case that the currently available data does not permit a conclusive assessment.

Regarding the newly identified structure reconstructed from the reports of local residents **[Figure 6]**, the intentional association of human remains and the brick feature are obvious. The presence of multiple crania and absence of post-cranial remains is clearly unusual and ritualistic in nature (cf. Pietrusewsky & Douglas 2002: 179-181). In general size, this structure, at 5-metres-square, is similar to the shrine foundation excavated by Cœdès nearby at the Ban Nai Ma location, which measured approximately 5.8-metres-square (1928a: 198). The deepest vertical extent of the newly documented structure, roughly estimated from memory, was said to be between 1.4 and 1.5 metres. This places the structure base in the general region of Quaritch Wales' maximum burial depths. Obviously, the identification and reconstruction of this structure is based on hearsay and must be treated with caution, but it seems to follow a consistent pattern of human remains occurring in association with Dvāravatī-level structures at Phong Tuek.

Comparative Sites

The first sites labeled "Dvāravatī" and having architectural remains (a total of seven) were reviewed by Pierre Dupont; the recent English edition of this work with updates added seven more sites to this list (Dupont 2006: 17-93). The only site among these where human remains were noted by Dupont was Phong Tuek. These remains were, however, dismissed by Dupont as not seeming "to make any significant contribution to justify further research" (2006: 83), i.e. Dupont probably accepted Quaritch Wales' assertion that these burials were not related to the Dvāravatī component at Phong Tuek.

Sites with locations and ages potentially relevant for comparison to Phong Tuek have also been summarised by Amara Srisuchat (1998), Andrew Barram and Ian Glover (2008), the present author (Clarke 2011) as well as Pimchanok Pongkasetkan and Stephen Murphy (2012). Among the site reports available for this late prehistoric-early historic era, only a few include mortuary data. **Table 1** summarises four sites identified for consideration along with the mortuary patterns at Phong Tuek. These sites have been attributed by their investigators to "Dvāravatī" or to components dated to the Dvāravatī time period as it is generally established, and are located within a geographic range associated with Dvāravatī in the literature. The brief consideration here of these sites and their mortuary data is not intended to ignore their varying temporal placements or potential associations with distinctive regional cultural traditions. These sites are considered, however, to be among the principal examples of inhumation burial so far documented for the mid-to-late segments of the first millennium CE.

Table 1: Dvāravatī-era Sites with Inhumation Burials

Site Name	Location	Date Range	# Burials	Burial Type	Grave Goods
Phong Tuek	Kanchanaburi province, western Thailand	7th-11th centuries CE	12-18	Extended inhumation, secondary inhumation	Minimal grave goods; iron knives, bronze earring
Dong Mae Nang Mueang	Nakhon Sawan province, central Thailand	8th-12th centuries CE	52	Extended, flexed, bagged inhumations; late cremations in stoneware boxes	Minimal grave goods; gold earring, iron object
Wat Chom Chuen, Si Satchanalai	Sukhothai province, north-central Thailand	"Early Dvāravatī" (5th-6th centuries CE)	15	Mostly extended inhumations, also flexed and bagged	Limited grave goods; terracotta paddles and figurines, glass and stone beads, iron object
Chaliang, Si Satchanalai	Sukhothai province, north-central Thailand	7th-9th centuries CE	9	Extended inhumation	Eroded on riverbank; no grave goods observed
Mueang Fa Daet	Kalasin province, northeast Thailand	7th-11th centuries CE	3 or more	Extended, jar (non cremation) inhumations; urn cremations	Spouted pots, small cup lamps, beads, bronze bracelets, iron implements

Extended inhumation and non-cremation jar burials at Mueang Fa Daet, a moated centre in northeast Thailand, have been published with a Dvāravatī attribution (Phasook *et al.* 1991; Phasook 2537 and 2544). Mueang Fa Daet has been extensively explored, including the excavation of fourteen brick-and-laterite foundations, and substantial Buddhist remains, including sculptural images, *sema* stones (Murphy, this volume), and moulded tablets of a regional style have been uncovered at the site. During excavation of a habitation area in 1991, cultural deposits up to four metres deep revealed a long sequence of occupation ranging from the "late Prehistoric" Iron Age, beginning *circa* 300 BCE, to an "Ayutthaya culture" component terminating *circa* 1800 CE. In the middle of this sequence, Phase 3 is identified by Phasook Indrawooth (2544: 75) as a "Dvāravatī culture" component *circa* 700-1100 CE. It is asserted that "the most interesting discoveries" in this level were "three human skeletons buried in full length with their head turned to the west and the south" (2001: 75). Items with these extended inhumations included spouted pots, small cup lamps, iron implements, and glass and stone beads (Phasook 2544: 76), an assemblage associated with so-called Dvāravatī sites as well as sites found elsewhere in Southeast Asia. Jar burials with uncremated contents were also present in this cultural level.

Phasook observes that the "Dvāravatī residents" of Mueang Fa Daet, unlike their contemporaries in the Chao Phraya valley of central Thailand, "continued to bury their dead," rather than shifting to cremation immediately after Buddhism arrived (2537: 120, figs 15, 17). The presence of these extended inhumations with typical grave goods in an excavated cultural sequence (earlier segments of which are radiocarbon dated) dispels the assertion that inhumation graves did not occur after Indic influences arrived in northeast Thailand.

Other comparative sites include two localities at the moated centre of Si Satchanalai (Hein *et al.* 1988; FAD 2540). One set of Si Satchanalai remains (Chaliang section) consists of nine inhumations eroding out of the Yom riverbank. These were encountered approximately 5 metres below ground surface, apparently extending out of a habitation level radiocarbon dated to *circa* the seventh-ninth centuries CE (Hein *et al.* 1988: 12, 14). The midden contained impressed and cord-marked earthenware pots, some burnished and painted, and spouted "*kendi*" and "flared mouth" (carinated?) jars – an assemblage that fits within the early historic pattern. No grave goods were noted with the eroded burials, which were all extended. Despite the absolute date, associated pottery types and proximity to the "Dvāravatī centre," the Si Satchanalai analysts state that the burials "appear to belong to an early habitation phase which may be prehistoric and non-Buddhist" (Hein *et al.* 1988: 14). No explicit reasoning is provided, but the fact that the burials are inhumations may be the basis of this observation, reflecting the presumption of cremations-only after the arrival of Indic religious practices.

Fifteen burials were also encountered below architecture, perhaps a *stūpa* base, at Si Satchanalai's Wat Chom Chuen locality (FAD 2540; Pimchanok & Murphy 2012: 85). These were mostly extended inhumations, with a few flexed and bundle ("bag") burials as well, located in a stratum radiocarbon dated between the third and fifth centuries CE, "most likely belong[ing] to the Early Dvāravatī period" (Pimchanok & Murphy 2012: 85). Grave goods were sparse, but included terracotta figurines and paddles, glass and stone beads, and one small iron object, possibly a blade, with a male skeleton.

Fifty-two graves were excavated in 2009 among structural foundations at Dong Mae Nang Mueang (Murphy & Pimchanok 2010; Pimchanok & Murphy 2012), a smaller double-moated centre that has been investigated in various aspects over several decades. The site of a rubble-mound exhibiting *sema*-like "standing stones" was partially excavated, revealing a layer of architectural rubble including finger-marked bricks, stucco fragments that included floral and vegetal motifs, a few earthenware sherds and a possible terracotta finial, attributed to the "Late Dvāravatī period of the 10th to 12th centuries;" no prehistoric or historic Sukhothai/Ayutthaya components were encountered (Pimchanok & Murphy 2012: 78). Beneath this layer was a stratum one metre deep containing the burials at various levels and distributed across the entire area of the mound, with some brick and "Late Dvāravatī style" stucco, as well as green-glazed Angkorian ware, in the stratigraphic matrix. These graves included eight extended burials, eleven flexed, and twelve "bag" burials, with the remaining twenty-one unassigned. A group of two green-glazed Angkorian "boxes" or urns were also present in the burial stratum, containing "cremated human bone" (Pimchanok & Murphy 2012: 78).

As with other "Dvāravatī-era" inhumations discussed here, the remains at Dong Mae Nang Mueang also exhibit a paucity of grave goods, a condition said to be in "stark contrast to Iron Age mortuary traditions in central Thailand" (Pimchanok & Murphy 2012: 84). The only objects directly associated with these inhumations were a gold earring and an object that "may be iron."

The limited nature of this comparative data illustrates the current scarcity of mortuary information for Dvāravatī sites. Nonetheless, the repeated occurrence of non-cremation burials described above demonstrates the presence of this mortuary type during the "early historic" period in Thailand. The scarcity of information for both

inhumation and cremation graves in central Thailand from that period may partly reflect the fugitive nature of the latter, and of not looking in the right places for the former. The excavation of early structural remains has often stopped at the foundation level, potentially leaving even modestly deeper burials undiscovered. This situation may pertain at Phong Tuek, for it is the case that of the six structural locations systematically excavated at the site, contiguous human remains were encountered only at the two locations where Quaritch Wales' investigation proceeded well beyond the foundation level.

Conclusion

The principal objective of this inquiry has been to describe and evaluate the co-occurrence of human remains and ritual architecture at the Dvāravatī site of Phong Tuek. Recognising that the available data on the content and stratigraphic disposition of mortuary features at Phong Tuek is not adequate to support definitive evaluation, even when augmented by the excavator's field notes, the reconstructed spatial relationships are nonetheless compelling in their suggestion of a contemporaneous, functional connection between the human remains and structural features. Taken together with the evidence accumulating from other sites, the proposition that inhumation burials are sometimes present in early historic ritual contexts is strongly supported, and it behooves field workers to develop excavation strategies that take this into account. As detailed information is generated at Dvāravatī and other early historic sites, and specific mortuary regimes described, questions regarding ritual practices and other social functions, as well as social ranking and sacred-secular differentiation can be better addressed. In particular, the pattern of inhumations and sparse grave furnishings in proximity to ritual structures is an intriguing phenomenon in need of more study. Such features may represent early Buddhist or Brahmanical practices that are heretofore un-described in pre-modern Thailand.

It would appear that a new paradigm for mortuary practices can now be postulated, in keeping with Phasook Indrawooth's previous observation that the residents of Mueang Fa Daet "continued to bury their dead" rather than shift to cremation. Contrary to earlier observations, such a shift did not occur uniformly across the early historic horizon in Thailand. Indeed, the persistence of Southeast Asian burial traditions after the arrival of Indic religious and socio-political cultural elements speaks to the process by which such exogenous practices were accepted and adapted. Since the late 1970s, as systematic information has accumulated from excavated sites, there has been a growing recognition that a "sub-regional" or "localised" diversity of social practices and material forms has been typical on the Southeast Asian mainland through time. This is certainly the case in Thailand, where "one of the most interesting outcomes of surveys and excavations […] is the recognition of regional variability; that what is true for the northeast does not hold for central, west or southern Thailand" (Glover 1991: 352).

Sub-regional distinctiveness is particularly evident among ceramic assemblages during the first millennium (Glover 1980: 19; Sawang 2005: 66; Stark 2006: 100), but is also reflected in other material categories, including mortuary practices (Pietrusewsky & Douglas 2002: 188; White 1995). Distinctiveness is often observable even among sites "closely situated to one another" (Glover 1980: 19). Peter Skilling indicates that the dominant religious tradition was also subject to regional adjustment, noting that "the Buddhisms of the Mon, Burmese, Central Thai, Shan, Lanna Tai, Lao, and Khmer are each quite distinctive" in their art and practices (2003: 103, n. 39). The persistence of Southeast Asian inhumation burial is another demonstration that the response to new Indic ideas and objects on the Southeast Asian mainland was neither uniform nor wholesale. Instead, new elements were selectively adopted and amalgamated with local indigenous traditions. Field strategies that include the active search for and recovery of mortuary data at Dvāravatī sites will be an important component in expanding our understanding of this process.

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Endnotes

1 The term "Dvāravatī," as a label for an archaeological culture, a time period, a polity or polities, and/or an art style, continues to be variously defined (cf. Barram 2003; Skilling 2003; Barram & Glover 2008; Glover 2010; Saritpong *et al*. 2011; and Gallon 2013). Elements that are emphasised in describing a Dvāravatī phenomenon or for postulating what such a phenomenon may encompass often reflect the differing *foci* of scholarly disciplines, particularly those of art history and archaeology. In the present essay, the term "Dvāravatī" is used in its most generic sense, reflecting the wide-ranging manner by which the term has been applied in reference to the period and territory where Buddhist and Brahmanical practices first became widespread in the region of Thailand. These conceptualisations generally involve the mid-to-later first millennium CE (ca seventh-eleventh centuries) in the area of central Thailand, though adjacent regions and sites are also often included. The conceptualisation of Dvāravatī requires additional refinement, including non-elite and non-ritualistic aspects of this cultural phenomenon, and substantial additional data collection and analysis will be necessary to accomplish this.

2 Per the editorial requirements of the present volume, the site name is given here as the modern transliteration "Phong Tuek." Bibliographical or general online searches, however, will find that virtually all scholarly studies connected to the site use a derived spelling originally given by Cœdès as P'ong Tük.

3 A scholarly observation in the 1960s appears to have remained true into the twenty-first century: "the skeletons discovered at P'ong Tuk were ignored entirely by students of Thai history" (Sood 1966: 234).

4 These notes were found with a collection of Dr Quaritch Wales' papers at the archives of the Royal Asiatic Society (RAS), London. This collection was donated by his widow, Dorothy, *circa* 1995 (Guy 1995; RAS 1995). The author is grateful to the Society for allowing a photocopy of the notes to be made for use in the reevaluation of Phong Tuek.

5 At the time of the Cœdès investigation, Phong Tuek was in "Ratburi" (Ratchaburi) province.

6 Per editorial requirements, dimensions are given here in metric units; the original English measurements are eight by ten inches.

7 Cœdès also refers to this location as the "Banana Plantation" (e.g. 1928a: pl. 6).

8 Whether this axial deposit should be assigned a reliquary function is uncertain. Ślączka (2007: 6) makes a convincing case that many foundational deposits termed "relic" or "reliquary" are actually consecration deposits (*garbhanyāsa* – i.e. "the placing of the embryo") offered during rituals that insure the safety and prosperity of the facility and its occupants, as well as animating and consecrating the ground where construction is occurring (2007: 201-202, 217-219).

9 This item is identified as an "iron hook" in Quaritch Wales (1936a: 11).

10 "It is necessary to emphasise that introducing fictitious details is dangerous since the chronology of the Dvāravatī sites has not yet been accurately established. By assigning *ex abrupto* the 6th century as the age of the Dvāravatī ruins whatever they may be, and similarly the 11th century to the Khmer ruins of Thailand, one seems to lose sight of the fact that the historical civilizations in Thailand were not distinct periods, and that the territory of Dvāravatī – which is still a vague concept – existed after the 6th century and that Khmer influence was not limited to the 11th. It is thus not possible to subscribe to the conclusions of H.G. Quaritch Wales" (Dupont 2006: 78).

11 It appears that the human origin of the calcined bone contents of this ritual container is a presumption on Quaritch Wales' part, as may be his functional attribution of "*stūpa*" instead of *caitya*. Ślączka (2007: 259, n. 101) observes that the "ashes" found in such "reliquary caskets" are usually unverified chemically and may not even be "anything of animal origin at all."

References

Amara Srisuchat
1998 A Proposed Outline of the Chronology of Early History in Thailand: Dating and Re-analysis of Data from Recently Excavated Sites in Thailand. In Klokke, Marijke & de Bruijn, Thomas (eds), *Southeast Asian Archaeology 1996: Proceedings of the 6th International Conference of the European Association of Southeast Asian Archaeologists*. Kingston upon Hull: Centre for Southeast Asian Studies, pp. 99-115.

Barram, Andrew & Glover, Ian C.
2008 Re-thinking Dvaravati. In Pautreau, Jean-Pierre *et al.* (eds), *From* Homo Erectus *to the Living Traditions. Choice of Papers from the 11th International Conference of the European Association of Southeast Asian Archaeologists*. Chiang Mai: Siam Ratana Ltd., pp. 175-182.

Borell, Brigitte
2008 The Early Byzantine Lamp from Pong Tuk. *Journal of the Siam Society* 96: 1-26.

Briggs, Lawrence Palmer
1945 Dvāravatī: The Most Ancient Kingdom of Siam. *Journal of the American Oriental Society* 65(2): 98-107.

Bronson, Bennet
1976 *Excavations at Chansen and the Cultural Chronology of Protohistoric Central Thailand.* Doctoral Dissertation. Philadelphia: University of Pennsylvania. [Unpublished]

Bronson, Bennet & Dales, George F.
1972 Excavations at Chansen, Thailand, 1968 and 1969. A Preliminary Report. *Asian Perspectives* 15: 15-46.

Brown, Robert L. & MacDonnell, Anna M.
1989 The Pong Tuk Lamp: A Reconsideration, *Journal of the Siam Society* 77(2): 9-20.

Clarke, Wesley
2009 The Skeletons of P'ong Tuk: Human Remains in Dvaravati Ritual Contexts? Paper presented at the *19th Indo-Pacific Prehistory Association Congress*, Hanoi, 29 November-5 December 2009. [Unpublished]

2010 Buddhist Bones? The Intriguing Evidence from P'ong Tuk. Paper presented at the *Council on Thai Studies 38th Annual Meeting*, University of Wisconsin, Madison, 29-30 October 2010. [Unpublished]

2011 *Return to P'ong Tuk: Preliminary Reconnaissance of a Seminal Dvaravati Site in West-central Thailand*. Master Thesis. Athens: Ohio University. [Unpublished; Available online at: http://rave.ohiolink.edu/etdc/view?acc_num=ohiou1321396671]

Cœdès, George
1928a Excavations at P'ong Tuk and Their Importance for the Ancient History of Siam. *Journal of the Siam Society* 21(3): 195-209.

1928b New Archaeological Discoveries in Siam. *Indian Arts and Letters*, New Series 2(1): 9-20.

Domett, Kate & Tayles, Nancy
2004 Tooth Modification in Late Iron Age Cambodia. *Journal of Physical Anthropology*, Supplement 38: 88-89.

Dupont, Pierre
2006 *The Archaeology of the Mons of Dvāravatī*. English Translation by Joyanto K. Sen, with Extensive Annotations. Two Volumes. Bangkok: White Lotus Press. [First published in French as *L'archéologie mône de Dvāravatī*, 1959]

Fine Arts Department (FAD)
2540 *Wat Chom Chuen*. Bangkok: Fine Arts Department. [In Thai; 1997 CE]

Fukui, Hayao
1976 Environmental Determinants Affecting the Potential Dissemination of High Yielding Varieties of Rice – A Case Study of the Chao Phraya Basin. In Ichimura, S. (ed.), *Southeast Asia: Nature, Society, and Development*. Honolulu: University of Hawai'i Press, pp. 139-166.

Gallon, Matthew D.
2013 *Ideology, Identity and the Construction of Urban Communities: The Archaeology of Kamphaeng Saen, Central Thailand (c. Fifth to Ninth Centuries CE)*. Doctoral Dissertation. Ann Arbor: University of Michigan. [Unpublished]

Glover, Ian C.
1980 Ban Don Ta Phet and Its Relevance to Problems in the Pre- and Protohistory of Thailand. *Bulletin of the Indo-Pacific Prehistory Association* 2: 16-30.

1991 The Late Prehistoric Period in West-central Thailand. *Bulletin of the Indo-Pacific Prehistory Association* 10: 349-356.

Guy, John
1995 The Dorothy and Horace Quaritch Wales Bequest – A Note. *Journal of the Royal Asiatic Society*, Third Series 5(1): 91-92.

Hein, Don *et al.*
1988 Inhumation Burials at Sisatchanalai. *Siam Society Newsletter* 4(2): 12-15.

Kaida, Yoshihiro & Surarerks, Vanpen
1983 Climate and Agricultural Land Use in Thailand. In Yoshino, M.M. (ed.), *Climate and Agricultural Land Use in Monsoon Asia*. Tokyo: University of Tokyo Press, pp. 231-254.

Murphy, Stephen A. & Pimchanok Pongkasetkan
2010 Fifty Years of Archaeological Research at Dong Mae Nang Muang. An Ancient Gateway to the Upper Chao Phraya Basin. *Journal of the Siam Society* 98: 49-74.

Phasook Indrawooth
2537 Watthanatham thawarawadi nai phak isan: wikhro lakthan chak laeng borannakhadi mueang fa daet song yang (Dvaravati Culture in the Chi Valley: A Study on Muang Fa Daed Song Yang). *Muang Boran* 20(1): 99-120. [In Thai with English Summary; 1994 CE]

2544 *Raingan kankhutkhon mueang boran fa daet song yang, amphoe kamalasai, changwat kalasin* (*Report on the Excavation at Mueang Fa Daet Song Yang, Kamalasai District, Kalasin Province*). Nakhon Pathom: Silpakorn University. [In Thai; 2001 CE]

Phasook Indrawooth, Sinchai Krabuansang & Payao Narkwake
1991 Muang Fa Daed Song Yang: New Archaeological Discoveries. In Silpakorn University (ed.), *Récentes recherches en archéologie en Thaïlande : deuxième symposium franco-thaï*. Bangkok: Silpakorn University, pp. 98-111.

Pietrusewsky, Michael & Douglas, Michele T.
2002 *Ban Chiang: A Prehistoric Village Site in Northeast Thailand. 1: The Human Skeletal Remains*. Philadelphia: Museum of Archaeology and Anthropology, University of Pennsylvania.

Pimchanok Pongkasetkan & Murphy, Stephen A.
2012 Transitions from Late Prehistoric to Dvaravati Period Funerary Practices: New Evidence from Dong Mae Nang Muang, Central Thailand. In Bonatz, Dominik, Reinecke, Andreas & Tjoa-Bonatz, Mai Lin (eds), *Crossing Borders: Selected Papers from the 13th International Conference of the European Association of Southeast Asian Archaeologists, Volume 1*. Singapore: NUS Press, pp. 75-89.

Quaritch Wales, Horace Geoffrey
1936a *Greater-Indian Research Expedition, Season 1935-1936*, Manuscript on file at the Royal Asiatic Society, London, H.G. Quaritch Wales Archive, inventoried as Notebook #28 – two hardbound notebooks the earlier of which (dated January 1936) contains the P'ong Tuk field notes. [Handwritten pages not individually numbered; page numbers used here are inferred]

1936b Further Excavations at P'ong Tuk (Siam). *Indian Arts and Letters*, New Series 10(1): 42-48.

1937a Some Ancient Human Skeletons Excavated in Siam. *Man* 37: 89-90.

1937b *Towards Angkor. In the Footsteps of the Indian Invaders*. London: Harrap & Co.

1964 "Some Ancient Human Skeletons Excavated in Siam:" A Correction. *Man* 64: 121.

1966 Dvāravatī in South-East Asian Cultural History. *Journal of the Royal Asiatic Society*, New Series 98(1): 40-52.

Royal Asiatic Society (RAS)
1995 Wales Bequest to the Society. *Journal of the Royal Asiatic Society*, Third Series 5(1): 169-170.

Saritpong Khunsong, Phasook Indrawooth & Surapol Natapintu
2011 Excavation of a Pre-Dvāravāti Site at Hor-Ek in Ancient Nakhon Pathom. *Journal of the Siam Society* 99: 150-171.

Skilling, Peter
2003 Dvāravatī: Recent Revelations and Research. In Baker, Chris (ed.), *Dedications to HRH Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra on Her 80th Birthday*. Bangkok: The Siam Society, pp. 87-112.

Ślączka, Anna A.
2007 *Temple Consecration Rituals in Ancient India: Text and Archaeology*. Leiden/Boston: Brill.

Sood Sangvichien
1966 Neolithic Skeletons from Ban Kao, Thailand, and the Problem of Thai Origins. *Current Anthropology* 7(2): 234-235.

Stark, Miriam T.
2006 Pre-Angkorian Settlement Trends in Cambodia's Mekong Delta and the Lower Mekong Archaeological Project. *Bulletin of the Indo-Pacific Prehistory Association* 26: 98-109.

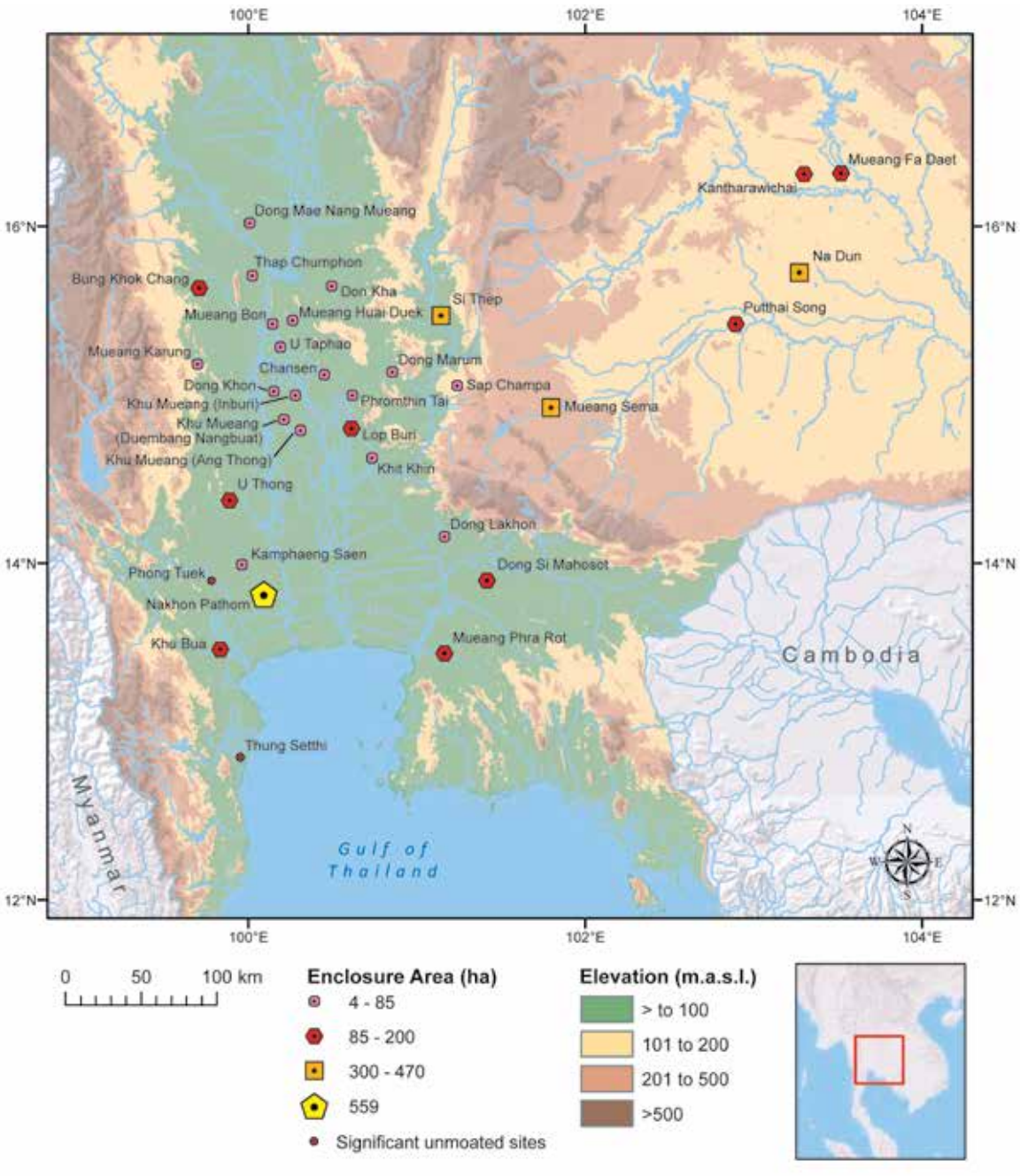
Tanabe Susumu *et al.*
2003 Stratigraphy and Holocene Evolution of the Mud-dominated Chao Phraya Delta, Thailand. *Quaternary Science Reviews* 22: 789-807.

Tayles, Nancy
1996 Tooth Ablation in Prehistoric Southeast Asia. *International Journal of Osteoarchaeology* 6: 333-345.

Tayles, Nancy & Marc Oxenham (eds)
2006 Bioarchaeology of Southeast Asia. New York and Cambridge: Cambridge University Press.

Thanik Lertcharnrit
2005 Late Prehistoric and Early Historic Archaeology in Thailand: Recent Evidence from the Central Highland. *Silpakorn University International Journal* 5(1-2): 55-72.

White, Joyce
1995 Incorporating Heterarchy into Theory on Socio-political Development: The Case from Southeast Asia. In Ehrenreich, R.M., Crumley, C.L. & Levy, J.E. (eds), *Heterarchy and the Analysis of Complex Societies*. Virginia: American Anthropological Association, pp. 101-123.



Map 1: *Moated Dvāravatī settlements of central Thailand and a selection of significant moated settlements in northeast Thailand [Drawing by Matthew D. Gallon].*

Monuments and Identity at the Dvāravatī Town of Kamphaeng Saen

Matthew D. Gallon

Introduction

Throughout the ancient world, the emergence of urban centres entailed a dramatic growth in the number of people living within a single settlement. The diversity and size of the populations of early urban centres often overwhelmed the kinship-based mechanisms that for several millennia had maintained social cohesion in sedentary village communities. New social identities and relationships were needed to help unite groups of people who lacked strong kinship ties, and in some cases, had significant cultural differences. During the first millennium CE, the people of central and northeast Thailand faced these challenges as they underwent increased population aggregation, political centralisation and urbanisation. As part of these dramatic changes, the residents of these regions developed new social identities, expressed in part through shared forms of material culture, town plans and religious practices. The spread of this suite of cultural similarities marks the rise of an archaeological culture known as Dvāravatī.[1]

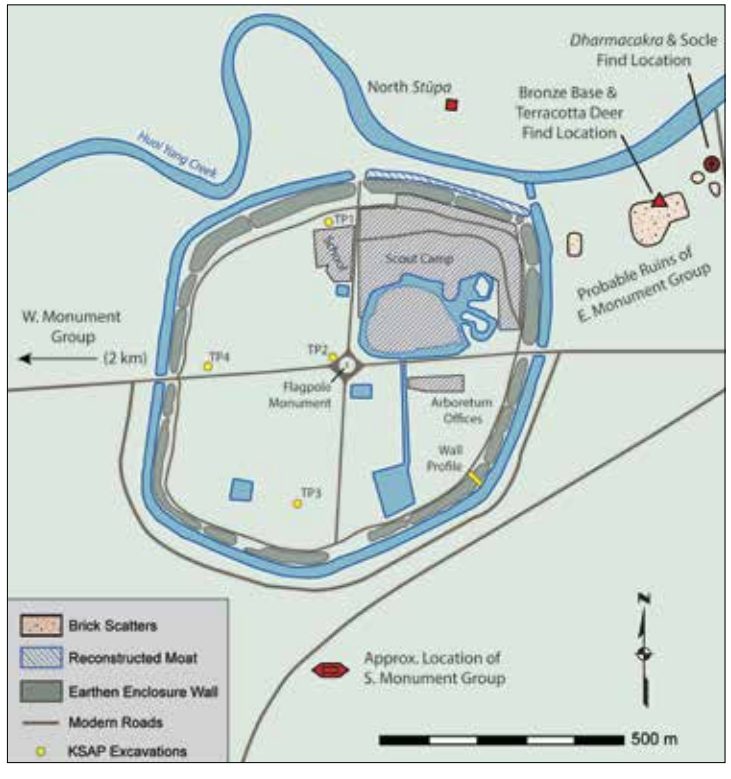
In this essay, I focus on how Dvāravatī communities created and reinforced religious, specifically Buddhist, identities through monument construction and the configuration of space within and around their settlements. Using the results of my archaeological research at the Dvāravatī centre of Kamphaeng Saen as an example, I show how the residents placed monuments and sculpture to materialise Buddhist concepts within their settlement's landscape. I then argue that the location of Buddhist material at Kamphaeng Saen fits within a broader pattern of the spatial configuration of Buddhist monuments in central Thailand. This pattern reveals shared concepts of religious space and identity among the residents of these centres. The spatial context of Buddhist monuments within these settlements also provides insights into some of the dynamics between political and monastic institutions at that time, and how Buddhist practices and monuments helped create new group identities and relations among and between both groups.

Preliminary Explorations at the Dvāravatī Centre of Kamphaeng Saen, 1939-1992

Kamphaeng Saen is located in Nakhon Pathom province, in west-central Thailand, often considered the heartland of the Dvāravatī culture **[Map 1]**. A moat and wall enclose a 53 hectare area at Kamphaeng Saen. Based on measurements of the moated area of Dvāravatī period sites (Gallon 2013: figs 4.16, 4.18), Kamphaeng Saen can be considered a fourth-tier centre and the smallest enclosed settlement in the west-central region from this period **[Map 2]**.[2]

By contrast, Kamphaeng Saen's nearest neighbouring enclosed settlement, only 25 kilometres to the south, is the urban centre of ancient Nakhon Pathom, whose impressive 659 hectare moated enclosure makes it the largest Dvāravatī settlement. U Thong, located roughly 40 kilometres north of Kamphaeng Saen, is the next closest moated centre, with an enclosed area of 96 hectares. Nakhon Pathom and U Thong have well-documented Buddhist monuments both inside and outside their enclosures, as well as numerous Buddhist sculptures, often from unknown intra-site locations (Dupont 1959; Boisselier 1968 and 1970; Arunsak *et al.* 2545; Usa 2009). Several stone Brahmanical or Hindu sculptures (i.e. Śiva *liṅgam*s and a stele of a mitred-Viṣṇu) were recovered at U Thong (Quaritch Wales 1946; Arunsak *et al.* 2545), and two Śiva *liṅgam*s were found associated with laterite structures interpreted as temples at Khok Chang Din, located roughly 3 kilometres outside U Thong (Somsak 2510; Phattharaphong 2545).

