



Ancient Maritime Cross-cultural Exchanges

Archaeological Research in Thailand





Ancient Maritime Cross - cultural Exchanges Archaeological Research in Thailand



The Fine Arts Department, Ministry of Culture
2019

Ancient Maritime Cross-cultural Exchanges: Archaeological Research in Thailand

The Fine Arts Department, Ministry of Culture, Thailand.

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Image on Front Cover:

Upper left corner: Clay seal depicting a single masted ship with voyagers on board, found at Nakhon Pathom, 5th to 6th century CE

Full Image: A Chinese junk with seven Chinese and a European ship with eight Europeans on board sailing to Ayutthaya, the Siamese capital (1350 - 1767 CE). The illustrated manuscript of Traibhumi (Geography of the Three Worlds) No. 6, late Ayutthaya Period, 17th -18th century CE

Image on Back Cover:

Upper: At the end of the floating ceremony the Urak Lawoi put the Pajak boat into a local longtail boat before launching it to the sea at Ko Lanta Island, Krabi Province. (*Photograph: Courtesy of Mr. Jetkamol Wongtaw*)

Lower: Relief depicting a junk at sea, Candi Borobudur, Magelang, Central Java, Indonesia, 8th century CE

Image on Inner Front Cover:

The aerial photograph, taken from the Pak Khlong Kluay shipwreck

The wreck locates on the beach near Phu Kao Thong, the ancient port site, Ranong Province, the Andaman Coast.

The relation between ancient port and trans-oceanic ship are exemplified by these sites.

(*Photo by Mr. Sira Ploymukda*)

Image on Page 2 (Left page of Preface):

A bird's eye view of a part of the Phang-nga Bay, taken from atop a mount at the Phi Phi Island

(*Photo by Mr. Tharapong Srisuchat*)

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Preface

One of the important missions of the Fine Arts Department is the promotion of the study of the past civilization of our country, and the dissemination of the new knowledge to people in order to take pride in our nation and be aware of the significance of protection of our cultural heritage.

Archaeological research is a means of revealing the mankind's past and fulfilling the missing pages of history. When the project of the international symposium on 'Ancient Maritime Cross-cultural Exchanges of Asia' was planned to be held in Thailand, and organized by the department at the beginning of the year 2019, then in May 2018 the Fine Arts Department assigned 10 archaeologists and 2 curators who have worked and collected data by means of surveys, excavations and scientific analysis of samples at a site or several sites for some years to prepare their research papers that would be presented at the international symposium together with foreign researchers and Thai scholars outside the department.

Prior to distributing their new discovery or new research, the Fine Arts Department provided them with a training course in writing and presenting their research to the international audiences in order to help our field archaeologists and curators to pursue their researches without worrying about writing their papers in English.

The 12 research papers in the book focus on the archaeological findings and remains at archaeological sites in Thailand, particularly recent discoveries at the sites that reflect the maritime cross-cultural exchanges in the past from the beginning of the third century to the eighteenth century CE.

We hope that the papers will attract considerable interest, and will broaden the readers' perspectives and challenge their assumptions.



(Mr. Anandha Chuchoti)
Director-General
The Fine Arts Department



Mr. Anandha Chuchoti

Director - General of the Fine Arts Department,
Ministry of Culture, Thailand

Anandha Chuchoti has served as a Director-General of the Fine Arts Department since 2015. Before becoming the head of this department, he worked in several positions which helped him to equip with professional skills, theoretical knowledge and practical experiences. For instance, in 2014, he gained the ministerial management experience from being the Ministry of Culture's Inspector - General and Deputy Permanent Secretary, respectively. Moreover, he developed his cultural heritage management skills while working as a director of the 6th Regional Office of the Fine Arts Department with the duty of protecting and preserving the archaeological sites and objects in the areas of six provinces, namely, Sukhothai, Tak, Kamphaeng Phet, Phichit, Phitsanulok and Uttaradit. Apart from this, he also served as a director of the Office of National Museums, several historical parks and national museums such as the Ayutthaya Historical Park, Kamphaeng Phet Historical Park, Mueang Sing Historical Park in Kanchanaburi Province and Ramkhamhaeng National Museum in Sukhothai Province.

Mr. Chuchoti graduated with a bachelor's degree in Archaeology from Silpakorn University, Bangkok, and completed his master's degree in Educational Administration from Naresuan University, Phitsanulok Province. During his career, he attended several leadership programmes and executive – level courses. For example, the Senior Executive Programme: Leaders with Vision and Moral by the Office of the Civil Service Commission, the National Defence Course by the National Defence College of Thailand, the Senior Executive Programme for Strategic Protection and Anti-Corruption by the Office of National Anti-Corruption Commission, and the Course for Chief Information Officers (CIO) by the Ministry of Information and Communication Technology. Furthermore, he also participated in various academic visits for cultural heritage management in many countries, namely Malaysia, Indonesia, Japan, France, China (PRC), Greece, Turkey, the United Kingdom, Peru, Germany, the Czech Republic, Austria and the United States of America.

According to his experience on cultural heritage management, he has addressed the issues of trespassing land by the locals in archaeological sites and historical parks, proceeded the excavations in the archaeological sites and developed the historical areas in the central, northern and north-eastern parts of Thailand. The examples of his previous work are initiating the conservation and restoration of the Chan Palace in Phitsanulok Province, solving the issue of trespassing land by the locals in the areas of Kamphaeng Phet Historical Park and Wat Puen in Lop Buri Province, managing the project of museum renovation aimed to exhibit the lifestyle of local communities and managing the projects of renovation and reconstruction of various museums, e.g. the National Museum Bangkok, the Hariphunchai National Museum in Lamphun Province, the National Museum Ubon Ratchathani, the National Museum in Prachin Buri Province, the Chao Sam Phraya National Museum in Phra Nakhon Si Ayutthaya Province and the Ban Kao National Museum in the province of Kanchanaburi.



Prasat Mueang Sing,
the late 12th century Mahāyāna temple,
Sai Yok District,
Kanchanaburi Province, Thailand



Wat Mahathat, the 13th–15th century
main temple of the ancient town
of Sukhothai, Sukhothai Province, Thailand



Buddhist Object Exhibition Hall, Burabhaphimuk Pavilion, National Museum Bangkok (After Renovation)



The Royal Bed Room, Wasantaphiman Pavilion, National Museum Bangkok (After Renovation)



The Metal Artwork, the Patchimaphimuk Pavilion, National Museum Bangkok (After Renovation)



The Mother-of-pearl inlaid Instrument, the Phrommethada Pavilion, National Museum Bangkok (After Renovation)



The brick vihāra (an assembly hall) of Wat Puen, Tha It Sub – district, Mueang Lopburi District, Lopburi Province (After Restoration)



Model of a new building for an exhibition of gold artifacts, at the Chao Sam Phraya National Museum, Phra Nakhon Si Ayutthaya Province



Mr. Anandha Chuchoti, Director-General of the Fine Arts Department,
President of the Opening Ceremony of 'Tracing a Legacy of Ayutthaya',
at Wat Chai Watthanaram, Phra Nakhon Si Ayutthaya Province, March 17th, 2018

From Our Home Make-up to the Outside World

Anandha Chuchoti

I was appointed as Director-General of the Fine Arts Department in 2015. I have realized that it's my pride in taking the executive role of the department which is the largest and oldest agency in the history of Thailand's Ministry of Culture, but it has been a subtle and challenging task concerning making decisions and ensuring that the decisions were carried out successfully during a tough time of the current political and economic circumstances of the country.

The Fine Arts Department ('Krom Silpakorn' in Thai) was established on March 27th, 1911, at the behest of His Majesty King Vajiravudh (known to foreigners-King Rama VI), to be an agency of the absolute monarchical government at that time. Therefore, the task of the department was designed to serve the royal functions as well as the royal government's policy for the benefit of their subjects. His Majesty the King was pleased to transfer works under the responsibility of two departments: the Chamberlain Artisan and Museum to the Fine Arts Department.



Mr. Anandha Chuchoti played a role as a leader of the FAD's experts to design buildings for the Royal Crematorium of His Majesty King Bhumibol Adulyadej (Rama IX) on October 26th 2017.

The designed buildings to be constructed for the event as follows:
Phra Thi Nang Song Tham and the surrounding buildings. The design of its landscape, the restoration and construction of a royal chariots and palanquins, undertaken by conservators and artisans of the Fine Arts Department (FAD) as well as the celebratory performances for the Royal Funeral Ceremony.



