

Junko Habu
Peter V. Lape
John W. Olsen
Editors

Handbook of East and Southeast Asian Archaeology

 Springer

Handbook of East and Southeast Asian Archaeology

Junko Habu · Peter V. Lape
John W. Olsen
Editors

Alisha M. Eastep
Managing Editor

Handbook of East and Southeast Asian Archaeology

 Springer

Editors

Junko Habu
Department of Anthropology
University of California, Berkeley
Berkeley, CA
USA

Managing Editor

Alisha M. Eastep
East Asian Archaeology Laboratory
University of California
Berkeley, CA
USA

Peter V. Lape
Department of Anthropology
University of Washington
Seattle, WA
USA

John W. Olsen
School of Anthropology
University of Arizona
Tucson, AZ
USA

ISBN 978-1-4939-6519-9

ISBN 978-1-4939-6521-2 (eBook)

DOI 10.1007/978-1-4939-6521-2

Library of Congress Control Number: 2017932627

© Springer Science+Business Media, LLC 2017

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Printed on acid-free paper

This Springer imprint is published by Springer Nature

The registered company is Springer Science+Business Media LLC

The registered company address is: 233 Spring Street, New York, NY 10013, U.S.A.

For Akira Matsui (1952–2015), whose work on zooarchaeology and wetland archaeology formed the foundation for international collaborations between Japan and the rest of the world, and Michael (Mike) Morwood (1950–2013), whose discovery of Homo floresiensis amazed the world, and whose work in Indonesia and Australia inspired a generation of archaeologists.

Acknowledgements

This *Handbook* depended on the generous contributions of writing from our many chapter authors. We thank them for sharing their unique perspectives with us, and for their patience over the long gestation period of this book, without both of which this *Handbook* would never have been completed. For critical financial assistance with translations of chapters written in languages other than English, we thank the Henry Luce Foundation, particularly program officer Helena Kolenda. Funding for translation and editorial work was also provided by the 'Long-term Sustainability through Place-Based, Small-Scale Economies: Approaches from Historical Ecology' Project (R-09-14200084) of the Research Institute for Humanity and Nature, Japan. Thanks are also to Beth Cary, who translated the Sakurai chapter from Japanese to English, and Yuko Kobayashi and Maira Brondizio, who proofread many chapters. We thank Martina L. Steffen (University of Arizona) for her assistance in editing early drafts of the China chapters. We owe an enormous debt of gratitude to Teresa Krauss who solicited this volume and guided it through many previous iterations, as well as her colleagues at Springer Press, especially Hana Nagdimov. Finally, the editors wish to express our profound thanks to Managing Editor Alisha Eastep, who handled the incredibly complex editing and author correspondence duties with aplomb and supreme efficiency. Thanks to all!

Preface

Archaeology as both a theoretical discipline and a field of practice has undergone enormous growth and change in East and Southeast Asia during the past quarter century. In spite of that rapid development, the larger regional and inter-regional approaches adopted by archaeologists working in many other areas of the world have not been fully implemented in East and Southeast Asia. The reasons for this lag are multifarious, ranging from disparate social science paradigms that underlie archaeological interpretation to the realities of greatly differential knowledge of the basic culture histories of the region.

Historically, China and Japan have dominated most discussions of East Asian archaeology in the West. This is primarily because China's territory comprises such a large portion of the eastern Eurasian landmass and its archaeologists have been very active since the 1950s in exploring the links between material culture and the social theories that might be used to explain human behavior while, in Japan, archaeologists benefitted from the global integration of that country's economy beginning in the 1960s. China and Japan, in particular, were incorporated into the mainstream international academic community arguably faster and more thoroughly than many other sub-regions of East and Southeast Asia, further enhancing their visibility to Western scholars.

On the other hand, many, if not most, areas in the region have either had extremely limited resources with which to pursue prehistoric archaeological research, or their guiding intellectual paradigms have placed little value on such internationalization. In some places, both of these factors have molded the shape of archaeological practice as well as the social theories that underpin it.

In considering the rationale for organizing this volume, we have envisioned a text which addresses not only the facts of prehistory as they are currently known across a very broad swath of eastern Eurasia and the Pacific Basin, but also situates those facts within the polyvalent historical development of archaeology as a discipline of social science inquiry in the region. Thus, we have sought out authors and topics to fill glaring lacunae in our collective knowledge of East and Southeast Asian prehistory while simultaneously giving voice to local scholars with respect to emphasizing topics and interpretive realms that they consider most salient.

We have attempted to conscientiously avoid merely assigning topics to particular authors, and we offered only the gentlest direction by way of recommending themes and topics that we felt had a high probability of being of interest to the widest spectrum of Western archaeologists. Such topics include but are not restricted to: basic culture history and chronology, the historical basis for the practice of archaeology in each sub-region included in the book, discussion of the dominant theoretical frameworks that have guided each scholar's work and reflection about the ways in which each territory's archaeological record might be articulated with that of the region as a whole. In several cases, we have invited non-indigenous scholars to provide integrative overviews of regionally cross-cutting themes to begin to establish the framework of a regional perspective most familiar to archaeologists trained in the West within an anthropological paradigm.

As we approach the end of the second decade of the twenty-first century, we believe most sub-regions of East and Southeast Asia have developed sufficiently broad and deep understandings of their own archaeological sequences to merit the production of a volume such as this. As the title implies, the *Handbook* focuses on the archaeology of East and Southeast Asia. In assembling its contents, we were faced with a number of interrelated dilemmas with respect to where and how to draw lines of inclusion and exclusion. As a first-order approximation, we employed modern geopolitical boundaries to determine the scope of the book's contents, further refined by the ethnohistoric distribution of culturally and linguistically distinct peoples (e.g., the prehistory of the Mongols is of interest whether they live in China, Mongolia, or Russia). Simultaneously, practical limitations of space and time also helped determine our answers to questions like (to name just a few by way of example): "If Mongolia is included, why not the rest of Central Asia?", "How come so much of the Russian Far East west of Primorye wasn't included?", "What about the Pacific Basin outside of the territory traditionally included within Insular Southeast Asia?", and "Why not include contributions from scholars in the Democratic People's Republic of Korea?". These specific questions, and myriad similar queries, while perfectly legitimate, could not all be answered from a single perspective or based on one universally applicable rationale. Frankly, some specific areas that we had planned to include were not in the end due largely to the lack of response from the author(s) invited to participate, some of whom assertively promised chapters but never replied to subsequent inquiries. Ultimately, we opted to move forward with the *Handbook's* production, acknowledging the timely contributions of many authors whose completed chapters were in hand by early 2015.

We faced such challenges recognizing the trade-offs with respect to specific areas covered and contributors included. We readily acknowledge having to omit much valuable work and important perspectives. But we also recognize that this text is a *handbook*, not an encyclopedia, and that the useful shelf-life of behavioral interpretations of archaeological data is measured in months or, maximally, years rather than some longer time-frame. Our decision to configure this work as a handbook was based on our vision of the text as a resource for scholars at many levels, ranging from advanced

university undergraduates to peer colleagues with an interest in, but little knowledge of, the archaeology of this vast region. We also hope that the *Handbook* will serve as a catalyst for enhanced communication and collaboration among indigenous scholars in East and Southeast Asia. Nothing would please us more than to tackle the daunting task of overseeing the production of a revised and updated version of the *Handbook* in just a few short years!

This *Handbook* is the result of protracted and intensive interaction between the editors and individual authors. Our editorial philosophy was predicated upon the notion that our sole responsibilities were to establish and maintain the highest academic standards for each contribution and to assist each author clearly express their own perspective on the archaeology of their own regions. With the authors' full knowledge and consent, we have standardized some terminology and edited contributions where English-language competence prevented individuals from clearly and adequately expressing complex ideas. We have taken great pains *not* to alter any author's emphases or the information they impart in order to render as accurately as possible both the style and content of their contributions.

Obviously, one problem inherent in producing a handbook such as this lies in the linguistic realm of common meaning. We have chosen to default to the use of toponyms as well as the names of people, dynasties, etc. that are most likely to be familiar to the widest range of Western English-language dominated users rather than trying to achieve absolute uniformity in the systems of romanization employed.

By way of explanation, editorial policy dictates the use of "BC" (Before Christ) and "AD" (anno Domini) as cross-cultural chronometric markers rather than the less Abrahamic "BCE" (Before the Common Era) and "CE" (Common Era) that are in preferential use in world regions where indigenous religious traditions have either been abandoned at the state level or were never based on a knowledge of or belief in Jesus Christ.