Even though Kamphaeng Saen's enclosure is significantly smaller than other moated settlements in west-central Thailand, it shares some key features with its larger neighbours and with Dvāravatī settlements elsewhere in central Thailand. Dvāravatī moated settlements are typically located near waterways that feed their moats. Kamphaeng Saen is located adjacent to the south bank of the Huai Yang stream, which ultimately flows into the Tha Chin river. The Huai Yang feeds a moat that encircles the site in an irregular polygon shape of roughly 750 x 780 metres. The moat is 16 to 20 metres wide and is still filled with water throughout the entire year. The earth removed during the moat's construction was piled along its interior edge forming a rounded



Map 2: *A map of Kamphaeng Saen showing the location of exterior religious monuments and the KSAP test excavations [Drawing by Matthew D. Gallon].*

earthen wall, which is currently 2.5 to 4 metres above ground surface and 18 to 30 metres wide.[3] The moat and wall enclosure follow an irregular polygon plan, consistent with other early Dvāravatī enclosures that typically have irregular to oval plans (Quaritch Wales 1969: 116-117; Mudar 1999: 5).

Pierre Dupont (1939), Jean Boisselier (1965) and H.G. Quaritch Wales (1969) all made brief visits to Kamphaeng Saen to investigate Dvāravatī-style sculpture found by local residents. During a visit to the site in the late 1930s, Dupont (1939: 364-365 and 1959: 199-200, figs 401-403) examined three sculptures of standing Buddhas (approximately 50 cm. high) found outside the settlement enclosure and then moved to the modern Kamphaeng Saen monastery **[Figures 1a-b]**.[4] All were carved out of laterite and then covered with stucco. The production technique and style of the images led Dupont (1939: 364-365 and 1959: 144) to characterise them as part of a localised sculptural tradition of the "late Dvāravatī period." Based on the slab backing on these images, he also hypothesised that they were set in niches of a religious structure (Dupont 1959: 199). Dupont (1939: 364-365) noted that the monks had recovered the images from small brick-covered mounds that were located outside the settlement enclosure to the northwest; however, Quaritch Wales (1969: 50) later observed that the mounds where the statues were found were located "outside the eastern gate of the town," and in 1992 Somprasong Nuamboonlue (2539) and his team documented an oral history by a local resident confirming their recovery east of the settlement.

Figures 1a-b: *Two of three stucco on laterite Buddhas recovered at Kamphaeng Saen in the early 20th century CE: left, currently located in Wat Kamphaeng Saen; right, currently located in Wat Sawang Chat Pracha Bamrung [Photographs by Matthew D. Gallon].*

In 1963, a *dharmacakra* (Buddhist Wheel of Law) **[Figure 2]** carved from blue-green limestone and a carved stone base or socle **[Figure 3]** were found at Kamphaeng Saen (Chira & Woodward 2509: cat. 22; Quaritch Wales 1969: 50). Today both sculptural pieces are housed in the Phra Pathom Chedi National Museum in Nakhon Pathom. Little is known about their *in situ* context, but Quaritch Wales (1969: 50) mentioned that they were found "somewhat further to the east" of the brick mounds where the three statues of the Buddha were recovered. The triangular base of the *dharmacakra* frames a figure that Chira Chongkol and Hiram Woodward (2509) identified as "a divinity or royal personage holding an unopened lotus in each hand." Due to the simplification of the decoration around its rim both Quaritch Wales (1969: 138) and Robert Brown (1996: 132) placed the *dharmacakra* from Kamphaeng Saen in a late group in their typologies of Dvāravatī *dharmacakra*s (Quaritch Wales's type 4; Brown's group 5). Brown (1996: 136-137) suggested that this group of wheels may date to the late seventh or eighth century CE, but cautioned that this was highly speculative.

The socle found with the *dharmacakra* bears an inscription that refers to the "Four Noble Truths" of Buddhism.[5] The inscription is written in

Figure 2: *The* dharmacakra *from Kamphaeng Saen; 67 cm. diameter. Currently located in the Phra Pathom Chedi National Museum, Nakhon Pathom, inv. no. 38/2541 [Photograph by Matthew D. Gallon].*

Pāli with a script derived from southern India (similar to Pallava), which Cœdès's dated to the eighth century CE.[6] It is located on either the top or bottom of the socle, depending on the sculpture's original orientation. Brown (1996: 108) observed that the script is relatively large, which might indicate that it was meant to be read from the ground by a viewer looking upward at the bottom of the socle as it sat atop a pillar supporting a *dharmacakra*. Literacy in Pāli, however, was likely low, and the inscription's primary function may have been to spiritually empower the sculpture or impress viewers rather than provide information about Buddhist doctrine (Revire, this volume).

Based on reports and oral histories, Somprasong (2539: 31-34) identified the general locations of four groups of ruins of brick structures outside the settlement enclosure to the north, east, south and west. Due to their brick construction and mound-like character, these structures were probably either reliquary or commemorative Buddhist *stūpas*.[7] The group of ruins to the north of the enclosure were located on the opposite side of the Huai Yang stream and included a large mound with a base roughly 12 x 12 metres (Somprasong 2539: 33). Four smaller (2 x 2 metres) structures were reportedly located at each of its corners, but had been destroyed by ploughing. The structures located east of the settlement were described by Somprasong (2539: 32) as seven mounds aligned in an east-west line, with a small circular pool of water at its eastern end. Unfortunately, he did not specify the mounds' dimensions or their distances from each other and the settlement. About 400 metres south of the settlement enclosure, Somprasong (2539: 32-33) identified a third group of ruins with six brick mounds. They had bases approximately 4 x 4 metres and, like the eastern group, were configured in an east-west line. Based on this similarity, he speculated that there had been a seventh *stūpa* mound in the southern group that had been destroyed and was no longer visible. The final group Somprasong (2539: 32) identified was located about 2 kilometres west of the town, significantly further from the settlement than the other groups. Half of the main mound in this group had been destroyed by road construction; the base of the ruins of the remaining structure was 15 x 24 metres. He also identified the base (roughly 12 x 12 metres) of a smaller structure due east of the main structure, as well as a 45 metre square water pool 100 metres further east. Somprasong's documentation of ruins and oral histories in the area around Kamphaeng Saen provided a valuable record of this landscape, which has undergone significant changes even since his study. While there is a strong likelihood that many of the structures he documented are contemporaneous with the Dvāravatī occupation of Kamphaeng Saen, it was beyond the scope of his study to conclusively determine the age and function of the structures or precisely map their location and configuration.

In contrast to the area outside the settlement's moat, there is little evidence for religious monuments inside the moat and wall enclosure. Today, this area contains a scout camp, primary school and arboretum, all built after the mid-1960s. With the assistance of the scout camp watchman, Quaritch Wales (1969: 50) identified low densities of potsherds on the surface in some parts of the site, with other areas void of any surface material. He noted that the surface ceramics included earthenware sherds from cord-marked vessels and carinated vessels, resembling those commonly found at other sites affiliated with the Dvāravatī culture. Based on the irregularity of the plan of the enclosure and the low density of surface material, Quaritch Wales (1969: 51) speculated that Kamphaeng Saen was founded as "an early outpost towards the sea which stagnated rather than developed with the establishment of a definitive seaside capital at Nak'on Pathom."

Dupont (1939), Boisselier (1965) and Quaritch Wales (1969) did not report seeing any monuments inside the settlement enclosure during their visits to the site. Alternatively, Somprasong (2539: 32) recorded oral histories from local residents who claimed a *stūpa* base (i.e. *chedi* in Thai) had been located at the centre of the settlement enclosure. Somprasong did not provide any details on the size or construction of the monument, although he noted that one informant said there was an inscription on a stone that was apparently part of the monument. Attempts to plough this area with a tractor were reportedly unsuccessful and, as a result, a flagpole was built over the location of the monument. Today no pre-modern construction materials are visible under the flagpole base. In the southeastern part of the enclosed area, Somprasong (2539: 34) was shown more substantive evidence for a monument in the form of a pile of bricks, whose base he believed resembled that of a monument. Unfortunately, he did not report the exact location of the pile, its dimensions, or the sizes of the bricks it comprised. In the north part of the site, Somprasong (2539: 31) documented the recovery of numerous Indo-Pacific glass beads, of types typically found at first millennium CE sites in central Thailand, as well as a clay Buddha image of uncertain age. Two bronze Buddha images were reportedly found in the northeast part of the site. One is small and eroded, making its age difficult to determine; the other appears to be a later Ayutthaya period Buddha (ca 1350-1767). These opportunistic finds and observations confirmed that the site was occupied during the Dvāravatī period, while raising additional questions about the chronology and nature of its establishment, growth and decline.

The 2009-2010 Kamphaeng Saen Archaeology Project

From January 2009 to August 2010, I directed the Kamphaeng Saen Archaeology Project (KSAP), under the supervision of the 2nd Regional Office of the Fine Arts Department (FAD), to investigate the site through field research and subsequent analyses (Gallon 2013). Despite the chance finds of Dvāravatī sculpture and cultural materials discussed above, no site-wide systematic archaeological investigation had yet been conducted at Kamphaeng Saen. As a result, the project addressed fundamental questions about site chronology, organisation and function; baseline information essential for examining how the emergence of urban centres in central Thailand affected both the residents of ancient Kamphaeng Saen, as well as their relationships

Figure 3: *The Pāli inscribed socle from Kamphaeng Saen; 36.5 cm. wide x 38.5 cm. long Currently located in the Phra Pathom Chedi National Museum, Nakhon Pathom, inv. no. 37/2541 [Photograph by Matthew D. Gallon].*

with neighbouring communities like Nakhon Pathom and U Thong. The KSAP team was particularly interested in how the construction and configuration of religious monuments may have both encouraged and reflected the emergence of shared concepts of identity among the residents of these centres. To investigate these questions the KSAP employed a combination of pedestrian survey, auger coring and excavation.[8]

Full coverage survey of the area inside the enclosure confirmed Quaritch Wales's (1969: 50) observation of an uneven distribution of low densities of ceramics on the ground surface, almost exclusively earthenware sherds resembling those in assemblages from other Dvāravatī culture sites. The KSAP team did not find any mounds of *in situ* Dvāravatī-style bricks within the site interior, although we did document a few isolated bricks of indeterminate age and numerous earthen mounds that post-date the Dvāravatī occupation of the site.[9] Auger core samples collected throughout the interior revealed a combination of open and occupied areas, but did not encounter any indications of sub-surface monuments. Auger coring around the flagpole base at the centre of the site, the location of the supposed *stūpa* base mentioned by Somprasong (2539: 32), did not encounter any sub-surface impediments or architectural debris, and only one brick fragment of indeterminate age was identified in this area on the surface. The lack of architectural debris in this area raises serious doubts about the existence of a brick monument in this location, but it is possible that it may underlie the flagpole base (approximately 3.5 x 5 metres) or was completely destroyed and removed during the construction of the flagpole and the surrounding road.

Test excavations in four different parts of the site interior recovered Dvāravatī ceramics, ground stone, and glass beads, without significant evidence for pre- or post-Dvāravatī phases of occupation. We found a few isolated bricks, but they were not associated with any other evidence for monuments or religious objects, and appear to have been used in domestic contexts. We also cleaned a pre-existing cut through the earthen enclosure wall and extended it to natural soil, revealing that the wall was entirely built of earth and dated to the site's initial occupation.[10] AMS radiocarbon dates from the excavated contexts indicated that occupation of the site began around the fifth or sixth century CE and was most intensive from this initial period through the seventh century CE. After this initial phase, the density of occupation significantly decreased, but continued until the ninth century CE, after which the site was largely abandoned. Our excavations did not identify any evidence to explain the site's premature decline, but as Quaritch Wales's (1969: 51) speculated, urbanisation and centralisation of political power at nearby Nakhon Pathom likely played an important role.

Investigations of the landscape outside the enclosure included surveys and attempts to locate and more precisely document the exterior monument ruins described by Somprasong (2539: 32-33). We were unable to locate either the south or west monument groups, but identified the north *stūpa* 155 metres from the settlement enclosure on the opposite side of the river and scatters of bricks 50 to 300 metres east of the enclosure **[Map 2]**. The north *stūpa* ruins were covered by dense brush making it difficult to document; however, the mound appeared to have a square foundation, roughly 12 x 12 metres, a solid core roughly 2 metres high and an approximate orientation of 9 degrees east of true north **[Figure 4]**. On average, the bricks of this monument were slightly smaller than those in the field east of the site (see *infra*), but they contained similar temper of rice grains and chaff and were within the size-range of bricks found at Dvāravatī period sites. No stucco ornaments or sculptural fragments were visible on the surface of the mound or the surrounding ground surface, and a survey of adjacent fallow fields encountered no other archaeological material. Future clearance and excavation are needed to more conclusively determine the monument's plan and age.

Our surveys of a selection of fallow fields within 1 kilometre of the enclosure exterior identified only a few modern ceramic sherds in fields north, south and west of the site, but in an area east of the enclosure we identified complete and fragmentary Dvāravatī-style bricks scattered around a recently dug reservoir and nearby fields **[Figure 5]**. We did not identify any *in situ* bricks or structures in this area. The bricks had variable dimensions and levels of oxidation, but were on average 32 x 16 x 8 cm., incompletely oxidised (i.e. had a black core) and tempered

Figure 4: *Ruins of the north* stūpa *mound with members of the survey team (view north) [Photograph by Matthew D. Gallon].*

Figure 5: *A scatter of Dvāravatī-style bricks in a field east of the settlement enclosure (view north, north-west) [Photograph by Matthew D. Gallon].*

with rice husks and grains **[Figures 6a-b]**. The bricks from the scatters resemble examples from other Dvāravatī sites such as U Thong, Nakhon Pathom and Khu Bua. The brick scatters likely represent the remains of the "much dug-over" brick mounds described by Quaritch Wales (1969: 50) and the seven mounds described by Somprasong (2539: 32).

Just east of the brick scatters, Mr Pisit Thonatanat, a member of the local historical society and long-time resident, showed us the general location where the *dharmacakra* and inscribed socle had been recovered in 1963, roughly 350 metres east of the moat and 100 metres south of the river **[Map 2]**. This location is consistent with Quaritch Wales's (1969: 50) description of the discovery of these two sculptural pieces "somewhat further to the east" of the mounds with bricks. In our surveys of the fields east of the settlement enclosure we identified only the scatters of brick and no other archaeological materials. This initially perplexed us, but through discussions with a local farmer we learned that he and others had found and collected a few earthenware sherds and sculptural fragments near the brick scatters. His small collection of sherds comprised fragments of earthenware vessels with features common in Dvāravatī assemblages, and included three notable pieces: a rim that resembles those typically found on a type of high-necked vessels referred to as "water-pots" (e.g. Phasook 2528: pl. 27, fig. 10.1-5, 10.10); a fragment of a tall tubular finial that came from either a small *stūpa* or an ornate lid (e.g. Phasook 2528: fig. 15) **[Figure 7]**; and a leg from a vessel stand (e.g. Phasook 2528: pl. 45, fig. 16) **[Figure 8]**.

The farmer also found two sculptural objects in the field east of the settlement enclosure. The first was a terracotta head of a deer **[Figure 9]**, a symbol commonly associated with Buddhism, and documented at other Dvāravatī sites, albeit in stone (Brown 1996: figs 69-75). The second was a bronze pedestal in the shape of a lotus with the feet of a standing figure on its top **[Figure 10]**. Unfortunately the sculpture had broken at both the lotus's stem and just above the figure's ankles. Two Dvāravatī stone sculptures, one from Lop Buri (FAD 2552: fig. 22) and another from Nakhon Pathom (Brown 1996: fig. 79; FAD 2552: fig. 25), depict the Buddha a top a mythical beast (either identified as Phanasbodi or Sūrya respectively) and flanked on either side by an attendant (variously identified as Bodhisattvas or gods Indra or Brahmā) who is standing on a stemmed lotus. The depiction of the Buddha on a mythical beast flanked by attendants is unique to Dvāravatī art; art historians believe the motif developed between the end of the eighth and the ninth century CE (FAD 2552; Baptiste & Zéphir 2009: 82-87). Two other Dvāravatī stone and bronze sculptures depict a celestial Buddha and an attendant to either side, with the three figures standing on lotus blossoms that all emanate from the same stalk. These images were recovered from Khok Samrong, Lop Buri province and the Chedi Chula Prathon in Nakhon Pathom, and may date to the first and second half of the eighth century CE, respectively (Piriya 2012: 92-93, figs 1.88, 1.89). To varying degrees, the lotus bases in these images resemble the bronze sculptural fragment from Kamphaeng Saen and raise the possibility that it came from a similar image.[11] The relative dating of these lotus bases overlaps with the timeframe given for the *dharmacakra* and inscription from Kamphaeng Saen, suggesting significant investment in Buddhist sculpture at the settlement in the eighth century CE.

Figures 6a-b

Figure 7

Figure 8

Figure 9

Figure 10

In addition to the sculptural pieces whose provenance east of the site was verified by the farmer, the modern Wat Kamphaeng Saen has several Dvāravatī-style stucco and terracotta sculptural pieces in its museum that were reportedly recovered at Kamphaeng Saen.[12] Dupont (1939), Boisselier (1965) and Quaritch Wales (1969) reported seeing only the three stucco and laterite Buddhas and no other stucco fragments during their visits; however, Somprasong (2539: 30) later documented several of the pieces, raising the possibility that they were discovered since the late 1960s. During a visit to Wat Kamphaeng Saen in 2010, we examined two stucco human faces **[Figures 11-12]** that closely resemble the many stucco faces from Buddhist monuments at other Dvāravatī settlements in western Thailand (e.g. Thung Setthi, Nakhon Pathom, Khu Bua and U Thong). These faces share distinctive features including connected eyebrows, thick lips and a large nose. Somprasong (2539: 30) reported additional stucco objects from Kamphaeng Saen, including a third face with similar features to the two we saw, a hand fragment, the hind leg of a lion and a scroll-like architectural ornament; unfortunately, these pieces could not be located at the time of our visit. Additionally, the U Thong National Museum has a typical Dvāravatī-style lion made of stucco whose provenance is listed as Kamphaeng Saen.[13]

We also examined two terracotta sculptural fragments in the Wat Kamphaeng Saen collection. The first was the upper torso and

Figures 6a-b: *A complete example (top) and width cross-section (bottom) of Dvāravatī-style bricks found in a field east of the settlement enclosure. Note the incompletely-oxidised core and rice grain and husk temper in the cross-section [Photographs by Matthew D. Gallon].*

Figure 7: *Fragment of a terracotta finial, found in a field east of the settlement enclosure [Photograph by Matthew D. Gallon].*

Figure 8: *Leg from a clay vessel stand, found in a field east of the settlement enclosure [Photograph by Matthew D. Gallon].*

Figure 9: *Terracotta deer head fragment, found in a field east of the settlement enclosure [Photograph by Matthew D. Gallon].*

Figure 10: *Fragmented bronze lotus base with feet, found in a field east of the settlement enclosure [Photograph by Matthew D. Gallon].*

Left Figure 11: *Stucco face, reportedly found at Kamphaeng Saen. Currently located in Wat Kamphaeng Saen [Photograph by Matthew D. Gallon].*

Right Figure 12: *Stucco face, reportedly found at Kamphaeng Saen. Currently located in Wat Kamphaeng Saen [Photograph by Matthew D. Gallon].*

arms of a figure in the *añjali* gesture, signifying homage or worship **[Figure 13**]. The figure has what appear to be armbands around both upper biceps and bracelets around both wrists. In Dvāravatī art, these types of ornaments are generally worn by individuals such as Bodhisattvas, Brahmanical or Hindu deities, celestial beings, or the laity, who are in some examples shown worshipping or assisting the Buddha almost always depicted without ornaments (Somsak 2535: figs 25, 26, 71; FAD 2552: figs 7, 40, cats 24, 25, 36, 37). The second terracotta fragment we examined was not documented by Somprasong (2539), and depicts two adjacent heads **[Figure 14]**. The hairstyle of the figure on the left resembles that of the female musicians and the noble woman and her attendant depicted in the stucco panels recovered from *stūpa* no. 10 at Khu Bua (Somsak 2535: figs 71, 72).

The Buddhist Landscape at Kamphaeng Saen and Beyond

When we examine the landscape of Kamphaeng Saen, including both areas inside and outside the settlement enclosure, there is a striking division of space between the habitation areas presumably in the settlement core and the surrounding Buddhist monuments and sculpture on its periphery. Even though our investigations could not provide absolute dates for any of the religious monuments outside the enclosure, the east group clearly dates to the Dvāravatī period based on the style of the bricks, sculpture and ceramics found there. The north *stūpa* is also likely from this same period based on its square base and style of bricks. While we could not inspect the south group, the apparent similarity between the configuration of the south and east group of monuments in Somprasong's report (2539) suggest they may be roughly contemporaneous. The age of the west monument group is the least certain, although the bricks on the surface of the monument shown in Somprasong's photo (2539: fig. 26) appear to have similar dimensions as the typical oversized bricks from other Dvāravatī period monuments.

In addition to the spatial divisions, there is an interesting chronological difference between the interior occupation area and the Buddhist sculpture from the exterior religious areas. The absolute dates obtained in our test excavations of Dvāravatī contexts inside the

Left Figure 13: *Terracotta hands, reportedly found at Kamphaeng Saen. Now in Wat Kamphaeng Saen [Photograph by Matthew D. Gallon].*

Right Figure 14: *Terracotta double head, reportedly found at Kamphaeng Saen. Now in Wat Kamphaeng Saen [Photograph by Matthew D. Gallon].*

enclosure indicated the most intensive occupation of the site was from the fifth or sixth century CE to the seventh century CE. After this time, occupation at the site dramatically diminished until its abandonment *circa* the ninth century CE.[14] The dates of the construction of the brick religious monuments are unknown, but relative dates for the *dharmacakra* (late seventh to eighth century CE), the socle inscription (eighth century CE) and the three laterite Buddhas (eighth to ninth century CE), all correspond to when the site was in decline. If these dates are accurate, they suggest investment and activity at the site by the Buddhist community after the town's population began to decrease. Since Buddhist monastic communities primarily relied on donations from the laity for the resources required to support themselves and the construction of monuments, it is possible that the investment in the Buddhist sculpture during Kamphaeng Saen's nadir was actually funded by sources from outside the community, such as individuals located in the nearby thriving centre of Nakhon Pathom.

Direct evidence for the presence of a Buddhist monastic community at Kamphaeng Saen is limited. As Murphy (2010b) observed, *sema* stones are useful indicators of consecrated spaces specifically used for monastic rituals (e.g. ordinations) and are therefore suggestive of where monastic compounds were likely located. Unfortunately, during the Dvāravatī period such boundary stones are primarily found in northeast Thailand, suggesting the monastic communities of central Thailand may have established consecrated spaces in other ways, such as wooden *sema*s which have not survived in the archaeological record.[15] This makes it difficult to identify the actual spaces where Buddhist monks lived and practised in central Thailand. Buddhist monks may have been present during the consecration of *stūpa*s, but the efficacy of these monuments did not require their constant presence. At Kamphaeng Saen, the brick monuments appear to have been either reliquary or memorial *stūpa*s, although their advanced state of ruin makes it difficult to conclusively identify them. The recovery of Dvāravatī-style earthenware sherds in the vicinity of the east monument group suggests some individuals, possibly monks, were consuming, cooking or storing food in this area. While this is far from conclusive evidence of a monastic compound at Kamphaeng Saen, the location of most, if not all, of the monuments at Kamphaeng Saen outside the enclosure on the settlement's periphery

suggests a clear preference for building Buddhist structures in these locations by the monks and the community who supported them. Two possible factors influencing this configuration, examined below, include the monastic ideals of renouncing the laymen's life and the construction of a spiritually protective boundary.

Early Buddhist monastic communities had to find ways to reconcile the contradiction of withdrawing from society while still relying on the laity for patronage and new monks to fill their ranks (Bailey & Mabbett 2003: 1-38). Textual and archaeological evidence of early historic Buddhist communities in India suggest that one spatial solution they pursued was to build monasteries on the outskirts of settlements (Fogelin 2004: 318-326 and 2006). From *circa* 200 BCE-300 CE, Buddhist monasteries in India were commonly built in locations along important trade routes and outside urban centres (Heitzman 1984; Ray 1986; Morrison 1995: 214-217; Fogelin 2004: 318-326 and 2006). Many of the ports on India's east and west coasts had monasteries overlooking them (Ray 1994: 136-143). These locations along trade routes or near key centres of trade, but outside habitation areas, allowed the monks to strike a balance between renouncing domestic life in a town or city, while remaining within close proximity to urban populations to provide them with ritual and educational services and ensure their continued patronage. In particular, donations from the growing merchant guilds provided an important source of income, and the monasteries in turn acquired goods from these donors (Ray 1986). This mutually beneficial relationship had the added benefit of allowing both parties to expand their influence and authority outside of the traditional Brahmin-based political structure.

The spatial patterns of Dvāravatī period Buddhist monuments in central Thailand suggest that the early monastic communities in these areas also maintained symbiotic relationships with the residents of urban centres. Most studies of Dvāravatī religious sculpture and monuments have focused on identifying foreign influences and chronological relationships through stylistic and iconographic analyses rather than examining the significance of their spatial distribution within settlements (e.g. Cœdès 1928; Dupont 1959; Brown 1996; Woodward 1997: 43-73; Piriya 2012: 45-95). Several scholars (e.g. Quaritch Wales 1969: figs 2, 3, 5, 7, 10; Higham 2002: 256; Phasook 2004: 138) have noted in passing that religious monuments were located both inside and outside of settlement enclosures at protohistoric walled and moated sites, but few have elaborated on the significance of this distribution. Piriya Krairiksh (1975) and later Nicolas Revire (2010) have considered the significance of monuments outside the enclosure within the site-specific context of Nakhon Pathom. Piriya (1975: 173) suggested that the exterior monuments were later, and resulted from the community's expansion beyond the enclosure after the seventh century CE; Revire (2010: 81-82) entertained the possibility of a more functional explanation, in which the exterior monuments were part of a monastic complex that provided a more isolated context for greater asceticism. In northeast Thailand, Stephen Murphy (forthcoming) examined the location of different types of Buddhist art and monuments in the regional landscape, and determined that the monastic communities were divided between larger groups associated with the riverine urban centres and smaller groups or even isolated individuals located at forest or cave retreats. Due to the urban monastic communities' access to surplus food and labour from the riverine urban centres, they were able to support both larger populations of monks and the construction of Buddhist monuments.

Murphy (forthcoming) also examined the spatial distribution of Buddhist monuments within the landscape of a selection of lowland urban centres. At Mueang Sema, Nakhon Ratchasima province, he noted that structures indicative of monastic compounds (e.g. *ubosot*s or *vihāra*s) were located both outside the site's enclosure as well as near the centre of the inner enclosure. The location of these latter monuments is significant, since it suggests that a monastery or at least monastic rituals were located at the centre of the community, unlike in South Asia. Mueang Fa Daet in Kalasin province, also contained an *ubosot* close to the centre of the site, as well as *stūpa*s both inside and outside the enclosure. The seven exterior *stūpa*s, all roughly contemporaneous, ringed the exterior of the enclosure, which Murphy suggested may have been to establish a sacred field around the settlement. Interestingly, Uthara Suvrathan (2013: 89-91) identified a similar configuration of early historic *stūpa*s around the town of Banavasi in Karnataka, southern India, a pattern seen at other ancient cities in India at that time. For Mueang Fa Daet and other Dvāravatī enclosed centres, Murphy (forthcoming) suggested that the construction of monuments outside of the enclosures signified a change in the way residents conceived of the boundaries of settlements, since unlike their Iron Age predecessors they now extended built space beyond the settlement enclosure.

In my own survey of Dvāravatī centres in central Thailand (Gallon 2013: 178-180, Appendix B), I found the majority of documented Buddhist monuments[16] are found in one of three locations: 1) approximately 1.5 to 3.5 kilometres outside the settlement; 2) within 500 metres of the outside of the moat; 3) inside the moated enclosures. There are monuments that are exceptions to this pattern, including some monuments up to 6.7 kilometres outside the enclosure (e.g. Nakhon Pathom's Noen Phra); however, these three groups are the most robust. There are far fewer monuments in the third category than the other two. At Kamphaeng Saen, the west monument group falls into the first category; the north, east and south monument groups fall into the second. The second category of Buddhist structures, located on the exterior of the settlement but still in close proximity to it, may have been built to serve the laity; whereas the more distant category may have been devoted to monastic-focused activities, while still within a day's walk of the settlement. Both of these locations reflect the monastic communities' need to reconcile the ideal of renouncing domestic life with the economic reality of dependence on patronage from the community. Additionally, by conducting their affairs in peripheral locations, monastic leaders would have been able to more easily accumulate political and economic influence independently of political elites, who could monitor and control them more closely if they were within the core of the settlement. The ability of the monastic community to operate outside the supervision of political elites suggests that political administrators and the monastic communities may have formed separate hierarchies of authority within the society. Even within this alleged heterarchical organisation, both groups were likely interdependent, as the monastic communities required patronage and

military defence, and the political elite needed the monks to perform ceremonies and receive merit-building donations.

In central Thailand, Dvāravatī Buddhist monuments built inside settlement enclosures may have played important roles in power negotiations between political elites and monastic communities. These included large monuments, which can be described as *mahāstūpa*s or *mahācaitya*s (great *stūpas* or *caitya*s), located near the centre of sites such as Nakhon Pathom, Si Thep and Khu Bua (Phasook 2004: 138).[17] Such monuments were also built outside the settlement enclosures (e.g. Khao Khlang Nok at Si Thep), but it is the large Buddhist monuments located near the centre of Dvāravatī centres that represent a significant adaptation of the *mahāstūpa* tradition. In early historic India and Sri Lanka, communities also built *mahāstūpa*s, but located them on the periphery or several kilometres away from major urban centres. Compared to the intra-site distribution of monuments in South Asia, the placement of large Buddhist monuments at the centre of major Dvāravatī centres most closely resembles the location of Hindu temple complexes at the core of medieval towns in southern India (Champakalakshmi 1996; Heitzman 1997). The Hindu temple complexes in medieval southern India served as ritual, political and administrative centres, and were built and sustained through elite patronage. The construction of Dvāravatī so-called *mahāstūpa*s at the centre of larger settlements in a publicly visible location suggests that they may have played important roles in political and monastic ceremonies intended for a broad audience. If Dvāravatī rulers incorporated concepts of Buddhist kingship, such as the *cakravartin*, into their court rituals, royal personae and governance, they may have modified traditional Buddhist spatial ideals of placing monuments outside habitation areas to pursue their own political and religious agendas. That such *mahāstūpa*s are almost exclusively found at sites in the upper-tiers of the settlement hierarchy in central Thailand further reinforces their ties to administrative activities and political performance. If there actually was a *stūpa* at the centre of Kamphaeng Saen, as reported in Somprasong (2539: 32) but undetectable in our investigations, its reported size would be too small to have served as a *mahāstūpa*.

In addition to Buddhist monuments built of bricks and laterite, Dvāravatī monumental construction projects also included the earthen walls and moats that enclosed many of the centres in central and northeast Thailand at that time. These earthworks provided a combination of military defence, water control and a source of aquatic resources; however, the residents of these centres may have also conceived of them as sacred structures if their plan held cosmological significance. The strongest evidence for this possibility comes through analogy with neighbouring Cambodia during the Angkorian period (ninth-fifteenth centuries CE) when the Khmer built moats around many of the settlements or temples in this area (Moore 1989: 208-121; Higham 2000: 355 and 2004: 344-346). Inscriptions associated with Angkorian period sites suggest that in addition to their defensive and irrigation functions, the Khmer moats also defined a cosmological landscape based on Hindu conceptions of the universe (Cœdès 1963; Wheatley 1971: 295-296; Moore 1989: 208-212; Higham 2000). The Dvāravatī site enclosures, and their Iron Age predecessors, may have similarly created a spiritually protected or empowered space.

The Buddhist monuments around Dvāravatī settlements may have also established a protective sacred space. Due to the relics they contain, *stūpa*s are considered to emit a sacred energy. As noted above, Murphy (forthcoming) suggested that the enclosed settlement of Mueang Fa Daet in northeast Thailand was surrounded by seven *stūpa*s, possibly for the spiritual protection of the settlement. The configuration of brick monuments, likely *stūpa*s, in the four cardinal directions around Kamphaeng Saen may have served a similar purpose. Our field work revealed that the construction of the earthwork enclosure around Kamphaeng Saen occurred during its initial occupation. It is still unclear when the alleged brick *stūpa*s or *caitya*s were built, but the Buddhist sculptures appear to date to the end of the site's occupation, *circa* eighth to ninth century CE. It is possible that along with the sculpture, the Buddhist monuments were added later to either reinforce or replace the sacred protection provided by the initial earthwork enclosure. Other enclosed Dvāravatī centres in west-central Thailand, such as Nakhon Pathom, U Thong and Khu Bua, also have Buddhist monuments ringing their enclosures, although not always in the four cardinal directions as at Kamphaeng Saen. These patterns may represent a "translation" of cosmological concepts about the power of earthwork enclosures into the configuration of Buddhist monuments within the landscape; however, a more refined chronology for both the construction of Dvāravatī earthworks and brick or laterite monuments in central Thailand is needed to more fully evaluate this hypothesis.

Conclusion

Earthwork enclosures and religious monuments, both during their construction and as a lasting physical presence in the urban landscape, would have been well-suited to uniting various groups within newly formed or growing Dvāravatī centres. The residents of these communities inevitably included migrants from multiple villages and, therefore, required new social bonds and group identities to supplement and transcend their more exclusive kinship-ties based on former village residence. The construction of monuments required labourers, planners and sponsors to invest time and resources on a public project rather than activities that benefitted their individual households. For this reason, Monica Smith (2003: 282) has described some monumental construction projects, such as city walls, as an "architecture of consensus," because they encouraged cooperation and reinforced a shared civic identity among diverse social groups within an urban centre. While Dvāravatī public monuments may have served as important civic symbols in this way, their success in fostering intra-community bonds did not require that all members of the community view them in the same way.