The Royal Crematorium of His Majesty King Bhumibol Adulyadej (Rama IX)

Left: In the Course of Construction;

Right: The Royal Cremation Ceremony on October 26th, 2017

Over the past 22 years, before turning to democratic rule, the department's personnel were academicians and skillful artisans who were proud of their jobs in academic research, preserving national tradition, art and heritage and disseminating the knowledge and experience to the public, and handing it down to younger generations. As a high vision of His Majesty the King to uplift the mind and the awareness of the universal knowledge of his subjects, invitations and employment foreign scholars to take part in the department were finely done. The eminent scholars, for instance, Professor George Coedès, a French scholar, was the first Director of the National Library (Ho Phra Samut Vajirayan) for 10 years (1918 -1928), who worked closely with Prince Damrong Rajanubhab (a brother of King Chulalongkorn the Great), who, later has been admired by Thai people as the 'Father of Thai History'. Professor George Coedès had spent his time with writing painstaking works on the Southeast Asian history and inscriptions, particularly, the publication of the 7 volumes of 'Inscriptions du Cambodge', and 'Inscriptions du Campa', 'Inscriptions of Dvaravati, Srivijaya, Lopburi' and his well-known academic books: The Indianized States of Southeast Asia. These books opened new pages of the Southeast Asian history. Professor Silp Bhirasri (Mr. Corrado Feroci), an Italian artist from Florence, who was the founder of the School of Fine Arts and later the Silpakorn University was the first Rector of the university. He introduced the western concept of art to Thai students and inspired the Thai government to establish the School of Fine Arts, and later developed to be the Faculty of Painting, Sculpture and Graphic Art, of Architecture, of Decorative Art, and of Archaeology. At that time the National Library and the School of Fine Arts and the Silpakorn University were under the Fine Arts Department. This is a reason why the university's name and the department bear the same name.



The Thai - Laos Archaeological Workshop on Analysis of Human and Animal Bones, a Collaboration Project between Thailand's Fine Arts Department and Laos PDR's Department of Heritage, at Centhara and Convention Centre, Udon Thani Province, Thailand, February 18th–24th, 2016

We are proud to say that the Faculty of Archaeology which was established in 1955 has been an academic institute of which Thai lecturers and students of the past have been born to be eminent scholars in the field; some of them are Professor Subhadradis Diskul (a son of Prince Damrong Rajanubhab), Professor Saeng Monwithun, Professor Cham Thongkhamwan, Professor Chin Yu-di (who has been admired by his students as 'Father of Thai Prehistory'), Acharn Khongdej Praphatthong, Dr. Nandana Chutiwongs, Acharn Kongkaew Veeraprajak, Professor Pisit Charoenwongsa and Professor Dr. Phasook Indrawooth. I am also proud to be one of the university's students who gained art historical and archaeological knowledge from some of these scholars. I can say that reading books of the aforementioned academicians and the teaching of my mentors in the faculty's class encouraged me to be an archaeologist and to develop archaeological research of the country.



The ASEAN Underwater Archaeology Workshop on Alternative Solution and Extended Frontier, near Mannok Shipwreck site, Klaeng District, Rayong Province, Thailand, March 1st–18th, 2016



Mr. Anandha Chuchoti, Chairman of the 6th Meeting and Conference of Asian National Museums Association (ANMA)

“The Role of National Museums in the World Climate Change and Cultural Sustainable Development” at Bangkok, Thailand, December 21st–23rd, 2017

Since the government re-established the Fine Arts Department in 1933 that resulted in its structural change; the drama arts and musical works of the royal court were integrated into a unit under the Fine Arts Department. This is deemed as the root of the department’s complete authority regarding the monitoring of national art and cultural knowledge. Though the department has passed through several organizational restructuring, it has continuously maintained and inherited national heritage, art, tradition, and culture over the years. In 2002 when the Fine Arts Department was transferred from the Ministry of Education to the Ministry of Culture until present, many branches covering both centrally and regionally were established. The department still has missions to utilize its specialization to administer works related to maintenance, conservation and restoration of art and culture, to preserve traditional customs, royal and national ceremonies, as well as to research on these fields and disseminate them to students and the public as a whole.



Mr. Anandha Chuchoti, accompanied by experts in architecture and structure-engineering to inspect the construction of a new museum storage building for study collection at the Central Storage of the Office of National Museums at Khlong Luang District, Pathum Thani Province

The personnel of the department is aware that our government agency is a core root for the progressive and graceful development of the country in a borderless world. Though the Fine Arts Department has intended to pass wisdom of the aforementioned fields to the responsible new blood from generation to generation over time, we have been challenged to solve the problem of lacking manpower; experienced personnel has gradually retired year by year, and no acquisition of new personnel due to the government's official personnel downsizing policy took place. It has also reflected on the negligence of the importance of preservation of art and cultural heritage. Nevertheless, personnel of the Fine Arts Department has unceasingly driven surveys, searching, study and research in various fields which are complicated and never-ending works. Therefore, they must always be alert and willing to learn in order to be able to move along the modern world elegantly.



On the occasion of celebration the 130 anniversary of the establishment of diplomatic relations between Japan-Thailand, the Fine Arts Department, Thailand, and the Agency for Cultural Affairs, Japan (Tokyo National Museum, Kyushu National Museum and the Japan Foundation) co-organized the exhibition "The History of Japanese Art: Life and Faith" at the National Museum Bangkok, on December 27th, 2017 to February 18th, 2018.



The official visit of Mr. Anandha Chuchoti
and the Fine Arts Department's personnel to Saga, Japan, January 15th-16th, 2018

I have the opinion that the Fine Arts Department strongly needs self-assessment in the fast-changing global context, both within and outside the country, in order to develop both proactive and defensive working strategies. In the meantime the department must be well aware that it is important to bring up new ideas and technologies to create more benefit and serve the society and country, as well as keeping up good work and best practices. Therefore, the officials and employees in all fields of the department should be required to be professional, responsive, and active for the benefit of the nation. They also need to continuously develop themselves in various aspects, including competency in terms of service provision, technical knowledge, activity organization, and particularly, English skills in order to achieve the goal in both national and international levels.

My recognition of the importance of human resource development made me review the department's staffing structure and manpower plan on a regular basis in order to improve personnel with standard skills and competency, professionalism, and work efficiency.



Mr. Yoshinori Yamuguchi, Governor of the Saga Prefectural Government of Japan and Mr. Anandha Chuchoti, Director - General of the Fine Arts Department after signing an MoU of Cultural Collaboration between the two agencies of two government at the meeting room of the Fine Arts Department, Bangkok, Thailand February 8th, 2018.

It is my attempt to build a bridge between common researchers and highly experienced scholars in ways that could enrich the Fine Arts Department as a whole. Several practical training programs have been performed. Some courses are provided to build a bridge across the English barrier to encourage our officers to 'going internationally'. They are as follows: Improvement of English Skill, English Academic Presentation, English Writing and Conversation for Fellowship Program, English Skill for Conservators, English for Fellowship Officers to IELTS & TOFEL Examination at New Cambridge Institute, and Academic English Writing for Presentation and Conference. The current considerable programme is 'Academic Writing and Presentation of Papers in the International Symposium' that had taken several courses since May 2018 before completion in February 2019.



The Grand Exhibition of the 2018 Year and the International Symposium
“Featuring Buddhist Imagery from Bhārata to Suvarṇabhūmi”,
to celebrate the 70 anniversary of the establishment of diplomatic relations
between India-Thailand in 1947, at Bangkok, on March 12th-13th, 2018.



A mission to Mumbai, India, of Mr. Anandha Chuchoti, Director-General and experts of the Fine Arts Department on signing an MoU on collaboration activities between the Fine Arts Department (FAD) and Chhatrapati Shivaji Vastu Sangrahalaya (CSMVS), Mumbai, India, January 17th-18th 2019

Thanks to an advice of Dr. Amara Srisuchat, senior expert in archaeology and museum and senior advisor to the Fine Arts Department, who is one of the successful scholars in field research, domestically and internationally, I step up to make some co-organized activities with other countries, like exhibitions in Thailand and abroad, bilateral symposiums on co-research and conservation, and finally several MoU have been signed with organizations whose missions are in the fields of cultural heritage's research, protection and education. I believe that the relationship and alliance with neighboring countries and other foreign countries must be a way to develop human resources, and be a good opportunity to let our personnel to broaden their perspectives by exchange of experience with researchers outside the country. Regarding missions of archaeology and national museums during my directorship of the Fine Arts Department were several archaeological projects: inventories, surveys, excavations, site protection, conservation and research, both in the national and international level have been conducted as well as a number of museum development's projects: renovation of museum's buildings, improvement of permanent exhibitions, establishing a museum storage -cum-study collection and travelling exhibitions that brought out our national material culture to exhibit in foreign countries and brought some outstanding objects from foreign museum's collection to be displayed for people in Thailand at the Fine Arts Department's National Museums.



Mr. Anandha Chuchoti was invited by the National Museum of Korea to deliver a lecture on “National Museums in Thailand: The Development and International Collaboration” at the museum’s auditorium. He visited the museum on September 10th-15th, 2018, and discussed with Mr. Dr. Bae Kidong, Director-General of National Museum, Korea, about an MoU of Cultural Exchanges between the Korea National Museum and the Fine Arts Department on the occasion of the 60 Anniversary of the establishment of diplomatic relations between Korea-Thailand in 2018.



The Korea Mass Media interview Mr. Anandha Chuchoti about the cultural collaboration projects between Thailand and Korea after his lecture at the National Museum Korea on September 12th, 2018.



Group photo of participants of Academic Writing and Presentation prepared for the upcoming 2019 international Symposium, on July 14th, 2018.