Berkeley, USA
Seattle, USA
Tucson, USA

Junko Habu
Peter V. Lape
John W. Olsen

Contents

| | | |
|------------------------------------|---|------------|
| 1 | Introduction | 1 |
| | Junko Habu, Peter V. Lape and John W. Olsen | |
| Part I History and Practice | | |
| 2 | Japanese Archaeology Today: New Developments, Structural Undermining, and Prospects for Disaster Archaeology | 11 |
| | Junko Habu and Katsuyuki Okamura | |
| 3 | Archaeologizing "Korean Heritage": Cultural Properties Management and State Tourist Development | 27 |
| | Hyung Il Pai | |
| 4 | A History of Chinese Archaeology | 39 |
| | Li Liu | |
| 5 | A History of Mongolian Archaeological Studies | 59 |
| | Byambaa Gunchinsuren | |
| 6 | The Archaeology of Vietnam | 79 |
| | Nam C. Kim | |
| 7 | The Position of Cambodian Archaeology in Current Sociopolitical Context | 83 |
| | Piphal Heng and Kaseka Phon | |
| 8 | The History and Practice of Archaeology in Laos | 89 |
| | Ben Marwick and Bounheung Bouasisengpaseuth | |
| 9 | The History and Practice of Archaeology in Thailand | 97 |
| | Rasmi Shoocongdej | |
| 10 | The History and Practice of Archaeology in Myanmar | 111 |
| | Geok Yian Goh | |
| 11 | The Archaeology of Singapore | 119 |
| | John N. Miksic | |

| | | |
|--|---|-----|
| 12 | A History of Archaeology in Malaysia | 125 |
| | Stephen Chia | |
| 13 | The Archaeology of Indonesia | 143 |
| | Truman Simanjuntak | |
| 14 | An Outlined History of Philippine Archaeology and Its Periodization | 151 |
| | Victor Paz | |
| Part II Early Occupations of Asia | | |
| 15 | The Early Human Occupation of East and Southeast Asia | 159 |
| | Ryan J. Rabett | |
| 16 | Paleolithic Archaeology in Japan | 195 |
| | Fumiko Ikawa-Smith | |
| 17 | Paleolithic Archaeology in Korea | 219 |
| | Kidong Bae | |
| 18 | Paleolithic Research in China | 241 |
| | Xing Gao, Ying Guan, Xin Xu and John W. Olsen | |
| 19 | The Early Occupation of Taiwan | 277 |
| | Wei-chun Chen | |
| 20 | The Development of Prehistoric Archaeology in Mongolia | 293 |
| | Byambaa Gunchinsuren | |
| 21 | Early Occupation of Southeast Asia: Dental-Skeletal Evidence | 309 |
| | John Krigbaum | |
| Part III Changing Human-environment Relations from Late Pleistocene to Early Holocene | | |
| 22 | The Development of Pottery and Associated Technological Developments in Japan, Korea, and the Russian Far East | 321 |
| | Simon Kaner and Yasuhiro Taniguchi | |
| 23 | Human Ecology of the Early Neolithic Kuahuqiao Culture in East Asia | 347 |
| | Yan Pan, Yunfei Zheng and Chun Chen | |
| 24 | The Preagricultural Human Occupation of Primorye (Russian Far East) | 379 |
| | Alexander N. Popov and Andrei V. Tabarev | |
| 25 | Early Pottery in Island Southeast Asia | 397 |
| | Mary Clare Swete Kelly | |

**Part IV Villages, Towns, and Cities: Development
of Cultural and Social Complexity**

- 26 **Plant Domestication in East Asia** 421
Gary W. Crawford
- 27 **Subsistence, Sedentism, and Social Complexity among
Jomon Hunter-Gatherers of the Japanese Archipelago** 437
Naoko Matsumoto, Junko Habu and Akira Matsui
- 28 **The Chulmun Period of Korea: Current Findings
and Discourse on Korean Neolithic Culture** 451
Gyoung-Ah Lee (이경아, 李炅娥)
- 29 **The Middle and Late Neolithic Periods of China:
Major Themes, Unresolved Issues, and Suggestions
for Future Research** 483
Anne P. Underhill
- 30 **The Dian and Dong Son Cultures** 503
Alice Yao
- 31 **The Development of Cultural and Social Complexity
in Mongolia** 513
William Honeychurch
- 32 **Transportation and the Anomaly of Road Systems
in Medieval Mainland Southeast Asia** 533
Mitch Hendrickson
- 33 **The Development of Urban Places in Southeast Asia** 547
John N. Miksic

Part V Centers, Peripheries, and Interaction Networks

- 34 **The Yayoi and Kofun Periods of Japan** 561
Koji Mizoguchi
- 35 **Mumun, Proto-Three Kingdoms, and Three Kingdoms
in Korea** 603
Sarah Milledge Nelson and Juliette Neu
- 36 **Farmer and Forager Interactions in Southeast Asia** 619
Laura Lee Junker and Larissa M. Smith
- 37 **Cultural Interactions in Mainland and Island Southeast
Asia and Beyond, 2000 BC-AD 200** 633
Hsiao-chun Hung
- 38 **Island Southeast Asia and Oceania Interactions** 659
Glenn R. Summerhayes

Part VI The Transition to History

| | |
|---|------------|
| 39 Archaeology of Early-Modern Japan: Food, Rituals, and Taboos. | 677 |
| Jun'ya Sakurai | |
| 40 The Historical Ecology of Colonialism and Violence in Hokkaido, Sakhalin, and the Kuril Islands, AD 1200–1900 | 695 |
| Mark James Hudson | |
| 41 The Archaeology of Mongolia's Early States. | 707 |
| Byambaa Gunchinsuren | |
| 42 Origins of Ethnolinguistic Identity in Southeast Asia | 733 |
| Roger M. Blench | |
| Index | 755 |

The History and Practice of Archaeology in Thailand

9

Rasmi Shoocongdej

Thailand has a long and complex history regarding the investigation of the past through the material remains discovered during the “pre-modern era,” long before the introduction of scientific archaeology in the nineteenth century. Archaeological tradition in Thailand developed differently than in the west with close ties to Buddhism and the formation of nation-states. The traditional archaeology of Thailand is a part of history, thus historical approaches are the primary approaches in archaeological research in Thailand. However, modern Western archaeology was introduced after World War II, and consequently, the development of archaeological research in Thailand has been directly influenced and effected by Western archaeology since then.

Recently, the increased influence of globalization has directly impacted the archaeology of Thailand. Archaeology has become very important for economic development and nationalism in Thailand. Accordingly, increasing interest in the protection, conservation, restoration, and rescue of archaeological sites, which is more closely tied to recent history, has been a major concern for Thailand. This concern is only becoming more relevant with the growth of international tourism in the capitalist world.

This chapter provides a history of the development of archaeology in Thailand in the past and present from a local perspective. In particular, the paper will focus on the roles of social, political, and economic impacts on the development of research practices, and the current status of archaeological knowledge.

9.1 Historical Perspectives

It should be pointed out that I have already discussed the impact of Western colonialism and nationalism in contemporary archaeology in Thailand elsewhere, and how these have impacted archaeological theories and practices today (Shoocongdej 1992: 2–4, 2007, 2011a). Therefore, I will not address these concerns in this paper. Rather, I will briefly touch on related topics. Here, I will divide the discussion into three broad periods: the First Stage (circa the fifteenth–eighteenth centuries AD), the Establishment of Archaeology (circa the nineteenth–twentieth centuries AD) and Modern Archaeology.

R. Shoocongdej (✉)

Department of Archaeology, Faculty of Archaeology, Silpakorn University, Bangkok, Thailand
e-mail: rasmi@su.ac.th

9.2 The First Stage: Local Tradition

Before the development of modern archaeology, the Thai perception of the past related to its historical period and religious ideology (Ketdhut 1995). There are two traditional types of historiography: the *Tamnan*, which focused on the Buddhist order, and *Pongsawadan*, which focused on the royal courts. The *Tamnan* were written between the fifteenth and seventeenth centuries. They are stories, legends, and myths of the history of Buddhism. In contrast, the *Pongsawadan* are chronological records of major events in each reign, and focused on members of a dynasty or kingdom. They were written between the beginning of the seventeenth to the middle of the nineteenth centuries (Kasetsiri 1976; Peleggi 2002). Both the *Tamnan* and *Pongsawadan* provide clear concepts of chronological time and geographical space.