We know little about who actually participated in Dvāravatī monument construction, and differences in gender and class may have dictated who was required, or allowed, to work on monuments, leading to different perceptions and experiences of this process among community members. Historically, both slavery and corvée labour have existed in the region (Beemer 2009), and probably played an important role in Dvāravatī period monument construction (Gallon 2013: 323-325). The difference between those who laboured in monument construction

and those who did not, therefore, may have marked and reinforced new types of social groups within the community. Monument construction was undoubtedly gruelling work, and the shared experience of such hardship may have strengthened bonds among those who laboured. Such work-groups may have initially been based on kinship, ethnicity or former village residence, but over time labourers' shared experiences may have provided the basis for new, more widely shared, identities that cross-cut kinship. The lack of participation in monument construction, due to privileged status, gender, limited physical ability, or other social differences, may have also served to highlight and strengthen new social groups within the community. The varying experiences of monument construction could therefore play an important role in bringing different groups of residents together in newly created or expanding Dvāravatī centres.

Monument construction also enabled Dvāravatī period political and religious leaders to materialise the labour and resources they had amassed in a relatively permanent and publically visible medium (Baines & Yoffee 2000; Stark 2006: 420-421). The ability to successfully coordinate work on such monuments demonstrated the wealth and authority at the command of these elites. The construction of religious monuments, with elite planning and sponsorship and non-elite labour, also put in to practice the social order and stratification legitimised by elements within Hindu and Buddhist ideologies. Additionally, monastic groups may have used the construction of Buddhist monuments to demonstrate their autonomy and political power within a heterarchical or contested system of authority. By situating Buddhist monuments and monasteries on the periphery of urban centres, monastic orders may have demonstrated their relative independence; whereas those monuments built within the settlement, and particularly the large *mahāstūpa*s, may represent the monastic community's participation in more religio-political activities, such as the legitimisation of a monarch. In both cases, monument construction would have played an active role in the negotiation of authority between political and religious leaders, as well as an important source of identity for the community members who contributed resources and labour.

In addition to supporting the development of new social groups within the community during their construction, earthwork enclosures and religious monuments also helped to create shared world-views among the residents by constraining, or "normalising," their movements and perceptions of the landscape (Bradley 1998: 108; A. Smith 2003: 67-77). The fact that many Dvāravatī enclosed centres had similar spatial configurations of monuments indicates that not only did their leaders share concepts of how to define and empower a sacred landscape through the placement of monuments, but also their residents subsequently experienced similar patterns of religious practice and daily movement. These similarities enabled an individual to potentially relocate from one centre to another and not only recognise and understand the organisation of the new settlement, but feel physically and spiritually secure once there. In a landscape where slave-raiding may have been fairly common, such security, or at least the illusion thereof, would have been highly valued. This security may have enabled, along with other factors, the population aggregation and urbanisation that took place during the Dvāravatī period. In the case of the decline of Kamphaeng Saen, if its residents moved or were forcibly resettled to Nakhon Pathom, they would have been familiar with some of the spatial logic behind the configuration of the monumental landscape in their new home due to the similarity in the configuration of monumental space at these two settlements, albeit on different scales. Participation in the construction of new monuments at Nakhon Pathom would have in turn helped them forge bonds with groups within the community, as well as begin to internalise the socio-political order of their new home.

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Endnotes

1 The term "Dvāravatī" has been used to describe an art style, a chronological period, an archaeological culture and one or more polities; for discussion, see Skilling (2003: 104-106), and Gallon (2013: 79-117). According to a given author's use of the term, the time span and phenomena identified as "Dvāravatī" can vary considerably. The differences in the label's usage often follow disciplinary boundaries between archaeology, art history and history; yet, even within these disciplines there is a significant lack of consensus over what constitutes "Dvāravatī." As an archaeologist, I use the term to describe an archaeological culture defined by a suite of shared forms of material culture and practices. I consider the "Dvāravatī period" to be the roughly defined span of time when a significant number of the elements of this suite can be identified, *circa* fifth to eleventh centuries CE. The starting date for this range is one to two centuries earlier than archaeologists have traditionally given for the Dvāravatī culture (e.g. Quaritch Wales 1969; Phasook 2004; Murphy, forthcoming), but accounts for the recent absolute dates (Barram & Glover 2003; Gallon 2013: 244-269, Table 5.5) from contexts with ceramics and other non-ritual objects in styles conventionally attributed to the "Dvāravatī culture."

2 Mudar (1999) identified several moated settlements in west-central Thailand that are smaller than Kamphaeng Saen, but they are not included in other lists of moated Dvāravatī sites (e.g. Phasook 2004), and it is unclear if they contain Dvāravatī period material.

3 After his two visits to the site in the 1960s, Quaritch Wales (1969: 49) noted the presence of a second wall, possibly lining the moat's exterior edge, but no traces of this wall remain today. In the 1930s, Dupont (1939: 364) noted only a single wall on the moat's interior edge.

4 When Dupont (1939: 364) examined the three sculptures they were all housed at Wat Kamphaeng Saen. Since that time, the set of sculptures has been divided; one image remains at Wat Kamphaeng Saen, a second image has been moved to another local monastery (Wat Sawang Chat Pracha Bamrung), and the third image was reportedly taken by the FAD. The two sculptures that remain at the local monasteries have been covered with gold leaf as a result of continued veneration, making it difficult to assess their features or construction.

5 Chira & Woodward (2509: cat. 22) transliterated and translated the inscription as: *saccakiccakataññāṇaṁ catudhā catudhā kataṁ tivaṭṭaṁ dvādasākāraṁ dhammacakkaṁ mahesino*; i.e. "the knowledge of each of the Four Noble Truths, the knowledge of the obligation entailed by each, and the knowledge that these obligations have been fulfilled, making three revolutions for a total of twelve aspects of knowledge, are the foundation of the Buddha's *dhammacakka* (wisdom)."

6 Cœdès's chronological assessment of the script is mentioned by Quaritch Wales (1969: 50), but it is unclear if this was based on their personal communication or Cœdès's work on similar inscriptions. According to Brown (1996: 108) the inscription on the socle from Kamphaeng Saen is the same as the inscription on the inner hub of an early *dharmacakra* from Nakhon Pathom translated by Cœdès (1956: 225).

7 Buddhist structures built in first millennium CE Thailand included what have been identified as *stūpa*s (reliquary or commemorative mound-like structures), *vihāra*s (assembly halls) and *ubosot*s (halls for monastic ordinations or other prescribed rituals) (Murphy 2010b: 269-270 and forthcoming). Each of these structures has rough counterparts in early historic South Asia (Coningham 2001); however, in South Asia the term "*vihāra*" may refer to an entire monastery or a block of monastic cells and "*ubosot*s" are largely restricted to Sri Lanka (Murphy, forthcoming). In Thailand, the terms "*caitya*" or "*chedi*" refer to commemorative *stūpa*s that do not necessarily contain relics (Woodward 1993: 75-77), whereas in South Asia *caitya* is most often applied to a type of *gṛha*, or hall, containing an image or *stūpa* (Coningham 2001). It is difficult to differentiate between *stūpa*s and *caitya*s in the archaeological record in Thailand. Furthermore, it is unclear if the Dvāravatī monuments that have been identified as belonging to these two categories were considered to have completely separate functions, and it is possible that there was a functional continuum between the two types of structures. Dvāravatī monuments that are characterised as *stūpa*s or *caityas* also include rectilinear mound-like structures that have flat tops, which likely served as the platform for a hall built of perishable materials (e.g. Wat Khlong at Khu Bua). The religious and political functions of these structures are unclear, and they may have served as an image or assembly hall, as well as a *stūpa*.

8 For details of the methodology and results of these investigations, see Gallon (2013).

9 We were unable to identify the mound of bricks Somprasong documented inside the eastern gate of the site. There were a few concentrations of Dvāravatī style-bricks around the arboretum office, but staff members told us that the bricks had recently been brought in from the area outside the site to the east for various uses. We also identified several mounds of bricks of indeterminate age roughly 140-150 metres northwest of the site centre; however, the mounds also had modern construction materials embedded in them, and if the bricks date to the Dvāravatī period they have clearly been heavily disturbed and likely moved. Finally, there are more than three hundred earthen mounds, many roughly conical-shaped, scattered around the interior of the enclosure at Kamphaeng Saen. Auger coring of several of these features and excavation of one mound showed them to be completely void of archaeological material, and overlie the Dvāravatī period strata. So while they post-date the Dvāravatī occupation of the site, the origin of these features remains unclear.

10 The profile through the earthen wall contained no brick or stone construction materials or any artefacts. The absence of any refuse in the matrix of the wall suggests the moat was dug into sterile soil rather than pre-existing cultural deposits, and that the construction of the moat and wall therefore took place around the initial occupation of the site. Auger core tests in other sections of the wall also failed to identify any artefacts or stone or brick construction materials in the wall.

11 There are other depictions of a Buddhist figure standing atop a lotus (e.g. Piriya 2012: 79, 89, 90; figs 1.59, 1.60, 1.82); however, these images are often free standing and do not show a stem below the lotus blossom, as this is the base of the sculpture.

12 Monastery museums often serve as repositories for objects members of the community suspect to be old or spiritually empowered, regardless of their original provenance. Archaeological materials obtained on journeys outside the local area occasionally find their way into these collections, and for this reason the provenance of material in monastery collections must be treated with caution. In the case of the Wat Kamphaeng Saen sculptural fragments, the monastery curator, members of the local historical society and Somprasong (2539: 30) all claimed that the material was found at Kamphaeng Saen. Questions about the provenance of these objects, however, do arise since more stucco objects have not been reported from the site and there is no evidence of stucco fragments on the surface in the areas around the destroyed brick structures we surveyed.

13 Seen by the author on display in 2009.

14 The recovery of a single sherd of twelfth century imported Chinese stoneware from just below the surface inside the enclosure during KSAP auger coring, and Somprasong's report of the discovery of a Ayutthaya style Buddha, suggest that even after the ninth century CE, there was still occasional activity at the site. However, our test excavations found no evidence of significant full-time habitation at the site after this time. See Gallon (2013: 282-308) for additional discussion of causes behind the site's decline.

15 One of the rare examples of possible stone *sema*s in central Thailand comes from Mueang Bon, where Quaritch Wales (1969: 79) noted eight pairs of small "roughly-shaped" *sema* stones found *in situ* adjacent to *stūpa* no. 4 on the hill outside the site's moated enclosure. It is notable that the stones were both small and lacked the often ornate carvings of the *sema* stones found in the Northeast. Unfortunately, Quaritch Wales did not publish any images of the stones.

16 There are a few monuments associated with smaller unmoated settlements (e.g. Thung Setthi and Phong Tuek in Phetchaburi and Kanchanaburi provinces respectively). A few relatively isolated cave sites with Dvāravatī period Buddhist carvings (e.g. Khao Ngu caves in Ratchaburi province and Khao Thamorat cave in Phetchabun province) are also known and may have served as the residences of ascetic monks.

17 It is notable that the large monuments located at the centre of these sites include the rectilinear mound structures with flat tops and single staircases (e.g.Wat Khlong at Khu Bua). As I noted above, while these monuments are often classified as *stūpa*s, they may have served additional or alternative functions. The presence of a single stairway leading to an elevated platform would be well-suited to increasing the visibility and emphasising the privileged status of leaders who may have used these monuments in religio-political ceremonies; although the existence of such ceremonies is speculative.

References

Arunsak Kingmani, Wasan Thepsuriyanont & Phattharaphong Kaongoen
2545 *Borannakhadi mueang u thong* (*Archaeology of U-Thong*). Suphan Buri: Fine Arts Department. [In Thai; 2002 CE]

Bailey, Greg & Mabbett, Ian W.
2003 *The Sociology of Early Buddhism*. Cambridge: Cambridge University Press.

Baines, John & Yoffee, Norman
2000 Order, Legitimacy, and Wealth: Setting the Terms. In Richards, J. & Buren, M.V. (eds), *Order Legitimacy, and Wealth in Ancient States*. Cambridge: Cambridge University Press, pp. 13-17.

Baptiste, Pierre & Zéphir, Thierry (eds)
2009 *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des musées nationaux.

Beemer, Bryce
2009 Southeast Asian Slavery and Slave-Gathering Warfare as a Vector for Cultural Transmission: The Case of Burma and Thailand. *Historian* 71(3): 481-506.

Boisselier, Jean
1965 Récentes recherches archéologiques en Thaïlande. *Arts Asiatiques* 12: 125-174.

1968 *Nouvelles connaissances archéologiques de la ville d'U-T'ong* Bangkok: Fine Arts Department of Thailand.

1970 Récentes recherches à Nakhon Pathom. *Journal of the Siam Society* 58: 55-65.

Bradley, Richard
1998 *The Significance of Monuments: On the Shaping of Human Experience in Neolithic and Bronze Age Europe*. New York: Routledge.

Brown, Robert L.
1996 *The Dvāravatī Wheels of the Law and the Indianization of South East Asia*. Leiden: E.J. Brill.

Champakalakshmi, R.
1996 *Trade, Ideology and Urbanization: South India 300 BC to AD 1300*. New Delhi: Oxford University Press.

Chira Chongkol & Woodward, Hiram, Jr
2509 *Namchom phiphithaphan sathan haeng chat u thong changwat suphan buri/Guide to the U-Thong National Museum, Suphanburi*. Bangkok: Fine Arts Department. [In Thai and English; 1966 CE]

Cœdès, George
1928 *Les collections archéologiques du Musée national de Bangkok*. Bruxelles-Paris: G. Van Oest.

1956 Une Roue de la Loi avec inscription en Pāli provenant du site P'ra Pathom. *Artibus Asiae* 19(3-4): 221-226.

1963 *Angkor*. Oxford: Oxford University Press.

Dupont, Pierre
1939 Rapport de M. P. Dupont sur sa mission archéologique en Thaïlande (18 janvier-25 mai 1939). *Bulletin de l'École française d'Extrême-Orient* 39: 351-366.

1959 *L'archéologie mône de Dvāravatī*. Two Volumes. Paris: École française d'Extrême-Orient.

Fine Arts Department (FAD)
2552 *Sinlapa thawarawadi tonkamnoet phutthasin nai prathet thai/Dvaravati Art: The Early Buddhist Art of Thailand*. Bangkok: Fine Arts Department. [In Thai and English; 2009 CE]

Fogelin, Lars
2004 *Beyond the Monastery Walls: The Archaeology of Early Buddhism in North Coastal Andhra Pradesh, India*. Doctoral Dissertation. Ann Arbor: University of Michigan. [Unpublished]

2006 *Archaeology of Early Buddhism*. Lanham: AltaMira Press.

Gallon, Matthew D.
2013 *Ideology, Identity and the Construction of Urban Communities: The Archaeology of Kamphaeng Saen, Central Thailand (c. Fifth to Ninth Century CE)*. Doctoral Dissertation. Ann Arbor: University of Michigan. [Unpublished]

Heitzman, James
1984 Early Buddhism: Trade and Empire. In Kennedy, K.A.R. & Possehl, G.L. (eds), *Studies in the Archaeology and Paleoanthropology of South Asia*. New Delhi: Oxford University Press, pp. 121-137.

1997 *Gifts of Power: Lordship in an Early Indian State*. New Delhi: Oxford University Press.

Higham, Charles
2000 The Symbolism of the Angkorian City. *Cambridge Archaeological Journal* 10: 355-57.

2002 *Early Cultures of Mainland Southeast Asia*. Bangkok: River Books.

Moore, Elizabeth H.
1989 Water Management in Early Cambodia: Evidence from Aerial Photography. *The Geographical Journal* 155: 204-214.

Morrison, Kathleen D.
1995 Trade, Urbanism, and Agricultural Expansion: Buddhist Monastic Institutions and the State in the Early Historic Western Deccan. *World Archaeology* 27: 203-221.

Mudar, Karen M.
1999 How Many Dvaravati Kingdoms? Locational Analysis of First Millennium A.D. Moated Settlements in Central Thailand. *Journal of Anthropological Archaeology* 18: 1-28.

Murphy, Stephen A.
2010a *The Buddhist Boundary Markers of Northeast Thailand and Central Laos, 7th-12th Centuries CE: Towards an Understanding of the Archaeological, Religous and Artistic Landscapes of the Khorat Plateau*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished]

2010b Dvaravati Period Sema Stones: Shifting Meanings and Definitions in Archaeology, Epigraphy, Texts and Religious Re-use. *Rian Thai: International Journal of Thai Studies* 3: 259-282.

Forthcoming Buddhism and its Relationship to Dvaravati Period Settlement Patterns and Material Culture in Northeast Thailand and Central Laos ca. 6th -11th centuries CE: A Historical Ecology Approach to the Landscape of the Khorat Plateau. *Asian Perspectives* 52(2).

Phasook Indrawooth
2528 *Dachani phachana dinphao samai thawarawadi* (*Index Pottery of Dvāravati Period*). Bangkok: Silpakorn University. [In Thai with English Summary; 1985 CE]

2004 The Archaeology of the Early Buddhist Kingdoms of Thailand. In Glover, Ian C. & Bellwood, Peter S. (eds), *Southeast Asia: From Prehistory to History*. New York: Routledge Curzon, pp. 120-148.

Phattharaphong Kaongoen
2545 *Borannakhadi khok chang din* (*The Archaeology of Khok Chang Din*). Suphan Buri: Fine Arts Department. [In Thai; 2002 CE]

Piriya Krairiksh
2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Raknga haeng sinlapa thai*, 2553 (2010 CE)]

Quaritch Wales, Horace Geoffrey
1946 Recent Malayan Excavations and Some Wider Implications. *Journal of the Royal Asiatic Society*, New Series 78(3-4): 142-149.

1969 *Dvāravatī: The Earliest Kingdom of Siam (6th to 11th century A.D.)*. London: Bernard Quaritch Press.

Ray, Himanshu Prabha
1986 *Monastery and Guild: Commerce under the Satavahanas*. New Delhi: Oxford University Press.

1994 *The Winds of Change: Buddhism and the Maritime Links of Early South Asia*. New Delhi: Oxford University Press.

Revire, Nicolas
2010 Iconographical Issues in the Archeology of Wat Phra Men, Nakhon Pathom. *Journal of the Siam Society* 98: 75-115.

Skilling, Peter
Dvāravatī: Recent Revelations and Research. In Baker, Chris (ed.), *Dedications to HRH Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra on Her 80th Birthday*. Bangkok: The Siam Society, pp. 87-112.

Smith, Adam
2003 *The Political Landscape: Constellations of Authority in Early Complex Polities*. Berkeley: University of California Press.

Smith, Monica L.
2003 Early Walled Cities of the Indian Subcontinent as "Small Worlds." In Smith, M.L. (ed.), *The Social Construction of Ancient Cities*. Washington, D.C.: Smithsonian Institution, pp. 269-289.

Somprasong Nuamboonlue
2539 *Raingan kansueksa ruapruam lakthan kiaokap mueang kao kamphaeng saen khong amphoe kamphaeng saen* (*Report on the Investigation of Evidence about the Ancient Settlement of Kamphaeng Saen of Kamphaeng Saen District*). Bangkok: Amarin Press. [In Thai; 1996 CE]

Somsak Rattanakun
2510 Kankuttaeng borannasathan dan thi nuea khong khok chang din amphoe u thong changwat suphan buri (Excavation of an Ancient Site in the Northern Part of Khok Chang Din, U Thong District, Suphan Buri Province). *Silpakorn Journal* 11(2): 78-83. [In Thai with English Abstract; 1967 CE]

2535 *Borannakhadi mueang khu bua* (*The Archaeology of Khu Bua*). Bangkok: Fine Arts Department. [In Thai; 1992 CE]

Stark, Miriam T.
2006 Early Mainland Southeast Asia Landscapes in the First Millennium A.D. *Annual Review of Anthropology* 35: 407-432.

Suvrathan, Uthara
2013 *Complexity on the Periphery: A Study of Regional Organization at Banavasi, c. 1st – 18th century A.D.* Doctoral Dissertation. Ann Arbor: University of Michigan. [Unpublished]

Usa Nguanphienphak
2009 Fouilles récentes au Phra Pathon Chedi. In Baptiste, Pierre & Zéphir, Thierry (eds), *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des musées nationaux, pp. 144-149.

Wheatley, Paul
1971 *The Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City*. Chicago: Aldine Publishing Company.

Woodward, Hiram, Jr
1997 *The Sacred Sculpture of Thailand*. Bangkok: River Books.

Sema Stones in Lower Myanmar and Northeast Thailand: A Comparison

Stephen A. Murphy

Introduction

The narrative art depicted on various *sema* stones (Buddhist boundary markers) from northeast Thailand dating from the seventh to eleventh centuries CE and generally considered to be part of the Dvāravatī art style or culture[1] have long been admired for both the quality of their carvings and the skilful rendering of their subject matters.[2] The subjects consist primarily of *jātaka* tales and scenes from the life of the Buddha. Similarly, a group of *sema*s from the Kalyāṇī Sīmā in Thaton, lower Myanmar, also depict narrative scenes from *jātaka*s and have therefore invited comparison from a number of scholars.

Piriya Krairiksh (1974: 63) in particular stresses this point, arguing that a group of Mons may have fled northeast Thailand as the Khmers began to take over their territories.[3] The natural place for them to seek refuge, he argues, was Thaton, being as it was, one of the main centres of "Mon Buddhism." Furthermore, he states that as there does not seem to be any "Burmese" forerunners to the Thaton *sema*s, it is plausible that the Mons of northeast Thailand brought this tradition with them.

This hypothesis, however, has a number of problems. Upon close investigation of the *sema*s from both northeast Thailand and Thaton, it becomes apparent that while the content of these narrative scenes are similar and at times identical, the style, composition and morphology of the *sema*s from both locations differ considerably.

What follows is a comparison between the *sema* stones of lower Myanmar and northeast Thailand from the seventh to eleventh centuries. The origins and use of *sema*s shall first be briefly discussed, followed by an overview of the earliest evidence for these objects in both Myanmar and Thailand. Excavations at Vesāli in Rakhine (Arakan) state in the west of Myanmar have led to the discovery of a number of *sema*s from *circa* fifth to seventh centuries CE, while the so-called "Buddhist megaliths" (Luce 1985: 130-131, pls 12, 13, 15) at the site of Śrīkṣetra, while not clearly identifiable as *sema*, do appear to have fulfilled a somewhat similar function in defining ritual space and provide evidence for a well-established stone carving tradition.

The narrative art on the *sema*s from northeast Thailand, in particular from the sites of Mueang Fa Daet and Ban Nong Chat,[4] shall then be compared with that from Thaton. In doing so, it will be shown that whilst there are many similarities in terms of function and narrative content, there are also various differences in terms of how the narrative art is depicted, the form of the *sema*s themselves and certain stylistic renderings. Overall, it will be shown that the "Mon refugee" hypothesis is untenable. This raises a further question, that is, whether or not the *sema* tradition of northeast Thailand can be seen as a model or forerunner for those in lower Myanmar. The evidence discussed

Opposite: *Detail of Figure 4 depicting an episode of the* Mahosadhajātaka. *Khon Kaen National Museum [Photograph by Stephen A. Murphy].*

herein, however, indicates it is more probable that the *sema*s at Thaton developed independently of those in northeast Thailand, drawing their inspiration from the already rich and well-established indigenous tradition of carving Buddhist imagery and motifs.

Sema Stones: Origins and Use

The gradual and pervasive movement of Buddhism into Southeast Asia from the early centuries of the first millennium CE onwards brought with it a variety of new rituals, concepts, customs and artistic traditions. As a result, Buddhist ideas of sacred space and sacred art merged with the pre-existing local cultures that they encountered, resulting in unique expressions particular to these communities.

As Buddhism became established in these areas the need to perform certain prescribed rituals led to the development of specific artistic and religious traditions. Regulations concerning the demarcation of ritual space were paramount among these considerations and as a result the tradition of erecting *sema* stones emerged in northeast Thailand and lower Myanmar.

The importance of demarcating ritual space arose from the need to perform the *pāṭimokkha* on *uposatha* days and ordination ceremonies. The *pāṭimokkha* ceremony, which consists of the recitation of the rules of the order, is performed twice a month, on the full and new moon, and once a year at the end of the rainy season on the *pavāraṇā* day. Furthermore, Pāli Buddhist praxis stipulates that it must take place within clearly marked consecrated ground (Horner 1962: 6-13, 137-146). However, this ritual ground need not consist of a building, such as an *ubosot/bot* or *sim/sīmā* (ordination hall), but can take place in the open air as long as the space has been clearly demarcated. It is for this specific function therefore, that *sema* stones were erected (Murphy 2010: 86-124; Arunsak 2010: 67-82).[5]

The Pāli word *sīmā* means boundary. As No Na Paknam (1981: 57) points out, the Thai term *sema* is therefore a vulgarisation of the Pāli word *sīmā*. In modern Thailand, *sema* stones are usually called *bai sema*s, with *bai*, meaning leaf, generally referring to the shape of the predominant slab type *sema*, particularly from the Ayutthaya period onwards (ca fourteenth century to present).[6] In Myanmar, however, the word *sīmā* (pronounced as *thein*) refers to both a boundary and an ordination hall, as in the Kalyāṇī Sīmā at Thaton for example (Luce 1969: 252-253).

The function of *sema* therefore, was to create this necessary boundary (*sīmā*) within which key Buddhist ceremonies such as the *pāṭimokkha* or ordination ceremony could take place.[7] As Petra Kieffer-Pülz points out, this is one of the conditions for the continued existence of the Saṅgha, as without a clearly defined *sīmā*, there would be no space to perform valid Buddhist rituals (1997: 141). In modern-day Thailand for example, a set of eight *sema*s are placed around an *ubosot*, either singularly or in pairs (therefore amounting to sixteen *sema* stones in total).[8] Once this formal procedure has been correctly carried out, the area is then deemed sacred and the requisite ceremonies can take place within it.

In modern Myanmar, a similar consecration ceremony takes place. Nagasena Bhikkhu (forthcoming) has recently carried out an exhaustive account of *sīmā* literature in Myanmar language giving a number of accounts of this consecration ceremony in a modern context. Some of the earliest related epigraphic evidence in Myanmar comes from the Kalyāṇī inscriptions of King Dhammazedi, set up in Bago (Pegu) in *circa* 1477-78 CE. In these bilingual inscriptions (Mon and Pāli), the arrangement of the *sema*s is outlined in the Mon portion of the text stating,

> […] having been marked (at) the corners (facing) the four quarters [four boundary stones were planted. When] these four middle stones [were planted,] it being an advantage to have eight boundary stones with a view to making other than four-sided figure […]. (trans. Blagden 1928: 247)

Clearly therefore, by the fifteenth century the rituals, regulations and ceremonies concerning the demarcation of the *sīmā* precinct had been firmly formulated in lower Myanmar.[9]

However, while the need to create ritual space is clearly defined in the Pāli texts, as Pinna Indorf (1994: 19) points out, nowhere in these texts does it state how this is to be done. The *Vinaya Mahāvagga* lists a number of possibilities, such as anthills, trees and rivers to define ritual space, however, they need to be clearly identifiable in order to suffice.[10] The evidence from northeast Thailand and central Laos illustrates that in these regions this need to fix Buddhist ritual space was met by the setting up of *sema* stones. Therefore, being found throughout Myanmar, Thailand, Cambodia and Laos, *sema*s today seem to represent a specific Southeast Asian response to the creation of ritual space.[11] To the best of my knowledge no such practice has been recorded to date from India or Sri Lanka prior to *circa* tenth century CE.

Early Evidence for *Sema* Stones in Myanmar

The earliest evidence for *sema*s in Myanmar comes from a number of sites in the central and western regions, with none of them falling under the umbrella of the so-called "Mon" regions. In fact, one of the sites discussed, Śrīkṣetra, is in the Pyu region of Myanmar, while the other, Vesāli, is neither Mon nor Pyu.

Elizabeth Moore (2007: 129) has recently debunked these ethnic terms as over-simplistic concepts and argues that we should view pre-Bagan (Pagan) Myanmar more from a perspective of its landscape and human interaction with it, than in terms of reductive ethnocentric definitions. She further points out that during the first millennium CE, there was active interchange between upper and lower Myanmar, brought about more by ecological conditions than anything else. Michael Aung-Thwin (2005) has also cautioned against the blanket use of terms such as "Mon" and "Pyu," but for very different reasons, seeing them more as constructions of British colonialism. His critique, however, is problematic in parts, particularly in terms of his claims regarding the apparent lack of archaeological evidence in lower Myanmar, as has been outlined by Donald Stadtner (2008; see also Moore & San Win, this volume) who for his part, is a firm advocate of the Pyu and Mon paradigms.

A similar line to Moore's understanding is taken in this essay. From the archaeological record it seems clear that early Buddhism

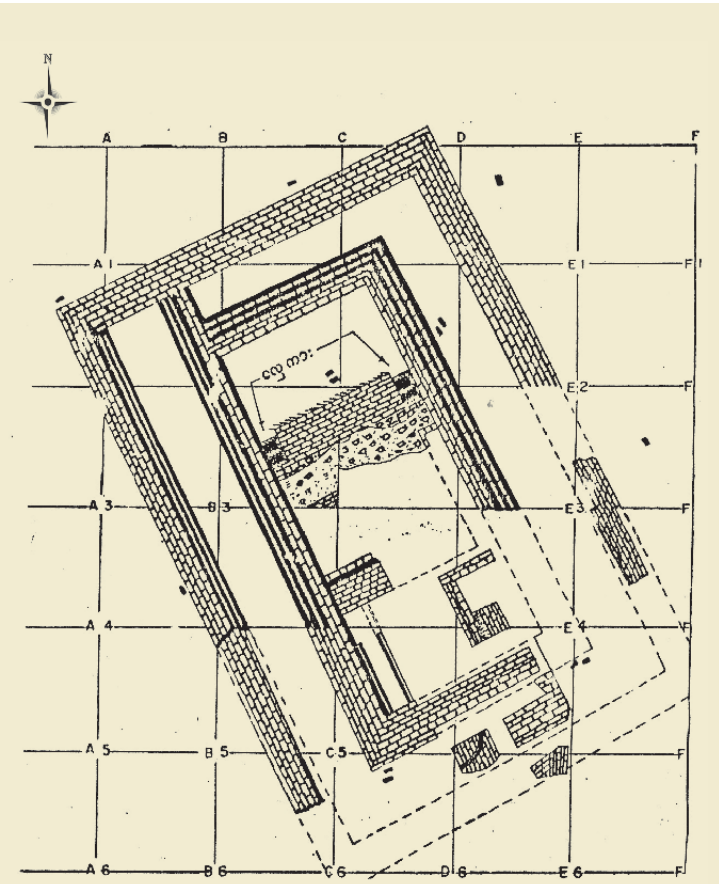

Figure 1: *Ground plan of the excavated* "thein" *from the site of Vesāli in western Myanmar (Rakhine/Arakan state). The pillars identified as* sema*s are located in grid squares A2, B4, C1, C2, D2, D6, E1, F3, F5 [Drawing courtesy of U Nyunt Han].*

did not distinguish between Pyu and Mon. As it moved into what is today modern Myanmar, it disseminated its doctrine and teachings among the various cultures and traditions that it encountered. Therefore, while the early evidence for Myanmar *sema*s discussed below do not come from Mon areas, it is argued that the same religious and doctrinal forces were at play, and thus *sema*s from Vesāli and the Buddhist stone carvings from Śrīkṣetra may legitimately be considered as possible forerunners to those found in eleventh century Thaton. Furthermore, while they may not be the direct prototypes for the Thaton *sema*s, they do illustrate that the tradition of stone carving and depicting Buddhist narrative art on large stone pillars/stele was in existence in this region of Myanmar from *circa* the sixth century onwards. In addition, Moore (2007: 129-225) has shown that communication between the areas of Vesāli, Śrīkṣetra and Kyaikkatha in lower Myanmar is clearly evident during the first millennium and it is not inconceivable that religious and artistic ideas moved freely between them.

The earliest evidence for the setting up of *sema*s in Myanmar comes from the ancient city of Vesāli located in modern-day Rakhine state. This site lies in a coastal region of western Myanmar, close to the border with modern-day Bangladesh. The settlement itself lies about 10 kilometres north of Mrauk U.

Excavations at Vesāli between November 1983 and February 1984 led to the discovery of a brick building (mound no. 5), which was rectangular in shape and measured 22.5 x 15.2 metres.[12] Surrounding this building, the excavation team found thirteen fossilised wood pillars, set up in pairs and roughly equidistant, which stood at a height of about 60 cm above the ground **[Figure 1]**. This building was identified by the excavation team as a *thein*, or ordination hall, due to factors such as its ground plan and its location in relation to other buildings excavated during the course of their research. The thirteen fossilised pillars were therefore identified as *sema*s, erected to mark out the *sīmā* precinct of this *thein*. The site itself was dated from between the fifth to ninth centuries CE.

In terms of the dating of this site, Moore (2007: 23) further points outs that while there are no radiocarbon dates available, there is an eighth century inscription of King Anandacandra at Vesāli recording eighteen previous rulers. This timeframe is also consistent with the evidence for *sema* stones from northeast Thailand.

Figure 2: *Buddhist stele from Śrīkṣetra (upper Myanmar) depicting the Buddha and two attendants. Height 107 cm., width 112 cm., depth 23 cm. Housed at the Thayekhittra Archaeological Museum [Photograph by Stephen A. Murphy].*

The site of Śrīkṣetra is located in upper Myanmar, approximately 6 kilometres outside the modern town of Pyay (Prome). It is one of the most substantial early urban sites in Myanmar with its surrounding walls measuring approximately 14 kilometres in circumference (Moore 2007: 167-172).

The evidence at Śrīkṣetra in terms of possible forerunners for the Thaton *sema*s comes in the form of the so-called Buddhist megaliths (Luce 1985: 130-131, pls 12, 13, 15c). These two sets faced each other each surrounded by a small brick wall. While these are not strictly themselves called *sema* stones, Stadtner for instance has suggested that they did function in a similar way as they too possibly demarcated an ordination hall (1998: 45). This usage, and the fact that these large stone objects do indicate the existence of a well-establish stone carving tradition of Buddhist imagery by this period, make them favourable objects of comparison with *sema* stones.