It's a time to let our new generation of archaeological and museum researchers to be stepped toward the international floor. I am immensely proud of my 12 archaeologists and curators as well as my 5 experts who have achieved in improvement of their academic English skill in writing and speaking by attending a long-term training programme that was well planned by Dr. Amara Srisuchat and our Personnel Development Division of the Office of Central Administration. This specific training by coaching programme was instructed by Dr. Amara Srisuchat, Acharn Orawan Bunchongsawat (English linguistic mentor), and our FAD's volunteers including Venerable Kantasilo, Mrs. Bozena Mazur, Mrs. Margot Weinmann, Ms. Ines Ehrlich, Mr. Alan Needleman, and Mr. Wilfried Giessler who extremely devoted their time to undertake the hard mission. Consequently, a rehearsal of presentation of 12 research papers of them, moderated by the 5 experts was undertaken smoothly with some recommendations to improve their presentations by two honored commentators, Professor Pisit Charoenwongsa and Khun Sirikitiya Jensen, on July 14th, 2018 at a meeting room of the Royal River Hotel, Bangkok.



Mr. Anandha Chuchoti, Director - General of the Fine Arts Department, Dr. Amara Srisuchat, an Advisor to the department and a mentor of Academic Writing Research and Presentation Training Programme for the 12 speakers (archaeologists and curators) and 5 moderators to be presented at the 2019 International Symposium on Ancient Maritime Cross-cultural Exchanges of Asia, taken group photo at the seminar room of the Royal River Hotel, Bangkok, Thailand, June 10th–17th, 2018.

Apart from teaching and assistance to the presenters to elaborate their research papers in Bangkok, Dr. Amara Srisuchat took her journeys to the provinces of Nakhon Si Thammarat, Songkhla, Phetchabun, Phra Nakhon Si Ayutthaya, Chiang Mai and Mae Hong Son to seriously coach them to prepare informative presentations that would fit into each 'Expert Panel Session', designed for the upcoming International Symposium on 'Ancient Maritime Cross-cultural Exchanges of Asia', in which about 40 foreign experts have been invited to deliver their research and participate in the provinces of Surat Thani, Phang-nga and Krabi, on February 7th to 10th, 2019. Dr. Amara Srisuchat and Mr. Wilfried Giessler deserve credit for hard-working of editing the 12 research papers to be published in the book.

I really ensure that after launching the book and the articles being presented in the upcoming international symposium among eminent scholars, experts and academic audiences, our 12 new blood researchers should have great pride in what they have well done and achieved. They are pioneers to open a new page in the history of our home, the Fine Arts Department, to the academic world outside.



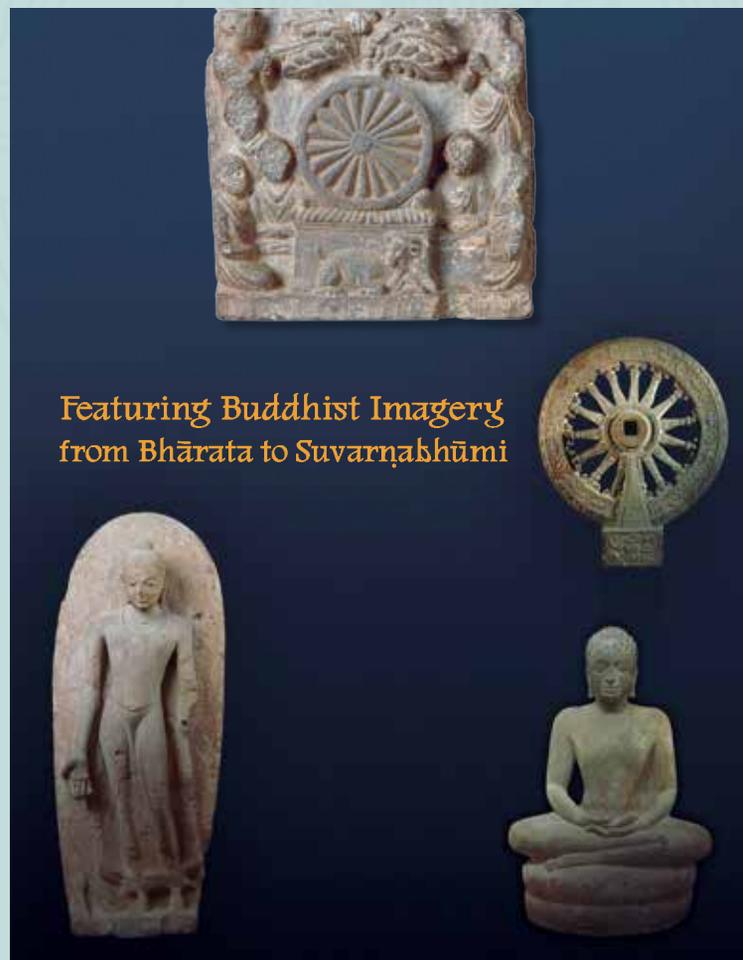
Dr. Amara Srisuchat

asrisuchat@hotmail.com

Amara Srisuchat is an Advisor to the Fine Arts Department and a member of Thailand's Cultural World Heritage Committee. She is the former Senior Expert in Archaeology and Museum of the department within Thailand's Ministry of Culture. Prior to her last official task in 2018, she supervised archaeological excavations at prehistoric, port and early settlement sites especially in Southern Thailand. She served as head of researchers of the Lower Southern Regional Office of Archaeology and National Museums, head of the Kamphaeng Phet Historic Park (a World Heritage site) and director of three major national museums including the Ramkhamhaeng National Museum (Sukhothai World Heritage), the Kanchanaphisek National Museum (Ethnology Museum) and the National Museum, Bangkok. Between 2012 and 2015, she was a Senior Expert in Art and Antiquity. She is credited with significantly improving the operations of regional museums and archaeological research work in Thailand and promoting museum and international archaeological research activities that has received awards from the Thai government for her leadership.

As a scholar, Dr. Srisuchat lectures widely, participates in international forums, and teaches university courses in Thailand and abroad. She has contributed to the UNESCO Integral Study of the Silk Road (1990-1991); Academic leader of researchers in Social Science Group on the Cultural Mapping of Southern Thailand Project (2002-2004); resource person and advisor to international workshops and meetings, such as SEAMEO-SPAFA workshop on Rock Art I, II, III, Museology, and Buddhist Art Tradition (2011-2014), UNESCO workshops on Cultural Survival and Revival in Buddhist Sangha (2009), on SEAMEO-SPAFA's and UNESCO's Protecting Asia's Heritage and Fighting Illicit Traffic of Cultural Property (2012, 2013), on SEAMEO CHAT's Governing Board Meeting and History and Tradition Series Lecture (2016 - 2018), on the UNESCO High Level Museum Forum (2017), and on UNESCO's Expert Meeting in Capacity Building of the World Heritage (2018). Since 2010 she has been a member of an Academic Committee on Encyclopedia of World Archaeology, Royal Institute of Thailand. In 2014, she was one of fourteen participants of the Global Museum Leaders Colloquium (GMLC) of The Metropolitan Museum of Art, New York, U.S.A.

Dr. Srisuchat's published writings and editorial works in English more than 50 papers that are significantly recognized, and demonstrate the diversity of topics. Some of her works related to the Maritime Cross-cultural Exchanges of Asia are as follows: Ancient Trades and Cultural Contacts in Southeast Asia (Bangkok 1996), Art Objects and Architecture: Reflections on Indo-Thai Cultural Linkage (New Delhi 2006), World Heritage Sites in Thailand Reflecting Indo-Thai Cultural Linkage (New Delhi 2007), Inscriptions of Early Civilizations in Thailand (Kuala Lumpur 2011), Artisanship and Aesthetic of Japan and Thailand (2011), The Glory of Thailand's Past & Five Hundred Years of Thai-Portuguese Relations (Lisbon 2012), A Reappraisal of Inscriptions and Icons in Southern Thailand reflecting Religious Perceptions of the Śrīvijayan People (Jambi 2014), Śrīvijaya in Suvarṇadvīpa (Bangkok 2015), Sanskrit Impact on Terms of Religious Sculpture and Architecture in Thailand (New Delhi 2015), Indigenous Thought on Indian Traditions in Thailand (New Delhi 2015), Roots of ASEAN's Cultures (Bangkok 2016), Archaeological Findings of Thailand Reflecting West-East Meeting Points through the Maritime Silk Routes (Quanzhou 2016), A Reflection of Transoceanic Contacts on Innovations of Buddhist Art and commodities in Thailand's Past (Seoul 2017), and Featuring Buddhist Imagery from Bhārata to Suvarṇabhūmī (Bangkok 2017).



*Featuring Buddhist Imagery
from Bhārata to Suvarṇabhūmī*



The Fulcrum Al-Salamah (Ship of Peace) at the port of Phuket, Southern Thailand, December 28th, 1990



The Xi'an city's Gate, China, November 18th - 21st, 2002

Ancient Maritime Cross-cultural Exchanges of Asia: Travelling Back to the Past

Amara Srisuchat

This article is a Keynote Speech, prepared to deliver it at the international symposium 'Ancient Maritime Cross-cultural Exchanges of Asia' that will provide information to the audiences of the symposium on major events that the present-speaker partook in the international symposiums/ forums and activities alike that allowed her to gain experience of the management of academic activities, and has been aware of the importance of exchange of academic experiences among scholars. Therefore, her effort to have an international symposium as such is based on the realization of dissemination of new knowledge in the fields of archaeology, history, anthropology, geography, art and cultural heritage that would be widely fruitful, since field researchers would share their deep knowledge and long experiences among them when they have gathered in an international academic activity.