In Thailand, a practical awareness of these periods is exemplified by conservation and restoration work, guided by a framework of Buddhist faith. This has been the case for quite some time, for example in the Sukhothai period (circa AD 1429–1463), when monks gathered pieces of old Buddha images that were left in different places to be repaired and restored. There is evidence of the restoration of the Thapachan Khan Temple in the late Ayutthaya period (circa AD 1357–1767). In the early Rattanakosin (Bangkok) period (circa AD 1767–1851), there was a law that imposed criminal penalties for violating religious relics and institutions, including stealing with intent to sell Buddha images or the looting of stupas (Vallibhotama 1987). It is important to note that the first development stage may not meet the traditional definition of the concept of archaeology in the West but rather concerns itself with the conservation and restoration of the Buddhist faith in a similar spirit.

Archaeological methods were first used in Thailand (or “Siam,” at that time) by King Mongkut, also known as King Rama IV, when he was a priest during King Rama III’s reign. He investigated and excavated the foundation of Pra Phathom Chedi in Nakon Phatom, western Thailand around 1831. Later, in 1833, he carried out a general survey in northern Thailand and discovered the first “Thai” inscription from the Sukhothai period, dated to 1292 at the Sukhothai province (Wan Wait-hayakon 1965). This significant event and subsequent discovery marked the establishment of what would later be known as archaeology in Thailand, and King Mongkut was a pioneer who tried to combine conventional historical accounts with archaeological evidence. At that time the body of knowledge available was limited to the Sukhothai period, and no systematic study was implemented. These surveys and excavations aimed to study the history of Siam and the origins of its people.

9.3 The Establishment of Archaeology: European Influence

Between the nineteenth and early twentieth centuries, when most Southeast Asian countries had fallen under the control of Western colonial powers, Thailand was under the reign of King Chulalongkorn, also known as King Rama V (1868–1910) (Steinberg 1987). The study of archaeology was slowly developing in 1874, when the King set up the Palace Museum in order to exhibit artifacts and gifts to show the British and French that Thailand was as civilized as Western nations and that its cultural traditions had a long, sustained history (Davis 1989). In 1904 the Siam Society was founded by Royal Thai elites in conjunction with both Westerners who worked in the government as missionaries and those in the private sector. Their goal was to conduct research on people, nature and, ancient history (Davis 1989; Ketdhut 1995). At the same time, the French school of the Far-East (*Ecole Française d’Etrême Orient*) was founded in Hanoi, Vietnam in 1901. This organization served as a training institution for French “orientalists,” and later for indigenous scholars who had a strong link to the development of historical archaeology in Thailand. Early French archaeological research in the region was closely tied to its history and the history of its art, oriented towards typology, monumental

architecture, and epigraphical research (Audouze and Leroi-Gourhan 1982: 170–183). Near the end of his reign, on the second of December 1907, King Chulalongkorn founded the Archaeology Society (or Boran Kadi Samosorn) on the ruins of Ayutthaya. He made a statement at the society's first meeting that the origins of Thailand should date back a thousand years to the Dvaravati kingdom (Ketdhutai 1995: 33; Peleggi 2002: 133–161).

With the exception of the Ecole Française d'Extrême Orient's influence on Thai historical archaeology, archaeological work during this period did not undergo much Western influence because Thai scholars focused on collecting historical accounts and writing historiographies of Thailand. The most influential person at the time was Prince Damrong Rajanupab, the King's brother and a Minister of the Interior, who was interested in archaeology. He wrote a large number of books on historical archaeology and art history while visiting the ruins of the countryside of Thailand. Later he was named a father of Thai history (Kachachiva 2013). Therefore, the early development of archaeology in Thailand started from an antiquarian interest in and search for Thai's roots.

During the twentieth century, King Vajiravudh, also named Rama VI (1910–1925), and who studied history and civil law at Christ Church College at the University of Oxford, England between 1899 and 1901, came into power. Due to his interest in archaeology and history, he founded the Royal Academy, comprised of three sections: the library, archaeology section and museum, and the fine arts section. Prince Damrong Rajanupab was appointed the Director in charge of establishing the National Museum of Bangkok and named to the Council of the Vajiranana National Library. George Cœdès was appointed the Secretary General of the Royal Academy in 1926 and worked closely with Prince Damrong Rajanupab to establish the cultural chronology of museum exhibitions based upon the classification of artifacts, art objects, and stone inscriptions as compared to known Cambodian chronology (Chavalit 2003). In 1911, he created the Royal Thai Fine Arts Department, and incorporated the museum into this new department.

In 1927, under King Prajadhipok, also known as King Rama VII, the Royal Thai Fine Arts Department was merged into the Royal Academy. In terms of archaeological activities, as Secretary General of the Royal Academy, Cœdès excavated the Pong Tuk site, Kanchanaburi province, in western Thailand, then later also excavated by H.G. Quaritch Wales (Clarke 2012; Indrawooth 1999). Both of them brought to light and extended the knowledge of Dvaravati as an early state formed in the Thailand area specifically and a part of Southeast Asian civilization generally. It is important to note that the cultural chronology used then is still being used in the study of historical archaeology in Thailand. It was broken down to the following periods: Dvaravati, Srivijaya, Lopburi, Sukhothai, Ayutthaya, and Bangkok (Ketdhutai 1995; Vallibhotama 1987). In 1929, Cœdès resigned from the Secretary General of the Royal Academy to resume his work as a director of the Ecole Française d'Extrême-Orient in Hanoi (Chavalit 2003). It can be said that his involvement was critical to linking the archaeology of Thailand within the larger Indo-China context. At the same time, there were a few prehistoric studies carried out by foreigners, for example when Lunet de Lajonquière surveyed rock art sites in Krabi, Southern Thailand in 1912 (You-Di 1986), as well as Eric Seidenfaden's surveys of cave sites in the Surathani province, Southern Thailand (Charoenwongsa 1982), and when Sarasin (1933) surveyed caves in Northern and Central Thailand. In sum, the majority of studies conducted at the time focused on historical archaeology, art history, and history, while there was relatively little interest concerning prehistoric times.

In 1932, prior to World War II, there was a revolution that transformed the political institution in Thailand from an absolute to a constitutional monarchy. Many royal families left Thailand, including Prince Damrong Rajanupab, who was exiled to Penang, Malaysia where he met P.V. van Stein Callenfels and became deeply interested in prehistoric archaeology in his later life. Prince Damrong Rajanupab used the term prehistory for the first time in his famous book, *Sam Somdet*. This was the

starting point of prehistoric studies in Thailand (Charoenwongsa 1982; Ketdhat 1995; Shoocongdej 2013).

There are three important figures in the early development of prehistoric archaeology in Thailand. First is P.V. van Stein Callenfels, a Dutch archaeologist who worked in Indonesia for the Archaeological Service of the Dutch East Indies and who played an important role in the development of prehistoric archaeology in Southeast Asia and Thailand. He organized the First Far-Eastern Prehistory Congress in 1932 in Hanoi, Vietnam, of which George Cœdès served as chair. The congress eventually evolved into the Far-Eastern Prehistory Association and changed its name to the Indo-Pacific Prehistory Association in 1976. The 1932 meeting was the first attempt to foster prehistory and archaeological activities in this region (Solheim 1957: 6–9). These organizations, no doubt, have had a tremendous impact on the development of Southeast Asian archaeology in general, and especially on the establishment of a cultural chronology in Thailand. It is important to keep in mind that prior to World War II, prehistoric research in Southeast Asia was in its beginning stages. Accounts of cultural history, therefore, were generally developed by arranging the archaeological data of a small number of individual sites in Burma, Malaysia, Indonesia, and Vietnam into tentative cultural sequences that were then extrapolated to the whole region, as well as by correlating similar artifacts of different groups of people endowed with distinctive cultures (see Heine-Geldern 1932; Movius 1955).

Prehistoric archaeology in Thailand did not truly develop until after WWII. An important figure in the post-WWII development of prehistoric archaeology in Thailand is H.R. van Heekeren, a Dutch official in Indonesia, who was a prisoner of war working on the Japanese railroad in the Kanchanaburi province (van Heekeren 1948). Another important early figure who was active during WWII was Peter Williams-Hunt, an English aerial photographic interpreter who served with the Royal Air Force. During his service, he took a lot of aerial photographs and reported a series of circular earthworks that turned out to reveal important information related to the moated sites of northeastern Thailand (Williams-Hunt 1950). His work was later studied by Elizabeth Moore (1986).