On a related point, Gordon Luce's term "Buddhist megalith" seems somewhat inappropriate. Firstly, megaliths in a Southeast Asian context usually refer to pre- or non-Buddhist religious practices that involved human burials of one sort or another. Secondly, the term megalith itself is problematic in regard to Southeast Asian archaeology as it has been used in a rather loose fashion and, in some cases, incorrectly.[13] In a Myanmar context, no in-depth research into megaliths has been carried out and what this culture may actually have consisted of is as yet uncertain. Instead, it is perhaps more appropriate to refer to these objects as monumental Buddhist art. This term emphasises that at times these stone sculptures can be extremely large in size while at the same time it avoids any confusion with implied burial or inhumation practices connoted by the term megalith.

Eight monumental Buddhist stones in particular emphasise the level and sophistication that Myanmar sculpture has reached by *circa* the sixth century. Six of them were discovered set up as triads at the Kyaukka Thein and at the time of their excavation were *in situ* (Beylié 1907). Another **[Figure 2]** probably comes from the Kyaukka *stūpa*

while the last one **[Figure 3]** was found south of the Bawbawgyi *stūpa* (Luce 1985: 131). They have now all been relocated to the site museum. The stone triads, the largest of which measures 250 cm. in height, 201 cm. in width and 47 cm. in thickness is carved in relief with a Buddha image in *dhyānamudrā* **[Figure 2]**. The Buddha in turn, is flanked by two disciples seated in prayer with all three figures depicted with circular halos radiating from around their heads. Unfortunately, the relief carving on the majority of these stones is quite badly worn, however, **Figures 2 and 3** are still quite well preserved. **Figure 2** exhibits some fine relief carving showing the Buddha in *dhyānamudrā*, sitting cross-legged with a flaming halo radiating from behind his head. Behind the Buddha's shoulders is a throne motif which appears to terminate in *makara* designs. Furthermore, a *bodhi*-tree is represented by a stone projecting above the Buddha.

The second stone **[Figure 3]** again shows the Buddha seated cross-legged, this time in *vajrāsana*, with a halo encircling his head. Once again he is in *dhyānamudrā* and is seated on a throne. The whole composition is framed under an arch-shaped leafed pediment.

The dimensions and aesthetic quality of these two pieces as well as the stone triads indicate that sophisticated levels of Buddhist art had been reached by this period and provides evidence for the existence of a stone carving tradition employing Buddhist motifs and themes from as early as the sixth to seventh centuries CE. Furthermore, the use of the halo device around the head of the Buddha image on the majority of the triads from Śrīkṣetra is encountered once again on the Thaton *sema*s from the Kalyāṇī Sīmā and may represent some form of iconographic continuity between the two sites.

The 1983-84 Vesāli excavations seems to establish that the practice of erecting fossilised wood *sema*s around ordination halls was already in existence in Myanmar from possibly as early as the fifth to sixth century CE. The lacuna of material evidence for other areas of Myanmar does not necessarily indicate that *sema*s were not being used. It could be the case that they were also made from perishable materials such as wood which would therefore not survive. Furthermore, evidence from Śrīkṣetra illustrates that by the sixth to seventh centuries CE a tradition of setting up large stone slabs with Buddhist relief carving upon them and used to demarcate an ordination hall was well established in this region. It seems quite plausible therefore, that the *sema*s from the Kalyāṇī Sīmā at Thaton may have found their antecedents in at least one, or both of these sites.

Figure 3: *Buddhist stele from Śrīkṣetra (upper Myanmar) with a Pyu inscription, showing the Buddha flanked by two attendants. Height 99 cm., width 46 cm., depth 10 cm. Housed at the Thayekhittra Archaeological Museum [Photograph courtesy of Donald M. Stadtner].*

Early Evidence from Northeast Thailand

When we come to northeast Thailand, the evidence for *sema*s is much more abundant. Surveys of *sema*s from this region have been carried out by the Fine Arts Department of Thailand (FAD 2502), Srisakra Vallibhotama (2518) and myself (Murphy 2010). I have, for instance, recorded 111 sites and over 1,200 *sema* stones throughout northeast Thailand and central and southern Laos (2010: 125, 202-204, 398-439 and 2013).

Clear evidence for the use of *sema*s in northeast Thailand from the seventh to eighth centuries CE is illustrated by a circular stone, now in the Khon Kaen National Museum, found at Wat Si That, in Kumphawapi district of Udon Thani province. This *sema* was discovered in 1963-64 during the Archaeological Salvage Expedition led by William G. Solheim II and Chester Gorman (1966: 159). It bears a fragmentary Sanskrit inscription in Pallava script (K. 981) edited and translated by George Cœdès, who dated it to approximately the seventh or early eighth century CE (1964: 159-160):

(1) […] *māyo* *yatir vviprādipūjitaḥ*
śilām imām asau saimīṃ *sthāpayām āsa bhikṣubhiḥ*

(2) […] *ne* *śucisaṃvatsare śake*
daśame caitraśukle bhūt *sīmeyaṃ saṅghasammatā*

The inscription provides indisputable evidence for the function of this stone with Cœdès' French translation of the first line reading, "[…] cet ascète honoré par les brahmanes a érigé cette pierre tenant l'office de borne, avec les *bhikṣu*." This has been translated into English by Piriya Krairiksh (1974: 41) as follows, "[…] this ascetic honoured by the Brahmans erected this stone having the function of boundary stone with the *Bhikkhus* [*sic*]"

However, Peter Skilling (pers. comm.) has recently presented me with a revised reading of this inscription that seems to downplay the Brahmins' role somewhat:

(1) [Name or epithet] the renuncient venerated by Brahmins and others caused, this stone in the form of a boundary by the monks to be established.
(2) [Year in words] the tenth day of the bright half of Caitra, this boundary was agreed by the Saṅgha.

As Piriya (1974: 42) states, this inscription leaves no doubt as to the function of *sema*s. Furthermore, on Cœdès' reading, it appears that the ritual was conducted by Brahmins, however, in Skilling's it looks as if Brahmins were present but perhaps did not in fact conduct the consecration. Either way it serves to remind us that the cultural and religious milieu of Southeast Asia at this period was in no way homogenous, nor for that matter did it seem to be in any way sectarian, with Brahmanism, and Buddhism of various schools, all coexisting to a greater or lesser extent alongside each other at various times and in various regions.

A Comparison of the Narrative Art

When we come to the eighth to eleventh centuries, we are on much firmer ground. In lower Myanmar, the *sema*s from the Kalyāṇī Sīmā at Thaton are finely carved with Buddhist narrative scenes of *jātaka* tales. Equally, from the eighth century onwards in Thailand, Buddhist narrative scenes also of *jātaka*s begin to appear on *sema*s throughout the region, particularly from the site of Mueang Fa Daet (Murphy 2010: 189-192 and 2013). What follows is a comparison and discussion of the aforementioned *sema*s from the two regions.

The first mention in the academic literature of "Dvāravatī period" *sema* stones from northeast Thailand was by Major Erik Seidenfaden

in 1954 in the *Bulletin de l'École française d'Extrême-Orient*. In this work, based upon reports he received from a Thai civil servant living in the area, he discussed the site of Mueang Fa Daet, which he referred to as "Kanok Nakhon." On observing photographs of *sema* stones present at this site, he concluded that they were Mon in origin stating that they were "the handiwork of Mon artists wearing the distinct impression of the Dvāravatī School of Art" (Seidenfaden 1954: 643). To confirm his identification he consulted Cœdès, who replied in a personal communication that he agreed with Seidenfaden.

This identification was further strengthened a few years later when M.C. Subhadradis Diskul wrote an article on the *sema*s of Mueang Fa Daet published in *Artibus Asiae* (1956). It is clear that from early on Mueang Fa Daet was identified and recognised as an important Dvāravatī period archaeological site.

In 1968, the Fine Arts Department of Thailand (FAD 2514) conducted excavations at this site and among the structures that they uncovered were found the remains of two *ubosot*s. Around one of these structures (site no. 14), they found *in situ* pillar-type *sema*s erected in pairs, while at the other *ubosot* (site no. 4), *sema* stones were also found but no mention is given of what type they were. The director of the excavation also stated that there were approximately two hundred *sema* stones at the site of Mueang Fa Daet.

During the course of my research, I recorded 172 *sema*s from this site (Murphy 2010: 189-191). Of this number, fifty-five had *jātaka* tales or scenes from the life of the Buddha depicted on them. The rest had Buddhist symbols such as *stūpa*s and water-pots (*kumbha*), or were just decorated with a lotus band on their base.

The *jātaka* tales on *sema* stones, particularly from Mueang Fa Daet and also the site of Ban Nong Hang, were first identified by Piriya Krairiksh (1974) in his study of the *sema*s at the Khon Kaen National Museum. Piriya succeeded in identifying five out of the ten *Mahānipātajātaka*s on the *sema*s. He identifies one instance of the *Mahājanakajātaka*, two instances of the *Mahāummagga/Mahosadhajātaka*, one instance of the *Khaṇḍahālajātaka*, two instances of the *Vidhurapaṇḍitajātaka* and one instance of the *Vessantarajātaka*.

The Kalyāṇī Sīmā in Thaton cannot compete with either the site of Mueang Fa Daet or other sites throughout northeast Thailand in terms of the quantity of *sema*s present, however, in terms of the narrative art depicted on them and the motifs present, it compares very favourably. As at Mueang Fa Daet and other sites throughout northeast Thailand, the most common Buddhist narrative scenes are those from the *jātaka*s, in particular the *Mahānipātajātakas*, that is, the last ten past lives of the Buddha.

The *jātaka*s from Thaton were first illustrated and identified by Maung Mya (1934: 203-204, pl. 1 CXVI) who, on the basis of an inscription on one of the stones at the Kalyāṇī Sīmā, dated them from the twelfth to thirteenth centuries. Both Luce (1969), and Shorto (1971: xxxviii), however, date the inscription to pre-1057 CE, that is, before the conquest of Aniruddha recorded in later Burmese chronicles. What follows is a comparison of four *jātaka* tales that the *sema*s from Thaton, lower Myanmar, and from northeast Thailand have in common.[14]

Figure 4: Sema *from Mueang Fa Daet (Kalasin province, northeast Thailand) depicting the episode of the "Battle of the Law" from the* Mahosadhajātaka. *Height 170 cm., width 84 cm. depth 24 cm. Housed at the Khon Kaen National Museum, inv. no. 466, 467/2517 [Photograph by Stephen A. Murphy].*

The *Mahāummagga-/Mahosadhajātaka*

The *Mahāummaggajātaka*, or *Mahosadhajātaka* as it is more commonly known in the Pāli literature, espouses the virtue of wisdom and is well represented in the narrative art of both Myanmar and Thailand from ancient times up to the present. In terms of *sema* stones it is depicted on one *sema* from Thaton and three *sema*s from Mueang Fa Daet.

The *sema*s from Mueang Fa Daet show a variety of different episodes from the *Mahosadhajātaka*. Of particular interest is a *sema* **[Figure 4]** carved with episodes on both sides, one side showing the scene in which the Bodhisattva Mahosadha decides the case of the stolen child, while the other side shows the "Battle of the Law" episode.[15]

In the judgement of the stolen child episode, Mahosadha is located at the centre of the composition while the two women to be judged kneel prostrate at his feet. The woman to Mahosadha's right is holding the child. There is also an architectural feature above Mahosadha, which acts to frame the composition. The "Battle of the Law" scene is depicted on the reverse of this *sema*. Once again, the composition is framed by a stylised architectural feature, under which sit four figures, three of whom are attendants. There is also another figure lying underneath, which Mahosadha, located on the far left and identifiable by the parasol above his head, is holding down with his hand and foot. This figure is the Brahmin Kevaṭṭa who is forced into obeisance by Mahosadha.

Overall, these two episodes illustrate that the ancient artists of Mueang Fa Daet were extremely well versed in this *jātaka* and succeeded in conveying its narrative by clearly constructed and conceptualised compositions. Also characteristic of the narrative art of the Mueang Fa Daet *sema*s are the conical headdresses and "Dvāravatī style" facial features, particularly in terms of the eyes and lips. Furthermore, the narrative compositions are at times framed by stylised architectural motifs **[Figure 13]**.

Interestingly, the placement of these two scenes on either side of the same *sema* may not be accidental. As Piriya (1974: 49-50) has pointed out, these two scenes appear side-by-side on terracotta plaques at the Thagya hpaya/*stūpa* at Thaton. It is worth noting, therefore, that while they are stylistically rather different, in terms of content, the Mahosadha *sema* from Mueang Fa Daet and the terracotta plaques are identical.

The *sema* from Thaton on the other hand, depicts the episode in which Mahosadha's wife is presenting the four nobles dressed up like white monkeys to the king while her husband is absent **[Figure 5]**. The depiction of the four nobles dressed up like monkeys allows for the scene to be clearly identified.[16] Skilfully rendered in low-relief, with the characters clearly shown, this scene, as with the Mueang Fa Daet *sema*, competently conveys the narrative episode.

When we look closely at the style of the carving and the arrangement of the composition itself, however, there is little to suggest a direct link with the *sema* from northeast Thailand. For instance, the architectural feature present on the *sema* from Thaton, a stylised-tiered tower of some kind, bears no resemblance to the architectural features on the *sema* from Mueang Fa Daet, nor does it have any parallel with other architectural motifs from *sema*s throughout northeast Thailand. There is also no obvious "Dvāravatī stylistic influence" and furthermore, the Bodhisattva is depicted with a halo, a device that is rarely shown on

Figure 5: Sema *from the Kalyāṇī Sīmā in Thaton (lower Myanmar; still* in situ*) depicting the scene from the* Mahosadhajātaka *in which Mahosadha's wife is presenting the four nobles dressed up like white monkeys to the king [Photograph by Stephen A. Murphy].*

Bodhisattvas in *sema*s from northeast Thailand, though it does appear on Buddha images.

Overall, therefore, while there are direct comparisons in terms of narrative content, particularly between the terracotta plaques of the Thagya hpaya/*stūpa* and the Mahosadha *sema* from Mueang Fa Daet, stylistically there are many divergences between the stones from these two regions.

Figures 6a-b: *Detail of a* sema *from the Kalyāṇī Sīmā in Thaton (lower Myanmar; still* in situ*) depicting the* Mahājanakajātaka. *Top: Mahājanaka holds on to the mast of the ship. Bottom: The goddess Maṇīmekhalā saves Mahājanaka from the ocean [photographs by Stephen A. Murphy].*

The *Mahājanakajātaka*

Scenes from the *Mahājanakajātaka* have been identified on *sema*s from three separate locations, Thaton **[Figures 6a-b]**, Ban Nong Hang in Kalasin province **[Figure 7]** and Ban Non Chat **[Figures 8 a-b]** in Khon Kaen province.[17] The *sema*s from Ban Non Chat and Thaton appear to depict the same scene. The *sema* from Ban Nong Hang has been identified by Piriya as the *Mahājanakajātaka* (1974: 47-48) although I have previously questioned this identification (2010: 225-227). The *sema* is fragmentary but Piriya proposes that it depicts the Bodhisattva Mahājanaka and his estranged wife, Queen Sīvalī. He further argues that it represents the scene after Mahājanaka has renounced his kingship and become an ascetic (cf. Cowell 1957: VI, 30-37). Mahājanaka, Piriya argues, is depicted at the bottom centre of the composition in an ascetic's garb, holding an ascetic's staff, while Queen Sīvalī is placed above him. She is shown leaning on her right shoulder, with her right hand raised to support herself. If this identification is correct, this posture may have been chosen to convey her grief and sorrow at the fact that Mahājanaka has resolved to remain an ascetic and, consequently, she can no longer accompany him. Overall, the compositional arrangement is uncrowded and as far as can be made out from the fragment, there are no further motifs or features present in this scene. The viewer's attention is therefore solely focused on the interaction between the two figures.

This identification, while compelling is far from certain. First of all, the identification of the bottom figure as Mahājanaka seems to rest solely on the staff he carries, which Piriya argues is that of an ascetic. However, it has been pointed out by a number of authors that it represents a *khakkhara* (Lorrillard 2008: 123-124; Revire 2009: 120-123) and that this instrument is not restricted to ascetics alone but to monks of various different monastic lineages. Furthermore, the *khakkhara* is also depicted on a further *sema* (No Na Paknam 1981: front cover; Murphy 2010: 272, fig. 5.74), and in this scene it is held by the Buddha. Additionally, the figure Piriya argues is Mahājanaka has his hair cut short in the style of a monk as opposed to the conical hairstyle of a Bodhisattva. As he does not have an *uṣṇīṣa*, he cannot be said to represent the Buddha either. The identification of the upper figure as a queen is also far from certain. It is more probable that this scene represents an unidentified episode involving a monk as opposed to the *Mahājanakajātaka*. Due to the uncertainty surrounding the actual narrative being shown, it is therefore omitted from consideration in the discussion below.

The *sema* from Ban Non Chat **[Figures 8 a-b]** depicts the episode of the shipwreck, identifiable by the large fish in the bottom right corner, and also by the mast of the ship, shown just to the left of the central *stūpa* motif. Two figures are clinging to this mast as the ship begins to sink, with the lower of the two possibly being Mahājanaka on account

of his conical headdress. There is also another figure placed above the large fish to the top right, however, it is unidentifiable as the top part of this *sema* is missing. It is also possible that this figure may represent Mahājanaka due to his placement in the composition, as in this episode Mahājanaka climbs to the top of the mast as the ship begins to sink, while his shipmates, unable to do so are eaten alive by various types of sea creatures as they swim helplessly in the sea.

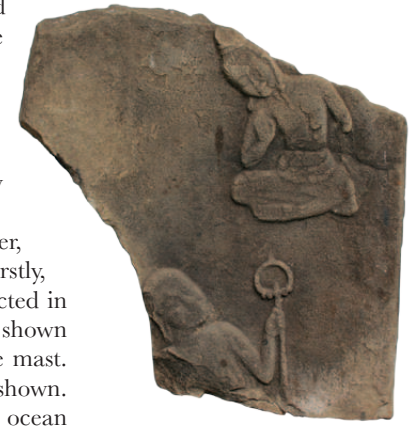

Figure 7: *Fragmentary* sema *from Ban Nong Hang (Kalasin province, northeast Thailand) supposedly depicting the* Mahājanakajātaka. *Height 64 cm., width 60 cm., depth 11 cm. Housed at the Khon Kaen National Museum, inv. no. 504/2517 [Photograph by Stephen A. Murphy].*

The *sema* from Thaton depicts the exact same episode, however, it does so using a very different compositional arrangement. Firstly, the narrative is conflated, as there are two episodes being depicted in the one composition. On the top register the shipwreck scene is shown with Mahājanaka standing in the centre of the ship beside the mast. However, below the ship, the next episode in this narrative is shown. Mahājanaka, after surviving the shipwreck and swimming in the ocean for seven days, is eventually saved by the goddess Maṇīmekhalā, who is shown lifting him out of the water and bearing him away.

When we compare the Mahājanaka episode on the top register of the Thaton *sema* with its counterpart from Ban Non Chat, we again observe that while the content is identical, the compositional arrangement and style once more differ. Firstly, in terms of scale, we see that the artist of the Thaton *sema* has chosen to depict the episode from a more distanced standpoint, allowing the viewer to take in the entire scene, or in this case the two concurrent narrative episodes. The *sema* from Ban Non Chat, on the other hand, has chosen to represent the episode up close, clearly depicting the characters of the narrative but not the backdrop. In fact, the only suggestion of a ship is the narrow mast to which the figures cling. Furthermore, the conflation of the narrative as seen on the *sema* from Thaton is never encountered in northeast Thailand during the "Dvāravatī period."[18]

Once again, while the narrative content is very similar and at times identical, the style and arrangement of the compositions from northeast Thailand differ quite significantly from those at Thaton.

Figure 8a: Sema *from Ban Non Chat (Khon Kaen province, northeast Thailand) depicting the shipwreck scene from the* Mahājanakajātaka. *Height 120 cm., width 70 cm., depth 20 cm. Housed at the village temple, Ban Non Chat, Khon Kaen province [Photograph by Stephen A. Murphy].*

Figure 8b: *Detail of the* sema *from Ban Non Chat depicting the sea monster [Photograph by Stephen A. Murphy].*

Figure 9: Sema *from Mueang Fa Daet (Kalasin province, northeast Thailand) depicting the episode from the* Vidhurapaṇḍitajātaka *where Vidhura preaches the Law to Puṇṇaka. Height 176 cm., width 76 cm., depth 25 cm. Housed at Khon Kaen National Museum [Photograph by Stephen A. Murphy].*

The *Vidhurapaṇḍitajātaka*

The *Vidhurapaṇḍitajātaka* is depicted on two *sema*s from Thaton **[Figures 10a-b]** and one *sema* from Mueang Fa Daet. The latter *sema* **[Figure 9]** depicts the scene in which the *yakkha* general, Puṇṇaka, is converted by the Bodhisattva Vidhura (Piriya 1974: 53-55; Murphy 2010: 237-243; Cowell 1957: VI, 131). This episode takes place on a mountaintop, represented here by the clouds in the background. After being dangled upside down and about to be thrown off the mountainside by Puṇṇaka, Vidhura manages to persuade the *yakkha* general to let him preach the Law first. Puṇṇaka agrees and upon hearing the wisdom of Vidhura, is converted and no longer seeks to kill the Bodhisattva. It is this moment of the preaching of the Law that is being depicted in this narrative scene. Vidhura sits in the top left of the scene while Puṇṇaka sits slightly below him to the right. Puṇṇaka is further identified by the depiction of his horse directly below him.

The *sema* stones from Thaton, on the other hand, show different episodes. One fragmentary *sema* depicts the episode in which the four kings meet **[Figure 10a]**. They are shown sitting around a table, engaged in conversation. It is highly probably, that this *sema*, like that depicting the *Vessantarajātaka* from Thaton discussed below **[Figure 11]**, was divided into two panels, each illustrating a different part of the narrative of the *jātaka* in question. Unfortunately, due to the fragmentary nature of this *sema*, it is impossible to know what this scene may have been. Once again, it is also worth noting that this compositional arrangement of dividing the face of the *sema* into two panels is never encountered in northeast Thailand.

The other *sema* from Thaton also depicting the *Vidhurapaṇḍitajātaka* illustrates the episode in which Puṇṇaka challenges King Dhananjaya to a game of dice **[Figure 10b]**. In this scene, King Dhannajaya sits on an elaborate throne which frames his person, while Puṇṇaka stands to his right. Stylistically, this throne bears no resemblance whatsoever to the thrones depicted on the *sema*s from northeast Thailand which are usually shown as either consisting of a matt/cushion-type seat or a polygonal motif with the throne itself rising behind, but not enclosing the Bodhisattva as is the case at Thaton (Murphy 2010: 344-365). This further serves to illustrate the stylistic differences that exist between the two regions.

The *Vessantarajātaka*

The *Vessantarajātaka* is depicted on two *sema*s from Thaton (Luce 1985: pl. 94c) **[Figure 11]**, one *sema* from Mueang Fa Daet **[Figure 12]** and one *sema* currently located at Wat Sibunrueang in Kalasin province but most likely also from the site of Mueang Fa Daet (Piriya 1974: fig. 22) **[Figure 13]**. All four *sema*s depict different scenes from this *jātaka* and once again the arrangement and the composition of the scenes from Thaton and northeast Thailand differ considerably.

The *sema* from Mueang Fa Daet depicts an episode preceding Vessantara's banishment from the palace. In this scene, the Bodhisattva Vessantara is seated on a throne below a parasol while his wife sits to his right, slightly below him in front of an architectural motif most likely meant to represent the palace. Vessantara's children are shown

Figure 10a: *The episode from the* Vidhurapaṇḍitajātaka *when the four kings meet, from the Kalyāṇī Sīmā in Thaton (lower Myanmar; still* in situ*) [Photograph by Stephen A. Murphy].*

Figure 10b: Sema *from the Kalyāṇī Sīmā in Thaton (lower Myanmar; still* in situ*) depicting the episode from the* Vidhurapaṇḍitajātaka *in which Puṇṇaka challenges King Dhananjaya to a game of dice [Photograph by Stephen A. Murphy].*

at the bottom of the scene, sleeping together on a mat. The fact that Vessantara is seated on a throne and the presence of the stylised architectural feature behind his wife confirm that they are still within the palace.

The *sema* from Wat Sibunrueang depicts the episode in which Vessantara gives away Maddī to Sakka, who is disguised as a Brahmin. Vessantara is shown in the centre of the scene with Sakka to his left and Maddī to his right. The donation of Maddī is symbolically depicted by the pouring of water onto the right hand of the recipient, who in this case is Sakka (Piriya 1974: 57 and 2012: 340-341; Cowell 1957: VI, 293).

The narrative takes place under a building of some kind, rather reminiscent of a modern Thai *sala*, or pavilion. This pavilion is in turn flanked by trees on either side above which float a pair of celestial beings. Overall, the architecture detail helps to create a well-balanced composition and as with the *Mahosadhajātaka* from Mueang Fa Daet, has the effect of framing the scene.

When we compare these two scenes with those found at Thaton, we once again see great differences in the style and execution of the narratives. One *sema* from Thaton, for instance, has been divided into two panels, the upper depicting the episode in which Vessantara gives away the white elephant to the eight Brahmins of Kāliṅga, while the lower panel has not been clearly identified (Luce 1985: pl. 94c).

Also depicted on a *sema* from Thaton is the scene in which the forester threatens to shoot Jūjaka with his bow after the latter has climbed up a tree after being chased by a pack of dogs **[Figure 11]**. If we compare the style and composition of this *sema* with the *sema* from Mueang Fa Daet, we observe that they differ in many ways, for instance in terms of the proportions of the figures and the style of their depiction. This points towards two different traditions separated by at

Figure 11: Sema *from the Kalyāṇī Sīmā in Thaton (lower Myanmar; still* in situ*) depicting the episode from the* Vessantarajātaka *in which the forester threatens to shoot Jūjaka [Photograph by Stephen A. Murphy].*

Figure 12: Sema *from Mueang Fa Daet depicting an episode from the* Vessantarajātaka *where Vessantara and his family are in the palace. Height 140 cm., width 80 cm., depth 20 cm. Housed at Khon Kaen National Museum, inv. no. 226/2517 [Photograph courtesy of Nicolas Revire].*

Figure 13: Sema *from Wat Sibunrueang, Kalasin province, depicting the episode in which Vessantara gives away Maddī to Sakka, who is disguised as a Brahmin. Height 144 cm. [Photograph courtesy of Paisarn Piemmettawat].*

least two centuries. It is difficult therefore to imagine any direct link or affiliation between the artists who carved the *sema*s from Mueang Fa Daet and those who were at work in Thaton.

Floral Motifs and the Form of the *Sema*s

It has been shown that by comparing *jātaka* scenes from northeast Thailand and Thaton that, while there is a large degree of similarity in terms of narrative content between the two regions, there is little direct connection in terms of the style and composition of the episodes. This lack of similarity is further emphasised and confirmed when we analyse the form of the *sema*s and their floral motifs.

In terms of form, the *sema*s from northeast Thailand and Thaton are quite different. The majority of *sema* stones from northeast Thailand with narrative scenes are of the slab type variety and resemble a stylised leaf in design, usually slightly tapered and curving inwards at the top to form a point (Murphy 2010: 344-365). The *sema*s from Thaton **[Figure 14]**, on the other hand, are more similar, albeit not exactly the same in design, to the tapered pillar type *sema*s from northeast Thailand. They taper inwards towards the centre before tapering outwards again toward the top, a design that is nowhere encountered in northeast Thailand. In fact the closest parallel in terms of design are perhaps the Khmer pillars found along causeways at temples throughout northeast Thailand and the Khmer empire itself. It is uncertain, however, whether there is any direct link between these two forms.

Furthermore, in terms of the floral motifs present on the *sema*s, there is little in common between the two regions. The large majority of the *sema*s from Thailand possess either a single or double band of lotus petals along the base, above which the narrative scene is usually depicted **[Figures 4, 9 and 12]**. The top part of the *sema*, on the other hand, is never carved with floral motifs (Murphy 2010: 334-336). In comparison, the Thaton *sema*s usually have both the upper and lower sections decorated with floral motifs. The lower part is usually a single band, with triangular-shaped lotus leaves, while the upper section can be very elaborate consisting of the whole upper section of the *sema* **[Figure 14]**. This floral carving is extremely reminiscent of Khmer art and may in fact be due to Khmer presence in the region of lower Myanmar from the early eleventh century onwards (Luce 1969: 21-23). It is worth noting here that if the Khmers were in fact present in Thaton at this period, it would seem a very unlikely place for a group of Mon "refugees" from Thailand attempting to escape the Khmers to settle.

Figure 14: *Illustration of the* sema *with the* Mahājanakajātaka *from the Kalyāṇī Sīmā, Thaton (lower Myanmar; still* in situ*) showing its tapering form and upper and lower parts carved with floral motifs. Approximate dimensions: height 130 cm., width 48 cm. depth 10 cm. [Photograph by Stephen A. Murphy].*

Another important difference is the presence of a stylised *stūpa* motif on either the front or rear of the majority *sema*s from northeast Thailand. This stylised axial *stūpa* can appear within the narrative scene such as in **Figure 8a** depicting the *Mahājanakajātaka*, on the reverse side of a carved *sema*, or it can be the main artistic component of the *sema* itself (Woodward 2003: 101-103; Murphy 2010: 312-314). Significantly, no such motif appears on the *sema*s from Thaton.

Conclusion

This essay has outlined the earliest evidence for *sema*s in Myanmar and northeast Thailand and in doing so has attempted to show that there was a sufficient artistic and religious tradition in place to point towards a "Burmese" origin for the *sema*s at the Kalyāṇī Sīmā in Thaton as opposed to an external source such as suggested by Piriya Krairiksh (1974). The site of Vesāli in particular, seems to provide evidence for the early use of *sema*s while the stone triads at Śrīkṣetra illustrate that there was a well-established tradition of monumental Buddhist relief carving and sculpture in upper Myanmar from the sixth to seventh centuries onwards.

In comparing the *sema*s from northeast Thailand and those from the Kalyāṇī Sīmā in Thaton, it becomes apparent that while there is a large degree of uniformity in terms of content, there is also significant divergence in terms of style, composition and form. This leads to the conclusion that there was no direct contact between those who carved and set up the *sema*s at Thaton and their counterparts in northeast Thailand. The *sema*s from northeast Thailand therefore do not appear to be the artistic source for those at Thaton. If Piriya's hypothesis was correct and a group of "Mon refugees" had settled in Thaton, leading to the creation of the *sema* stones at the Kalyāṇī Sīmā, then we would expect to see much more continuity in terms of style and form.

It seems much more plausible that the inhabitants of northeast Thailand and those in lower Myanmar shared extremely similar Buddhist religious traditions, perhaps derived from the same Pāli Canon.[19] This would provide a much more satisfactorily explanation of the similarities, and at times identical content of the *sema* stones from the two regions. To further emphasis this point, it should be noted that the movement of ideas and the movement of peoples are not the same thing. While ideas, be they religious, artistic or technical can move swiftly and freely along pre-existing trade routes and lines of communication, leaving very little material evidence in their wake, the movement of peoples, on the other hand, is an entirely different proposition. If the Mons of northeast Thailand did in fact migrate to Thaton, we would expect to see a much larger archaeological, material, epigraphic and artistic footprint than what we are left with today.

What is clear however, it that the *sema*s from Thaton and those spread throughout northeast Thailand, bear testament to the common religious traditions and artistic languages shared by both these regions as expressed through the medium of Buddhist narrative art.

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Endnotes

1 A discussion of what constitutes Dvāravatī is beyond the limits of this essay. Suffice to say that the prevailing view in scholarship is that it is a primarily early Buddhist culture and to a lesser extent Brahmanical, that arose in central and part of northeast Thailand consisting of urbanised polities more often than not based around moated sites. The degree to which it formed a uniform "state" or political entity is still a contentious issue. For an up-to-date overview of the definitions and debates surrounding the term Dvāravatī, see Skilling (2003); for a summary of the archaeological evidence, see Phasook (2542 and 2004); for definitions of the Dvāravatī art style, see Boisselier (1975: 73-92) and Woodward (1997: 43-74); for issues regarding the dating of the Dvāravatī period, see Barram & Glover (2008) and Glover (2010); for inscriptions, see Revire (this volume).

2 *Sema* stones from this period are also found in central and southern Laos. However, this essay will focus on those found in northeast Thailand only. For discussion of *sema*s in Laos, see Lorrillard (2008: 119, figs 3-6; see also this volume) and Murphy (2010 and 2013).

3 Piriya for instance states "harassed by the encroachments of the Khmers into their territories, some of the Mons in northeast Dvāravatī may have decided to seek safety at Thaton, the fabled cradle of Mon Buddhism [...]. On arrival they probably would have consecrated a chapter house for the continuation of their religion, and, as was the custom of their forebears, they would have embellished the *semas* with scenes from the *Mahānipāta-Jātakas* [...]" (1974: 63). Piriya is here building on an idea floated by Quaritch Wales (1947: 152-156) that Buddhism was reintroduced to Thaton by the Mons of Lamphun (ancient Haripuñjaya/Haripunchai) in the mid-eleventh century and Cœdès (1966), who mentions a reference in Pāli sources stating that, in the eleventh century, Mons from Lamphun fled to Thaton to escape a cholera epidemic (see also Moore & San Win, this volume).

4 Mueang Fa Daet is located in modern-day Kalasin province while Ban Nong Chat is in Khon Kaen province, northeast Thailand. For further discussion, see Murphy (2010: 157-160, 163-164 and 2013).

5 For a discussion of *sīmā* in a modern-day Cambodian context, see Harris (2010).

6 For comprehensive surveys of *bai sema*s in Thailand spanning the Ayutthaya to Thonburi periods, see No Na Paknam (2524) and Pitya (2550).

7 For the sake of consistency, the Thai term *sema* (as opposed to the Pāli term *sīmā*) is employed throughout this essay to define "boundary markers."

8 I have demonstrated, however, that the numbers can vary. For instance during the so-called Dvāravatī period the number of *sema*s employed can be as high as twenty-four stones being use at certain sites (Murphy 2010: 95-103).