Working among field archaeologists, either on surveys or excavations at ancient port sites as well as partaking in the analysis of archaeological findings in Thailand and some countries of Asia has offered great encouragement for her to develop an interest in the maritime cross-cultural exchanges and ecological and social impacts. In 1990 the present-speaker had the great opportunity to be a member of the International Teams of the Maritime Route Expedition in the UNESCO's project "Integral Study of the Silk Roads: Roads of Dialogue", and on board the Fulk-Al-Salamah (Ship of Peace), provided by His Majesty Sultanate of Oman, flying the UNESCO's flag and sailing from Venice to Osaka, she and international scholars who are students of the past and preservers of our world heritage could bring the project's aim to the goal; that is to say, they could study cultural interactions which took place along the route, stimulating scientific research in related fields, renewed the dialogue of the past and rediscovered the historical record of human understanding so as to comprehend how in antiquity the people of various ethnic groups, religious and cultures could live together and were in contact with each other. The maritime expedition proved to be fruitful, since it enabled several countries' organizations to organize many symposiums, forums and exhibitions on the theme of the maritime Silk Road. A large number of books and conference proceedings, documentary films, and research projects were developed. One of the research projects that has been proven to be the most successful endeavor is the UNESCO Hirayama Silk Roads Fellowships, supported by Professor Ikuo Hirayama, UNESCO Goodwill Ambassador. Among 100 researchers under the fellowship program, Muhammad Arif from Pakistan, Le Thi Lien from Vietnam, and Amara Srisuchat from Thailand were invited to deliver a research presentation at the UNESCO International Symposium on the Silk Roads 2002 in Commemoration of Completion of the Hirayama Silk Roads Fellowships Programme at Xi'an Jiao Tong University in Xi'an City, China, November 18th - 21st, 2002.



Archaeological of Visit to Candi in Jambi, Sumatra, Indonesia, August 21st, 2014

Regional or international academic conferences/ forums that were related to the theme of the ancient maritime cultural interaction, in which the present-speaker took participation, were well organized by active scholars and organizations, were as follows: 'Discovering Yue and Longquan Green Glazed Wares' by Dr. Ho Chui Mei of University of Hong Kong (1991), 'Multi-disciplinary International Conference on the Occasion of 50th Anniversary of Independence of Sri Lanka' (1998) by the Peradeniya University, Sri Lanka, 'Premodern Southeast Asian Earthenware' (1998) by Professor Dr. John Miksic of National University of Singapore, 'Ancient Harbours in Southeast Asia: the archaeology of early harbours and evidence of inter-regional trade' (20014) by Professor Dr. John Miksic and Dr. Goh Geok Yian of the Asia Research Institute, National University of Singapore, 'Thailand-Malaysia: Malay Peninsula Archaeology Program' (2004) by Dato' Dr. Adi Haji Taha, Director-General of Department of Museums and Archaeology, Malaysia and Dr. Sirichaichan Fakchamrun, Director-General of Department of Fine Arts, Thailand, 'Bujang Valley and Early Civilizations in Southeast Asia' (2011) by Professor Dr. Zuraina Majid of Department of National Heritage, Malaysia and Professor Dato' Dr. Mokhtar Saidin of Global Archaeological Research, Sain Universiti, Malaysia, 'Srivijaya in the Context of Regional Southeast Asia and South Asia, Jambi, Indonesia' (2014) by Mr. Bambang



The Chinese Junk from a shipwreck site, exhibited in the Quanzhou Maritime Museum.



Participants' excursion in Quanzhou, the International Symposium on the Maritime Route of the Silk Roads, Quanzhou, July 7th-9th, 2016

Budi Utomo of The National Research Center of Archaeology, Indonesia, 'ASEAN-India Cultural Links Historical and Contemporary Dimensions' (2015) by Excellency Ambassador Shyam Saran of Research and Information System for Developing Countries (RIS), Ministry of External Affairs, India, 'Sanskrit on the Maritime Route' (2015) by Bharatiya Vidya Bhavan, India, 'The Maritime Route of the Silk Roads' (2016) by the State Administration of Cultural Heritage, the People's Government of Quanzhou and National Center of Underwater Cultural Heritage, China, 'Maritime Silk Road in Southeast Asia: Crossroad of Culture' (2017) by East Asian Studies, Soyang University, Korea, and Buddhist Art Heritage (2018) by Dr. Amara Srisuchat and supported by Mr. Anandha Chuchoti, Director- General of the Fine Arts Department. From the aforementioned conferences the present-speaker had a good opportunity to meet and share knowledge and experiences with several scholars of diverse nations and some have been good friends since then. Some are great resource persons who have shared new data of their research in the field with each other. The modern day's email and social networks have enlarged our academic community of interest on the issue. We are of the same opinion that knowledge belonging to everybody and true understanding of our past civilizations which we have created together, will take us across the realm of prejudice.



Participants of the 2018 International Symposium at the main stūpa,
of the Si Thep Historical Park, March 15th, 2018

The success of the grand exhibition of the year 2018, 'Featuring Buddhist Imageries from Bhārata to Suvarṇabhūmī', followed up by an international symposium on Buddhist Art Heritage in which scholars from countries of Asia (Professor Dr. Himanshu Prabha Ray, Dr. Sabyasachi Mukherjee, Dr. Debduitta Ray, Professor Dr. Shahnaj Husne Jahan and Dr. Le Thi Lien, etc.), were available to deliver their presentations on the issue in Bangkok on March 12th-13th, 2018, organized by the Fine Arts Department (FAD), led a Director-General of the department, who has a background in archaeology and heritage management, to have some ideas of organizing an international symposium focused on archaeology and art heritage's research of the Asian region. As an advisor to the department and senior expert of the field, Dr. Amara Srisuchat was asked for planning the international symposium program. We had the same idea that the Fine Arts Department's archaeologists and curators who undertook surveys, excavations and analyzed findings from their field work should have the opportunity to present their research; therefore, the names of 12 persons who completed their field research on the topics were chosen and asked to prepare a paper for presentation at the symposium.



The present-day landscape of the 9th to 10th-century ancient port at Laem Pho-Payang, Phum Rieng District, Surat Thani Province

The framework for the symposium had been specifically established and about 40 foreign experts and 20 Thai scholars have been invited to present papers or to act as a chairperson/moderator in the 8 Expert Panel Sessions and 2 Special Presentation Sessions and 1 Special Demonstration Session would be included during the 2 days of the presentations in the auditorium of the symposium's venue. An idea of the Director-General of FAD to enhance experience for the symposium's participants led to the organization of a 4 days symposium at Surat Thani Province, southern Thailand, and excursions to visit archaeological sites and museums in the provinces of Surat Thani, Phang-nga and Krabi relating to the symposium's topic have been included. Therefore, the international symposium's agenda comprises 8 sub-topics of the Expert Panel Sessions as follows: (1) Religious Sites, Findings and Propagation; (2) On the Water Front: Settlement and Ports of the Maritime Routes in Southeast Asia; (3) Early Historic Settlements and Cross-cultural Contacts: Archaeological Sites in Thailand and Bordering Countries; (4) Between Land and Sea Routes: Commercial Transactions & Social Dynamics; (5) Significant Import and Export of Merchandise on the Maritime Route; (6) Ceramics: Production and Trade Routes; (7) Trans-oceanic Voyage: Underwater Findings; (8) People and Maritime Dialogue: Ethno-archaeological and Historical Approach.



Cattle Figurines from an archaeological site in northern Thailand and the Ban Chiang's pot depicting a figure of cattle, Ban Chiang National Museum

It is a rare privilege to carry out the symposium with distinguished foreign experts of several nations from Asia to deliver their presentations and discussions in the 8 panel sessions, and some honoured experts like Professor Pisit Charoenwongsa, Mr. Prachote Sangkhanukit and Mr. Kyaw Oo Lwin agreed to chair a session. To enrich and broaden the scope of the common research to include other research areas that may be of interest, the FAD intentionally invited eminent scholars in four diverse fields of science, like Professor Hong Thianhua, Dr. B.V. Khabade, Professor Dr. Rathnasiri Premathilake, and Assistant Professor Dr. Wunrada Surat to give a presentation on 'Applied Science in Cross-cultural Approach', the special session, moderated by Mrs. Chiraporn Aranyanak. Dr. Nandana Chutiwongs, an eminent scholar in the fields of archaeology and art history, accepted to deliver her talk on 'Tracing History through Archaeological Remains' in a special presentation session, in which she will read her translation of 'Inscription on Gold Plates upon the Pinnacle of the Phra Mahathat Chedi of Nakhon Si Thammarat', written by two Thai expert epigraphists, Miss Kongkaew Weeraprachak and Mr. Term Meetem, who could not be available at the symposium. At the end, the participants in the auditorium of the symposium's venue will be fascinated by a special performance and music, demonstrated by famous musicians and actors of three nations, Dr. Surasak Jamnongsarn and Mr. Saiklang Jindasu (Thailand), Dr. Arsenio Nicolas (the Philippines), and Datuk Ramli Ibrahim (Malaysia). Dr. Thongbai Phothisane, Director-General of Department of Heritage, Laos PDR, who is a poet of the 2004 SEA Write Award, will moderate the final auditorium's session.