It is important to note that a year after the political institution changed, the Royal Thai Fine Arts Department was restructured once again, first under the Ministry of Education and finally under the Ministry of Culture in 2002. Its role will be discussed at length in the next section. In sum, it is clear that archaeology in Thailand has been directly influenced by the European cultural-historical approach, especially regarding its diffusion and migration theories. The methodology of the time was mainly based on the description and classification of artifacts. The interpretations of historical archaeology in Thailand are closely related to archaeological interpretations of Burma, Cambodia, and Indonesia. Pioneering scholars in the field believed that the origin and growth of early Southeast Asian civilizations of the historic period arose from ancient Indian and Chinese cultures (Cœdès 1968), while prehistoric archaeology was still in its early development stage.

9.4 Modern Archaeology

By World War II, modern archaeology had been introduced in Southeast Asia, and archaeology rapidly developed throughout the region in the years following the war (see the works of Glover 2001; Higham 1989; Higham and Thosarat 1998, 2012; SPAFA 1987 for examples). The development of modern archaeology in Thailand can be divided into two major phases: the first phase, between 1960 and 1980, and the second phase, between 1981 and the present.

9.4.1 First Phase (1960–1980)

There was no systematic training for archaeologists until 1955 when the Faculty of Archaeology at Silpakorn University (hereafter, the Faculty) was formally founded. The primary objective of the Faculty was to train professional archaeologists and educators whose work related closely to archaeology and Thai cultural heritage. As a result, the majority of students from the department ended up working there after their graduation. The Siam Society supported the first prehistoric research venture the Faculty conducted in Thailand in 1959–1960 in Kanchanaburi, western Thailand; a joint Thai-Danish Expedition, led by Chin You-Di from the Thai side and van Heekeren from the Danish side (van Heekeren and Knuth 1967). The first generation of Thai archaeology students of the Faculty of Archaeology was trained by the Thai-Danish project at the Neolithic Ban Kao site in Kanchanaburi, western Thailand, (Sørensen and Hatting 1967). Chin You-Di (1986) was later named a father of Thai prehistory; he has been the most influential prehistoric archaeologist in Thailand (though he never had any formal training in archaeology) and was involved in the development of prehistoric research in the Fine Arts Department and the Department of Archaeology through several collaborative projects with Western archaeologists at the Ban Kao, Sai Yok, Kok Charoen, Ban Don Ta Phet, and Ban Chiang sites. As the discipline developed, systematic techniques for surveying, excavation, and data processing have been introduced.

At the same time in central Thailand, a Thai-British joint Archaeological Expedition to excavate Khok Charoen, an Iron Age site, was being led by William Watson and Helmut E. Loofs-Wissowa (Watson and Loofs-Wissowa 1967). Additionally, Bennett Bronson excavated the Chan Sen site, a Late Prehistoric/Early Historic site, as a part of his Ph.D. dissertation at the University of Pennsylvania (Bronson 1976, 1979). In Northeast Thailand during 1963–6, the Thai-Hawai'i Archaeological Salvage Program was underway, instituted by the Royal Thai Fine Arts Department and the Department of Anthropology at the University of Hawaii, led by Wilhelm G. Solheim II, and which carried out multiple survey and excavations. One key site excavated was at the Non Nok Tha site by Solheim's Ph.D. student, Don Bayard, providing evidence of early Thai bronze production methods (Bayard 1969, 1971; Solheim 1963, 1970). Yet another of his Ph.D. students, Chester Gorman, carried out his survey and excavation at the Spirit cave in Northwest Thailand, and addressed the issue of plant domestication (Gorman 1970, 1977). The results of these studies have strongly impacted the next generation of Thai and foreign archaeologists.

Another turning point for modern archaeology was when the Ford Foundation provided support to strengthen local Southeast Asian communities' efforts to protect and conserve their own heritage through the training program and collaborative archaeological project, named the Thai-Pennsylvania project, led by Chester Gorman and Pisit Charoenwongsa. Under this project, excavations were carried out at the Ban Chiang site in 1974 though 1975 (Gorman and Charoenwongsa 1976; White 1982). Additionally as part of this program, some prominent Thai archaeologists were given an opportunity to study at American universities such as the University of Pennsylvania. These archaeologists included Pthomrerk Ketdhutut (a former lecturer at the Department of Sociology and Anthropology, Thammasat University), Rachanie Thosarat (a former archaeologist at the Royal Thai Fine Arts Department who later pursued her Ph.D. at the University of Otago, New Zealand), Sahawat Nanna (a former Director General of the Royal Thai Fine Arts Department), Surapol Natapintu (a former associate professor at the Department of Archaeology, Silpakorn University), and Surin Pookajorn (a former professor at the Department of Archaeology, Silpakorn University). Later in the 1980s, the Thai-New Zealand research program began, led by Amphan Kijngam and Charles Higham in northeastern Thailand, during which a number of Thais went to study for their M.A. and Ph.D. at the University of Otago, such as Pirapong Pisanupong for a M.A. degree, and Amphan Kijngam and Rachanie Thosarat for their Ph.D. degrees. In sum, most archaeological work prior to

the 1980s were about the European cultural-historical approach, and were aimed to establish the local and regional chronologies of Thailand, although anthropological approaches were also introduced by American archaeologists.

9.4.2 Phase II (1981–Present)

In recent years, there has been an increase in the number of well-trained Thai archaeologists holding M.A. and Ph.D. degrees from Australia, England, France, Germany, India, New Zealand, Thailand, and the United States, along with more collaboration between Southeast Asian countries and more research projects being conducted by Thai archaeologists themselves (e.g., Fine Arts Department 1988; Jirawattana 2003; Kanjanajuntorn 2006; Lertrit 2002, 2003; Natapintu 1997; Onsuwan 2006; Pookajorn 1984; Rajapitak 1983; Shoocongdej 2000, 2007; Srisuchat 2001; Suchitta 1983; Vallibhotama 1982). Between 1982 and 1987, the Royal Thai Fine Arts Department set up the Thailand Archaeology Project, aimed at documenting sites in the entire country. Over several hundred sites were discovered, which consequently produced 50 publications that were mostly in Thai languages (Lertchanrit 2014).

Perhaps the most recent development in archaeological research in Thailand is the increasing shift towards interdisciplinary research methods and the application of scientific analyses and technology (see Charoenwongsa 1982; Higham and Thosarat 2012; Lampert et al. 2002; King 2006; Shoocongdej 2006; White et al. 2004). Evidently, there has been a broad expansion of theoretical frameworks and methodologies. In particular, methodologies have been increasingly imported from Western archaeology. As a result, the archaeological methods of survey, excavation, data recording, and analysis are currently highly developed in Thailand. Archaeological research, therefore, now carries both an inductive and deductive approach (such as in Dixon 1993). Nevertheless, the classification and typology of artifacts from major excavated sites are still the principal archaeological methods for correlating cultural chronology in Thailand (Hutterer 1982; Shoocongdej 1996, 2011a).

Thailand has had a high number of research collaborations with foreign archaeologists and institutions, for examples the Thai-British project carried out an excavation at Ban Don Thaphet, a late prehistoric site in western Thailand (Glover 1983, 1990; You-Di 1986), the Thai-Australian project conducted a survey of a shipwreck site in the Gulf of Thailand (Green et al. 1981; Green and Harper 1983), the Thai-New Zealand project carried out archaeological surveys and excavations in northeast Thailand (at Ban Na Di, Non U-Loke and Non Wat sites) and eastern Thailand (Khok Phanom Di, Non Nor) at different times (Higham 1989; Higham and Thosarat 1994, 2005, 2012), the Thai-American expedition carried out paleoanthropology projects in northern Thailand (Pope et al. 1981, 1986), and many Thai-French projects have proceeded in different teams and at different times in North Thailand, for instance the excavations at Ob Laung, Ban Wang Hai, and Huai Hin, all prehistoric sites (Pautrau et al. 2001; Santoni et al. 1986; Zeitoun et al. 2008), and at Khao Sam Kaeo, a protohistoric site in southern Thailand (Bellina 2007; Bellina and Glover 2004; Bellina and Silapanth 2006; Bellina-Pryce and Silapanth 2008).

In terms of archaeological knowledge and interpretations, earlier works have definitely had an influence on the present. However, lately there is a shift towards a theory of the independent origins and the internal developments of cultures in the region; for example, the development of agriculture (Gorman 1977; Solheim 1970). Clearly, cultural-historical explanations are still powerful interpretations within Thailand's archaeological theories. As an example, the migration of populations is still a favored explanation for culture change based on formal typological criteria. Also, there is still an underlying assumption that cultural changes from one "stage" to another occur in a uniform sequence, both in time and space (Bellwood 1997; Higham 1996).