9 For an account of the corresponding ceremony in Cambodia, see Giteau (1969).

10 See the *Uposathakkhandhaka* (Vin IV 139-147).

11 For Cambodia, see Boulbet & Dagens (1973); for Laos, see Lorrillard (2008: 119) and Murphy (2010: 173-81 and 2013).

12 Unpublished site report by the Burmese Department of Archaeology.

13 For further discussion on the problematic nature of the term "megalith" in a Southeast Asian context, see Glover (1998) and Murphy (2010: 365-374).

14 Today the *sema*s at the Kalyāṇī Sīmā in Thaton are enclosed in metal cages and are thus difficult to photograph **[e.g. Figure 14]**. Upon visiting the site in July 2011, I managed to photograph them as best as possible through the bars, allowing for close up details of the carvings but not illustrations of the overall stones. For good quality photographs of the stones before they were enclosed, see Luce (1985: pls 92-95).

15 Unfortunately the side depicting the stolen child episode is now extremely badly eroded and difficult to make out. However, there is a good illustration of this in Piriya (1974: fig. 9). For the relevant section of the Pāli text, see Cowell's translation (1957: VI, 207).

16 Unfortunately the nobles are not quite visible in **Figure 5**. However, they are clearly shown in Luce (1985: pl. 93d).

17 For Thaton, see Maung Mya, (1934: 203-204). The *Mahājanaka* scene on the *sema* from Ban Non Chat has been identified by the author of this article in Murphy (2010: 227-228). For its textual basis, see Cowell's translation (1957: VI, 22-23).

18 There is one possible exception to this on a *sema* from Mueang Fa Daet. See Murphy (2010: 222-224).

19 Pāli inscriptions for instance are attested in upper Myanmar, at Śrīkṣetra, from the fifth-sixth century CE onwards (Stargardt 2000) and in central Thailand from the seventh-eighth centuries (Revire, this volume). However, to the best of my knowledge, to date, no Pāli inscriptions have been discovered in northeast Thailand prior to the eleventh century.

References

Arunsak Kingmanee
2010 Boundary Stones of the Dvaravati Period: A Preliminary Overview. In Leelananda Prematilleke *et al*. (eds), *Abhinandanamālā, Nandana Chutiwongs Felicitation Volume*. Bangkok and Colombo: SPAFA, pp. 67-82.

Aung-Thwin, Michael
2005 *The Mists of Rāmañña: The Legend That Was Lower Burma*. Honolulu: University of Hawai'i Press.

Barram, Andrew & Glover, Ian C.
2008 Re-thinking Dvaravati. In Pautreau, J.P. (ed.), *From* Homo Erectus *to the Living Traditions; Choice of Papers from the 11th International Conference of the European Association of Southeast Asian Archaeologists*. Chiang Mai: Silkworm Press, pp. 175-82.

Beylié, Léon de
1907 *Prome et Samara*. Paris: Ernest Leroux.

Blagden, Charles Otto (trans.)
1928 *Mon Inscriptions, Section II-The Mediaeval Mon Records. No. XII. The Inscriptions of the Kalyanisima, Pegu.* Rangoon: Epigraphia Birmanica, III, 2.

Boisselier, Jean
1975 *The Heritage of Thai Sculpture*, New York: Weatherhill. [First published in French as *La sculpture en Thaïlande*, 1974; In collaboration with J.M. Beurdeley]

Boulbet, Jean & Dagens, Bruno
1973 Les sites archéologiques de la région du Bhnam Gūlen (Phnom Kulen). *Arts Asiatiques* 27: 1-130.

Cœdès, George
1964 *Inscriptions du Cambodge. Volume VII*. Paris: École française d'Extrême-Orient.

1966 Les Môns de Dvāravatī. In Ba Shin, Boisselier, Jean & Griswold, A.B. (eds), *Essays Offered to G. H. Luce by His Colleagues and Friends in Honour of His Seventy-Fifth Birthday. Volume 1: Papers on Asian History, Religion, Languages, Literature, Music Folklore, and Anthropology*. Ascona: Artibus Asiae Supplementum, pp. 112-116.

Cowell, Edward B. (trans.)
1957 *The Jātaka or Stories of the Buddha's Former Births*. Six Volumes. London: Pali Text Society & Luzac.

Giteau, Madeleine
1969 *Le bornage rituel des temples bouddhiques au Cambodge*. Paris: École française d'Extrême-Orient.

Glover, Ian C.
1998 The Archaeological Past of Island Southeast Asia. In Barbier-Mueller, J.P. *et al*. (eds), *Messages in Stone: Statues and Sculptures from Tribal Indonesia in the Collection of the Barbier-Mueller Museum*. Geneva: Musée Barbier-Mueller, pp. 17-34.

2010 The Dvaravati Gap – Linking Prehistory and History in Early Thailand. *Bulletin of the Indo-Pacific Prehistory Association* 30: 79-86. [Accessible at: https://digital.lib.washington.edu/ojs/index.php/BIPPA/article/view/10809/10667]

Fine Arts Department (FAD)
2502 *Krongkan lae raingan kansamruat lae kotdaeng borannawatthu satan nai pak tawan ok chiang nuea* (*Plan and Report of the Survey and Excavations of Ancient Monuments in Northeast Thailand*). [Unpublished Report in Thai; 1959 CE]

2514 *Concluding Report of the Excavations of Ancient Monuments at Mueang Fa Daet Song Yang*. [Unpublished Report in Thai; 1971 CE]

Harris, Ian
2010 Rethinking Cambodian Political Discourse on Territory: Genealogy of the Buddhist Ritual Boundary (*Sima*). *Journal of Southeast Asian Studies* 41(2): 215-239.

Horner, Isaline Blew (trans.)
1962 *The Book of the Discipline (Vinaya-Piṭaka), Volume IV (Mahāvagga)*. London: Pali Text Society and Luzac & Co. [Reprint; First Edition 1951]

Indorf, Pinna
1994 The Precinct of the Thai Uposatha Hall [BOT]. A Southeast Asian Spirit World Domain. *Journal of the Siam Society* 82: 19-54.

Kieffer-Pülz, Petra
1997 Rules for the Sīmā Regulation in the *Vinaya* and Its Commentaries and Their Application in Thailand. *Journal of the International Association of Buddhist Studies* 20(2): 141-153.

Lorrillard, Michel
2008 Pour une géographie historique du bouddhisme au Laos. In Goudineau, Yves & Lorrillard, Michel (eds), *Recherches nouvelles sur le Laos/New Research on Laos*. Vientiane-Paris: École française d'Extrême-Orient, pp. 113-181.

Luce, Gordon H.
1969 *Old Burma-Early Pagan*. New York: J.J. Augustin, Locust Valley.

1985 *Phases of Pre-Pagan Burma*. Oxford: Oxford University Press.

Maung Mya
1934 Pillars with Scenes from the Mahānipāta-Jātakas around the Kalyāṇī Sīmā, Thaton. *Archaeological Survey of India. Annual Report 1930-34*: 203-204.

Moore, Elizabeth H.
2007 *Early Landscapes of Myanmar*. Bangkok: River Books.

Murphy, Stephen A.
2010 *The Buddhist Boundary Markers of Northeast Thailand and Central Laos, 7th-12th Centuries CE: Towards an Understanding of the Archaeological, Religious and Artistic Landscape of the Khorat Plateau*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished; Accessible at: http://eprints.soas.ac.uk/12204/]

2013 The Distribution of *Sema* Stones throughout the Khorat Plateau during the Dvaravati Period. In Klokke, Marijke & Degroot, Véronique (eds), *Unearthing Southeast Asia's Past: Selected Papers from the Twelfth International Conference of the European Association of Southeast Asian Archaeologists, Volume 1*. Singapore: NUS Press, pp. 215-233.

Nagasena Bhikkhu
Forthcoming *The Significance of the Sima (Buddhist Monastic Boundary) in Burmese Theravada: Authority and Practice*. Doctoral Dissertation. London: School of Oriental and African Studies, University of London.

No Na Paknam
2524 *Sinlapa bon baisema/ The Buddhist Boundary Markers of Thailand*. Bangkok: Muang Boran Press. [In Thai and English; 1981 CE]

Phasook Indrawooth
2542 *Thawarawadi: kansueksa choeng wikhro chak lakthan thang borannakhadi/ Dvaravati: A Critical Study Based on Archaeological Evidence*. Bangkok: Silpakorn University Press. [In Thai and English; 1999 CE]

2004 The Archaeology of the Early Buddhist Kingdoms of Thailand. In Bellwood, Peter & Glover, Ian C. (eds), *Southeast Asia, from Prehistory to History*. London and New York: Routledge Curzon, pp. 120-148.

Piriya Krairiksh
1974 Semas with Scenes from the Mahānipāta-Jātakas in the National Museum at Khon Kaen. In Fine Arts Department (ed.), *Art and Archaeology in Thailand*. Bangkok: Fine Arts Department, pp. 35-100.

2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Raknga haeng sinlapa thai*, 2553 (2010 CE)]

Pitya Bunnag
2550 *Sema sima: laksima nai sinlapa thai samai Ayutthaya chuang lang siang krong raek tueng krang lang lae krong thonburi* (*Sema Sima, Sema Stones in Thai Art-spanning the Period from the First Fall of Ayutthaya to the Thonburi Period*). Bangkok: Office of the National Buddhist Association. [In Thai; 2007 CE]

Quaritch Wales, Horace Geoffrey
1947 Anuruddha and the Thaton Tradition. *Journal of the Royal Asiatic Society*, New Series 79(3-4): 152-156.

Revire, Nicolas
2009 À propos d'une « tête » de *khakkhara* conservée au Musée national de Bangkok. *Aséanie* 24: 111-134.

Seidenfaden, Erik
1954 Kanok Nakhon, an Ancient Mon Settlement in Northeast Siam (Thailand) and Its Treasures of Art. *Bulletin de l'École française d'Extrême-Orient* 54(2): 643-648.

Skilling, Peter
2003 Dvāravatī: Recent Revelations and Research. In Baker, Chris (ed.), *Dedications to HRH Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra on her 80th Birthday*. Bangkok: The Siam Society, pp. 87-112.

Solheim, William G. (II) & Gorman, Chester
1966 Archaeological Salvage Program; Northeast Thailand, First Season. *Journal of the Siam Society* 54(2): 111-210.

Srisakra Vallibhotama
2518 Sema isan (Semas in Isan). *Muang Boran* 1(2): 89-116. [In Thai; 1975 CE]

Stadtner, Donald
1998 The Art of Burma. In Girard-Geslan, Maud *et al*. (eds), *Art of Southeast Asia*. New York: Harry N. Abrams, pp. 40-91.

2008 The Mon of Lower Burma. *Journal of the Siam Society* 96: 193-215.

Stargardt, Janice
2000 *Tracing Thought through Things: The Oldest Pali Texts and the Early Buddhist Archaeology of India and Burma*. Amsterdam: Royal Netherlands Academy of Arts and Sciences.

Subhadradis Diskul, M.C.
1956 Mueng Fa Dæd. An Ancient Town in Northeast Thailand. *Artibus Asiae* 19(3/4): 362-367.

Woodward, Hiram, Jr
1997 *The Sacred Sculpture of Thailand: The Alexander B. Griswold Collection, The Walters Art Gallery*. Bangkok: River Books.

2003 *The Art and Architecture of Thailand. From Prehistoric Times through the Thirteenth Century*. Leiden-Boston: Brill.

PART IV
Later Khmer Impetus

Tantric Buddhism at Prasat Hin Phimai: A New Reading of Its Iconographic Message

Pia Conti

Introduction

The beautifully carved sandstone temple at Phimai on the Khorat Plateau is the first tantric Buddhist sanctuary built on a royal scale in the ancient Khmer empire. It was built between 1080 and 1108 CE in the reign of Jayavarman VI (r. 1080-1107 CE) who founded the Mahīdharapura dynasty that took Angkor to its apogee of power in the twelfth century. Jayavarman VI was crowned in Angkor, but he did not build a state temple there. The great work of sacred architecture of his reign was Prasat Hin Phimai with its powerful new message from the gods of tantric Buddhism. Prasat Hin Phimai is the only major temple in the Khmer empire to be adorned with tantric Buddhist imagery before Jayavarman VII (r. 1181/2-1216 CE) made tantric Buddhism the "state religion" in Angkor at the end of the twelfth century.

This essay presents a new English translation of a key tantric Buddhist inscription found at Sap Bak, near Phimai, and argues that the tradition of tantric Buddhism had long thrived on the Khorat Plateau. Tantric beliefs cross several generations and have links to both the tantric Buddhist history of tenth century central Cambodia as well as to the birth place of Buddhism in India. A discussion of these links paves the way for a new reading of Prasat Hin Phimai's famous inner lintels showing that one of their key functions is to symbolise the unity of body, speech and mind, as a central idea of this tradition. It takes the *maṇḍala* of the *Guhyasamājatantra* and of the *Cakrasaṃvaratantra* to be primary influences on its iconography.

Previous pages: *Stone lintel characteristic of the Bayon style, late 12th-13th century. Phimai National Museum [Photograph courtesy of Paisarn Piemmettawat].*

Background and New Research on Tantric Buddhism

In 1966, Jan Boeles wrote a ground-breaking article suggesting that the Hevajra cult had adherents in northeast Thailand in the early twelfth century and that a form of Vajrayāna, originating from Phimai on the Khorat Plateau, might have spread to Angkor, the capital city of the Khmer empire (1966: 28). The religious orientation of the Khmer empire subsequently changed under Jayavarman VII from a Brahmanical outlook to Buddhism of a tantric kind.

Two newly published bronzes of dancing women inspired Boeles' thesis: a fierce looking one from somewhere east of Nakhon Ratchasima; the other one, rather friendly looking, originating from Khon Kaen. Boeles connected them to a small collection of bronzes of dancing deities from the Bangkok National Museum and identified them as

Opposite Figure 1a: *Stele with* nāga*-enthroned Buddha, Thailand, 10th century, Bangkok National Museum, inv. no. 12/2475 [Photograph by Pia Conti].*

Figure 1b: *Stele with* preta *satisfied Avalokiteśvara, Thailand, 10th century, Bangkok National Museum, inv. no. 12.2475 [Photograph by Pia Conti].*

*yoginī*s, probably companions of the tantric deity Hevajra. A *Hevajra-* or *Trailokyavijayamaṇḍala*, a clay tablet displaying the world order of a tantric universe, and a lintel from the Khmer Buddhist temple of Prasat Hin Phimai in the province of Nakhon Ratchasima provided the core material for his suggestion (Boeles 1966: pls 1-9).

Boeles found help in his endeavour to interpret the rather mysterious Vajrayāna figures in the then recently published translation of the *Hevajratantra* (henceforth HT) by David Snellgrove (1959). The book had given him "a valuable instrument" for the study of tantrism, then still in its infancy in Europe (1966: 21). Since the publication of his article and Snellgrove's pioneering translation, more tantras relevant to Prasat Hin Phimai have been reconstructed and translated into western languages, for example the *Guhyasamājatantra* (henceforth GST) by Francesca Fremantle (1971) and the *Cakrasaṃvaratantra* (CS) by David Gray (2007).

Art historical and epigraphic research into Cambodian Buddhism, especially in its tantric form, has brought new findings as well. Phnom Trap, a small temple in Kompong Cham province, previously interpreted as Brahmanical (Aymonier 1900: I, 32), has now shown to be tantric Buddhist (Green 2012). Moreover, the famous inscription of Wat Sithor, recently retranslated by Tadeusz Skorupski, sheds new light on the extent tantric Buddhism was likely to have in the Khmer empire in the tenth century.

Furthermore, new research on the history of tantric Buddhism and its sculptural traditions in India, the birth place of the tantric movement, has broadened our general knowledge on this branch of Buddhism. In the light of these recent discoveries, we will have to reconsider Boeles' proposition on the movement of Vajrayāna from Khorat to Angkor in favour of a much more reciprocal relationship between the Khorat Plateau and the Angkorian heartland.

Traces of Tantric Buddhism on the Khorat Plateau before Prasat Hin Phimai

Until recently evidence for the presence of tantric Buddhism on the Khorat Plateau has been rather sparse. Besides the material from Phimai and the inscription of Sap Bak, we have two Khmer style steles with tantric images hailing from the northeast, now located in the Bangkok National Museum **[Figures 1a-b, 2]**. The first stele is dated to the tenth century (Woodward 2007: 74), the second to the beginning of the twelfth century (Piriya 2012: 301), that is, contemporaneous to Prasat Hin Phimai.

The first stele shows images of a *nāga*-enthroned Buddha **[Figure 1a]**, a dancing Vajrapāṇi, a Prajñāpāramitā, a Tārā (possibly), a four-armed Avalokiteśvara and a eight-armed Avalokiteśvara **[Figure 1b]** whose lower arms are in a particular gesture, called *pretasantarpita*, which seem to relate to an early tantric text, the *Kāraṇḍavyūhasūtra* (Woodward, forthcoming). There is also epigraphic evidence for the presence of the *Kāraṇḍavyūhasūtra* in the Khmer empire (Woodward 2007: 72).

The second stele shows an assemblage of Vajrapāṇi, the *nāga*-enthroned Buddha and possibly Prajñāpāramitā **[Figure 2]**. Three early tantric, Bengali-style, bronzes found on the Khorat Plateau (Woodward

Map 1: *Sites from northeast Thailand and Cambodia mentioned in the essay [Drawing courtesy of Hélène David-Cuny].*

2003: 93) are further proof of the presence of tantric images. Since bronzes are easily movable objects, it is likely that itinerant monks or merchants brought them to the region or that travelling bronze casters made them for local patrons.

Besides these previously known icons, Emma Bunker and Douglas Latchford (2011: 185-218) presented a whole series of tantric bronzes from private collections which were said to have been found on the Khorat Plateau or in northwestern Cambodia. These bronzes, among them one eight- and two four-armed Avalokiteśvaras and two Padmapaṇīs, four Vajrasattvas, one Vajradhara, and a Cundā were previously unknown, hidden as they were in private collections. Their presence substantially enlarges the amount of tantric material known from the region and leads us to infer that tantric Buddhism had a much greater presence on the plateau than previously surmised.

There is also one image of a *nāga*-enthroned Buddha, exhibiting Khmer features, which was found on the Khorat Plateau. Woodward (1997: 72) assigned it a tenth century date and concluded that the little Buddha figure illustrates the "exchange of iconographic ideas between workshops of the Dvāravatī towns and the Kingdom of Cambodia." A unique *caitya*, i.e. a Buddhistic monument or object of veneration **[Figure 8]**, which was found at Prasat Ta Muean **[Map 1]**, a small

Opposite Figure 2: *Stele with dancing Vajrapāṇi and* nāga*-Buddha, Thailand, 10th century, Bangkok National Museum, inv. no. 1/2475 [Photograph by Pia Conti].*

Figure 3: *Vajrapāṇi, Tuol Chi Tep, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 14892 [Photograph by Pia Conti].*

Buddhist temple in the Dangrek range on the route between Angkor and Phimai, also bears testimony to the exchange of iconographic ideas. The *caitya*, now in the Ashmolean Museum in Oxford, features one Prajñāpāramitā with a *nāga*-enthroned Buddha over her head, two unidentified female deities and an Avalokiteśvara.

The *nāga*-enthroned Buddha became the most widespread image representing the Buddha in tenth century Cambodia (Dupont 1950). It has been proposed by various scholars that the *nāga*-enthroned Buddha came to symbolise, for the Khmers, the transcendent nature of the Buddha (Cœdès 1923: 37; Lobo 1997; Woodward 2003: 152, 311; Sharrock 2011: 487).[1] George Cœdès and Wibke Lobo see the Buddha on the *nāga*-throne as representing the so-called Ādibuddha, who was "enlightened before the beginning of time." He is the "personification of the most fundamental principles of Buddhism." Peter Sharrock (2011: 488) suggests that in the tenth century Buddhist context, the Khmer *nāga*-enthroned Buddha came to symbolise Vairocana, the main Buddha of the *Vajradhātumaṇḍala*. It is interesting to note in this context that the *nāga*-enthroned Buddha was first portrayed in ancient Cambodia in company of the tantric deity Vajrin **[Figure 6b]**. The presence of the *nāga*-enthroned Buddha in ancient Khmer territories could thus be interpreted as an indicator of the presence of tantric thought.

Traces of Tantric Buddhism in the Angkorian Heartland before Prasat Hin Phimai

In tenth century Cambodia we find other early expressions of Buddhist tantrism. The presence of the deities Vajrin ("possessor of the vajra") or Vajrapāṇi ("vajra in hand") and of Trailokyavijaya ("conqueror of the three worlds") in the Khmer heartland and their reappearance in Phimai one hundred and thirty years later, suggests that Angkor's strand of tantric Buddhism may have travelled to the Khorat Plateau and influenced the choice of icons presented in Phimai.

One of the first manifestations of Vajrayāna in Angkor can be found in the inscription K. 266 of the little three tower temple at Bat Cum which was built around 953 CE. The temple is dedicated to the deities Vajrapāṇi, the Buddha and Divyadevī (Prajñāpāramitā) (Cœdès 1908: 8). Bat Cum was built by Kavīndrārimathana, the Buddhist architect and military leader of King Rājendravarman (r. 944-968 CE). It celebrates a military victory over the Cham. This military success has been credited to the spiritual help of Vajrapāṇi, the tantric warrior deity.

Unfortunately, no images of Vajrapāṇi, Prajñāpāramitā or the Buddha hailing from Bat Cum have been recovered. There is, however, a group of tenth century images found at Tuol Chi Tep near Phnom Trap at the Musée Guimet in Paris which hails from the same period. The group includes a fierce Vajrapāṇi with bulging eyes and fangs **[Figure 3]**, an Avalokiteśvara **[Figure 4]** and a Buddha **[Figure 5]** (Baptiste & Zéphir 2008: 166-170).

A similar group of tantric deities appear, chiseled in brick, inside the three *prasat* shrine of Phnom Trap D where a four-armed Avalokiteśvara, flanked by two four-armed Devīs, is depicted in the central shrine; an eight-armed Avalokiteśvara embellishes the southern and a four-armed Vajrapāṇi the northern shrine (Green 2012).

The deities praised at Bat Cum are also portrayed on the *caitya* of Kbal Sre Yeay Yin, where a *nāga*-enthroned Buddha **[Figure 6a]** appears in company of Vajrin **[Figure 6b]**, Prajñāpāramitā **[Figure 6c]** and Avalokiteśvara **[Figure 6d]**. Another *caitya* features Vajrin/Vajrapāṇi **[Figure 7a]** with a tantric ten-armed Prajñāpāramitā **[Figure 7b]** and Avalokiteśvara. These four deities thus seem to form an important sacred nexus for the tenth century Buddhist devotees. Interestingly only Vajrapāṇi and the *nāga*-enthroned Buddha feature at Prasat Hin Phimai. Avalokiteśvara and Prajñāpāramitā, so prevalent in the tenth century, did not make their way to Prasat Hin Phimai. They gained supreme importance only under Jayavarman VII, who installed them as protectors of Buddhism and patron deities of two of his major temples, Preah Khan and Ta Prohm.

The inscription (K. 111) of Wat Sithor (980 CE) also bears testimony to the fact that tantric Buddhism had a significant presence in the Khmer empire. A recent retranslation by Skorupski showed that many tantras were known at the time of Jayavarman V (r. 968-1000/1 CE). This Angkorian king, though publicly a Śaiva, encouraged his Buddhist minister Kīrtipaṇḍita to strengthen Buddhism and to import Buddhist texts from abroad (Sharrock 2012: 233). One of these texts is named the *Tattvasaṃgrahaṭīkā*, a sub-commentary to the *Tathāgatatattvasaṃgraha-nāmamahāyānasūtra* (STTS), the principal scripture of the Yoga Tantras (Sanderson 2003-04: 427; Sharrock 2012: 208). This tantra probably originated in the Buddhist monasteries of Nālandā and had a wide-spread influence in medieval Indian society and many Buddhist communities in Asia. A fair number of subsequent tantric texts took their inspiration from it.

One of the protagonists of this tantra is the deity Trailokyavijaya, "the conqueror of the three worlds," who features prominently in the Phimai inscription K. 397. Vajrin/Vajrapāṇi is another major player in the STTS, where he appears in two *maṇḍala*s. One, dedicated to Vajrapāṇi, is called the *Trailokyavijayamaṇḍala*. Thus the STTS presents Vajrapāṇi as an aspect of Trailokyavijaya and vice versa. The central myth celebrated in the STTS is the subjugation of Maheśvara (or Śiva) by Vajrapāṇi and the former's subsequent conversion to Buddhism.

Tantric Buddhism thus seems to have had a significant presence in ancient Cambodia, though it never functioned as the official "state religion" which remained Śaiva. Buddhism appears to have played a role as private faith for the Khmer intelligentsia – for important intellectuals such as Kavīndrārimathana and Kīrtipaṇḍita. There are even hints in the inscriptions which suggest that Jayavarman V was privately a Buddhist (Sanderson 2003-04: 429). Tantric deities were

Figure 4: *Avalokiteśvara, Tuol Chi Tep, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 14912 [Photograph by Pia Conti].*

Figure 5: *Buddha, Tuol Chi Tep, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 14880 [Photograph by Pia Conti].*

invoked as protectors during war as well as during times of peace. The inscription of Wat Sithor also relates that tantric Buddhist rituals, such as *homa* rites, were performed daily in Jayavarman V's palace in order to protect the state (Sharrock 2012: 205). Kīrtipaṇḍita also established Buddhist *āśrama*s for the *saṃgha* and guests.

The Inscription of Sap Bak (K. 1158)

The inscription K. 1158 is the major text documenting the presence of tantric Buddhism on the Khorat Plateau. The inscription stone was found broken near the village of Sap Bak, located about 40 km southwest of Phimai in the province of Nakhon Ratchasima **[Map 1]**, and there is no other archaeological context for it. No remains of a sanctuary or monastery have been unearthed. Sap Bak's proximity to Phimai, and the extent of the tradition of tantric Buddhism it alludes to, suggests that the deities celebrated in the inscription were well known in the region. Information gathered from the inscription will contribute to this essay's interpretation of Prasat Hin Phimai's iconography.

Left Figure 6a: Nāga-*Buddha, Caitya Khal Sre Yeay Yin, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 17487 [Photograph by Pia Conti].*

Right Figure 6b: *Vajrin, Caitya Khal Sre Yeay Yin, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 17487 [Photograph by Pia Conti].*

Left Figure 6c: *Prajñāpāramitā, Caitya Khal Sre Yeay Yin, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 17487 [Photograph by Pia Conti].*

Right Figure 6d: *Avalokiteśvara, Caitya Khal Sre Yeay Yin, Cambodia, 10th century, Musée Guimet, Paris, inv. no. MG 17487 [Photograph by Pia Conti].*

Left Figure 7a: *Vajrin, Khal Sre Yeay Yin, Cambodia, 10th century, Phnom Penh National Museum, inv. no. Ga 1735 [Photograph by Pia Conti].*

Right Figure 7b: *Ten-armed Prajñāpāramitā, Khal Sre Yeay Yin, Cambodia, 10th century, Phnom Penh National Museum, inv. no. Ga 1735 [Photograph by Pia Conti].*

The inscription is dated to the year 1066 CE, to the end of the reign of King Udayādityavarman II (r. 1050-1066 CE). Only a short interval of fourteen years between the inscription and the time in which the temple of Prasat Hin Phimai was most likely conceived. The extant temple was built under the reign of Jayavarman VI. Prasat Hin Phimai itself, however, has a long history as a sacred site. Archaeological evidence shows that there were previous holy structures at the site (Groslier 1962; Talbot 2002). An inscription, K. 1000, which is undated, mentions a stone image of the Buddha, a *muniraj* (Jacques 1969: 58), and K. 954, dated 1041 CE, found at the site, gives homage to Śiva and Buddha.

The inscription has been translated several times: first by Chirapat Prapandvidya (1990: 12-15) into English shortly after its discovery. Another Sanskritist, Julia Estève (2009: 442-520), went over the rubbings of the inscription and proposed an alternative Sanskrit reconstruction of the text together with a new translation into French. Based on her Sanskrit reconstruction, Tadeusz Skorupski, a tantra specialist, has provided another English translation from which I will procure most of my information. Skorupski's translation is published as an appendix to this essay **[Appendix 1]**.

The inscription has two parts. The first part consists of fifteen verses written in Sanskrit praising a deity called Śrī Samāja. This deity appears to be the name of the main deity in the GST. The second part is an inscription in Khmer referring to a restoration of nine Buddhist images (*buddhalokeśvara*) undertaken by the author of the Sanskrit inscription whose name is Dhanus. Both Chirapat (1990: 13) and Estève (2009: 450) have offered translations of the Khmer part.

The Sanskrit Portion of K. 1158

These verses give us a small, but precious insight into the tradition of tantric Buddhism among the Khmers of the Khorat Plateau.

Figure 8: *Prajñāpāramitā, Cambodia, mid-10th century, Ashmolean Museum, Oxford, inv. no. EA 1999.102 [Photograph courtesy of Delphine Desoutter].*

Verse 1 starts with Vraḥ Dhanus, the author of the inscription, bowing to "the five Sugatas" which are seen as "the originators of the glorious bodies of the excellent gods." The term *sugata* is here used as an epithet for the five directional Buddhas, or Jinas, Akṣobhya, Vairocana, Ratnasambhava, Amitābha and Amogasiddhi.

Verse 2 praises Vajrasattva, "the sixth, the preeminent lord of the existing Bodhisattvas, the foundation of all Buddhas." In the GST, Vajrasattva is the supreme Buddha who is above the five Buddhas or Jinas and, at the same time, seen as the ground or foundation of all of them.

Verse 3 expresses the hope that the author of the inscription will become part of the tradition of believers in the deity Śrī Samāja in all his future rebirths or lives. The first three verses thus establish the deities praised in the inscription as the five Sugatas (Jinas), Vajrasattva, and Śrī Samāja who here is meant to be a deity and not a text. These three entities appear later under the name *triguru* or the triple gurus (cf. verse 11).

Verse 4 relates that Dhanus "has heard the command of the supreme guru," presumably Śrī Samāja and that he pays homage to him.

Verse 5 introduces a region or place called "Chpārransī, which was originally called Jayantrapura," where "the protector Śrī Samantaprabheśvara has resided."

Verse 6 relates that the above named Śrī Samantaprabheśvara "has made the Buddha's dispensation or teachings firm in Kambuja down to the present time," after "having appeased the fear [or apprehension] of the Buddhists."

As Sap Bak is located on the Khorat Plateau near Phimai, there has been a lot of speculation on the whereabouts of Chpārransī. According to Étienne Aymonier "Chpārransī" is the Khmer translation of the Sanskrit word *aṃśārāma*, which is the equivalent of *veṇuvana*, the famous Bamboo Grove of the Buddhist texts. Aymonier has thus given an early hint that the place may be Buddhist (Estève 2009: 433). Chpārransī is mentioned fourteen times in the corpus of Khmer inscriptions between 924-1190 CE. Estève has gone over all the inscriptions in the Khmer corpus which mention Chpārransī and has argued that it is an important tantric Buddhist place in the Angkor region (Estève & Vincent 2010: 150). She also concluded from the corpus of inscriptions that Chpārransī had been an important religious place for centuries.

Several identities have been suggested for the "protector Śrī Samantaprabheśvara." Chirapat (1990: 13) speculated that he could be King Sūryavarman I because he was believed to have been in favour of the Buddhists during religious rivalries in the eleventh century. Alternatively, Chirapat proposed that Śrī Samantaprabheśvara could be a deity. Estève (2009: 444-450) argued that Śrī Samantaprabheśvara is the very deity of Chpārransī, either a Buddha or his image. According to the latter, the deity protected the Buddhists in Kambuja during times of religious strife and helped to anchor tantric Buddhism in Cambodia. Jacques (1969: 60) also finds that Srī Samantaprabheśa is a Buddha.

The inscription on the Khorat Plateau would thus connect its religious heritage to a place in the region around Angkor which, according to the different sources studied, may have been Buddhist from "mid-tenth century onwards until the fourteenth century" (Estève & Vincent 2010: 154). This evidence ties in well with the other manifestations of tantric Buddhism in the tenth century as discussed above.

The inscription's verses 7-9 praise three venerable teachers. They are likely to be the teachers of the author Dhanus. The three individuals, all accomplished beings, seem to form a lineage of gurus, thus implying that the GST, or related tantras, and its adepts have been in the region for an extended amount of time.

The first guru in line is Cuṅvi; the second guru is called Campakapāda. He is respected by other *siddha*s, or accomplished beings, and may have been a teacher in Chpārransī. He is said to have reached *nirvāṇa* in the region of Sthalāsvāy. The third guru, the venerable Dharaṇīndrapura, has "settled his heart in enlightenment" and possibly contributed to the adoration of the Buddhas by giving treasures to images.

These three "calmed ones," says verse 10, "have reached the fruit of reality [or the fruit that is the ultimate reality] under the secret tree [or the mystical tree], after having traversed the ocean by way of the perfection of wisdom, the commentaries on logic and the rest." In other words, the three gurus reached enlightenment after having studied the Mahāyāna scriptures such as the *Perfection of Wisdom*, and logic, and gained true knowledge of reality, of what really exists, and then passed away. In short, they became Buddhas.

Verse 11 says that Dhanus is a student of the "established doctrine" and venerates the triple gurus. The triple gurus relates back to the deities introduced in the first three verses, namely the five Jinas, Vajrasattva and Śrī Samāja. These are the deities of Dhanus' three teachers, Cuṅvi, Campakapāda and Dharaṇīndrapura, the three gurus in our translation.

Verse 12 relates that Dhanus with a mind inflamed with "sparks of the Kāśikā, poetry and other outer texts," sips "the secret elixir" already for a long time and is keen on "the sap of fire oblations, recitations, and yoga." Dhanus thus is involved in all kinds of tantric rituals such as the *homa* ritual, mantra recitations and yogic exercises.

Verse 13 tells us that Dhanus has "installed Jinas and other images in Teṅpāsnaga, the fortunate place of pilgrimage."

Verse 14 is an invocation of several deities through which Dhanus "has realised and personally grasped something about the destruction in this world and, indeed, in the other world."