The 12 field archaeologists and curators, moderators and their mentors after completeness of the FAD's Academic Writing and Presentation Training Course, 25 February 2019

The painstaking task of the symposium is to search and contact the right scholars to give a talk that ought to fit in each sub-topic session, due to postponing the activity for three times, unfortunately, some speakers who first accepted to come, finally were not available to partake in the symposium. Moreover, the encouragement of the FAD's field archaeologists and curators to prepare an academic article and presentation in English in the international symposium was very challenging. The experienced coaches, Dr. Amara Srisuchat and Acharn Orawan Bunchongsawat, and the FAD's volunteers (FADV) including Venerable Kantasilo, Mrs. Bozena Mazur, Mrs. Margot Weinmann, Ms. Ines Ehrlich, Mr. Alan Needleman, and Mr. Wilfried Giessler were invited to carry on the task. Mrs. Rakchanok Kojaranont, director of the Office of Central Administration of the Fine Arts Department, Mr. Tanakorn Teerarujikajohndech and Mr. Artit Thanmanukkit and his team from Personnel Development Division under the office actively managed the training project. The preliminary result are the articles of the 12 participants that are published in the FAD's academic book entitled 'Ancient Maritime Cross-cultural Exchanges: Archaeological Research in Thailand', 2019, edited by Dr. Amara Srisuchat and Mr. Wilfried Giessler. The FAD 2019 International symposium will comprise 21 nations: 32 foreign experts, 25 Thai scholars, 50 persons of organizing team of FAD and 100 persons as audience.

Finally, Professor Dr. John N. Miksic, senior expert in archaeology and history of Southeast Asia, who is well-known and greatly respected in our academic community, accepted the invitation to deliver a Keynote Speech 'Overview of Academic Researches on Ancient Maritime Cross-cultural Exchanges of Asia' in the FAD 2019 International Symposium in Thailand.



Mr. Phanuwat Ueasaman

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Phanuwat Ueasaman is head of researchers of the 12th Regional Office of the Fine Arts Department, Nakhon Si Thammarat Province. Since 2015 he has supervised the archaeological excavation and restoration project at Khao Si Wichai, the outstanding hill temple in Surat Thani Province. He worked at Sukhothai Historical Park, the World Heritage site (2004-2011) and was head of researchers of the FAD's Regional Office at Phuket Province (2011-2015). In 2015, he was awarded the Prime Minister Award for the best government officer of Ministry of Culture. In 2016, he presented his research paper on "New Evidence from Archaeological Excavation at Khao Si Wichai" at a national conference in Bangkok. Also, at an international conference in Nakhon Nayok Province, he presented his research on "The Archaeological Excavation of Khao Nui Cave and the Parallel Development of the Votive Tablets in Mainland Southeast Asia". Some of his publication in English are as follows: "The Excavation at Khao Nui: A Clay Votive Tablets Deposition Site in Trang Province" (2015); "Clay Votive Tablets in Southeast Asia: Distribution and Relationship" (2017); and "Archaeological Excavation at Wat Phra Mahathat Woramahawihan, Nakhorn Si Thammarat" (2018). He graduated with B.A. in Archaeology in 2003, and M.A. in Historical Archaeology in 2014 from Silpakorn University, Bangkok.

Ancient Hill Temples and Holy Caves in Upper Southern Thailand and the Trans-peninsular Route Connection

Phanuwat Ueasaman



Khao Si Wichai, Surat Thani Province, the hill temple on the eastern coast
(*Photograph: Courtesy of Dr.Surat Lertlum*)

Abstract

The main aim of this paper is to explain why and how the hill temples and/or holy cave's communities on the eastern coast, western coast and inland and the trans-peninsular routes in upper southern Thailand were related between the late sixth and tenth century CE. Information of twenty-six sites from previous researches since 1902 and the 2009-2018 archaeological surveys and excavations were systematically reviewed. This paper highlights new findings from archaeological excavations at a hill temple site on the eastern coast (Khao Si Wichai), and a holy cave site on the western coast (Khao Nui).

The results obtained from a comparative analysis of findings and analytical methods were used to dating sites are discussed in this paper. They support the hypothesis that the adoption of Hinduism, the main Indian religion and contemporary of Buddhism appeared at plain sites between the late fifth and mid-sixth century CE. Hill temple and holy cave's tradition of either the Mahāyāna Buddhists or Hindu Śaiva and Vaiṣṇava followers started in the late sixth century CE and it was maintained and spread through upper and lower southern Thailand in the mid-seventh to the mid-tenth century CE before and after the Śrīvijaya political influence.

The ideal geographical locations of hill temples and holy caves, i.e. some became a landmark and/or a center of community for both locals and foreign voyagers transportation to the near and the far-flung destination by land routes including trans-peninsular routes and sea routes, leading to the glory of ports on the eastern coast and the western coast.



The 2012 excavation at Khao Nui cave site, found a number of votive tablets in situ.

Introduction

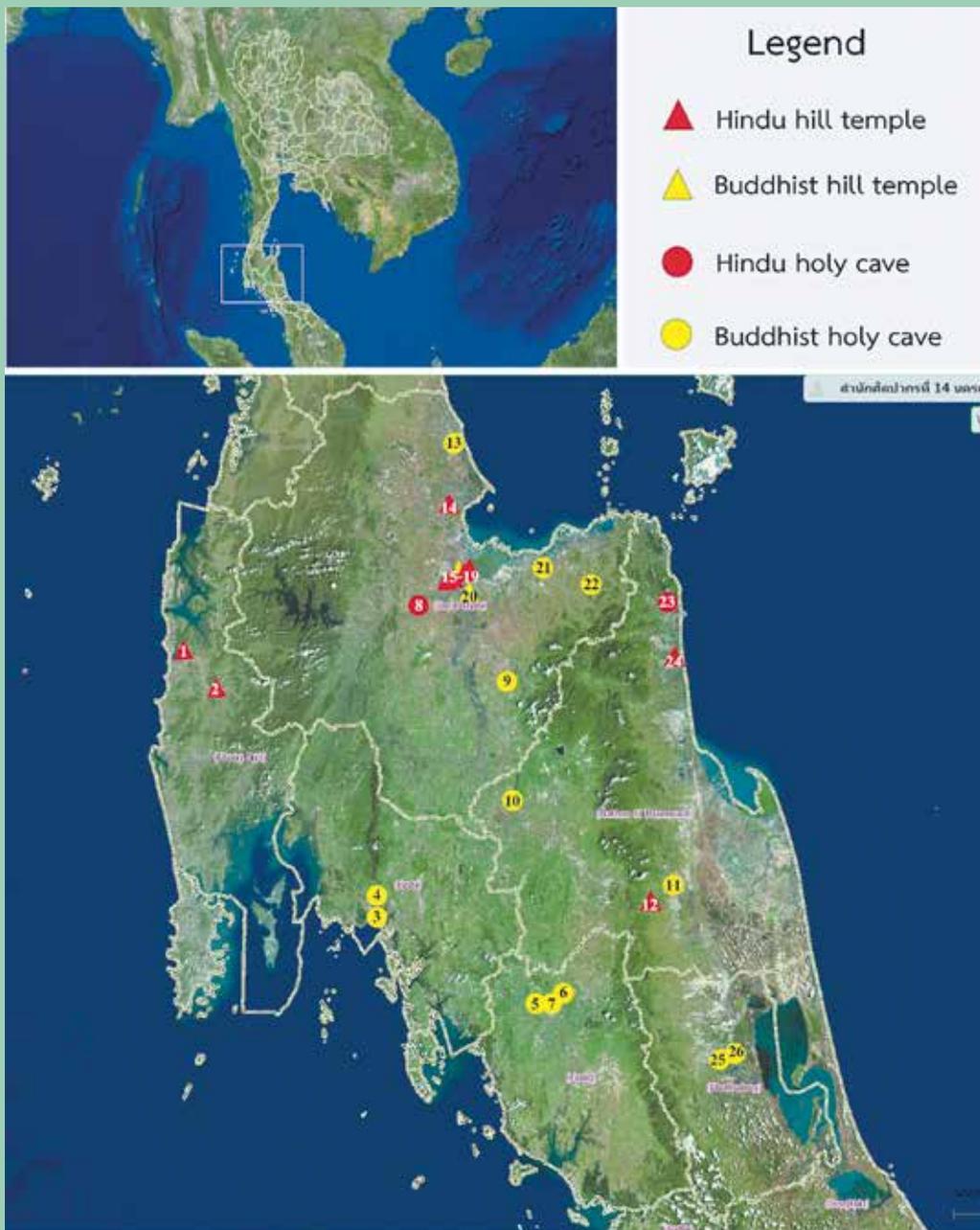
An inventory of ancient hill temples and holy caves in six provinces of the upper part of the Malay Peninsula consisting of Surat Thani, Nakhon Si Thammarat, Phatthalung, Phang-nga, Krabi and Trang were undertaken and twenty-six sites have been found. Most were known among scholars more than one hundred years, beginning with the survey report of W.W.Bourke (1902) about the discovery of Takua Pa inscription on Khao Phra Narai hill, followed by the report of the Crown Prince Vajiravudh (the future-to-be King Rama VI) about expedition at Khao Phra Narai hill temple and Khao Phra Noe hill temple in 1909. Archaeological excavations were undertaken at the following sites: Khuan Phun Phin (Manit Valipodom 1961-62), Khao Kanap Nam (Douglas D. Anderson 1979, 1999), Khao Kha (The Fine Arts Department (FAD) 1987-90), Khao Nam Ron (FAD 1996), Khao Si Wichai (FAD 1998-2015), Khao Phra Noe (FAD 2009), Khao Phra Narai (FAD 2009), and Khao Sai (FAD 2011).