In terms of organizations, the Royal Thai Fine Arts Department (FAD) and Thai universities are the major institutions involved in archaeological research. The Division of Archaeology within the FAD is primarily responsible for conducting archaeological research and is in charge of the registration, restoration, and preservation of all archaeological sites in the country. On the other hand, the universities (for example, Chiang Mai University in northern Thailand, Khon Kean University in northeastern Thailand, and Silpakorn University and Thammasat University in Bangkok) tend to prioritize teaching or providing general public education. In particular, the Department of Archaeology, Silpakorn University, is the only institution in Thailand providing direct training to those interested in advancing to the Ph.D. level in archaeology. It therefore plays an active role in archaeological research. Most research focuses on the prehistoric and historic periods, ethnoarchaeology and cultural resource management, which have been carried out by faculty members. B.A., M.A., and Ph.D. students have produced thousands of theses. At present, the government uses archaeology for tourist promotion since the economic benefits from the tourist industry are robust. The majority of the FAD budget is used to maintain and restore archaeological monuments, and only a small amount of money is left for doing genuine research projects (Shoocongdej 2011a).

Furthermore, due to the economic crisis in Thailand, cultural tourism has played an important role in archaeological investigations. In recent years, most Southeast Asian countries boost their local economies through the promotion of heritage tourism. But the damage and destruction of cultural resources has increased with the expansion of industry, urbanization, and tourism (Shoocongdej 2011b). Therefore, most archaeological work, unfortunately, has focused on salvage or rescue archaeology (such as in Lertchanrit 2014). The conservation and restoration of historical sites and the development of historical parks are given top priority. Meanwhile, further archaeological research has been placed on a second- or third-tier priority. Consequently, the survey and excavation of archaeological sites have been increasingly conducted through contract archaeology and not necessarily through academic institutions. To date, there are no standard guidelines or regulations to govern consultant companies in Southeast Asia; therefore, many sites have been damaged by ill-advised preservation efforts. As a result, a large quantity of data has been quickly produced from rescue archaeology, with very little concern for providing detailed analyses and final reports.

9.5 Global and Local Archaeological Issues

Generally speaking, the reconstruction of the history of Thailand has continually been influenced by a Western framework as depicted in archaeological textbooks (Bellwood 1997; Higham 1996; Higham and Thosarat 1998, 2012; Natapintu 2007a). Admittedly, I am aware that there are many research projects being carried out in Thailand by local archaeologists, I have chosen to address only the key issues relating to the reconstruction of cultural history in Thailand. Given the available evidence that has been conducted by Thai and foreign archaeologists over the decades, I would like to lay out the following issues concerning the archaeology of Thailand in relation to Southeast Asian and Global contexts.

First, regarding Pleistocene archaeology, particularly on early hominids and middle-Pleistocene culture, there have been very few research projects carried out (such as Marwick 2009; Pope 1988; Pramankij et al. 2001; Sørensen 2001; Zeitoun et al. 2008). In recent years, various aspects of Late and Post Pleistocene research have been undertaken in Thailand concerning the issues of mobility organization, lithics technology, and paleoenvironments (Anderson 1990; Marwick 2008; Marwick and Gagan 2011; Moser 2001; Pookajorn 1991, 1994; Reynolds 1989; Santoni et al. 1986; Shoocongdej 1996, 2000; White et al. 2004; Zeitoun et al. 2008). Our understanding of early human occupation in Thailand remains rather limited and has been progressing slowly.

Second, the issue of the origins of agriculture had been brought to Southeast Asia by Gorman in the 1960s (Gorman 1977). At the same time, the study of metallurgy has relatively increased in number as a result of the discovery of bronze at the Non Nok Tha and Ban Chiang sites in north-eastern Thailand in the 1970s. More diverse theoretical frameworks and methodologies have been applied beyond the cultural-historical framework including bioarchaeology (Oxenham and Tayles 2006; Pietrusewsky and Douglas 2002; Tayles 1992), archaeometry (Lampert et al. 2002), archaeo-metallurgy (Pryce et al. 2006), paleoenvironment (Penny 1998; White et al. 2004) and settlement patterns (Welch 1985; Welch and McNeill 1991; Wilen 1987), though an explanatory model of the origins of agriculture and metallurgy itself has received very little attention from Thai archaeologists. However, greater emphasis has been placed on technological and typological aspects, for instance the classifications of lithic, polished axes, pottery, Dong Son drums, and metal implements are currently the most popular research topics by Thai's archaeologists (Fine Arts Department 1988; Jirawattana 2003). In contrast, the issues of agricultural origins and metallurgy in the Thai region have been followed closely by Western archaeologists (as seen in Bellwood 1997, 2004; Higham 1996; Higham et al. 2011; Pigott and Ciarla 2007; Weber et al. 2010; White and Hamilton 2009; White and Pigott 1996). For instance, general models of the origin of agriculture and metallurgy are tied to migrations of people of Austronesian and Austro-Asiatic origin. Interpretations of cultural diffusion and migration are still used as an explanation of population movements along with the introduction of rice cultivation by Austronesian and Austro-Asiatic speakers and metallurgy by Austro-Asiatic speakers from China to Southeast Asia between 3000 and 1500 B.P. (Bellwood 1997; Higham 1996). It should be noted that the body of archaeological knowledge of the late prehistoric period has been expanded greatly and has significantly contributed to global prehistory.

Third, the development of complex societies, especially during the transition from the proto-history period to early state formation are the primary concern of Western and some Thai archaeologists (see Bellina 2007; Bellina and Silapanth 2006; Bellina-Pryce and Silapanth 2008; Higham 1996; Higham and Thosarat 2012; Indrawooth 1999, 2004; Khunsong et al. 2011; Noonsuk 2009). There is also new research that examines previous studies of the past, such as the reinterpretation of the Dvaravati culture studies (Barram and Glover 2006; Clarke 2012; Mudar 1999, 2003; Revire and Murphy 2014). Rather, Thai archaeologists are more interested in technological developments and trade route networks of diagnostic artifactual types (Dong Son drums, glass beads, bronze artifacts), which were widely distributed throughout the region (Chaisuwan and Naiyawat 2007).

Fourth, it is important to point out that there were very few foreign researchers (Grave 1995; Green et al. 1987; Guy 1987; Kealhofer and Grave 2008) working on historical archaeology, particularly after the thirteenth century AD (the Sukhothai, Lanna, Ayutthaya, Thonburi, and Bangkok periods). The French art historical approach still influences Khmer-period archaeology in Thailand, especially in iconographical and architectural studies (Suksawasdi 1989). In contrast, a considerable amount of research on this period has been conducted by Thai archaeologists on diverse issues such as the maritime Silk Road, the economy of Sukhothai and Ayutthaya and the development of Thonburi (Prishanchit 1989; Srisuchat 1996; Suteerattanapirom 2012; Vallibhotama 1989). These periods relate to the recent history of Thailand and are the main interest of the general public.

Finally, another important phenomenon observed in the development of archaeology in Thailand is cultural heritage management, which has received increasing attention from Thai archaeologists, including contract archaeology, community-based archaeology, and public archaeology (Lertchanrit 2014; Natapintu 2007b; Prishanchit 2005; Shoocongdej 2011b).

In sum, the practice of archaeology in Thailand has made great progress, and a noticeable amount of important discoveries and research have been made representing the all stages of cultural development, from the pre to recent history of Thailand. It is fair to say that recent research in Thailand

during the 1970s to the 2000s have contributed to the body of knowledge of Southeast Asian archaeology and to our discipline at large. However, Thai archaeologists are more locally focused on their own cultural developments, with the intention of tracing the historical roots of their own societies and the ancestral links between specific cultures (Glover 1993, 2001; Shoocongdej 2011b). There is still less concern with the global comparative framework or on studying the origins and cultural development of humankind in a broader context. Here especially, we see different questions being asked by Thai and foreign archaeologists.