Dhanus finishes the inscription in verse 15 expressing the hope that due to his meritorious deeds he will be reborn in Kambuja. He is still on the way to being enlightened and finds Kambuja an ideal place for the achievement of this goal.

The Khmer Portion of K. 1158

The Khmer text describes the erection of nine Buddhist images (*buddhalokeśvara*) on mount Abhayagiri by Śrī Satyavarman, a tantric practitioner of the past, who was renowned for supernatural powers. The images were erected to deter "Javā" from attacking the Khmer territories. These images all deteriorated in the course of time and were renovated by the above mentioned guru Dharaṇīndrapura. In turn, his pupil, Dhanus, reinstalled them in 1066 CE.

K. 1158 thus gives us a quite extensive account of the presence of tantric Buddhism in the Khorat Plateau. It reveals that there is a lineage of tantric adepts which is in its fourth generation now and which have chosen Śrī Samāja as their deity. It also shows that there is a connection

Figure 9: *View of Prasat Hin Phimai from the northwest, Thailand, 11th-12th century [Photograph by Pia Conti].*

between the followers of the GST on the Khorat Plateau and an as yet unidentified sacred place in the Angkor region named Chpārransī, and that one of the followers of the GST also played a role in that sacred place. It implies that the way to achieve *nirvāṇa* is through the studying of the Mahāyāna scriptures, Buddhist logic and grammar, performing rituals, erecting images, emitting mantras, and above all through identification with Śrī Samāja. It tells us that all the adepts of the tantras have reached their goal and left this earthly existence for *nirvāṇa*. It tells us that the deities worshipped in the tantra are Śrī Samāja, the Jinas and Vajrasattva, and indicates that tantric Buddhism is the established doctrine in the land. In addition it speaks of a *tīrtha*, a sacred place of pilgrimage, at Teṅpāsnaga, which was probably in the region. This pilgrimage site was in existence for a substantial amount of time, since images, which had deteriorated, were reinstalled by two successive gurus.

The Khmer part also gives some interesting information regarding the erection of images at Teṅpāsnaga by Satyavarman. A Satyavarman is also mentioned in an earlier Khmer inscription, K. 111 (Wat Sithor), discussed above, which relates that Kīrtipaṇḍita, who lived in the tenth century, had re-erected more than "nine and or ten images of Vajrin and Lokeśa, which were raised by Satyavarman on the eastern hill and whose pedestals were damaged" (Sharrock 2011: 216). The fact that a Satyavarman is mentioned in both inscriptions, K. 111 and K. 1158, in connection with the erection of tantric images, makes it likely that we are dealing with the same person.[2] The images at the *tīrtha* of Teṅpāsnaga on mount Abhayagiri thus have a long history; they may have been erected as early as the ninth century. Unfortunately, I have not yet been able to further determine the location of the *tīrtha*, but it is not unreasonable to assume that it was located somewhere near Sap Bak on the Khorat Plateau.[3]

I would now like to link these results with Prasat Hin Phimai and see if we can find any correspondences between the elements in the material record in the area surrounding Phimai and the Buddhism celebrated at the temple itself.

The Deities of Prasat Hin Phimai

The late eleventh-early twelfth century Khmer temple of Prasat Hin Phimai **[Figure 9]** is innovative in more than one way. It provided the prototype for the "pine-cone" shaped towers which later crowned the temple of Angkor Wat, built under Sūryavarman II (r. 1113-1150 CE), and was the model for the later *prang* structure of central Thailand. Moreover, it features a cruciform layout in the main sanctuary that inspired later Khmer temples such as Phanom Rung on the Khorat Plateau and Banteay Samre in Angkor.[4]

The iconography of Prasat Hin Phimai has several elements which connect it with the above described tradition. Epigraphic fragments provide vital information as well. The fragment K. 397, dated 1108 CE, found on the pedestal of the southern *gopura* of the second enclosure, states that an image of Trailokyavijaya was erected at the Prasat Hin Phimai sanctuary by a local dignitary "Kamrateṇ Añ Srī Vīrendrādhipatvarma of Chok Vakula." This image is called a general (*senāpati*) to the Kamrateṇ Jagat Vimāya, presumably the main image of Prasat Hin Phimai, which was probably a Buddha (Cœdès 1924: 346-350). The Trailokyavijaya image was installed most likely in the southern *gopura*.

Srī Vīrendrādhipatvarma, the author of the inscription, is known to us as a participant in the big military parade of dignitaries on the southern relief enclosure at Angkor Wat (Cœdès 1924: 346), where he is identified by an inscription. His participation in the parade depicted in Angkor indicates he was still a powerful individual under Sūryavarman II, the builder of the temple, and one of the successors in the line of kings from Mahīdharapura which was founded by Jayavarman VI probably in the Khorat region.

Trailokyavijaya, the "conqueror of the three worlds," is a tantric deity who became prominent in the second phase of the development of tantrism in India during the eighth century (Linrothe 1999: 270). He is a form of Vajrapāṇi and has a key *maṇḍala* in the STTS. The *Sādhanamālā*, an important manual on tantric deities, sees Trailokyavijaya as an emanation of the Jina Akṣobhya. Trailokyavijaya shares the colour blue with Akṣobhya, a colour that is generally associated with fierce deities and with "gruesome rites" in the tantras (Bhattacharya 1924: 60). Akṣobhya is seen as the source of other wrathful deities such as Heruka, Hevajra and Cakrasaṃvara.

Trailokyavijaya generally displays the *vajrahūṃkāramudrā*, the gesture of "being victorious over the three worlds." A bronze which is now at the Bangkok National Museum represents Trailokyavijaya with this gesture. This unique image **[Figure 10]** came from Prasat Hin Phimai (Woodward 2003: 154; Piriya 2012: 298) and may have had some similarities to the stone image of Trailokyavijaya evoked in K. 397.

Prasat Hin Phimai also features the early manifestation of Trailokyavijaya as Vajrapāṇi. The main sanctuary is guarded at its doors by this longstanding bodyguard of the Buddha and master of magic ceremonies, shaking the bell (*ghaṇṭā*) and the thunderbolt (*vajra*), and holding off unwanted visitors **[Figure 11]**.

Figure 10: *Bronze Trailokyavijaya, Phimai, Thailand, 11th-12th century, Bangkok National Museum, inv. no. 2.271 [Photograph courtesy of Paisarn Piemmettawat].*

Figure 11: *Vajrapāṇi, Gate of Victory, southern* gopura, *Prasat Hin Phimai, Thailand, 11th-12th century [Photograph by Pia Conti].*

The Buddhist Lintels of Prasat Hin Phimai's Inner Sanctuary

There are five Buddhist lintels in the interior central sanctuary of Prasat Hin Phimai. Four of them are located above the entrance to the central *cella*, one over the entrance to the antechamber (*antarala*). The iconography of the lintels is complex and it is especially difficult to find an interpretation including all five lintels.[5]

Four of the central lintels have similarities in design: they display a central figure in a medallion and two registers with subordinate figures. The eastern, northern and western lintel feature dancing *yoginī*s, an element, which connects them thematically and visually. The southern lintel depicts the *nāga*-enthroned Buddha surrounded by worshippers on the lower register and by seated Buddhas on the upper register (Manit 1962: fig. 35). Rows of seated Buddhas in *dhyānamudrā* are a recurrent motive at Prasat Hin Phimai. The presence of the *nāga*-enthroned Buddha in the southern lintel has lead researchers to suggest that the central image of the temple was probably also a *nāga*-Buddha (Manit 1962; Woodward 2003: 149). Erik Seidenfaden (1923: 17), the first western visitor to describe the temple in a lecture at the Siam Society, had found the central sanctuary empty, so there is no definite proof as to the identity of the central Buddha.

In the remaining part of this essay, I will mainly focus on two of the lintels, namely the northern and the eastern lintels.[6]

The Northern Lintel

The northern lintel **[Figure 12a]**, I argue, shows a streched out *maṇḍala* of Akṣobhya (as Śrī Samāja) with his four fellow Jinas. The five Buddhas sitting cross-legged feature three crowned heads and six arms. The front arms are folded in the meditation gesture (*dhyānamudrā*), the second proper right hand holds a very clearly sculpted *akṣamāla* or rosary. In their third right hand the deities, who are all identical, seem to hold a lotus **[Figure 12b]**. Possibly, the second proper left hand holds a bell (*ghaṇṭā*) and the third hand a jewel (or a different kind of lotus). Some of these attributes make the identification of the deities more difficult, since they do not correspond to the usual attributes given to the Jinas in various texts. The only deities in the Buddhist pantheon holding an *akṣamāla* so prominently are Avalokiteśvara, Prajñāpāramitā, Tārā or Cundā.[7]

Figure 12a: *Akṣobhya lintel, Prasat Hin Phimai, Thailand, 11th-12th century [Photograph courtesy of Paisarn Piemmettawat].*

Figure 12b: *Akṣobhya (close-up), Prasat Hin Phimai, Thailand, 11th-12th century [Photograph by Pia Conti].*

Several scholars have identified the images as representing Vajrasattva (e.g. Boisselier 1966: 302; Dagens 1995: 19), although they also admit that the attributes do not fit the usual iconographic scheme. Bruno Dagens in particular points out that the rosary is not an attribute of Vajrasattva.

Regarding the identification of the central image of the northern lintel as Vajrasattva, it is worth noting that most Khmer Vajrasattvas found on the Khorat Plateau or in Cambodia do not generally feature six arms and three heads, but only one head and two arms **[e.g. Figure 13]**. Most of the local Vajrasattva images balance the *vajra* on their right hand in front of their chest. They hold the *ghaṇṭā* in the left hand on the left hip (Bunker & Latchford 2011: 207-210; Sharrock 2011: 493-496). Despite the iconographic inconsistencies which pose problems for all interpretations, and against the received view, I identify here the central deity as Akṣobhya, with his four fellow Jinas. Akṣobhya is the Jina in the centre of the *Guhyasamājamaṇḍala* and the supreme "deity." The Jinas in Prasat Hin Phimai fit the description given in the GST where they are described in their "vajra form" as "three-headed" with "six arms" and wearing a "crown." The following excerpt of the GST describes them:

> Imagine Vairocana [delusion], the color of autumn clouds, three-headed, white, black and deep red, adorned with piled-up hair and a crown; imagine the Vajra Lord [Akṣobhya], three-headed, his faces black, red and white, blazing, wearing piled-up hair and a crown, agitating the world-realms; imagine the Passionate One [Amitābha], three-headed, his faces, red, black and white, delighting in piled-up hair and a crown, and you will surely succeed; imagine in their right hands the wheel, vajra and lotus; imagine their vajra forms with six arms, beautiful, bearing various weapons. (Fremantle 1971: 80)

Figure 13: *Bronze Vajrasattva, Barong Lovea, Cambodia, 10th-11th century, Phnom Penh National Museum, inv. no. Ga 5432 (formerly E. 808) [Photograph courtesy of Peter Sharrock].*

I identify the central deity with Akṣobhya because Guhyasamāja or Śrī Samāja himself is regarded as a tantric form of Akṣobhya. Furthermore, we know from the Sap Bak inscription that the GST was already known in the region. Vajrasattva, the sixth deity of Sap Bak, may also have had a place in the temple. He could have been represented by the central icon of the temple, possibly a *nāga*-enthroned Buddha.

The Eastern Lintel

The eastern lintel **[Figure 14a]** seems to feature the tantric deity Cakrasaṃvara (or Trailokyavijaya) with three heads and eight arms dancing on an elephant head. On both sides of the deity are rows of repeated figures: the top row shows ten Buddhas in *dhyānamudrā*, the row below consists of eight *yoginī*s and two *yogin*s dancing on corpses. The difference between the *yogin*s and the *yoginī*s is threefold: the male figures

Figure 14a: *Cakrasaṃvara lintel, Prasat Hin Phimai, Thailand, 11th-12th century [Photograph courtesy of Paisarn Piemmettawat].*

Figure 14b: *Cakrasaṃvara dancing on elephant head (close-up), Prasat Hin Phimai, Thailand, 11th-12th century [Photograph by Pia Conti].*

hold a *vajra* and a *ghaṇṭā*. The females hold a variety of attributes. The *yogin*s dance on their proper left leg, and the *yoginī*s on their proper right leg on a row of corpses. The amazing precision of the sculptural work suggests that they may have been related to real dance performances at the temple.

The Cakrasaṃvara in stone which we see here is almost unique in the Khmer material record. His only other representation is in bronze on the Poipet mould discussed below. The deity can be identified with certainty because of the outstretched elephant hide from which he emerges. He dances in *ardhaparyaṅka* on the bodies of two prone figures which lie on top of the elephant head. It is most unusual to show the elephant head underneath the dancing deity and the corpses. In India, the head of the elephant hide is stretched behind the deity.

As Chirapat (2007) has pointed out, the *ardhaparyaṅka* is not in tune with the position Trailokyavijaya/Cakrasaṃvara is given in the *Sādhanamālā* which should be the *pratyālīḍhāsana*, that is the archer position with one foot forward and the back leg stretched. The Cakrasaṃvara in *ardhaparyaṅka* is in fact closer to another famous angry deity, the dancing Hevajra. This deity, another Heruka (wrathful Buddhist deity), with its sixteen arms and eight heads, will become more prominent under Jayavarman VII. Cakrasaṃvara's wild dance on the corpses may symbolise the dynamism of the process of enlightenment as it does for Hevajra (Lobo 1994: 119) and the conversion of Śaiva deities to Buddhism.

A twelfth century bronze mould from Poipet shows a pantheon of deities **[Figures 15a-b]** which seem to belong together conceptually. The mould has three registers. The first register features a *nāga*-enthroned Buddha. The second register apparently features a Cakrasaṃvara, here in *pratyāliḍha* pose to the left and Hevajra, dancing, to the right of a six-armed, three-headed, sitting figure, most likely Akṣobhya, the alleged deity of the northern lintel at Prasat Hin Phimai. Vajrapāṇi can be seen dancing in the third row next to a standing six-armed figure which may be Avalokiteśvara. On its right there is a figure, holding a lotus, possibly Padmapāṇi, another form of Avalokiteśvara. There is a lintel at Prasat Hin Phimai which Dagens (1995: 35) identified as showing Padmapaṇī, its precise location, though, is not given by Dagens who visited the temple before its reconstuction.

On the Poipet mould, the identified Cakrasaṃvara, Hevajra and Vajrapāṇi dance on a corpse, just like they do at Prasat Hin Phimai.[8] The *nāga*-enthroned Buddha placed above the other figures may perhaps represent the so-called Ādibuddha, the "primordial Buddha" of the tantric universe, or possibly Vajrasattva, the form the "Ādibuddha" would assume in *saṃbhogakāya*. If the Poipet mould has any information to offer for a reading of Phimai's temple deities, the *nagā*-Buddha's position in the tablet reinforces the argument that Vajrasattva may possibly be represented as the *nagā*-enthroned Buddha in Khmer iconography.

Figures 15a-b: *Bronze mould (right) and its impression (left) showing Khmer tantric universe, Poipet, Cambodia, 12th century, Phnom Penh Museum, inv. no. Ga 5657 [Photograph courtesy of the Phnom Penh National Museum].*

The Saṃvara of Prasat Hin Phimai displays other peculiarities. In Pāla India, where the original iconography was most likely conceived, Cakrasaṃvara usually holds his hands in *prajñālinganābhinaya*, embracing his virtual consort. The Saṃvara of Phimai's temple, however, has a special wrist touching *mudrā* **[Figure 14b]** which is very rare; it only appears once more in a pedestal at Banteay Samre. In the Indian tradition there are two-, six- and twelve-armed versions of Cakrasaṃvara (like the one in the Poipet mould). Only the Phimai version has eight arms and holds the split elephant hide with the remaining six arms. One textual variant interprets the split elephant hide as a symbol for "the splitting of illusions," or a liberation from the illusionary world that keeps non-enlightened people in bondage (Dawa-Samdup 1919: 19).

In his study of the development of tantric iconography, Robert Linrothe (1999) has proposed a three phase scheme to distinguish between several generations of tantric deities. In the first phase, Buddhist deities are accompanied by angry deities or *krodha* which are in a subservient role. In the second phase, angry deities play an important role, but are not central to a tantra or a *maṇḍala*. In the third phase, these deities have their own *maṇḍala* and tantras. Linrothe suggests that Trailokyavijaya and the wrathful Vajrapāṇi are tantric deities of the second phase out of which the deities of the third phase, Cakrasaṃvara and Hevajra, developed. According to this author, Cakrasaṃvara appears in India just as Trailokyavijaya disappears. The former has so much in common with the latter that he may be considered "a phase three reincarnation of Trailokyavijaya" (Linrothe 1999: 278). One of the CS's most powerful mantras is the *Trailokyavijayamantra*. It is called the "universal king of spells (vidyārājacakravartī)" (Gray 2007: 295). This shows how intimately connected the two deities still are in the CS. At Prasat Hin Phimai, Trailokyavijaya and Vajrapāṇi play a subordinate role in relation to Cakrasaṃvara, who dwells in the centre of the temple – they both have a place in the southern quarter of a possible *maṇḍala*.[9]

In addition to the five central lintels, all found *in situ*, there are several lintels with related subjects still laying on the ground in the temple area. More lintels presenting Buddhist subjects are on display in the Phimai National Museum.[10] Some lintels feature rows of crowned teaching Buddhas in double *vitarkamudrā* and *yoginī*s, some just display dancing *yoginī*s, and some just depict standing crowned Buddhas.

A New Interpretation of the Two Inner Lintels

Cakrasaṃvara is the main protagonist of the CS and other texts which together form the Cakrasaṃvara tradition. The tantra refers to itself as the "Great King of Yoginī Tantras, called the Śrī Cakrasaṃvara *(śricakrasaṃvaranāmāmahāyoginītantrarāja)*" (Gray 2007: 4). This tantra was very popular in India from the late tenth through late thirteenth century, thus during the time Prasat Hin Phimai was built. Together with the HT, it is the most important "mother tantra" emphasising female deities.

What does *saṃvara* mean in Sanskrit? Snellgrove (2004: 152) takes the term to mean a "vow or a bond." Shinichi Tsuda (1974: 55) interprets it as "union of aspects of the world fused into one." Linrothe (1999: 278) proposes "supreme bliss." The different translations of the name stem from a variant in spelling as Snellgrove (2004: 152) explains:

> *Śambara* and *saṃvara* represent the same name in Sanskrit with slightly variant spellings, but the second spelling happens to be identical with the word meaning a vow or a bond. Thus the Tibetans translated them differently: *Śambara* as *bDe-mchog*, "Supreme Bliss," which is how they interpret this name, whatever the spelling, and *Saṃvara* as *sDom-pa*, understood as "binding" or "union." The compound name, Cakrasaṃvara, is thus interpreted as the "union of the wheel of the elements" explained in various ways, but suggesting in every case the blissful state of perfect wisdom.

In his recent translation of the tantra, Gray (2007: 36) suggests *cakrasaṃvara* should best be translated as the "binding of the wheels," or the "binding of the *dākinī* network."

The *Cakrasaṃvaramaṇḍala* consists of the main deity Cakrasaṃvara and three wheels of *yoginī*s or *dākinī*s, eight to each circle. The *maṇḍala* is called the "triple wheel" (Gray 2007: 179). To the wheels of the *maṇḍala*, three dimensions of human experience are assigned. The first wheel is called the "body wheel," the second the "speech wheel," and the third the "mind wheel." The tantra uses the expression "body, speech and mind" to symbolise the three essential dimensions of a human being. "Body, speech and mind," in Sanskrit *kāyavākcittā*, is an expression widely used in all kinds of Buddhist texts for the three-fold human experience, but also for the experience of Buddhahood. The idea behind this formulation is to transform human experience into an experience of transcendence and unity, into the Buddha's body, speech and mind. In CS, the *yoginī*s stand precisely for the idea of transformation of the human experience into Buddha experience, in other words for the path to enlightenment. On the northern and southern lintels of the inner sanctuary as well as on lintels found in various locations at Prasat Hin Phimai, the *yoginī*s are very prominent. Phimai is the first place where *yoginī*s appear in stone in the history of Buddhism in Cambodia and Thailand, and they appear together with Saṃvara. Parallel to the depiction of *yoginī*s in Phimai's temple, we have the set of *yoginī* bronze sculptures as well as the bronze Hevajra in Baphuon style (mid-eleventh century) which Boeles (1966: pl. 5) discussed. The presence of both the bronze sculpture of Hevajra and the stone representation of Cakrasaṃvara indicates that both the HT and the CS must have had some followers in the eleventh century; and it shows that at Prasat Hin Phimai the latter was given precedence over the former. The *yoginī*s will play an important part again under Jayavarman VII, whose preference for the HT is well documented (Woodward 1981). Several bronze Hevajra images and several *Hevajramaṇḍala*s, in two or three dimensions, show Hevajra surrounded by his eight *yoginī*s (Boeles 1966: pl. 4; Dalsheimer 2001: 269).

The GST does not refer to *yoginī*s, though it features female consorts. It is thought to be earlier than the CS and the concept of the *yoginī*s had not yet been developed. However, the GST expresses a similar idea of unity using different metaphors. *Guhyasamāja* can be translated simply as the "secret union," but the full title of the tantra is according to its translator, "The Union [or Assembly] of the secret Body, Speech and Mind of all Tathāgatas." Fremantle (1971: 15) explains:

> Body, speech and mind together comprise the total activity and experience of a living being; the body alone may be interpreted as the material form *nirmānakāya*, while speech and mind represent the spiritual and absolute natures, *saṃbhogakāya* and *dharmakāya*.

The concept of *kāyavākcittā* (body, speech and mind) is used many times in the tantra. Its main mantra is *oṃ sarvatathāgatakāyavākcitta-vajrasvabhāvātmako'ham* which means "Oṃ I am of the nature of the vajra of body, speech and mind of all Tathāgatas." This mantra expresses the wish of the tantric adept to become a Buddha.

In the GST, Akṣobhya is "Vajra Mind," Vairocana is "Vajra Body," and Amitābha is "Vajra Speech." Vajrasattva, the sixth Buddha, or ground of all Buddhas, symbolises this unity of body, speech and mind. Vajrasattva's name varies according to his function. According to Chirapat (1990), Vajrasattva may be called "Sarvatathāgatakāya-vākcittavajra, or Sarvatathāgatakāyavākcittādhipati. He is also called Vajradhara, Mahāvajradhara, Vajrapāṇi, etc." The identity of *kāyavākcittā* with Vajrasattva is expressed in the first two names.

There are other concepts which connect the two tantras. Akṣobhya in the GST and Saṃvara in the CS are both described as emanations of Vajrasattva. The two northern and eastern inner lintels at Prasat Hin Phimai would thus display two different emanations of Vajrasattva – one representing Akṣobhya and the Jinas, peaceful forms of Vajrasattva, the other Cakrasaṃvara, an angry emanation of Vajrasattva. Though the lintels in Phimai appear to represent two different tantra traditions – the GST and the CS –, they are closely related in the idea of the union of all aspects of the world, the central idea of many tantric texts. This is the idea they express symbolically, either in the metaphor of emanation and fusion of Buddhas or Jinas in a transcendental Buddha, or through the unifying of all elements constituting human experience.

Chronologically speaking the CS tradition is slightly later than the GST tradition and may also have arrived on the Khorat Plateau a little later. The CS tradition sees itself as an extension of other tantras and as more powerful, in fact as "the most excellent, the highest of all the yogas, which can kill anyone, gods, titans and men" (Gray 2007: 176). The adept who masters the yoga of the CS will be invincible and cannot die of natural causes. The yoga of the CS is described as the most powerful yoga, because "everything, whatsoever, spoken or unspoken,

exists in Śrī Heruka" (Gray 2007: 177). The CS promotes itself as the latest tantric weapon. Using its yoga one will have the powers of being unhindered in the three worlds, of being invisible, and of travelling in the underworld. Its yoga would also give the powers of resurrection, flight and alchemy. The CS promises to be even more powerful than the previous tantras and provide even faster liberation. Seen from an internal Buddhist perspective, Prasat Hin Phimai seems to honour the deities of the latest, most powerful tantra from India at the time.

Conclusion

The iconographic program of Prasat Hin Phimai builds partially on the tantric traditions of tenth century Cambodia, but not as much as one might expect, given that Phimai is situated along the important trade route between Angkor and the western frontiers of the Khmer empire. Deities such as Vajrin/Vajrapāṇi, Trailokyavijaya and the *nāga*-enthroned Buddha are present and play a substantial role in Phimai. Others, such as Avalokiteśvara and Prajñāpāramitā, do not appear yet at Prasat Hin Phimai, but become important again eighty years later.

The Buddhist tradition from the Khmer heartland is complemented by the presence of deities invoked in the Sap Bak inscription which celebrates the powers of the Jinas, Vajrasattva and Śrī Samāja. In addition, it is argued that at Phimai a new tantra was introduced, the *Cakrasaṃvaratantra* with its main deity Saṃvara and its wheels of dancing *yoginī*s. In my reading, the deities Cakrasaṃvara and Akṣobhya (Śrī Samāja) and their entourage of male and female deities embody two different aspects of a central idea celebrated in the tantras: the unity of body, speech and mind and the transformation of human fragmentation into Buddhahood. Whereas the *Guhyasamājatantra* and the *Cakrasaṃvaratantra* do not seem to have had many followers among later Khmer Buddhist generations, the *Hevajratantra*, another, later, "mother tantra" in which *yoginī*s also play an important role, will be taken up by the Khmer's most renowned Buddhist king, Jayavarman VII. The latter showed his appreciation for Prasat Hin Phimai and his ancestor Jayavarman VI by erecting two side shrines within Phimai's temple first enclosure ground and a "hospital" chapel outside the city walls. One of the side-shrines, the so-called Prang Brahmadatta, featured his and his wife's portrait (Multzer o'Naghten, this volume).

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Special thanks to Peter Sharrock for introducing me to Southeast Asian art and architecture and for guiding me with unreserved energy in my research on Khmer tantric Buddhism, and to Tadeusz Skorupski who introduced me to the philosophical concepts of Buddhism and who provided the new English translation of the Sap Bak inscription used in this essay. Thanks also to Julia Estève for sending me her work, to Roger P. Wright for sharing his insights on the *Guhyasamājatantra*, to Hiram Woodward, Wibke Lobo and Ken Gemes for reading and commenting on my manuscript, to Paisarn Piemmettawat for the use of Figures 10, 12a, and 14a, and finally to Hélène David-Cuny for help with the map of the region.

Abbreviations to Sanskrit Texts

CS	*Cakrasaṃvaratantra*
GST	*Guhyasamājatantra*
HT	*Hevajratantra*
STTS	*Tathāgatatattvasaṃgrahanāmamahāyānasūtra*

Appendix 1: Sap Bak Inscription (K. 1158) Translation from Sanskrit by Tadeusz Skorupski Based on Julia Estève's Transliteration (2009: 541-542)

1. In the first instance, the glorious five Sugatas are the originators of the Śrīghanas, and the Śrīghanas of the excellent gods. I bow to them, the givers of glory.

   (Alternatively: Primordially, the glorious five Sugatas are the originators of the glorious bodies, and the glorious bodies of the excellent gods. I bow to them, the givers of glory.)

2. But Vajrasattva is the sixth (as) the pre-eminent lord of the existing Bodhisattvas, (and) the repository (or foundation) of all the Buddhas. I bow to him for the sake of deliverance.

3. In all my existences, may I become a servant of the servant who has supreme devotion and stainless faith in the glorious Samāja.

4. Having thus heard the command of the supreme guru, I respect it with praises, (and) having repeated it with devotion, I always pay homage to the glorious Samāja.

5. The region originally called Jayantrapura and afterwards Chpārransī, it is there that the protector Śrī Samantaprabheśvara has stayed (or resided).

6. He indeed, having appeased the fear (apprehension) of the Buddhists, has made firm the Buddha's dispensation in Kambuja down to the present time. I bow to him again and again.

7. The venerable Cuṅvi, delightful in manners, pure, accomplished in many activities, blameless in speech, eloquent and pious, is supreme in recitation and devotion to the Jina(s) [= Buddha(s)].

8. The venerable Campakapāda, devoted to his teacher's feet, respected by the *siddha*s, (and) the teacher in Chpārransī, has passed into appeasement (tranquillity, *śama*) in the region of Sthalāsvāy.

9. Pious and steadfast, the venerable Dharaṇīndrapura, having adorned the base (*aṅghrir alaṃkṛtavān*?), and having enriched the wise (or firm) ones with fine treasures, has settled his pure heart in enlightenment.

10. Having traversed the ocean by way of the perfection of wisdom, the commentaries on logic and the rest, those calmed ones (*śrānta*) have reached the fruit of reality under the secret tree.

11. The one called Vraḥ Dhanus, steadfast, intelligent, and student of the established doctrine, constantly and joyfully venerates the triple gurus of the three gurus.

12. (With his) mind inflamed with the sparks of the Kāśikā, poetry and other outer (compositions), since a long time he sips the secret elixir, (and is) intent on the sap of fire oblations, recitations, and yoga.

13. In the year 988 [*śaka* = 1066 CE], on the seventh day of the bright fortnight of the month of Tapasya, this learned Vraḥ Dhanus is the one who has installed the Sugata and other images in Tenpāsnaga, the fortunate and excellent pilgrimage place (*tīrtha*).

14. Śrī, Śakti, Kīrtti, Devendra and many more, through them I have realised and personally grasped something about the destruction in this world and indeed in the other world.

15. If I have the fruit of my merit, (it is my) swift rebirth in Kambuja, but we work here for the sake of the deity through the deliberation of Sāmāja, not for anything else. Moreover, there are other aspirations, not just one.

Endnotes

1 The term *nāga*-enthroned (instead of the usual *nāga*-protected) Buddha dissociates the icon from the Mucalinda myth which plays a significant role in Theravāda Buddhism, but does not seem to play a role in Mahāyānist Buddhist societies (Sharrock 2011). Furthermore, the term *nāga*-enthroned Buddha seems to convey more powerfully the acquisition of the transcendent status which the Buddha gained in Mahāyāna and tantric belief systems.

2 Arlo Griffiths (2013: 72-75) has recently proposed to identify our "Satyavarman" of K. 1158 as King Satyavarman of Pāṇḍuraṅga in Campā. This Satyavarman reigned in the last quarter of the eighth century CE.

3 Griffiths (2013: 75) also proposed that the "Abhayagiri" of K. 1158 may be identified as "Ratu Baka hillock" in central Java. It seems to me, however, that the field of references in the inscription is local. The lineage of the three tantric gurus which are mentioned in the Sanskrit part is a local lineage, with possible connections to a region near Angkor. Moreover, Dhanus identifies "Kambuja" as the land in which the Buddhists work for their liberation (cf. verse 15). An overseas location for their sacred *tīrtha*, or place of pilgrimage, seems unlikely, since it would imply that several tantric Buddhists travelled repeatedly from Khorat or Angkor to Java during three centuries to keep up images placed in a holy place there.

4 The ground plans, cross-sections and an excellent description of the achitectural history of Prasat Hin Phimai are given by Pierre Pichard (1976).

5 Hiram Woodward (2003: 151) has proposed that the four central lintels represent the four bodies of Māra. This interpretation is grounded on his reading of inscription K. 953 found at Phimai and dated to 1041 CE in which the four bodies Māra are mentioned. Woodward's proposal is highly speculative and relies on a complex web of possible associations which seem to me too tendentious to work.

6 Most of the lintels and pediments on the outside of Prasat Hin Phimai represent Brahmanical topics. Many pediments and lintels feature scenes from the *Rāmāyaṇa*. There does not seem to be a general tenor to the chosen scenes. The most common denominator I could find is the representation of a fight between just and unjust causes. Boreth Ly (2007: 35) reads the pediments and lintels surrounding the central sanctuary providing a political and apotropaic function.

7 According to Marie-Thérèse de Mallmann (1975: 21), Vairocana in the *Vajradhātumaṇḍala* may have a rosary, but not his three-headed and six-armed form.

8 For a schematic representation of the Poipet mould, see Woodward (1981: 61).

9 Many thanks to Hiram Woodward for pointing out that two of the wrathful deities at Prasat Hin Phimai (Vajrapāṇi and Trailokyavijaya) are located in the southern part of the *maṇḍala*, a location traditionally assigned to *krodha,* as, for example in the esoteric *mahākaruṇagarbha* of Japan. If the temple indeed represents a three dimensional *maṇḍala*, the southern position of the *krodha*s may go some way in explaining the orientation of Prasat Hin Phimai. The temple is facing south and not east, as most Khmer temples do. Woodward (2003: 148) reads Vajrapāṇi as representing Vajrasattva in his secondary role as one of the sixteen *vajra* beings represented in esoteric Japanese *maṇḍala*s.

10 I have been trying to find an excavation report showing where the lintels which were not *in situ* were found exactly, but have as yet been unsuccessful. The closest to a report is Dagens' (1995) paper where he gives an inventory list of lintels found *in situ* and scattered on the ground. With many lintels, he gives only a vague indication of where they were found and a description of their likely content. Dagens is also not entirely sure where the various lintels were located on the outer structures, since at the time he went to Phimai many were still broken and scattered on the ground. Dagens concluded his research stating that it is not possible to say whether the particular layout of the central group, where the non-Buddhist themes surround the Buddhist ones inside the temple, can be found elsewhere in the temple.

References

Aymonier, Étienne
1900 *Le Cambodge I*. Paris: Ernest Leroux.

Baptiste, Pierre & Zéphir, Thierry
2008 *L'art khmer dans les collections du Musée Guimet*. Paris: Réunion des musées nationaux.

Bhattacharyya, Benoytosh
1924 *Indian Buddhist Iconography.* Oxford: Oxford University Press.

Boeles, Jan J.
1966 Two *Yoginīs* from Thailand. In Ba Shin (ed.), *Essays Offered to G. H. Luce. Volume 2*. Ascona: Artibus Asiae Supplementum, pp. 14-29.

Boisselier, Jean
1966 *Asie du Sud-Est. Le Cambodge*. Paris: Éditions A. & J. Picard.

Bunker, Emma & Latchford, Douglas
2004 *Adoration and Glory: The Golden Age of Khmer Art*. Chicago: Media Art Resources.