From 2011 to present, archaeological works in upper southern Thailand have been conducted by the Fine Arts Department's Regional Offices at Phuket and Nakhon Si Thammarat for research and development of the sites. The sites are as follows: Khao Phra Noe in Phang-nga (restoration 2011), Khao Nui in Trang (excavation 2012), Khao Phli Mueang in Nakhon Si Thammarat (discovery 2014), and Khao Si Wichai in Surat Thani (excavation and restoration 2015-present). Details of the aforementioned sites will be discussed in this paper.

Geographical Approach to the Sites

Southern Thailand has the form of a peninsula flanked by the Andaman Sea on the West and the Gulf of Thailand on the East, which adjoins the South China Sea. The southern tip of the part is adjacent to Malaysia and thus forms part of the Malay Peninsula. Thus, upper southern Thailand is regarded as the upper part of the Malay Peninsula which is connected to the mainland of central Thailand and other regions of the country and to the Southeast Asian land mass. There is lowland between two mountain ranges: Phuket mountain range and Nakhon Si Thammarat mountain range. Upper southern Thailand is situated between Latitude 5° 37' to 11° 32' North, and Longitude 98° 13' to 102° 52' East.

Archaeological sites and their locations in the field of the study are shown in Table 1. Significant relation and connection with the land and waterway routes and further discussion on findings from the sites are shown in Table 2. The explanations are as follows:



Map 1: the 26 sites of ancient hill temples and holy caves in upper southern Thailand



Khao Phra Noe (No.1), a Hindu hill temple, Vishnu statue found at the brick basement, after reconstruction (right)

Of twenty-six sites, eleven are considered to be hill temples sites and fifteen have been known to be religious caves (see Table 1). Between the late sixth and tenth century CE the tradition of building a temple on a hill was practiced by both Hindu and Buddhist communities of the West coast, the East coast and the inland (the area between the two mountain ranges). However, archaeological evidence shows that the Hindu followers occupied a hill to establish their temple rather than the Buddhist followers, and they continuously maintained a hill temple as their religious centre for long period of time. It seems likely that the tradition of using a hill top to establish a temple, the Buddhist followers did not seriously take it into consideration. This is exemplified by the late sixth to tenth century site of the Khao Si Wichai hill on which a Hindu temple was built whereas a Buddhist temple was on the plain between the foothill and a communal settlement. (see Table 1 No.15, Table 2 No.15.6)

The thirteen caves were used as religious places by the Buddhist followers, two by Hindu followers. Remarkably, a Hindu holy cave of today's Phli Mueang limestone mount located near the eastern coast was of the early Śaiva Pāśupata cult, dating back to the late sixth century CE. (Srisuchat 2015: 8) (Table 1 No.23) The mount and the cave as a whole was regarded as a natural temple according to the Pāśupata cult that spread from the eastern coast to the inland area, as confirmed by Khao Chong Khoi's inscription on the natural rock in situ which referred to the Pāśupata's practice. The two sites were connected by land routes across the Nakhon Si Thammarat mountain range (103 km). (see Table 1 No.12) Tham Singkhon is the name of a limestone cave located near the Phum Duang canal (180 metres) which joins the Tapi River at Khuan Phun Phin and flows to the sea (the Gulf of Thailand). (Table 1 No.8) A stone image of the goddess Durgā was found in the cave suggesting the use of the cave as a Hindu holy place in the seventh century CE. (Table 2 No.8)

The thirteen caves were used by the Mahāyāna Buddhist followers: five found on the western coast, five of the eastern coast and three inland. Twelve caves were used to inter votive tablets (Buddhist seals) and votive stūpas. Only Tham Khuha cave features a significant clay sculpture of images of Buddha on its ceiling that made the cave a holy place as a cave temple. It must be underlined that the sculpture such as this is found nowhere else in Thailand.

Judging from site location related to waterway distances (Table 1), it is reasonable to conclude that on the mount of the river only one Hindu hill temple (Khao Phra Noe), and only one Buddhist interred cave (Khao Khanap Nam), situated on the western coast. There are ten sites situated on the bank of the river, eight sites near a river or canal (0.2- 1.0 kilometres). There are six sites that are far away from any waterway (1.0-2.0 kilometres).



Khao Phra Narai (No.2), a Hindu hill temple



Khao Khanap Nam (No.3), a Buddhist holy cave



Khao Nui (No.7), a Buddhist holy cave

Identification and Analysis of Findings

In this topic data from Table 1: Archaeological Sites Showing Locations and Route Connections and Table 2: List of Significant Objects Related to Sites will be discussed. These findings led to the observation about the relation between hill temples and holy cave sites are as follows:

Table 1 : Archaeological Sites Showing Locations and Route Connections

Area	No.	Site's Name	Location (District, Province)	Note	Water Way Near the Site	Distance (km)		Route(s) to other Sites Connection (land and/or water way)
						from Site	to the Sea	
Western Coast (faced to Andaman Sea)	1.	Khao Phra Noe	Takua Pa, Phang-nga	Δ, L	Takua Pa River	0	2.00	the river flowing directly to the sea
	2.	Khao Phra Narai	Kapong, Phang-nga	Δ, L	Takua Pa River	0	17.50	the river flowing directly to the sea
	3.	Khao Khanap Nam	Mueang Krabi, Krabi	O, L	Krabi Yai River	0	1.20	the river flowing directly to the sea
	4.	Tham Suea	Mueang Krabi, Krabi	O	Krabi Yai River	1.50	7.40	the river flowing directly to the sea
	5.	Khao Sai	Huai Yot, Trang	O	Trang River	0.40	32.00	the river flowing directly to the sea
	6.	Wat Khiri Wihan	Huai Yot, Trang	O	Trang River	2.00	36.00	the river flowing directly to the sea
	7.	Khao Nui	Huai Yot, Trang	O	Trang River	0.10	33.50	the river flowing directly to the sea
Inland (between two mountain ranges)	8.	Tham Singkhon	Khiri Rat Nikhom, Surat Thani	O	Phum Duang Canal	0.18	40.50	the Tapi river joining the canal to the sea
	9.	Khao Khrom	Ban Na San, Surat Thani	O	Chawang Canal	1.50	62.50	the Tapi river joining the canal to the sea
	10.	Tham Phannara	Tham Phannara, Nakhon Si Thammarat	O	Tapi River	1.10	69.20	by land route to the Tapi river that flows to the sea
	11.	Khao Chum Thong	Ron Phibun, Nakhon Si Thammarat	O	Rak Mai Canal	1.50	46.40	connect to Khao Chaong Khoi 8.3 km.
	12.	Khao Chong Khoi	Chulabhorn, Nakhon Si Thammarat	Δ	Canal from the valley	0	54.30	connect to Khao Phli Mueang 103 km.
Eastern Coast (faced to the Gulf of Thailand)	13.	Khao Prasong	Tha Chana, Surat Thani	O	Tha Chana Canal	0.01	3.00	the canal flowing directly to the sea
	14.	Khao Nam Ron	Chaiya, Surat Thani	Δ	Tha Pun Canal	0.48	4.60	the canal flowing directly to the sea
	15.	Khao Si Wichai	Phun Phin, Surat Thani	Δ, L	Phun Phin Canal	0.44	12.20	the canal flowing directly to the sea
	16.	Khao Noradet	Phun Phin, Surat Thani	Δ	Phun Phin Canal	0.42	13.20	the canal flowing directly to the sea
	17.	Khao Phra Anon	Phun Phin, Surat Thani	Δ	Phun Phin Canal	0.10	12.00	the canal flowing directly to the sea
	18.	Khao Chai Son	Phun Phin, Surat Thani	Δ	Phun Phin Canal	0.08	11.40	the canal flowing directly to the sea
	19.	Khao Din	Phun Phin, Surat Thani	Δ	Phun Phin Canal	0.80	14.00	the canal flowing directly to the sea
	20.	Khuan Phun Phin	Phun Phin, Surat Thani	Δ	Tapi River	0.15	17.50	the river flowing directly to the sea
	21.	Khao Khuha	Kanchanadit, Surat Thani	O	Kra Dae Canal	1.20	4.50	the canal flowing directly to the sea
	22.	Khao Phanom Wang	Kanchanadit, Surat Thani	O	Na Canal	0.40	18.30	the canal flowing directly to the sea
	23.	Khao Phli Mueang	Sichon, Nakhon Si Thammarat	O, L	Wang Phai Canal	0	4.50	the canal flowing directly to the sea
	24.	Khao Kha	Sichon, Nakhon Si Thammarat	Δ	Tha Thon Canal	0.08	5.20	the canal flowing directly to the sea
	25.	Khao Ok Thalu	Mueang Phatthalung, Phatthalung	O	Ban Rae Canal	0.70	7.20	the canal flowing directly to the sea
	26.	Khao Khuha Sawan	Mueang Phatthalung, Phatthalung	O	Ban Rae Canal	0.40	8.20	the canal flowing directly to the sea

1.) The result of the present author's excavation (Ueasaman 2015, 2016, 2017) from Khao Nui cave (Trang Province), located on the left bank of the Trang River flowing directly to the Andaman Sea (approximately 33.5 km) [Table 1 No.7] which had been an ideal place for settling since the Neolithic period (2,000-500 BCE) to the early historic states (7th-13th century CE) as confirmed by the following finds in the cave: (1) The Neolithic objects: potsherds (black polished ware), fragment of bones. (2) The seventh to eighth-century finds: votive tablets depicting Buddha flanked by Bodhisattavas with Sanskrit inscription on the reverse side, votive tablets depicting Buddha flanked by Dharmacakra and Stūpa, votive tablets depicting a stūpa with Pāli inscription.