References

- Anderson, D. D. (1990). *Lang Rongrien rockshelter: A pleistocene-early holocene archaeological site from Krabi, southwestern Thailand*. Philadelphia: University Museum Monograph, University of Pennsylvania.
- Audouze, F., & Leroi-Gourhan, A. (1982). France: A continental insularity. *World Archaeology*, 2, 170–189.
- Barram, A., & Glover, I. (2006). Re-thinking of Dvaravati. In J. P. Pautreau, A. S. Coupey, V. Zeitoun, & E. Rambault (Eds.), *From Homo erectus to the living tradition* (pp. 175–182). Chiang Mai: Siam Ratana Ltd.
- Bayard, D. (1969). Excavation at Non Nok Tha, Northeastern Thailand, 1968; An interim report. *Asian Perspectives*, 13, 109–143.
- Bayard, D. (1971). *A course toward what? Evolution, development and change at Non Nok Tha, NE Thailand*. Ph.D. dissertation, Department of Anthropology, University of Hawaii, Honolulu.
- Bellina, B. (2007). *Cultural exchange between India and Southeast Asia: Production and distribution of hard stone ornaments (VI c. BC–VI c. AD)*. Paris: Éditions de la Maison des sciences de l'homme.
- Bellina, B., & Glover, I. (2004). The archaeology of early contact with India and the mediterranean world, from the fourth century BC to the fourth century AD. In I. Glover & P. Bellwood (Eds.), *Southeast Asia from prehistory to history* (pp. 68–88). London and New York: RoutledgeCurzon.
- Bellina, B., & Silapanth, P. (2006). Khao Sam Kaeo and the upper Thai peninsula: understanding the mechanism of early trans-Asiatic trade and cultural exchange. In E. A. Bacus, I. C. Glover, & V. C. Pigott (Eds.), *Uncovering Southeast Asia's past* (pp. 379–392). Singapore: National University Press.
- Bellina-Pryce, B., & Silapanth, P. (2008). Weaving cultural identities on trans-Asiatic networks: Upper Thai-Malay peninsula—an early socio-political landscape. *Bulletin de l'Ecole Française de Extrême-Orient*, 93, 257–293.
- Bellwood, P. (1997). *Prehistory of the Indo-Malaysian archipelago* (2nd ed.). Honolulu: University of Hawaii Press.
- Bellwood, P. (2004). The origins and dispersals of agricultural communities in Southeast Asia. In I. C. Glover & P. Bellwood (Eds.), *Southeast Asia: From prehistory to history* (pp. 21–40). London: RoutledgeCurzon.
- Bronson, B. (1976). *Excavation at Chansen and the cultural chronology of protohistoric central Thailand*. Ann Arbor: UMI.
- Bronson, B. (1979). The late prehistory and early history of central Thailand with special reference to Chansen. In R. B. Smith, & W. Watson (Eds.), *Early South East Asia: Essays in archaeology, history and historical geography* (pp. 315–336). New York: Oxford University Press.
- Chaisuwan, B., & Naiyawat, R. (2007). *Tung Tuk: The ancient port*. (In Thai). Bangkok: Fine Arts Department.
- Charoenwongsa, P. (1982). Introduction. In *Discovery of a lost bronze age Ban Chiang* (pp. 8–11). Philadelphia: University of Pennsylvania Press.
- Chavalit, M. (2003). Prof. George Coedès-Chief Librarian The Vajirana National Library. In *George Coedès and Thai studies* (pp. 53–64). Bangkok: Documentation Centre for Franco-Thai Studies.
- Clarke, W. S. (2012). *Return to P'ong Tuk: Preliminary reconnaissance of a seminal Dvaravati site in west-central Thailand*. M.A. thesis, Center for International Studies, Ohio University.
- Coedès, G. (1968) The Indianized States of Southeast Asia. In W. F. Vella (Ed.), *Sue brown cowing*. trans. Honolulu: The University Press of Hawaii.
- Davis, B. (1989). *The Siam Society under five reigns*. Bangkok: Amarin Printing Group.
- Dixon, C. (1993). *Southeast Asian in the world-economy: A regional geography*. Cambridge: Cambridge University Press.
- Fine Arts Department. (1988). *Archaeology of four regions*. (In Thai). Bangkok: Fine Arts Department.
- Glover, I. C. (1983). Archaeological survey in west-central, Thailand: A second report on 1982–1983 field season. *Asian Perspectives*, 5(1), 83–109.
- Glover, I. C. (1993). Other people's past: Western archaeologists and Thai prehistory. *Journal of Siam Society*, 80(1), 45–53.

- Glover, I. C. (1990). Ban Don Ta Phet: The 1984–85 excavation. In I. C. E. Glover (Ed.), *Southeast Asian archaeology 1986* (pp. 139–183). Oxford: Oxford British Archaeological Reports.
- Glover, I. C. (2001). Archaeology, nationalism and politics in Southeast Asia. *Hukay*, 3(1), 37–62.
- Gorman, C. (1970). *Prehistoric research in North Thailand: A culture-chronographic sequence from the late pleistocene to the early recent period*. Ph.D. dissertation, Department of Anthropology, University of Hawaii.
- Gorman, C. (1977). A priori models and Thai prehistory: A consideration of the beginnings of agriculture in Southeast Asia. In Charles A. Reed (Ed.), *Origins of agriculture* (pp. 321–355). The Hague: Mouton.
- Gorman, C. F., & Charoenwongsa, P. (1976). Ban Chiang: A mosaic of impressions from the first two years. *Expedition*, 8, 14–26.
- Grave, P. (1995). Beyond the Mandala: Buddhist landscapes and upland-lowland interaction in north-west Thailand AD 1200–1650. *World Archaeology*, 27(2), 243–265.
- Green, J. N., Harper, R., & Prishanchittara, S. (1981). *The excavation of the Ko Kradat wreck site, Thailand, 1979–80*. Special Publication. Department of Maritime Archaeology, Freemantle: Western Australian Maritime Museum.
- Green, J. N., & Harper, R. (1983). *The excavation of the Pattaya wreck site, Thailand and survey of three other sites, Thailand, 1982*. Special Publication no. 1. Sydney: Australian Institute for Maritime Archaeology.
- Green, J. N., Harper, R., & Intakosi, V. (1987). *The Ko Si Chang three shipwreck excavation 1986*. Special Publication no. 4. Sydney: Australian Institute for Maritime Archaeology.
- Guy, J. S. (1987). *Ceramic excavation sites in Southeast Asia: A preliminary Gazetteer*. Paper no. 3. Adelaide: University of Adelaide, Research Centre for Southeast Asian Ceramics and Art Gallery of South Australia.
- Heine-Geldern, R. (1932). *Ancient Homeland and early wandering of the Austronesians*. Pieter van de Velde, Trans. *Anthropos* 27:543.
- Higham, C. F. W. (1989). *The archaeology of Mainland Southeast Asia*. Cambridge: Cambridge University Press.
- Higham, C. F. W. (1996). *The bronze age of Southeast Asia*. Cambridge: Cambridge University Press.
- Higham, C. F. W., Higham, T., Ciarla, R., Douka, K., Kijngam, A., & Rispoli, F. (2011). The origins of the bronze age of Southeast Asia. *Journal of World Prehistory*, 24(4), 227–274.
- Higham, C. F. W., & Thosarat, R. (1994). *Khok Phanom Di: Prehistoric adaptation to the world's richest Habitat*. Fort Worth, Philadelphia: Harcourt Brace College Publishers.
- Higham, C. F. W., & Thosarat, R. (1998). *Prehistoric Thailand*. Bangkok: River Books.
- Higham, C. F. W., & Thosarat, R. (2012). *Early Thailand from prehistory to Sukhothai*. Bangkok: River Books.
- Higham, C. F. W., & Thosarat, R. (Eds.). (2005). *The origins of the civilization of Angkor: The excavation of Ban Lum Khao* (Vol. I). Bangkok: Fine Arts Department.
- Hutner, K. L. (1982). Early Southeast Asia: Old wine in new skins?—A review article. *Journal of Asian Studies*, 41(3), 559–570.
- Indrawooth, P. (1999). *Dvaravati: A critical study based on archaeological evidence*. Bangkok: Aksorn Samai.
- Indrawooth, P. (2004). The archaeology of the early Buddhist kingdoms of Thailand. In P. S. Bellwood & I. Glover (Eds.), *Southeast Asia: From prehistory to history* (pp. 120–148). London: RoutledgeCurzon.
- Jirawatana, M. (2003). *The bronze Kettledrums in Thailand*. (In Thai). Bangkok: The Office of National Museum, Fine Arts Department.
- Kachachiva, J. (2013). Archaeology from his handwriting. In R. Shoocongdej (Ed.), *150 years of prince Damrong Rachanuphap and development of archaeology in Thailand* (pp. 57–76). [In Thai]. Bangkok: Charansanitwong Printing.
- Kanjanajuntorn, P. (2006). *Developing social complexity in metal age west-central Thailand ca. 500 BC–AD 500*. Ph.D. dissertation, Department of Archaeology, University of Bristol.
- Kasetsiri, C. (1976). *The rise of ayutthaya: A history of Siam in the fourteenth and fifteenth centuries*. Kuala Lumpur: Oxford University Press.
- Kealhofer, L., & Grave, P. (2008). Land use, political complexity, and Urbanism in Mainland Southeast Asia. *American Antiquity*, 73(2), 200–225.
- Ketdhat, P. (1995). Development of archaeology in Thailand. [In Thai]. *Muang Boran*, 21(1–4), 15–44.
- Khunsong, S., Indrawooth, P., & Natapintu, S. (2011). Excavation of a pre-Dvaravati site at Hor-Ek in ancient Nakhon Pathom. *Journal of the Siam Society*, 99, 150–171.
- King, C. A. (2006). *Paleodietary change among pre-state metal age societies in Northeast Thailand: A stable isotope approach*. Ph.D. dissertation, Department of Anthropology, University of Hawai'i.
- Lampert, C. D., Glover, I., Heron, C., Stern, B., Shoocongdej, R., & Thompson, G. B. (2002). The characterization and radiocarbon dating of archaeological resins from Southeast Asia. In K. A. Jakes (Ed.), *Archaeological chemistry materials, methods, and meaning* (pp. 84–109). Washington D.C.: American Chemical Society.
- Lertcharit, T. (2014). Cultural heritage management in Thailand. In C. Smith (Ed.), *Encyclopedia of global archaeology* (pp. 7287–7293). New York: Springer.
- Lertrit, S. (2002). Some notes on new data from recent archaeological excavations in the Pasak River Valley. *Central Thailand. Silpakorn University International Journal*, 2(1), 119–135.