2011 *Khmer Bronzes: New Interpretations of the Past.* Chicago: Media Art Resources.

Chirapat Prapandvidya
1990 The Sab Bak Inscription: Evidence of an Early Vajrayāna Buddhist Presence in Thailand. *Journal of the Siam Society* 78(2): 11-14.

2007 *Phimai (Vimāya) Temple in Thailand*. Paper Presented at the Conference on *Buddhism and the 21st Century* Organised by the Government of India in Bodh Gaya, February 3-6, 2007. [Unpublished]

Cœdès, George
1908 Les inscriptions de Bàt Čum. *Journal asiatique*, New Series 12: 213-254.

1923 *Bronzes khmèrs*. Paris/ Bruxelles: Van Ouest & Cie.

1924 Études cambodgiennes. *Bulletin de l'École française d'Extrême-Orient* 4: 345-358.

Dagens, Bruno
1995 Autour de l'iconographie de Phimai. In Silpakorn University (ed.), *Actes du Premier Symposium franco-thaïlandais. La Thaïlande des origines de son histoire au XVème siècle.* Bangkok: Silpakorn University, pp. 17-37.

Dalsheimer, Nadine
2001 *Les collections du Musée de Phnom Penh*. Paris: Magellan & Cie.

Dawa-Samdup, Kazi (ed.)
1919 *Shrīchakrasambhāra Tantra. A Buddhist Tantra*. Arthur Avalon's Tantrik Texts, Vol. VII. Calcutta: Tacker, Spink & Co. [Reprint, New Delhi: Aditya Prakashan 1987]

Dupont, Pierre
1950 Les Buddha sur Nāga dans l'art khmer. *Artibus Asiae* 13: 39-62.

Estève, Julia
2009 *Étude critique des phénomènes du syncrétisme religieux du Cambodge ancien.* Doctoral Dissertation. Paris: École Pratique des Hautes Études. [Unpublished]

Estève, Julia & Vincent, Brice
2010 L'about inscrit du musée national du Cambodge (K. 943) : nouveaux éléments sur le bouddhisme tantrique à l'époque angkorienne. *Arts asiatiques* 65: 133-158.

Fremantle, Francesca
1971 *A Critical Study of the Guhyasamāja Tantra.* Doctoral Dissertation. London: School of Oriental and African Studies, University of London. [Unpublished]

Gray, David B.
2007 *The Cakrasaṃvara Tantra.* New York: The American Institute of Buddhist Studies.

Green, Phillip
2012 A Century of Confusion: The Brick Reliefs of Phnom Trap. Paper Presented at the Conference *Religious Studies in Cambodia: Understanding the Old and Tracing the New*, organised in Siem Reap, 9-11 June 2012. [Unpublished]

Griffiths, Arlo
2013 The Problem of the Ancient Name Java and the Role of Satyavarman in Southeast Asian International Relations Around the Turn of the Ninth Century CE. *Archipel* 85: 43-81.

Groslier, George Philippe
1962 *Études sur Phimai pour sa reconstruction*. Paris: École française d'Extrême-Orient. [Unpublished]

Jacques, Claude
1969 Études d'épigraphie cambodgienne. II. Inscriptions diverses récemment découvertes en Thaïlande. III. *Bulletin de l'École française d'Extrême-Orient* 56: 57-74.

Linrothe, Robert
1999 *Ruthless Compassion.* London: Serindia Publications.

Lobo, Wibke
1997 *Caitya* - Buddhistic Monument. In Jessup, Helen I. & Zéphir, Thierry (eds.), *The Sculpture of Angkor and Ancient Cambodia: Millennium of Glory.* Washington: National Gallery of Washington, pp. 242-243.

1998 Reflections on the Tantric Buddhist Deity Hevajra in Cambodia. In Manguin, Pierre-Yves (ed.), *Southeast Asian Archaeology 1994, Proceedings of the 5th International Conference of the European Association of Southeast Asian Archaeologists, Volume 2*. Hull: Centre for Southeast Asian Studies, pp. 113-127.

Ly, Boreth
2007 Protecting the Protector of Phimai. *The Journal of the Walters Art Museum* 64/65: 35-48.

Mallmann, Marie-Thérèse de
1975 *Introduction à l'iconographie du tantrisme bouddhique*. Paris: Maisonneuve.

Manit Vallibothama
1962 *Guide to Phimai and Its Antiquities*. Bangkok: Fine Arts Department.

Pichard, Pierre
1976 *Pimay : étude architecturale du temple*. Paris: École française d'Extrême-Orient.

Piriya Krairiksh
2012 *The Roots of Thai Art*. Bangkok: River Books. [First published in Thai as *Raknga haeng sinlapa thai*, 2553 (2010 CE)]

Sanderson, Alexis
2003-04 The Śaiva Religion among the Khmer. *Bulletin de l'École française d'Extrême-Orient* 90-91: 349-462.

Seidenfaden, Erik
1923 An Excursion to Phimai. A City Temple in the Khorat Province. *Journal of the Siam Society* 17: 1-19.

Sharrock, Peter
2011 The Nāga-enthroned Buddha of Angkor. In Bunker, Emma & Latchford, Douglas (eds), *Khmer Bronzes: New Interpretations of the Past.* Chicago: Media Art Resources, pp. 481-491.

2012 Kīrtipaṇḍita and the Tantras. *Udaya Journal of Khmer Studies* 10 [for 2009]: 203-237.

Snellgrove, David
1959 *The Hevajra Tantra: A Critical Study.* London: Oxford University Press.

2004 *Indo-Tibetan Buddhism*. Bangkok: Orchid Press. [Second Edition; First Ed. 1987]

Talbot, Sarah
2002 Northeast Thailand before Angkor: Evidence from an Archaeological Excavation at Prasat Hin Phimai. *Asian Perspectives* 40(2): 179-194.

Tsuda, Shinichi
1974 *The Saṁvaryodana-Tantra. Selected Chapters*. Tokyo: The Hokuseido Press.

Woodward, Hiram, Jr
1981 Tantric Buddhism in Angkor Thom. *Ars Orientalis* 12: 57-67.

1997 *The Sacred Sculpture of Thailand*. Bangkok: River Books.

2002 Esoteric Buddhism in Southeast Asia in the Light of Recent Scholarship. *Journal of Southeast Asian Studies* 35(2): 329-354.

2003 *The Art and Architecture of Thailand. From Prehistoric Times through the Thirteenth Century*. Leiden-Boston: Brill.

2007 The *Kāraṇḍavyūha* Sūtra and Buddhist Art in 10th century Cambodia. In Pratapaditya Pal (ed.), *Buddhist Art: Form & Meaning.* Mumbai: Marg, pp. 72-82.

Forthcoming Aspects of Buddhism in Tenth-Century Cambodia. In Lammerts, Christian (ed.), *Buddhist Dynamics in Premodern Southeast Asia*. Singapore.

Figure 1: *Mueang Sing, Kanchanaburi province, west side [Photograph by Hedwige Multzer o'Naghten].*

The Organisation of Space in Pre-modern Thailand under Jayavarman VII

Hedwige Multzer o'Naghten

Introduction

Over a century of Southeast Asian studies has highlighted the importance attached by Khmer people to certain territories located in present-day Thailand. In Isan, that is northeast Thailand, the Khmer presence seems to be attested from the late sixth century, according to the most ancient inscriptions,[1] and then weakened until the tenth century during which the construction of temples intensifies sharply, a sign of a more constant occupation of this region. Outside of Isan, there are others, albeit episodic, Khmer ruins in the Chao Phraya river basin or in Lop Buri, Prachin Buri, Sa Kaeo and Kanchanaburi provinces (Smitthi *et al.* 1992). Obviously, following the territorial logic, Khmer rulers were mainly interested in the regions bordering their kingdoms, located north of the Dangrek range and west of Angkor. But at the end of the twelfth century, during King Jayavarman VII's reign (ca 1182-1219/1220), the situation evolved differently as evidenced by the archaeological material of his time found in various places, sometimes at considerable distance from each other, delimiting a wide sphere of influence. Being more than just the single expression of a hegemonic will, these remains draw an archaeological map which may also reflect the king's political and religious orientations implemented in land use planning.[2]

Jayavarman VII's Presence in Pre-modern Thailand: Archaeological Remains

In present-day Thailand, archaeological remains dating from Jayavarman VII's reign have been found in significant quantities. They demonstrate the concrete presence of the Khmer king, not only in Isan as often pointed out, but also in other parts of the country. The stylistic architectural or iconographic specificities that characterise the art and the production of this period, known as "Bayon style," give it a remarkable originality (Boisselier 1974). They all represent strong criteria for identifying monuments as well as sculptures with the margin of error being low.

The Monuments

The most visible traces of the Khmer presence in pre-modern Thailand lie in the monuments built during Jayavarman VII's reign. These are mainly located in the western, central and northeastern parts of the country. The temple or *prasat* of Mueang Sing **[Figure 1]**, in

Figure 2: *Phra Prang Sam Yot, Lop Buri province [Photograph by Hedwige Multzer o'Naghten].*

Kanchanaburi province, and Wat Kamphaeng Laeng in Phetchaburi province, mark the empire's western confines.[3] Not far from there, the ancient city of Ratchaburi was probably the location of a monument of the same era which is now in the premises of Wat Mahathat. In the central region, the ancient cities of Lop Buri and Sukhothai also housed Jayavarman VII's temples such as Phra Prang Sam Yot **[Figure 2]** in Lop Buri, Wat Phra Phai Luang **[Figure 3]** and Wat Si Sawai **[Figure 4]** in Sukhothai. Apparently unfinished, the temples of Mueang Sing, Wat Kamphaeng Laeng and Phra Prang Sam Yot belong most likely to the "Bayon style," according to their still evident architectural features. As for the other temples, it is less visible due

Figure 3: *Wat Phra Phai Luang, Sukhothai province [Photograph courtesy of Pierre Pichard, 1980].*

to a late and continuous occupation and the adoption of Theravāda Buddhism as seen at Wat Mahathat in Ratchaburi where only a few original vestiges of the Khmer period remain. Most of these sites, however, offer an architectural composition relatively common in Thailand, centred on an alignment of three towers. Only the temple of Mueang Sing (Suriyavudh 2526a and 2526b), which appears to be the most important of Jayavarman VII's projects in pre-modern Thailand, adopted the more usual Khmer temple layout, consisting of a central tower and another structure often designated as a "library" surrounded by two enclosures.

In the northeast, the majority of buildings located on the Khorat Plateau present some radically different architectural characteristics. These buildings are mostly so-called "repetitive" foundations which owe their name to their architectural composition reproduced identically all over the kingdom, making their identification easy. They are divided in two categories: chapels of hospitals (*ārogyaśāla*) and "houses of Fire" (*vahnigrha*), the construction of which, according to the Ta Prohm (Cœdès 1906: 66, 80) and Preah Khan (Cœdès 1941: 280, 297) inscriptions of Angkor, was planned in large quantities[4] throughout the kingdom, that is to say the area of present day Cambodia, part of Thailand, southern Laos and southern Vietnam.

Figure 4: *Wat Si Sawai, Sukhothai province [Photograph by Hedwige Multzer o'Naghten].*

The hospital chapel's plan conforms to the ordinary layout of the small classical Khmer temple, comprising a central tower with attached vestibule facing east and a so-called "library" in the southeastern section inside an enclosure with an eastern entrance pavilion, and very often a basin in the northeast, but outside the compound (Cœdès 1940) **[e.g. Figure 5]**. This peculiar layout enabled George Cœdès to identify fourteen such structures according to the descriptions provided by Lunet de Lajonquière (1907), seven more were later acknowledged and published by Bruno Dagens (1993), five more by Bruno Bruguier,[5] and five additional ones by a Thai archaeologist (Rungrot 2547: 51-52).[6] Moreover, in Prachin Buri province, the site of Ban Khok Pip or Prasat Sa Morakot revealed architectural remains and a sandstone pedestal for three idols that suits perfectly with the worship of a certain Buddhist triad at hospital chapels (Boisselier 1969: 56-57). It would seem possible to complete this list with other monuments which undeniably have the same typical composition like Prasat Ban Noi (Sa Kaeo province, Cisark no. 7656), as pointed out by Asger Mollerup recently (2012: 67). All together, about thirty-two such hospital chapels in pre-modern Thailand have been securely identified to date **[Map 1; Appendix 1]**.

The other series of "repetitive" buildings, namely the "houses of Fire," often wrongly called *dharmaśālā* or "religious resting house" due to their position along axes of communication, have been discovered mostly between Angkor and Phimai (Lunet de Lajonquière 1902: L). They were designed as a single laterite building divided into three consecutive parts: a vestibule facing east, followed by a long central hall leading to a tower with a door opening on the west side. They all display unusual architectural features like the presence of windows only on the southern side or the tower communicating directly with the central hall

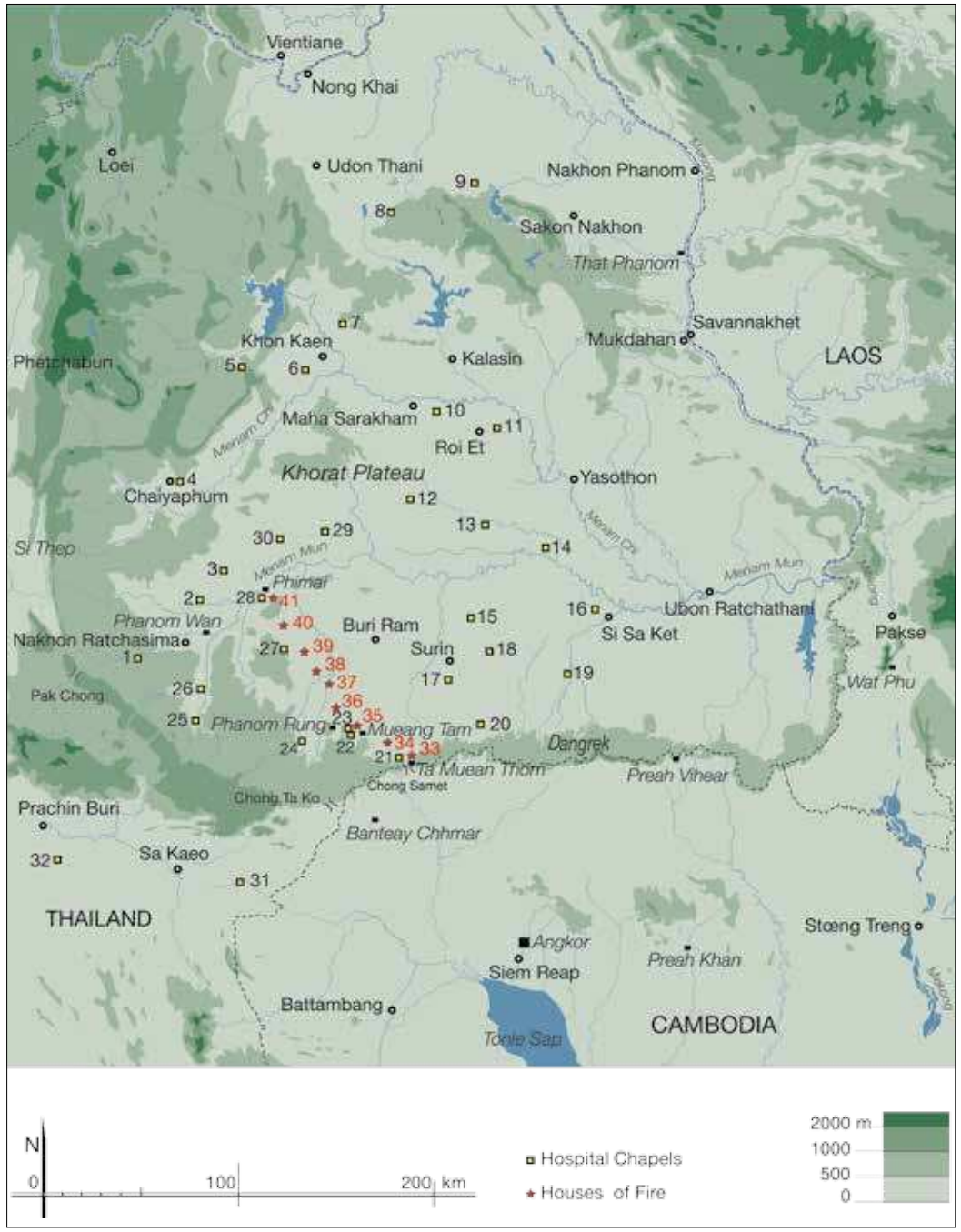
Figure 5: *Hospital chapel, Prasat Ta Muean Tot, Surin province [Photograph by Hedwige Multzer o'Naghten].*

Figure 6: *"House of Fire," Prasat Ta Muean, Surin province [Photograph by Hedwige Multzer o'Naghten].*

through a wide and high opening framed by two pilasters instead of the usual narrow door of the Khmer *cella* **[e.g. Figure 6]**.

About eight of them have been discovered in Isan so far, but, according to the Preah Khan stele (Cœdès 1941: 279, 296), there was another one at Phimai which has not yet been found **[Map 1; Appendix 2]**. Moreover, at the ancient city Kosinarai, near Nakhon Pathom, the clearing of a site brought to light one Avalokiteśvara and a "Bayon style" monument identified by Jean Boisselier as a "house of Fire" (1972: 42) **[Map 2]**.

In Isan again, the construction of laterite towers, placed on both sides of the *maṇḍapa* attached to the central tower of Prasat Hin Phimai **[Figure 7]**, also dates from Jayavarman VII's reign, as well as the third enclosure wall and its laterite entrance pavilions (Pichard 1976: 3-4). The attribution to the same period of an unfinished laterite tower covered up by the Prasat Wat Phra That, in the vicinity of Phra That Phanom in Nakhon Phanom province, appears much less certain (Boisselier 1965: 139).



Map 1: *Archaeological sites and remains in northeast Thailand during Jayavarman VII's reign [Drawing courtesy of Nicolas Revire and Pierre Pichard].*

Figure 7: *Prang Brahmadatta, Prasat Hin Phimai, Nakhon Ratchasima province [Photograph by Hedwige Multzer o'Naghten].*

The Inscriptions

Compared to the numerous monuments, inscriptions from the time of Jayavarman VII discovered in Thailand to this day are much rarer. They are basically of two types: on the one hand, approximately twelve hospital edicts[7] recording the installation of Bhaiṣajyaguru, the Medicine Buddha, and his Bodhisattva assistants – Sūryavairocana ("Sunlight") and Candravairocana ("Moonlight") –, and at the same time specifying the institution's rules **[Appendix 3; e.g. Figure 8]**; on the other hand, about eight dedications engraved on cult objects such as conches, bowls and vases offered to deities. For example, site no. 11 at Ban Khok Pip in Prachin Buri province, excavated by Boisselier (1972: 46-48), has provided five inscribed bronze objects.[8] Two of these (K. 1052 and K. 1056) give the names of two hospitals, Avadhyapura and Saṃvok, one of which should stand exactly on the site of the excavation. In addition, one support of a mirror (K. 973; Cœdès 1937-66: VII, 154) was found in the hospital chapel at Prasat Khok Ngiu (Buri Ram province) and two tripod vases were discovered at Wat Ban Na Sam (Surin province). One of these tripods is dated 1123 *śaka* (1201 CE) and is probably related to a "house of Fire" named Thmo Yol (Cœdès 1937-66: VII, 155). Except for the conch from Ban Khok Pip (K. 1053) and one of the two vases mentioned above (K. 974) which can be similarly paleographically dated to the "Bayon period," all these objects carry a date from Jayavarman's reign and some of them are even king's donations (Boisselier 1972: 46-48).[9]

Most of these inscriptions or inscribed objects have been found on sites set up by Jayavarman VII. In some cases, however, such as at Prasat Phanom Wan, in Nakhon Ratchasima province, only a fragment of a hospital stele remains, but there are no traces of an edifice. One can perhaps assume that, in ancient times, there was a hospital chapel near this temple.

Concurrently, inscriptions originating from major royal temples at Angkor mention the existence of several Jayavarman VII's foundations where the remains are of questionable attribution, and sometimes non-existent. The Preah Khan inscription (K. 908, stanzas 116-117), for example, assert that there was an image of Jayabuddhamahānātha in Lavodayapura, Jayarājapurī and Jayavajrapurī (Cœdès 1941: 280, 296; Jacques 2005: 13), which would presumably have been housed in the premises of Phra Prang Sam Yot (Lop Buri), Wat Mahathat (Ratchaburi) and Wat Kamphaeng Laeng (Phetchaburi). Similarly, a couple of small inscriptions from the Bayon (K. 293-3 and K. 293-6; Cœdès 1937-66: III, 194, 196) remind us of the Medicine Buddha's presence in Ratchaburi and Phetchaburi where, accordingly, a hospital chapel should have existed even though no trace can be found nowadays.

The Sculptures

The "Bayon style" sculpture sheds a different light on this period because it gives evidence of another form of the ascendency of royal power related to the spreading of religious ideas. Its characteristics make it one of the most representative and relevant markers to this research. While perpetuating traditional aesthetics on Khmer sculpture, "Bayon art" undoubtedly brings a renewal of artistic expression. Besides its most famous expression of intense spirituality reflected by closed eyes and a barely sketched mystic smile, its anthropomorphic sculpture presents specific features, stylistic as well as iconographic, which make it genuinely unique. All the statues share the same stylistic characteristics, both anatomical and clothing.

Physically, anthropomorphic images show an anatomy that is very realistic and closer to the human model, especially in the body's modeling which is softer and more rounded where the musculature is discretely suggested. The male images perfectly illustrate this trend: a fleshier bust, a wide neck and legs often massive and heavy, making a thick silhouette and giving the impression of physical power. In contrast, female images adopt a face close to skinniness, a very frail body and a narrow bust.

Generally, garments and ornaments are rather simple. The statues are clothed in a *sampot*, pleated and short for men, long and decorated with small flowers and a wide panel folded on the front for women, and attached by a wide belt made of small square plates adorned with flowers, a detail typical of this period. Even more characteristic is the chignon hairstyle consisting of parallel pigtails incised in crescent-shape. For men, the hairs are gathered in a *jaṭāmukuṭa*, a cylindrical or conical crown sometimes encircled at its base by a string of pearls. Women frequently wear a conical chignon-cover with four concentric rows of lotus petals.

According to the iconographic tradition, Buddha images of the "Bayon style" display some distinctive signs peculiar to the Blessed One, like hair treated in regular and stylised coiled curls or the cranial protuberance. This last feature can assume two different aspects under this style: high and pointed or slightly protruding, and can sometimes be covered by a simple *mukuṭa* adorned with lotus petals.

If the Buddha seated on the coils of a snake (i.e, *nāga*-Buddha; see also Conti, this volume) was indubitably the main icon of this reign **[e.g. Figures 9-10]**, representations of Lokeśvara, another name for the Bodhisattva Avalokiteśvara, were also found in great number. Most of them opt for the common form with one head wearing a small seated Amitābha Buddha on the front of the chignon, and four arms holding the traditional attributes, that is to say, a lotus bud on the lower right hand and a rosary on the upper right hand, and on the left side, a flask and a book on the lower and upper hands respectively **[e.g. Figure 11]**. Concurrently, Prajñāpāramitā was elevated to the rank of highest deity alongside the Buddha and Lokeśvara. For the first time in Cambodia, she was carved in free-standing life-size sandstone sculptures, with two arms borrowing attributes from the two Indian goddesses, Prajñāpāramitā and Tārā, who commonly hold the book for the former and the lotus for the latter **[e.g. Figure 12]**.

Figure 8: *Hospital edict, from Ku Khanthanam, Roi Et province, Roi Et National Museum [Photograph courtesy of Nicolas Revire].*

But the most striking facet of "Bayon art" lies in original creations, purely Khmer and hitherto unknown in India, partly due to the adoption of Mahāyāna Buddhism as the official religion. Indeed, new iconographic types such as Lokeśvara under his "radiating" aspect illustrating one Buddha emerging from each pore of the Bodhisattva[10] **[e.g. Figure 13]**, or seated leaning against a stele **[e.g. Figure 14]**, as well as the so-called "Vajradhara" **[e.g. Figure 15]** who actually would be none other than Bhaiṣajyaguru, the Medicine Buddha (Woodward 2011), can be associated only to Jayavarman VII's reign. Even more so, the portrait-statues of the sovereign and his queen, discovered at Prasat Hin Phimai, symbolise the supremacy of royal power (Cœdès 1960: 184, 193) **[Figures 16 and 17]**.

The identification of these images poses little difficulty insofar as they follow accurately their own iconographic codes. The particularity of the "radiating" eight-armed standing Lokeśvara is expressed by the physical appearance of the body, covered with a myriad of small Buddhas seated in meditation (*samādhimudrā*) and distributed on the torso, the hair, around the wrists and ankles as well as the fingers and toes. Equally new in Khmer art, Avalokiteśvara appears now in a seated posture. As usual, he wears a tiny Amitābha Buddha on the front of his chignon, sometimes worn away. He often bears no adornment, except earrings, and has four arms. The upper hands hold the rosary on the right side and the flask on the left one. The lower hands, as can be observed on different well-preserved pieces, held a small round object in the palm of the right hand, sometimes identified as the jewel, and in the left hand, a more or less stylised fly-whisk. As for "Vajradhara," alias Bhaiṣajyaguru (Woodward 2011), holding a *vajrā* in the left hand and a bell in the right one, he is always seated crossed-legs.

Almost all of the "Bayon style" sculptures found within the present-day Thai territory come from temples built by Jayavarman VII or sites reoccupied by him **[Map 2]**. Outside of Cambodia, Phimai and Mueang Sing (Suriyavudh 2526a: 103) house the largest concentration of Buddhist statues of this art-period. Unsurprisingly, we find there again

Left Figure 9: Nāga-*Buddha, Lop Buri National Museum [Photograph by Hedwige Multzer o'Naghten].*

Right Figure 10: Nāga-*Buddha, from the main shrine of Prasat Hin Phimai, Nakhon Ratchasima province, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

Figure 11: *Four-armed standing Lokeśvara, from Prasat Nang Ram, Nakhon Ratchasima province, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

Figure 12: *Two-armed standing Prajñāpāramitā (replica* in situ*), from Mueang Sing, Kanchanaburi province [Photograph courtesy of Nicolas Revire].*

Figure 13: *Eight-armed "radiating" Lokeśvara (replica* in situ*), from Mueang Sing, Kanchanaburi province [Photograph by Hedwige Multzer o'Naghten].*

an iconographic program gathering three major figures of Mahāyāna Buddhism, that is, the *nāga*-Buddha, the Bodhisattva Avalokiteśvara and the Goddess Prajñāpāramitā who form the sovereign's favourite triad. But certain other representations of deities, also in favour during the reign, have been found in smaller quantities, like "Vajradhara," or the Medicine Buddha in hospital chapels. In contrast, small Buddhist triads **[e.g. Figure 18]**, or steles carved with four-armed seated Lokeśvara were plentiful. All of these sculptures are particularly representative of that period.

Overall, the abundance of archaeological remains from Jayavarman VII's reign, discovered in pre-modern Thailand, certifies a well-established Khmer presence from the late twelfth century to the early thirteenth century. It also reflects the major position of these regions in the imperial sphere of Jayavarman VII as well as their prominent role in his territorial policy.

Jayavarman VII's Royal Policies in Pre-modern Thailand and Land Use Planning

There are different ways to show that a territory is under a sovereign's authority, or in his dependence, and to mark thus the extent of his empire. Inscriptions, sculptures, and monuments, Jayavarman VII has used all these devices to append his own print on the surface of his kingdom. Their locations enable us to not only trace the theoretical limits of his power, but also to constitute the framework of an archaeological map revealing the fundamental choices that have shaped it.

Archaeological Remains as Territory Markers

The distribution of archaeological remains found *in situ* in Thailand reveals a high density in some specific geographical areas such as the Khorat Plateau, as well as the valleys of the Chao Phraya river in the central region and the Mae Klong river in the western region.

The establishment of Jayavarman VII's foundations was developed depending on two radically different approaches of spatial organisation; in Isan, one can note a high concentration of at least forty monuments, all "repetitive" – approximately thirty-two hospitals and eight "houses of Fire" –, on the latest account, all distributed along the Dangrek range and between the arms of the Mun and Chi rivers as far north as modern Udon Thani **[Map 1]**. Conversely, in the western and central regions, sites are spaced out from south to north, along different river valleys, the Khwae Noi river on the western frontier (Mueang Sing), the Mae Klong river (Ratchaburi and Phetchaburi), the Bang Pakong river (Ban Khok Pip or Prasat Sa Morakot) and the Chao Phraya river as well as its tributary rivers in the North (Lop Buri and up to Sukhothai) **[Map 2]**. Obviously, this geographical layout can be partially explained by the geomorphologic configuration of these spaces, focused on river basins and compartmentalised by mountain ranges, however, it also seems to correspond to the former settlements from the time of Dvāravatī.

The circulation between central and northeast Thailand, two neighbouring regions separated by the Dong Phaya Yen chain, was achieved by roads and waterways, both known since ancient times. The

Figure 14: *Stele of Four-armed seated Lokeśvara found at Ku Phon Rakhang, Roi Et province, Roi Et National Museum [Photograph courtesy of Nicolas Revire].*

Figure 15: *Medicine Buddha (formerly identified as Vajradhara), from Prasat Nang Ram, Nakhon Ratchasima province, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

Figure 17: *Queen's portrait-statue, from Prasat Hin Phimai, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

Figure 16: *King Jayavarman VII's portrait-statue, from Prang Brahmadatta, Prasat Hin Phimai, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

Figure 18: *Stone stele of Buddhist triad, Phimai National Museum [Photograph courtesy of Nicolas Revire].*

layout of several main roads, portions of which are still known and used today, can be retraced from abandoned paths or tracks that linked ancient occupation sites (Boisselier 1965: 136). It is thus possible to ascertain that some of these transversal axes were connected, from west to east, with the major centres of the kingdom of Jayavarman VII. In its western part, most of them date from the Dvāravatī culture, whose settlements were established by the middle of the first millennium of the Common Era along the Chao Phraya river and its tributaries, as well as in the basin of the Mun river. They all offer the connection between the Gulf of Muttama (Martaban) and the Indian Ocean, and inland through the Tenasserim chain and its more common passes. The famous Three Pagodas Pass, which leads to the valleys of the two Khwae rivers, provides access to Kanchanaburi as a starting point of a body of roads. One of these roads descends to the south towards Ratchaburi and Phetchaburi and up to the modern Gulf of Thailand. Another one, through U Thong, runs eastward towards Lop Buri which is the link between western and eastern parts of the Chao Phraya river basin (Boisselier 1965: 145). Nearby Lop Buri, traces of ancient roads led probably to the north and the modern city of Nakhon Sawan, while other roads brought directly to the Khorat Plateau. They apparently led up to present-day Khon Kaen by crossing the Dong Phaya Yen chain or passing through Si Thep which ensured the transition between the Pasak river valley and the Mun river through the Chai Badan threshold **[Map 2]**. Further south, Jean Boisselier (1965: 145) also noticed the existence of age-old paths between U Thong and the Bang Pakong river valley, where Ban Khok Pip is located, landmarked by a large number of ancient sites like Prasat Sa Morakot, Dong Si Mahosot and Mueang Phra Rot on the east bank of the river (Prachin Buri province) or Mueang Phra Rot II on the west shore (Chon Buri province). This valley leads without obstruction to the Tonle Sap basin. The remains of a road, perhaps unfinished, from Watthana to Angkor, seem to come from the Gulf of Thailand (Geiringer 1891: 28; Lunet de Lajonquière 1909: 244).

All these territories, whether in central or northeast Thailand, were connected to the Angkorian capital by a few crossing points. For example, the Watthana threshold in the Aranyaprathet plain, between the Dangrek's western end and the Cardamom mountain's northern tip, gives access to the Great Lake (Tonle Sap) of present-day Cambodia, while communication with the Khorat Plateau occurs through a series of passes spaced out on the Dangrek's cliff tops (Aymonier 1901: 112, 192, 224, 304). It should also be noted that, at the end of the twelfth century, the Angkorian central authority extended to most parts of what is today Thailand, maintaining control over one of the largest hydrographic systems of mainland Southeast Asia, that of the Chao Phraya river, and, via the Mun river basin, that of the Mekong's river system, but also over most of the arable land and a huge operational network of riverine and overland communications routes (Hendrickson 2010; Multzer o'Naghten 2011: 134-137, 139-141, 167).

Finally, the location of archaeological remains in Thailand reveals regional disparities, emphasising the importance of certain areas whose development certainly meets the projection and implementation of different choices made by the king and very often situated on ancient settlements. This clear organisation leads us to question the king's

Map 2: *Greatest extent of the Khmer empire during Jayavarman VII's rule [Drawing courtesy of Nicolas Revire and Pierre Pichard].*

principles of management in foreign lands. Besides a likely expansionist policy, the historical factor, in addition to the king's religious beliefs and the economic requirements – rarely mentioned in previous Khmer studies –, have obviously played a role in the territorial planning of the Khmer kingdom.

Socio-political Analysis and Land Use Planning

Since the eleventh century, the Chao Phraya river basin, and for even longer, the Khorat Plateau, have been in the territorial expansion sphere of Khmer power. Jayavarman VII's policy in ancient Thailand was in historical continuity with the previous Khmer rulers. He reinforced the domination upon this region, consolidated it in the north, and extended it in the west almost as far as the present-day Myanmar border, nearby which he probably built the temple of Mueang Sing.

In Isan, Jayavarman VII established foundations on or near sites created or honoured by members of his paternal lineage who were all kings in Angkor, namely Jayavarman VI (r. 1080-1107), Dharaṇīndravarman I (r. 1107- ca 1113) and Sūryavarman II (r. 1113-ca 1150). It seems that the location of his temples was chosen in relation to former foundations of these previous kings, especially on a route leading from Angkor to the Khorat Plateau. At Prasat Phanom Wan, where a Jayavarman VI edict is inscribed (K. 391) on a central tower's door jamb (Cœdès 1937-66: VI, 297-299), a fragment of a hospital stele (K. 395) has been found (Cœdès 1940: 344), and at Phanom Rung, where a stele (K. 384) gives the genealogical origins of the three sovereigns (Cœdès 1937-66: V, 297-305), Jayavarman VII planned a hospital chapel (Kuti Ruesi Nong Bua Lai/Rai). Along the road leading from Angkor to Phimai, the king ordered the building of "houses of Fire," and notably also between Ta Muean Thom and Prasat Hin Phimai.