Phase 1



potsherd and fragment of bones
2000, - 500 BCE

Phase 2



clay votive tablet
7th-8th CE

Phase 3



clay votive tablet
12th-13th CE

Objects of different periods found at Khao Nui cave, Trang Province (see Table 2 No. 7)



Verso of the 7th- 8th century votive tablet depicting Buddha flanked by Bodhisattavas, inscribed with "Four Truths of the Noble Ones" in Sanskrit, Khao Nui cave, Trang Province



Votive tablets depicting a stūpa with Pāli inscription 'Ye Dhamma formula', Khao Nui cave, Trang Province

Table 2 : List of Significant Objects Related to Sites

No.	Site's Name	Objects	Dating	Religion
1.	Khao Phra Noe	stone Viṣṇu statue	late 6 th -7 th c. CE	Hindu
		carnelian beads	7 th -9 th c. CE	-
		Chinese Táng ware	8 th -9 th c. CE	-
2.	Khao Phra Narai	Viṣṇu statue and attendants	9 th c. CE	Hindu
		stone inscription	9 th c. CE	Hindu
3.	Khao Khanap Nam	potsherd / bone / stone adze	4,000-500 BCE	Prehistoric
		clay votive tablets	late 6 th -7 th c. CE	Buddhist
4.	Tham Suea	potsherd / bone / stone adze	2,000-500 BCE	Prehistoric
		clay votive tablets	7 th -8 th c. CE	Buddhist
5.	Khao Sai	clay votive tablets	9 th -10 th c. CE	Buddhist
6.	Wat Kiri Wihan	clay votive tablets	9 th -10 th c. CE	Buddhist
7.	Khao Nui	potsherd / bone / stone adze	2,000-500 BCE	Prehistoric burial
		clay votive tablets	7 th -8 th c. CE	Buddhist
		clay votive tablets	12 th -13 th c. CE	Buddhist
8.	Tham Singkhon	Tripod / stone adze	2,000-500 BCE	Prehistoric dwelling
		stone Durgā statue	7 th -8 th c. CE	Hindu
		stucco decoration / painting / script / Buddha images	18 th -19 th c. CE	Buddhist
9.	Khao Khrom	clay votive tablets	9 th -10 th c. CE	Buddhist
10.	Tham Phannara	potsherds	2,000-500 BCE	Prehistoric dwelling
		glass beads	7 th -8 th c. CE	-
		Chinese Táng ware	8 th -9 th c. CE	-
		reclining Buddha image	18 th -19 th c. CE	Buddhist
11.	Khao Chum Thong	clay votive tablets	9 th -10 th c. CE	Buddhist
12.	Khao Chong Khoi	inscription	late 6 th -7 th c. CE	Hindu
13.	Khao Prasong	clay votive tablets	9 th -10 th c. CE	Buddhist
		reclining Buddha image	18 th -19 th c. CE	Buddhist
14.	Khao Nam Ron	head of statue (stone)	7 th -8 th c. CE	Hindu
15.	Khao Si Wichai	Chinese Táng ware	8 th -9 th c. CE	-
		Persian turquoise glazed ware	8 th -9 th c. CE	-
		beads	7 th -10 th c. CE	-
15.1	Monument No.1	brick monument	939 CE (TL)	Hindu
15.2	Monument No.2	brick monument	809 CE (TL)	Buddhist
		part of Buddha images	7 th -8 th c. CE	Buddhist
		clay votive tablets	8 th -9 th c. CE	Buddhist
15.3	Monument No.3	brick monument	985 CE (TL)	Hindu
		stone sculpture's base	7 th -9 th c. CE	Hindu
15.4	Monument No.6	brick monument	7 th -9 th c. CE	Hindu
		stone Viṣṇu statue	late 6 th -7 th c. CE	Hindu
		stone Śivaliṅga	7 th -8 th c. CE	Hindu
		stone Dharmacakra	7 th -8 th c. CE	Buddhist
15.5	Monument No.7	brick monument	840 CE (AMS)	Hindu
15.6	Monument No.12	brick monument	7 th -9 th c. CE	Buddhist
		stone Dharmacakra	7 th -8 th c. CE	Buddhist
		bronze Dharmacakra	8 th -9 th c. CE	Buddhist
15.7	Monument No.13	brick monument	7 th -9 th c. CE	Hindu
		stone sculpture's base	7 th -9 th c. CE	Hindu



Khao Chong Khoi mountain pass (No.12), a Hindu site



Khao Si Wichai (No.15), a Hindu hill temple



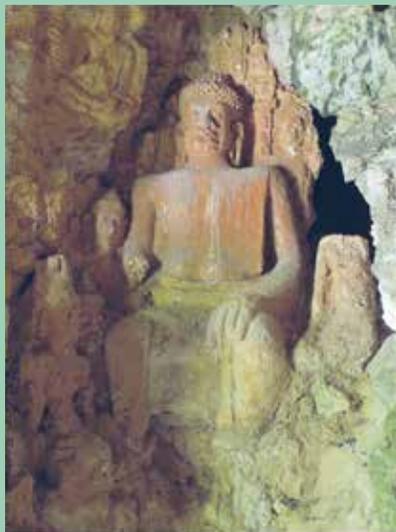
Khuan Phun Phin (No.20), a Buddhist hill temple

Table 2 : List of Significant Objects Related to Sites (continued)

No.	Site's Name	Objects	Dating	Religion
16.	Khao Noradet	brick ruins	7 th -9 th c. CE	Hindu
17.	Khao Phra Anon	stone base construction	7 th -9 th c. CE	Hindu
		Chedi (stūpa) / Uposatha	18 th -19 th c. CE	Buddhist
18.	Khao Chai Son	brick ruins	7 th -9 th c. CE	Hindu
19.	Khao Din	brick ruins	7 th -9 th c. CE	Hindu
		stone sculpture's base	7 th -9 th c. CE	Hindu
20.	Khuan Phun Phin	bronze Buddha image (Amarāvātī style)	4 th -5 th c. CE	Buddhist
		bronze statue of Avalokiteśvara Bodhisattava	7 th -8 th c. CE	Buddhist
		clay votive tablets	7 th -8 th c. CE	Buddhist
		clay votive stūpas	7 th -8 th c. CE	Buddhist
21.	Khao Khuha	clay relief on the ceiling of the cave depicting sitting Buddha	8 th -9 th c. CE	Buddhist
22.	Khao Phanom Wang	clay votive tablets	7 th -8 th c. CE	Buddhist
23.	Khao Phli Mueang	miniature gold Śivaliṅga	6 th -7 th c. CE	Hindu
24.	Khao Kha	brick monument	7 th -8 th c. CE	Hindu
		stone Śivaliṅga	7 th -8 th c. CE	Hindu
		stone Viṣṇu statue	7 th -8 th c. CE	Hindu
25.	Khao Ok Thalu	clay votive tablets	7 th -8 th c. CE	Buddhist
26.	Khao Khuha Sawan	clay votive tablets	7 th -8 th c. CE	Buddhist

(3)The twelfth to thirteenth - century finds: votive tablets depicting Buddhas in various attitudes (Table 2 No.7). The Khao Nui cave had been used as a burial place in a prehistoric period, as a holy place to inter in the cave of the Mahāyāna Buddhist followers in two periods of early states; contemporary with Śrīvijaya and Lavapura (Lopburi), respectively.

2.) A type of votive tablet depicting Buddha sitting with legs pendant (Bhadrāsana) flanked by Bodhiattavas, found in Khao Nui cave is also found in caves of the West coast: Khao Kanap Nam and Tham Sue (see Table 2 No.3, 4) and the East coast: Khao Si Wichai, Khuan Phun Phin, Khao Phanom Wang, Khao Ok Thalu and Khao Khuha Sawan (see Table 2 No.15, 20, 22, 25, 26) but it is not found in the caves inland. This depiction of the Buddha in this attitude is reminiscent of the clay relief of the Buddha image on the ceiling of Khao Khuha cave. The depiction of the Buddha in this attitude is comparable with those of carvings on the wall of Phra Phothisat cave (Saraburi Province in central Thailand), stone image of Wat Phra Men of the Dvāravatī state (Nakhon Phathom Province in central Thailand, 8th-9th century CE), stone images of Dong Duong site (central Vietnam, 9th-10th century CE), and stone image of Candi Mendut of the Śrīvijaya state in Java (Indonesia, 8th-9th century CE) (Srisuchat 2014: 4-5).