- Lertrit, S. (2003). On chronology-building for central Thailand through and attribute-based ceramic seriation. *Asian Perspectives*, 42(1), 41–71.
- Marwick, B. (2008). Human behavioural ecology and stone artefacts in northwest Thailand during the terminal Pleistocene and Holocene. In J. P. Pautreau (Ed.), *From homo erectus to the living traditions. Choice of papers from the 11th international conference of the European Association of Southeast Asian archaeologists* (pp. 37–49). Chiang Mai: Siam Ratana.
- Marwick, B. (2009). Bugeography of middle pleistocene hominins in mainland Southeast Asia: a review of current evidence. *Quaternary International*, 202, 51–58.
- Marwick, B., & Gagan, M. K. (2011). Late pleistocene monsoon variability in northwest Thailand: An oxygen isotope sequence from the bivalve *Margaritanopsis ladosensis* excavated in Mae Hong Son province. *Quaternary Science Reviews* 30(3), 088–093, 098.
- Moore, E. H. (1986). *The moated Mu'ang of the Mun river basin*. Ph.D. thesis, Institute of Archaeology, University of London.
- Moser, J. (2001). *Hoabinhian, géographie un chronologies eines steinzeitlichen technocomplexes in Südostasien*. Cologne: Linden Soft.
- Movius, H. L. (1955). Palaeolithic archaeology in Southern and Eastern Asia, exclusive of India. *Journal of World History*, 2, 57–523.
- Mudar, K. M. (1999). How many Dvaravati kingdoms? Locational analysis of first millennium A.D. moated settlements in central Thailand. *Journal of Anthropological Anthropology*, 18, 1–28.
- Mudar, K. M. (2003). *Prehistoric and early historic settlements on the Central Plain: Analysis of archaeological survey in Lopburi Province*. Ph.D. dissertation, Department of Anthropology, University of Michigan.
- Natapintu, S. (1997). Current archaeological research in central Thailand. In R. Ciarla, F. Rispoli, & O. Nalesini (Eds.), *Southeast Asian archaeology 1992. Series Orientale Roma 77* (pp. 45–56). Rome: Istituto Italiano per l'Africa e l'Oriente (IsIAO).
- Natapintu, S. (2007a). Contribution of archaeology to the quality of life improvement at the village of Ban Pong Manao, Lopburi province, central Thailand. In *Proceedings of the international seminar on archaeology and nation building* (pp. 2–231). Malaysia: Pusat Penyelidikan Arkeologi Malaysia, University of Sains Malaysia.
- Natapintu, S. (2007b). *Following an ancestor path: Cultural development in prehistory*. (In Thai). Bangkok: Matichon.
- Noonsuk, W. (2009). *The Isthmian civilizations: The significance of Peninsular Siam in the Southeast Asian maritime world*. Saarbrücken, Germany: Lambert Academic Publishing.
- Onsuwan Eyre, C. (2006). *Prehistoric and proto-historic communities in the Eastern Upper Chao Phraya River Valley, Thailand: Analysis of site chronology, settlement pattern and land use*. Ph.D. dissertation, Dept. of Anthropology, University of Pennsylvania.
- Oxenham, M., & Tayles, N. (Eds.). (2006). *Bioarchaeology of Southeast Asia*. Cambridge: Cambridge University.
- Pautreau, J. P., Mornais, P., & Doy-Asa, T. (2001). *Ban Wang Hai: Un cimetière l'âge de Fer en Thaïlande de Nord*. Chiang Mai: Silkorm Books.
- Peleggi, M. (2002). *The politics of Ruins and the business of Nostalgia*. Bangkok: White Lotus Press.
- Penny, D. A. (1998). *Late quaternary palaeoenvironments in the Sakon Nakhon Basin, North-east Thailand*. Doctoral dissertation, Monash University.
- Pietruszewsky, M., & Douglas, M. T. (2002). *Ban Chiang, a prehistoric village site in Northeast Thailand, Volume 1: The human skeletal remains*. Philadelphia: University of Pennsylvania Museum of Archaeology.
- Pigott, V. C., & Ciarla, R. (2007). On the origins of metallurgy in prehistoric Southeast Asia: The view from Thailand. In S. La Niece, D. Hook, & P. Craddock (Eds.), *Metals and mines: Studies in archaeometallurgy* (pp. 76–88). London: British Museum.
- Pookajorn, S. (1984). *The Hoabinhian of Mainland Southeast Asia: New data from the recent Thai excavation in the Ban Kao Area*. Bangkok: Thammasat University.
- Pookajorn, S. (1991). Preliminary report on the excavation at Moh Khiew Cave, Krabi Province, Sakai Cave, Trang province, and ethnoarchaeological study about a minority ground, Sakai in Trang Province. In *The research project on Hoabinhian culture in Thailand* (vol. 1). (In Thai). Bangkok: Department of Archaeology, Silpakorn University.
- Pookajorn, S. (1994). Preliminary report on the excavation at Moh Khiew Cave, Krabi Province, Sakai Cave, Trang province, and ethnoarchaeological study about a minority ground, Sakai in Trang Province. In *The research project on Hoabinhian culture in Thailand* (vol. 2). (In Thai). Bangkok: Department of Archaeology, Silpakorn University.
- Pope, G. G. (1988). Recent advances in Far Eastern paleo-anthropology. *Annual Review of Anthropology*, 17, 43–77.
- Pope, G. G., Barr, S., MacDonald, A., & Nakbunlung, S. (1986). Earliest radiometrically dated artifacts from Southeast Asia. *Current Anthropology*, 27(3), 275–278.
- Pope, G. G., Frayer, D. W., Liangcharoen, M., Kulasing, P., & Nakbunlung, S. (1981). Palaeoanthropological investigations of the Thai-American expedition in northern Thailand (1978–1980): an interim report. *Asian Perspectives*, 21, 147–163.