By appropriating these sites, Jayavarman VII presented himself as the direct heir of the kings of Angkor stressing the "dynastic" link with kings who appear in his genealogy, justifying on the one hand, his domination over these lands, and on the other hand, his legitimacy to the throne. However, the high archaeological density in Isan also reflects another reality, that of a developing region. Concurrent to the roads and the hydrological works, the two main networks of monuments, hospitals and "houses of Fire," sometimes presented as institutions of "public utility," give evidence of the existence of a dynamic and densely populated environment. Indeed, the construction of hospitals is easily explained by the social necessities imposed by the presence of more or less developed cities, while the "houses of Fire," known as landmarks on the roads leading to the capital, suggest the existence of active commercial and human traffic.

The exceptional concentration of hospitals located throughout Isan, – around thirty-two out of the one hundred and two mentioned in the Ta Prohm stele (Cœdès 1906: 66, 80) –, reflects the vitality of this region, inhabited since prehistoric times. Indeed, most of Jayavarman VII's hospitals fit into a landscape already organised and widely developed by the Khmers and their predecessors for many centuries. A large number have been built in an environment already marked by the presence of Khmer temples dating from the tenth (Mueang Kaeo near Prasat Non Ku and Prasat Mueang Khaek, Nakhon Ratchasima province), eleventh (Kamphaeng Noi near Kamphaeng Yai, Si Sa Ket province) and twelfth centuries (Prasat Chom Phra and Prasat Ban Chang Pi near Prasat Sikhoraphum, Surin province), especially for the sites located between the Mun river and the Dangrek range. The concentration is more noteworthy in the vicinity of Phimai and Prasat Phanom Wan, as well as around Phanom Rung, Mueang Tam and Ta Muean Thom, which are major centres of Khmer power from the eleventh and twelfth centuries. Some others hospitals are close to ancient cities characterised by circular earthworks, moats and *barai* (Ku Santarat at Mueang Champasi, Maha Sarakham province; Prasat Ban Noi at Mueang Phai, Sa Kaeo province or Prasat Sa Morakot, Prachin Buri province). Conversely, it seems that the line of Khmer expansion extends significantly to the north with new foundations in the provinces of Chaiyaphum (Prang Ku), Maha Sarakham (Ku Santarat, Ku Ban Khewa), Roi Et (Ku Phon Rakhang, Ku Khanthanam, Prang Ku), Khon Kaen (Ku Kaeo, Prasat Praphachai), Udon Thani (Ku Kaeo Ban Chit) and Sakon Nakhon (Ban Phanna) **[Map 1]**.

All these permanent developments attest of the demographic dynamism in the region. As indicated by stanza 119 of the Ta Prohm stele, 81,640 men and women in total, were working for the benefit of the 102 hospitals, representing an average of 800 people per hospital (Cœdès 1906: 66, 80).[11] At the scale of the Isan region, the total rises to a minimum of 24,000 people, within the hospitals or in the surrounding villages, which should generate significant economic prosperity.

Owing to the hospital stele's content, we know that according to the number of staff allocated, there were four hospital categories, the size of which varied (Jacques 1991: 36-41).[12] Thus we can deduce that logically the size should be proportional to the locality to which they were attached. Indeed the largest hospital in Isan is located next to Prasat Hin Phimai which is one of the main Khmer sites in the region, and, as stated by Jayavarman VII's inscriptions, of great importance for the king. Regarding the hospital steles found *in situ* in Isan, we know that five of them assigned ninety-eight employees to large hospitals – for example, at Prasat Phanom Wan (Nakhon Ratchasima province) and Prasat Khok Ngiu (Buri Ram province), situated in the western part of the region, that is to say close to the largest urban centres and near the busiest traffic axis. But also at Prang Ku (Chaiyaphum province), Ku Kaeo (Khon Kaen province) and Prasat Tham Chan (Si Sa Ket province) all of which are on the limits of the territories developed under Jayavarman VII's reign. Some steles allocating fifty people to the service of the hospital were also found in Prasat Ta Muean Tot and Prang Khon Buri, located near passes crossing the Dangrek range, which suggests an almost certain permanent influx.

More closely related to the communication route's network are the "houses of Fire" because, as intended in the Preah Khan stele, most of them lined three main roads leading to Angkor (Cœdès 1941: 279-280, 296-297). From the quantities discovered compared with that announced (twenty-five out of one hundred and twenty-one and only eight in pre-modern Thailand), one cannot draw valid conclusions about their role in the territory's organisation. However, those that still exist confirm the existence of two out of the three major axes detailed in the Preah Khan stele, one in the northwest and another one in the east, probable main lines of intense trade circulation.

Strangely, we do not find any "houses of Fire" on the third axis. But, it might be interesting to compare two lists of toponyms mentioned in the Preah Khan inscription. The first one gives the name of different places where a Buddha image called Jayabuddhamahānātha was erected by Jayavarman VII (Cœdès 1941: 279, 295-296) and the second one enumerates the names of the cities with a "house of Fire" (Cœdès 1941: 279-280, 296-297). Through linguistic analysis, Cœdès (1941: 296) has identified some places in the Jayabuddhamahānātha's list with towns which are situated in present-day Thailand. According to him, Lavodayapura is Lop Buri, Svarnapura is Suphan Buri, Śambūkapaṭṭana is a site in the Chao Phraya valley, Jayarājapurī is Ratchaburi, Jayasiṃhapurī is Mueang Sing and Jayavajrapurī is Phetchaburi. Actually, the complete list begins with two unknown toponyms, Jayasiṃhavatī and Jayavīravatī, and ends with one also unidentified, Jayarājagiri.

Curiously enough, the third axis of "houses of Fire," according to the Preah Khan stele, contains the same names at the beginning and at the end of its own list. Thus, it appears that the places that are part of the Jayabuddhamahānātha's list situated in Thailand, from north to south of the Chao Phraya river valley, could be inserted exactly in the middle of the third list of "houses of Fire" **[Table 1]**. We know that the names given in this list follows a geographical order because there were located along roads starting from Angkor (Yaśodharapura). Consequently, it is suggested that the third main road, beginning at Jayasiṃhavatī and Jayavīravatī and ending at Jayarājagiri, which locations are still unknown, was on the same axis as that of Lavodayapura, Svarnapura, Śambūkapaṭṭana, Jayarājapurī, Jayasiṃhapurī and Jayavajrapurī, that is to say toward present-day Thailand.

Table 1: Comparative Itineraries between Axis Related to "Houses of Fire" and Jayabuddhamahānātha

"Houses of Fire"	Jayabuddhamahānātha	Identification
Yaśodharapura	-	Angkor
Jayavatī	-	?
Jayasiṃhavatī	*Jayasiṃhavatī*	?
Jayavīravatī	*Jayavīravatī*	?
-	Lavodayapura	Lop Buri
-	Svarnapura	Suphan Buri
-	Śambūkapaṭṭana	Chao Phraya river valley
-	Jayarājapurī	Ratchaburi
-	Jayasiṃhapurī	Mueang Sing
-	Jayavajrapurī	Phetchaburi
-	Jayastambhapurī	?
Jayarājagiri	*Jayarājagiri*	?
Yaśodharapura	-	Angkor

Comparatively, other foundations located in the Chao Phraya river valley or on the western borders, seem to be scattered in marginalised areas. As the isolated Mueang Sing complex on the western border, or the cities of Sukhothai in the north and Phetchaburi in the south, they seem to mark the expansion line of Jayavarman VII's power. Distant from the political centre, they however occupied strategic positions like communication nodes, trade centres and outposts of the kingdom at the boundaries of the areas they dominated.

However, another possible criteria for the places of Jayavarman VII's foundations lies in the clear intention of honouring, and, as a matter of fact, multiplying the Buddhist sites in his kingdom.

Religious Analysis and Land Use Planning

It is certainly not a coincidence that the territories on which Jayavarman VII strengthened his authority were the first settlements of the introduction of Buddhism into this part of mainland Southeast Asia. Acting as a Buddhist sovereign, he had the duty to protect Buddhist sites, while ensuring the spreading of the Buddha's teaching. It is therefore not surprising to find Jayavarman VII's foundations on old Dvāravatī cities where the king strove to rebuild eminently Buddhist sites. The main settlements of Dvāravatī appear to have been at Nakhon Pathom, U Thong and Khu Bua west of the Chao Phraya river and at Lop Buri, all places where Jayavarman VII built his own foundations or restored preexistent monuments (Phasook 2009). In the Mae Klong river valley, remains of the "Bayon style" have been brought to light at Kosinarai, near Nakhon Pathom (Jarunee 2534). Similarly, further south in the vicinity of Khu Bua, Jayavarman VII's temples were constructed in Ratchaburi and Phetchaburi, as well as in the Bang Pakong river valley at Ban Khok Pip (Prasat Sa Morakot) in Prachin Buri, and also in Isan.

Of note, contrary to Khmer territories where Brahmanical images were still present in the repertoire, all the statues discovered in Thailand from this period are Buddhist, with the exception of portraits of the king and the queen erected at Prasat Hin Phimai.

The so-called Dvāravatī period corresponds to the introduction or expansion of Buddhism in this region of Southeast Asia, but also to the development of trade routes established from the early centuries of the Common Era, for the transportation of precious woods, metals, and rare goods. Historically, the Three Pagodas Pass is one of the main overland routes between lower Myanmar and western Thailand through which Buddhism entered the territory of present-day Thailand during the early centuries CE. Similarly, the abundance of Dvāravatī remains in the lower Mae Klong river valley seems to suggest that, in the first millennium, there was a trade route between the Bay of Bengal and the Gulf of Thailand by way of the Three Pagodas Pass. We know how Buddhism and commercial exchanges were closely associated, often using the same axis. The Dvāravatī culture has deeply structured the territories where it spread, through the establishment of a communication network to link its main principalities and possibly to support trade between the Gulf of Muttama (Martaban) and the Gulf of Thailand up to the South China Sea.

Thus, all these Buddhist locations are steps on the trade routes that Jayavarman VII had sought to control in order to take advantage for the benefit of his kingdom's economic development. Often neglected in the historical analysis of the reign, the economic point of view appears as a main parameter of the empire's power.

Economic Analysis and Land Use Planning

In terms of natural resources, the territories under Khmer domination include the majority of river plains, lowlands fertilised by the silty flooding of major rivers (Multzer o'Naghten 2011: 138-141). In the central regions of Thailand, a long alluvial corridor is drained by the Chao Phraya river's tributaries, while the lowlands are organised around the Delta and receive sediments from the Mae Klong river and

the Bang Pakong river. In the northeast, the Mun river watering the Khorat Plateau is enriched by Mekong river silts (Multzer o'Naghten 2011: 134-137).

In addition to their agricultural value, these regions have metal resources which are sorely lacking in Cambodia. In the west, Kanchanaburi province is famous for its lead mines (Pottier 1997: 198), and tin is extracted in the Tenasserim chain. The Chao Phraya river valley is rich in natural and highly sought products such as eagle wood, lacquer, oleoresin, teak and pepper. Near Lop Buri, iron deposits were exploited (Jacq-Hergoualc'h 2004: 100), while the Watthana plain contains rich enough lead, tin and gold veins (Geiringer 1891: 27-34). There are again tin and iron on the Khorat Plateau (Dagens 1994: 46), which is also the hub of huge salt production related to the salted fish traffic between Phimai and Angkor (Hendrickson 2007: 244-245). However, it appears highly unlikely that the economic power of Cambodia was based on trading. The geographical position of the kingdom, enclosed between mountain barriers which do not help transversal itineraries, and disadvantaged by a very short coastline, does not facilitate its integration into the intense activity which increased in Southeast Asia from the tenth century onwards. From the eleventh and twelfth centuries on, the Khmer rulers, must have been fully aware of the problem, and presumably tried to remedy the situation and to assert themselves in trading networks. From the economic point of view, the expansionist policy in which they got involved, by coercive ways or by the changing of alliances, had a doubly specific purpose: firstly, to annex territories rich in natural resources which they needed and secondly, to conquer maritime accesses. In the eleventh and twelfth centuries, the different attempts by the Khmer kings were not particularly successful. Therefore, Jayavarman VII adopted a different policy. He understood that it was not enough to conquer accesses to the sea in order to integrate maritime networks, but that he should also extend his domination over all the communications networks and especially on the water routes connected to the three main basins which are those of the Chao Phraya river, the Mun river and the Tonle Sap, part of the Mekong river's system (Multzer o'Naghten 2011: 363-368).

To impose itself in the circle of major trading powers, the region of Cambodia needed to turn its continental central position within mainland Southeast Asia to its advantage. The movement of goods in the interior (harvested products and manufactured goods) could only flow according to specific routes and crossing points. By controlling these strategic points and by levying customs duties, the kingdom might have flourished significantly under the condition that it kept control of the entire network. In this context, land use planning was organised on control points and crossroads situated at intersections of land routes and rivers. In the light of this analysis, the geographical location of some of Jayavarman VII's foundations can be better understood (Multzer o'Naghten 2011: 368-374).

The first key point located in the most western region is the great temple of Mueang Sing, connecting the western routes related to the Ayeyarwady (Irrawaddy) river basin via the Three Pagodas Pass. There are also those sites deployed in the lower Chao Phraya river valley towards Ratchaburi and Phetchaburi. These cities, firmly established in the commercial traffic for centuries, offered, moreover, a real interest because they led to the sea through the Gulf of Thailand. From Phetchaburi in particular, which functioned as an inland port overlooking the Gulf of Thailand, it was possible to join the cities situated on the northeastern coast of this gulf and the South China Sea (Wolters 1960) **[Map 2]**. Going north, from Kosinarai to Sukhothai, "Bayon style" monuments and sculptures confirm, from place to place, Jayavarman VII's dominion over the Chao Phraya river basin. The Khmer presence at Lop Buri assured the rule over the junction between the Chao Phraya river valley and that of the Pasak river, space controlled to the north by Sukhothai (Lunet de Lajonquière 1904: 246). On the other hand, Lop Buri also ensures the transition, via the Chai Badan's threshold, between the Chao Phraya river valley and that of the Mun river which extends east up to the Mekong and the Champassak plain. On the Khorat Plateau, around Prasat Hin Phimai and Prasat Phanom Wan, two main poles of communication of the region, hospital chapels and "houses of Fire" are located in the vicinity of the most currently used Dangrek's passes, such as Chong Ta Ko and Chong Samet **[Map 1]**. In addition, there is the pass at Pak Chong leading to Prachin Buri province, and that of Chong Ta Ko, enabling the reach of the Watthana's threshold, the single passage in the plain giving access to the Tonle Sap and Angkor. Prachin Buri's area, where remains of the time of Jayavarman VII has been discovered, especially at Prasat Sa Morakot, is another hub of this network which communicates by waterways with Lop Buri and leads to the Gulf of Thailand via the Bang Pakong's valley, another commercial corridor (Lunet de Lajonquière 1909: 245).The location of some of Jayavarman VII's most important monuments seem to fit judiciously in the mesh of a vast communication network much used by merchants for centuries, covering a wide area where traffic between isolated regions can be made only through some corridors and narrow passages. The control of these roads and the levy of taxes (nature tolls) certainly assured to the ruler in command, a source of considerable revenue.[13]

Conclusion

King Jayavarman VII has often been seen, paradoxically, as a megalomaniac despot who led his country to ruin, on the one hand, and, on the other hand, as a Buddhist and altruistic sovereign concerned with the happiness and welfare of his subjects.

The study of the considerable archaeological material dating from his time analysed on the scale of the territory under his control, the largest ever area that a Khmer kingdom has experienced in its history **[Map 2]**, reveals other aspects of this reign that reflect the real historical and human dimensions of this king. In this context, the position held by pre-modern Thailand in this vast empire illustrates perfectly the main guidelines of the royal policy based on a highly efficient system of land use planning that had remarkably integrated all variables, geographical, human and economic, in order to ensure its optimal management.

In this centralised organisation, large urban centres played the role of administrative, economic, and religious relays of the political power. All were connected to the capital city, Angkor (Yaśodharapura), by a network of overland or fluvial communication channels which allowed

control over the provinces, but also trade flows transiting through strategic accesses, and contributed to the wealth development and the kingdom's prosperity. Moreover, the numerous Buddhist foundations testify to the royal policy conducted in the field of religion as much for the spread of Buddhism as for federating the dominated territories under this religious royal patronage.

Finally, by means of this policy implemented throughout his kingdom, and by controlling sites and regions of significant importance, politically, economically or religiously, Jayavarman VII hoisted his empire up among the greatest powers of Asia at the turn of the thirteenth century.

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Appendix 1:
List of "Hospital Chapels" in Thailand [see Map 1]

No. 1: Prasat Hin Mueang Kao or Prasat Mueang Kao (IK. 452), Sung Noen district, Nakhon Ratchasima province.

No. 2: Prasat Ban Prasat (IK. 439), Non Sung district, Nakhon Ratchasima province.

No. 3: Prang Phon Songkhram (IK. 441), Non Sung district, Nakhon Ratchasima province.

No. 4: Prang Ku or Wat Ku (IK. 457), Mueang district, Chaiyaphum province.

No. 5: Prang Ku (unregistered), Ban Thaen district, Chaiyaphum province.

No. 6: Ku Kaeo (Cisark no. 7620), Mueang district, Khon Kaen province.

No. 7: Ku Praphachai (Cisark no. 7619), Nam Phong district, Khon Kaen province.

No. 8: Ku Kaeo or Ku Kaeo Ban Chit (Cisark no. 6214), Ku Kaeo district, Udon Thani province.

No. 9: Ku Phanna (Cisark no. 3889), Sawang Daen Din district, Sakon Nakhon province.

No. 10: Ku Ban Khewa (Cisark no.1190), Mueang district, Maha Sarakham province.

No. 11: Prang Ku (IK. 357), Thawat Buri district, Roi Et province

No. 12: Ku Santarat (IK. 367), Na Dun district, Maha Sarakham province.

No. 13: Ku Phon Rakhang (IK. 363), Kaset Wisai district, Roi Et province.

No. 14: Ku Khanthanam or Ku Ban Dan (IK. 358), Phon Sai district, Roi Et province.

No. 15: Prasat Chom Phra (IK. 380), Chom Phra district, Surin province.

No. 16: Prasat (Sa) Kamphaeng Noi (IK. 372), Mueang district, Si Sa Ket province.

No. 17: Prasat Ban Chaniang (IK. 378), Mueang district, Surin province.

No. 18: Prasat (Ban) Chang Pi (IK. 381), Sikhoraphum district, Surin province.

No. 19: Prasat Tham Chan or Prasat Ban Samo (IK. 393), Prang Ku district, Si Sa Ket province.

No. 20: Prasat Ban Prasat or Prasat Kangaen (IK. 385), Sangkha district, Surin province.

No. 21: Prasat Ta Muean Tot (IK. 373), Phanom Dong Rak district, Surin province.

No. 22: Kuti Ruesi Ban Khok Mueang/Mueang Tam (IK. 404), Prakhon Chai district, Buri Ram province.

No. 23: Kuti Ruesi Nong Bua Rai or Bua Lai/ Phanom Rung (IK. 402), Prakhon Chai district, Buri Ram province.

No. 24: Prasat Khok Ngiu or Prasat Hin Khok Prasat (IK. 410), Pakham district, Buri Ram province.

No. 25: Prang Khon Buri (IK. 422), Khon Buri district, Nakhon Ratchasima province.

No. 26: Prasat Sa Phleng (IK. 433), Chok Chai district, Nakhon Ratchasima province.

No. 27: Prang Ban Prang (Cisark no. 7578), Huai Thalaeng district, Nakhon Ratchasima province.

No. 28: Kuti Ruesi (Noi) (Cisark no. 7577), Phimai district, Nakhon Ratchasima province.

No. 29: Kuti Ruesi (IK. 420), Ban Mai Chaiyaphot district, Buri Ram province.

No. 30: Prasat Nang Ram (IK. 445), Prathai district, Nakhon Ratchasima province.

No. 31: Prasat Ban Noi (Cisark no. 7656), Watthana Nakhon district, Sa Kaeo province.

No. 32: Prasat Sa Morakot (Cisark no. 1311), Si Mahosot district, Prachin Buri province.

Appendix 2:
List of "Houses of Fire" in Thailand [see Maps 1-2]

No. 33: Prasat Ta Muean (Cisark no.7575), Kap Choeng district [formerly Phanom Dong Rak], Surin province.

No. 34: Prasat Thamo (IK. 400), Ban Kruat district, Buri Ram province.

No. 35: Prasat Ban Bu/Phanom Rung (Cisark no. 2422), Prakhon Chai district, Buri Ram province.

No. 36: Prasat Khok Prasat [formerly Prasat Nong Khong] (Cisark no.6048), Nang Rong district, Buri Ram province.

No. 37: Prasat Nong Prong [formerly Prasat Nong Plong] (IK.413), Nang Rong district, Buri Ram province.

No. 38: Prasat Nong Ta Pleng [formerly Prasat Sebo] (IK. 415), Nang Rong district, Buri Ram province.

No. 39: Prasat Huai Khaen (Cisark no.7573), Huai Thalaeng district, Nakhon Ratchasima province.

No. 40: Prasat Ku Sila (Cisark no.7571), Huai Thalaeng district, Nakhon Ratchasima province.

No. 41: Phimai (?), mentioned in K. 908, Phimai district, Nakhon Ratchasima province.

No. 42: Kosinarai (unregistered), Ban Pong district, Nakhon Pathom province **[Map 2]**.

Appendix 3:
List of "Hospital Edicts" in Thailand [cf. Appendix 1]

No. I: Prang Ku (K. 402), Mueang district, Chaiyaphum province [Appendix 1, no. 4].

No. II: Ku Kaeo (K. 1170), Mueang district, Khon Kaen province [Appendix 1, no. 6].

No. III: Prasat Khok Ngiu (K. 386), Pakham district, Buri Ram province [Appendix 1, no. 24].

No. IV: Prang Khon Buri (K. 387), Khon Buri district, Nakhon Ratchasima province [Appendix 1, no. 25].

No. V: Prasat Phanom Wan (K. 395), Mueang district, Nakhon Ratchasima province.

No. VI: Prasat Hin Phimai (K. 952), Phimai district, Nakhon Ratchasima province [Appendix 1, no. 28].

No. VII: Prasat Ta Muean Tot (K. 375), Phanom Dong Rak district, Surin province [Appendix 1, no. 21].

No. VIII: Unknown provenance (SR 4 = K. 1115), Prasat district, Surin province

No. IX: Unknown provenance (SR 6), Mueang district, Surin province.

No. X: Ku Khanthanam (unregistered), Phon Sai district, Roi Et province [Appendix 1, no. 14].

No. XI: Ku Phon Rakhang (unregistered), Kaset Wisai district, Roi Et province [Appendix 1, no. 13].

No. XII: Prasat Tham Chan (unregistered), Prang Ku district, Si Sa Ket province [Appendix 1, no. 19].

Endnotes

1 Several Sanskrit inscriptions of the Khmer prince Citrasena (later King Mahendravarman) have been found in different provinces of northeast Thailand. See Vickery (1998: 71-75); also Lorrillard, this volume.

2 This essay is drawn from my doctoral dissertation submitted at Paris 3-Sorbonne nouvelle under the supervision of Michel Jacq-Hergoualc'h (Multzer o'Naghten 2011: 125-416).

3 Contra Groslier (1980: 41-42).

4 One hundred and two hospital chapels are quoted in the Ta Prohm stele (K. 273, st. 117) and one hundred and twenty-one "houses of Fire" appear in the Preah Khan stele (K. 908, st. 126).

5 See Appendix 1, nos. 7, 8, 9, 20, and 27.

6 See Appendix 1, nos. 1, 5, 13, 14, and 23. Rungrot, however, erroneously identifies chapel no. 5 as IK. 433 which actually corresponds to chapel no. 26. To be totally accurate, most of the aforementioned monuments have already been identified by B.-P. Groslier during his investigations conducted in Thailand between 1973 and 1975 (Groslier 1980), in collaboration with the Fine Arts Department of Thailand (FAD). Several FAD reports also provide relevant surveys and information, but unfortunately they are written in Thai and are, therefore, inaccessible to most researchers who do not read this language.

7 Claude Jacques (1993: 39) enumerates seven steles [Appendix 3, nos. I-VII] and an additional one for which he did not know the name, located near Surin. Jacques perhaps referred to one of the inscriptions registered in Thailand as SR 4 (K. 1115) or SR 6 with no precise provenance [Appendix 3, nos. VIII-IX]. More recent discoveries have also been made since the 1990s. Two stone edicts were found in 2002 in Roi Et province, respectively at Ku Khanthanam, Phon Sai district, and Ku Phon Rakhang, Kaset Wisai district (Phimphan 2546; Appendix 3, nos. X-XI), and one edict of the third category was excavated in 2008 near Prasat Tham Chan (IK. 393) in Prang Ku district, Si Sa Ket province (Kongkaeo 2553; Appendix 3, no. XII). I thank Nicolas Revire for these new references published only in Thai.

8 These are kept at the Prachin Buri National Museum and received the following K. accession numbers for the inscriptions: K. 1052 for the mirror support in crescent shaped, K. 1053 for the conch, K. 1054 and K. 1055 for the round and oval bowls, and K. 1056 for the tetrapod support of a conch.

9 K. 1052 and K. 1056, from Ban Khok Pip, are both donations made from Jayavarman VII, respectively in 1192 and 1193 CE (Boisselier 1972: 46-47), as well as K. 973, offered in 1192 CE at the hospital named Vīrendrapura, today Prasat Khok Ngiu (Cœdès 1937-66: VII, 154). K. 1054 and K. 1055, from Ban Khok Pip (Prasat Sa Morakot), are dated 1187-88 CE (Boisselier 1972: 47).

10 Woodward (1994-95) has proposed to identify images of Jayabuddhamahānātha with the "radiating" Lokeśvara. This hypothesis is not really convincing, however, for a Bodhisattva cannot be considered a Buddha in Cambodia. See also Jacques (2005).

11 I thank Christophe Pottier for drawing my attention to this fact.

12 Jacques notes that only the hospital stele found in Phimai belongs to the second category.

13 Christoval de Jaque remarks that "the Laos paid tribute of one tenth of their mines, herds, and agricultural products, which one should probably interpret as a customs duty levied on merchandise passing through Cambodia" (Groslier 2006: 123).

References

Aymonier, Étienne
1901 *Le Cambodge II. Les provinces Siamoises*. Paris: Ernest Leroux.

Boisselier, Jean
1965 Récentes recherches archéologiques en Thaïlande. Rapport préliminaire de mission 1965 (25 juil.- 28 nov. 1964). *Arts Asiatiques* 12: 125-174.

1969 Travaux de la mission archéologique française en Thaïlande II. Rapport sommaire de la mission 1965 (juil.- nov. 1966). *Arts Asiatiques* 20: 47-98.

1972 Travaux de la mission archéologique française en Thaïlande (juil.- nov. 1966). *Arts Asiatiques* 25: 28-90.

1974 *La sculpture en Thaïlande*. Fribourg: Office du Livre. [With contributions of J.M. Beurdeley]

Cœdès, George
1906 La stèle de Ta-Prohm. *Bulletin de l'École française d'Extrême-Orient* 6(2): 44-82.

1940 Études cambodgiennes. XXXIV. Les hôpitaux de Jayavarman VII. *Bulletin de l'École française d'Extrême-Orient* 40(2): 344-347.

1941 La stèle du Práh Khăn d'Aṅkor. *Bulletin de l'École française d'Extrême-Orient* 41: 255-302.

1960 Le portrait dans l'art khmèr. *Arts Asiatiques* 7(3): 179-198.

1937-66 *Inscriptions du Cambodge*. Eight Volumes. Hanoi-Paris: École française d'Extrême-Orient.

Dagens, Bruno
1993 Centralisme et architecture : les hôpitaux de Jayavarman VII en Thaïlande. In Silpakorn University (ed.), *Deuxième symposium franco-thaï : récentes recherches en archéologie en Thaïlande*. Bangkok: Silpakorn University, pp. 24-35.

1994 Recherches archéologiques franco-thaï dans la Thaïlande du Nord-Est. Les fouilles de Muang Champasi. *Compte-rendu de l'Académie des Inscriptions et Belles Lettres* 138: 43-67.

Geiringer, G.
1891 Excursion dans les provinces de Péchim et de Korat, royaume de Siam. *Bulletin de la Société des Études Indochinoises* (1891): 27-34.

Groslier, Bernard-Philippe
1980 Prospection des sites khmers du Siam. In *Coûts et profits en archéologie*. Sophia-Antipolis: CNRS, Centre régional de publications, pp. 33-61. [Reprinted in *Mélanges sur l'archéologie du Cambodge*, Paris: École française d'Extrême-Orient, 1997, pp. 189-220].

2006 *Angkor and Cambodia in the Sixteenth Century*. Bangkok: Orchid Press. [Originally published as *Angkor et le Cambodge au XVI^e siècle*, Paris: PUF, 1958]

Hendrickson, Mitch
2007 *Arteries of Empire. An Operational Study of Transport and Communications in Angkor, South-East Asia (9th to 15th Centuries CE)*. Doctoral Dissertation. Sydney: University of Sydney. [Unpublished]

2010 Historic Routes to Angkor: Development of the Khmer Road System (Ninth to Thirteenth Centuries AD) in Mainland Southeast Asia. *Antiquity* 84: 480-496.

Jacq-Hergoualc'h, Michel
2004 *Le Siam*. Paris: Les Belles Lettres.

Jacques, Claude
1993 Les repères de l'Empire de Jayavarman VII en Thaïlande. In Silpakorn University (ed.), *Deuxième symposium franco-thaï : récentes recherches en archéologie en Thaïlande*. Bangkok: Silpakorn University, pp. 36-41.

2005 Deux problèmes posés par l'inscription de la stèle de Praḥ Khan K. 908. *Aséanie* 15: 11-32.

Jarunee Inshurdchai
2534 Phra phothisat lokesuan pleng rasami: nai phiphithaphan sathan haeng chat ratchaburi/ A Bodhisattva Avalokitesvara Image with Rays of Light in the National Museum of Changwat Ratchaburi. *Silpakorn Journal* 34(3): 23-36. [In Thai and English; 1991 CE]

Kongkaeo Wiraprachak
2553 Charuek prasat tham chan (The Tham Chan Sanctuary Inscription). *Silpakorn Journal* 53(4): 33-45. [In Thai with English Abstract; 2010 CE]

Lunet de Lajonquière, Étienne Edmond
1902 *Inventaire descriptif des monuments du Cambodge, volume I*. Paris: Ernest Leroux.

1907 *Inventaire descriptif des monuments du Cambodge, volume II*. Paris: Ernest Leroux.

1909 Le domaine archéologique du Siam. *Bulletin de la Commission Archéologique de l'Indochine* (1909): 188-262.

Mollerup, Asger
2012 *Ancient Khmer Sites in Eastern Thailand*. Bangkok: White Lotus Press.

Multzer o'Naghten, Hedwige
2011 *Les fondations de Jayavarman VII : l'aménagement d'un territoire et son interprétation historique et religieuse*. Doctoral Dissertation. Paris: Paris 3-Sorbonne Nouvelle. [Unpublished]

Phasook Indrawooth
2009 Un antique royaume urbanisé de Thaïlande. In Baptiste, Pierre & Zéphir, Thierry (eds), *Dvāravatī : aux sources du bouddhisme en Thaïlande*. Paris: Réunion des musées nationaux, pp. 31-45.

Phimphan Phaibunwangcharoen
2546 Phop mai charuek phra chao chaiyoworaman thi chet ik song lak thi changwat roi et (The Discovery of Two Inscriptions of Jayavarman VII in Roi Et). *Silpakorn Journal* 46(4): 44-49. [In Thai with English Abstract; 2003 CE]

Pichard, Pierre
1976 *Pimay : étude architecturale du temple*. Paris: École française d'Extrême-Orient.

Pottier, Christophe
1997 Nouvelles données sur les couvertures en plomb à Angkor. *Bulletin de l'École française d'Extrême-Orient* 84: 183-201.

Rungrot Phiromanukun
2547 Arokhayasan: khwamru thua pai lae kho sang ket bueang tan (Arogyasala: The Hospitals of Jayavarman VII). *Muang Boran* 30(3): 15-54. [In Thai with English Abstract; 2004 CE]

Smitthi Siribhadra, Moore, Elisabeth H. & Freeman, Michael
1992 *Palaces of the Gods: Khmer Art and Architecture in Thailand*. Bangkok: River Books.

Suriyavudh Suksvast, M.R.
2526a Prasat mueang sing (Prasat Muang Singh, Part 1). *Muang Boran* 9(2): 90-103. [In Thai with English Summary; 1983 CE]

2526b Prasat mueang sing (Prasat Muang Singh, Part 2). *Muang Boran* 9(3): 102-111. [In Thai with English Summary; 1983 CE]

Vickery, Michael
1998 *Society, Economics, and Politics in Pre-Angkor Cambodia: The 7th-8th Centuries*. Tokyo: The Centre for East Asian Cultural Studies for Unesco/The Toyo Bunko.

Wolters, Oliver W.
1960 Chên-Li-Fu. A State of the Gulf of Siam at the Beginning of the 13th Century. *Journal of Siam Society* 48(2): 1-35.

Woodward, Hiram, Jr
1994-95 The Jayabuddhamahānātha Images of Cambodia. *The Journal of the Walters Art Gallery* 52/53: 105-111.

2011 Cambodian Images of Bhaisajyaguru. In Bunker, Emma C. & Latchford, Douglas (eds), *Khmer Bronzes: New Interpretations of the Past*. Chicago: Art Media Resources, pp. 497-502.

Websites

Carte interactive des sites archéologiques khmers (Cisark): http://www.site-archeologique-khmer.org

The Inscriptions in Thailand Database Project: http://www.sac.or.th/databases/inscriptions

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