- Pramankij, S., Subhavan, V., Chongkum, S., Songkla, S. N., Pimjun, S., & Asvavinijkulchai, C. (2001). Preliminary report on the discovery of the oldest prehistoric human remains in Thailand. (In Thai). *Silpawattanatham*, 23, 45–47.
- Prishanchit, S. (1989). *Ceramics from the Gulf of Thailand*. [In Thai]. Bangkok: Smaphan.
- Prishanchit, S. (2005). *Community archaeology: Past management and community development*. (In Thai). Bangkok: Community Archaeology.
- Pryce, T. O., Bellina-Pryce, B., & Bennett, A. T. N. (2006). The development of metal technologies in the upper Thai-Malay initial interpretation of the archaeometallurgical evidence from Khao Sam Kaeo. *Bulletin de l'Ecole Française de Extrême-Orient*, 93, 295–315.
- Rajapitak, W. (1983). *The development of Copper-Alloy metallurgy in Thailand in the pre Buddhist period with special reference to high-tin bronze*. Ph.D. thesis, Institute of Archaeology, University College, London.
- Revire, N., & Murphy, S. A. (2014). *Before Siam: Essays in art and archaeology*. Bangkok: River Books and The Siam Society.
- Reynolds, T. G. (1989). Techno-typology in Thailand: A case study of Tham Khoa Khi Chan. *Bulletin of the Indo-Pacific Prehistory Association*, 9, 33–45.
- Santoni, M., Pautreau, J. P., & Prishanchit, S. (1986). Excavations at Obluang, province of Chaing Mai (Thailand). In Ian C. Glover, & E. Glover (Eds.), *Southeast Asian archaeology* (pp. 37–54). Oxford: British Archaeological Reports International Series S-561.
- Sarasin, F. (1933). Prehistoric researches in Siam. *Journal of Siam Society* 26(1), 118–1, 121.
- Shoocongdej, R. (1992). Conversations across the continent. In E. A. Bacus & R. Shoocongdej (Eds.), *Southeast Asian archaeology international newsletter* (vol. 2, pp. 2–4). Ann Arbor: University of Michigan.
- Shoocongdej, R. (1996). Problem in Thai prehistory: Working toward an anthropological perspectives. *Bulletin of Indo-Pacific Prehistory Association*, 14(1), 119–132.
- Shoocongdej, R. (2000). Late pleistocene forager in seasonal tropical Southeast Asia: a case of Lang Kamnan, western Thailand. *World Archaeology*, 32(1), 14–40.
- Shoocongdej, R. (2006). Late pleistocene activities at the Tharn Lod Rockshelter in Highland Pang Mapha, Mae Hong Son Province, Northwest Thailand. In E. A. Bacus, I. C. Glover, & V. C. Pigott (Eds.), *Uncovering Southeast Asia's Past* (pp. 22–37). Singapore: NUS Press.
- Shoocongdej, R. (2007). Impact of colonialism and nationalism in Thai archaeology. In P. L. Kohi, M. Kozelsky, & N. Ben-Yenhuda (Eds.), *Selective remembrances* (pp. 379–399). Chicago: University of Chicago Press.
- Shoocongdej, R. (2011a). Contemporary archaeology as a global dialogue: Reflections from Southeast Asia. In L. R. Lozny (eds.), *Comparative archaeologies. A sociological view of the science of the past* (pp. 707–730). New York: Springer.
- Shoocongdej, R. (2011b). Public archaeology in Thailand. In K. Okamura & A. Matsuda (Eds.), *New perspectives in global public archaeology* (pp. 95–112). New York: Springer.
- Shoocongdej, R. (2013). Prince Damrong Rachanuphap and prehistoric archaeology. In R. Shoocongdej (Ed.), *150 years of prince Damrong Rachanuphap and development of archaeology in Thailand* (pp. 95–109). [In Thai]. Bangkok: Charansanitwong Printing.
- Solheim, W. G., II. (1957). Southeast Asia (regional report). *Asian Perspectives*, 1(1), 93–100.
- Solheim, W. G., II. (1963). Salvage archaeology in Thailand. *Bulletin of the International Committee on Urgent Anthropological and Ethnological Research*, 6, 39.
- Solheim, W. G., II. (1970). Northern Thailand, Southeast Asia, and world prehistory. *Asian Perspectives*, 13, 145–162.
- Sørensen, P. (2001). A reconsideration of the chronology of the early Palaeolithic Lannatian culture of northern Thailand. *Bulletin of the Indo-Pacific Prehistory Association*, 5, 138–141.
- Sørensen, P., & Hattig, T. (1967). Ban Kao, part 1: The archaeological materials from the Burials. In *Archaeological investigations in Thailand* (vol. II). Copenhagen: Munksgaard.
- (SPAFA) Southeast Project in Archaeology in Fine Arts of Southeast Asian Ministers of Education Organization (SEAMEO). (1987). *SPAFA: Seminar in Prehistory of Southeast Asia (T-W11)*. Bangkok: SPAFA.
- Srisuchat, A. (1996). Merchants, merchandise and markets: archaeological evidence in Thailand concerning maritime trade interaction between Thailand and other countries before the 16th AD. In A. Srisuchat (Ed.), *Ancient trades and cultural contacts in Southeast Asia* (pp. 237–266). Bangkok: Office of the National Cultural Commission.
- Srisuchat, Amara 2001 Southern Root Lineage: Ecological, Physical and Psychological Traits. (In Thai). Bangkok: Thailand Research Fund.
- Steinberg, D. Joel (Ed.). (1987). *In search of Southeast Asia: A modern history*. Honolulu: University of Hawaii Press.
- Suchitta, P. (1983). *The history and development of iron smelting technology in Thailand*. Ph.D. dissertation, Department of Anthropology, Brown University.
- Suksawasdi, S. (1989). *Phanom Rung*. Bangkok: Matichon.
- Suteerattanapirom, K. (2012). Archaeology in the Thonburi Area. *Silpakorn University International of Social Sciences, Humanities, and Arts*, 12(2), 183–199.

- Tayles, N. G. (1992). *The people of Khok Phanom Di: Health as evidence of adaptation in a prehistoric Southeast Asian Population*. A Thesis Submitted for the Degree of Doctor of Philosophy at the University of Otago, Dunedin, New Zealand.
- Waithayakon, W. (1965). *Stone inscriptions of Sukhothai*. Bangkok: Siam Society.
- Watson, W., & Loofs-Wissowa, H. E. (1967). The Thai-British archaeological expedition: A preliminary report on the work of the first season, 1965–1966. *Journal of Siam Society*, 55(2), 237–272.
- Weber, S., Lehman, H., Barela, T., Hawks, S., & Harriman, D. (2010). Rice or millets: Early farming strategies in prehistoric central Thailand. *Archaeological and Anthropological Sciences*, 2(2), 79–88.
- Welch, D. J. (1985). *Adaptation to environmental unpredictability: Intensive agriculture and regional exchange at late prehistoric centers in the Phimai Region, Thailand*. Ph.D. dissertation, Department of Anthropology, University of Hawaii.
- Welch, D. J., & McNeill, J. R. (1991). Settlement, agriculture and population changes in the Phimai region, Thailand. *Bulletin of Indo-Pacific Prehistory Association*, 11, 210–228.
- White, J. C. (1982). *Ban Chiang: Discovery of a lost bronze age*. Philadelphia: University Museum.
- White, J. C., & Hamilton, E. G. (2009). The transmission of early bronze age technology to Thailand: New perspectives. *Journal of World Prehistory*, 22, 357–397.
- White, J. C., Penny, D., Kealhofer, L., & Maloney, B. (2004). Vegetation change from the late pleistocene through the Holocene from three areas of archaeological significance in Thailand. *Quaternary International*, 113, 111–132.
- White, J. C., & Pigott, V. C. (1996). From community craft to regional specialization: Intensification of copper production in pre-state Thailand. In B. Wailes (Ed.), *Craft specialization and social evolution: In Memory of V. Gordon Childe* (vol. 93, pp. 151–175). University Museum Monograph. Philadelphia: University Museum of Archaeology and Anthropology.
- Wilen, R. N. (1987). *The context of prehistoric food production in the Khorat Plateau Piedmont, Northeast Thailand*. Ph.D. dissertation, Department of Anthropology, University of Hawaii.
- Williams-Hunt, P. D. R. (1950). Irregular earthworks in eastern Siam. *Antiquity*, 24, 30–37.
- Vallibhotama, S. (1982). *Archaeological study of lower Mun-Chi Basin*. [In Thai]. Bangkok: Netherlands Engineering Consultants (NEDECO).
- Vallibhotama, S. (1987). *The transition of archaeology from personal memory*. (In Thai). Bangkok: Muang Boran.
- Vallibhotama, S. (1989). *Ancient settlement of sukhothai state*. (In Thai with English Summary). Bangkok: Thammasart University Press.
- van Heekeren, H. R. (1948). Prehistoric discoveries in Siam, 1943–1944. *Proceedings of the Prehistory Society Cambridge*, 14, 24–32.
- van Heekeren, H. R., & Knuth, E. (1967). *Archaeological excavations in Thailand: Sai Yok*. Copenhagen: Munksgaard.
- You-Di, C. (1986). *Prehistoric archaeology in Thailand*. [In Thai]. Bangkok: Rungsilpa.
- Zeitoun, V., Forestier, H., & Nakbunlung, S. (2008). *Préhistories au sud du Triangle d'Or*. Paris: Institut de Recherche pour le Développement.