Khao Khuha (No.21), a Buddhist holy cave



Khao Phli Mueang (No.23), a Hindu holy cave and religious objects found at the site



Khao Kha (No.24), a Hindu hill temple and stone Statues found at the site

3.) All votive tablets and votive stūpas that were found in all caves shown in the Table 2 [No.3, 4, 5, 6, 7, 9, 11, 13, 22, 25, 26] were made of unbaked clay (sun dried clay). Tablets made of unbaked clay also prevailed in the East coastal communities; however, fired clay tablets were made and used as well as confirmed by unbaked clay tablets and fired clay tablets found together at the hill temples of Khao Si Wichai and Khuan Phun Phin.

4.) The most popular product from Chinese ceramics of the Táng dynasty; Islamic glass and other wares were also found at the coastal port sites; Muaeng Thong-Ko Kho Khao at the mouth of Takua Pa river in Phang-nga Province (Chaisuwan and Naiyawat 2009: 71-77) and Laem Pho-Payang at the mouth of Phum Rieng River in Surat Thani Province as the eastern coast emporium. These imported items were found at the hill temple sites on the West coast (Khao Phra Noe and Khao Phra Narai) as well as on the East coast (Khao Si Wichai and Khao Kha). Therefore, it is suggested that these exotic items were introduced to the hill temples.

5.) The fine grain pots with featuring motifs, considered to be locally made, were found at the hill temple of Khao Si Wichai and Khao Kha (Pakpadee Yukongdi and Nongkran Srichai 1997: 51) which are comparable with those of Yarang, lower southern Thailand. It is suggested that there were local communities connected between upper southern and lower southern Thailand in the late sixth and seventh century CE.

Discussion of Results

Archaeological findings at the eleven hill temples/holy sites and fifteen holy cave sites support the following previous hypothesis:

1. Geographical rock formations of upper southern Thailand provide clear landmarks for many places particularly at the river mouths and sheltered bay-spots. Overseas sailors steered their ships towards landmarks that later were used as a hill temple or cave temple by the Hindu followers of both the West coast and the East coast of upper southern Thailand: Khao Phra Noe (at Phang-nga, the West coast), Khao Khanap Nam (at Krabi, the West coast) and Khao Phli Mueang (at Nakhon Si Thammarat, the East coast), for example.

2. There was communication and religious cult exchange between the local people who lived along the East coast and West coast of upper southern Thailand via streams and mountain valleys and passes, and the locals of inland participated in the trans-peninsular route exchange between the two coastal areas.



Khao Ok Thalu (No.25), a Buddhist holy cave and clay votive tablets found at the site



Distribution of the depictions of Buddha sitting with legs pendant (Bhadraṣṇa) in upper southern Thailand

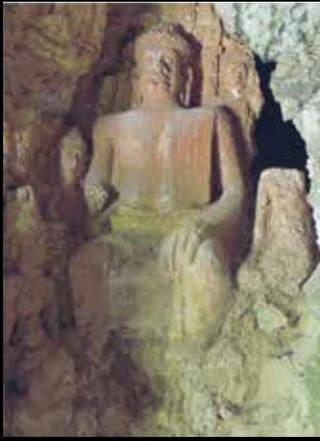
3. The establishment of hill temples supported the Hindu traditional belief of the holy abode of god on top of the mountain either of Śiva or Viṣṇu. A cave of a mount (i.e. Khao Phli Mueang cave) was supported to be the shrine devoted to Lord Śiva. Hindu devotees of upper southern Thailand followed the Indian Hindu example to determine all holy sites located close to a waterway or a confluence in order to promote the site as a 'sacred spot for Hindu pilgrimage.'

4. It seemed likely that the Mahāyāna Buddhist followers of upper southern Thailand did not much pay attention on building a large temple or having it on the high spot rather than using an available cave as a holy place for placing votive tablets and/or votive stūpas interred in the cave regardless of its location owing to the fact that they followed the Buddha's example of simplicity and the Buddha's teaching of all things being impermanent. Some tablets inscribed in Sanskrit with a Buddhist Sūtra (aphorism/a mystery verse) found interred in the caves, in this sense the cave became a repository of the Buddha's power and Buddha's teaching, suggesting that the makers and/or those who placed the items interred in the cave likely had a solemn wish to deposit the items to let future generations recover the Buddhist items that would give insight to the Buddha's teaching through the objects of representation.

Additional insight and new idea acquired from the research are proposed in this paper:

1. Location of hill temples and holy caves, some became landmark sites of upper southern Thailand on the West and East coast of Thailand are ideal for both locals and foreign voyagers' transportation to near and the far-flung destination, for there were many river and canal systems connecting the hill temples and the holy caves sites to the coastal ports/communities, as confirmed by some religious items and ceramics found at the sites that are comparable with those of eastern and central Thailand, central Vietnam, and the Island of Java in Indonesia.

2. The significant religious statues or objects found at the hill temples and holy caves sites that are comparable to those of the far-flung places by sailing across the sea are exemplified by stone image of Viṣṇu of Khao Si Wichai and that of Mueang Si Mahosot (Prachin Buri Province, eastern Thailand); depiction of enthroned Buddha sitting with pendent legs of Khao Khuha cave's clay relief (in Surat Thani on the East coast) and cave's votive tablets from both the West coast and the East coast to those of Dvāravatī's carving on the wall of Phra Phothisat cave (Saraburi Province) and Dvāravatī's stone image at Wat Phra Men (Nakhon Pathom Province) and of Dong Duong site on the coast of central Vietnam and of Śrīvijaya's Candi Mendut in Java; and a bronze four spoked Dhamacakra from excavation at Buddhist temple No.12 of Khao Si Wichai site, comparable to engraved Dharmacakra held by goddess Cuṇḍā on the exterior wall of Candi Mendut, a Mahāyāna Buddhist temple, late eighth century CE, central Java, Indonesia.



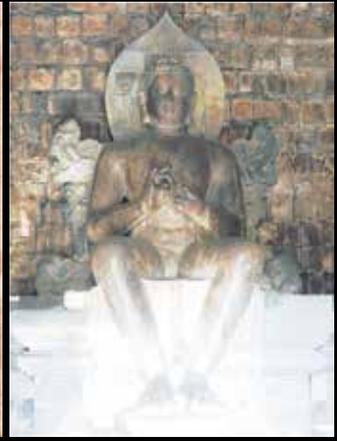
Khap Khuha
Southern Thailand
(clay relief)



Dong Duong site
Central Vietnam
(stone)



Phra Phothisat cave
Central Thailand
(bas relief)



Candi Mendut
Central Java
(stone)

Comparison of enthroned Buddha images at Khao Khuha cave,
Dong Duong site, Phra Phothisat cave, Candi Mendut



Fragments of import ceramics; Chinese Táng glazed wares
and Persian turquoise glazed wares, found at Khao Si Wichai hill temple (No.15)



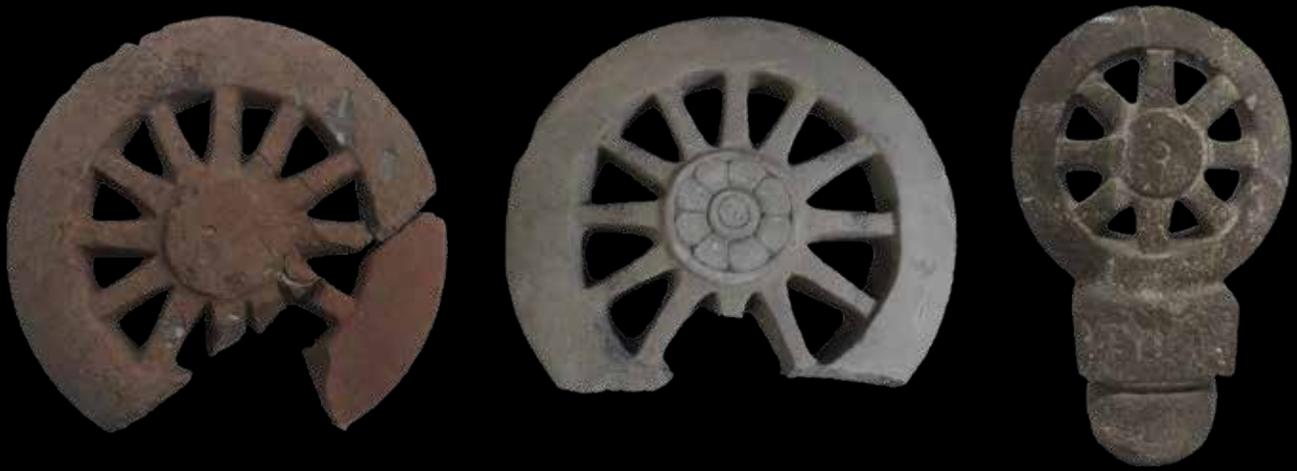
Comparison of potsherds with distinctive motif found at Khao Si Wichai (No.15), Khao Kha (No.24)
and Yarang (Pattani, in lower southern Thailand)

3. Three considerable goods of the eighth to ninth century CE: the Chinese Táng glazed wares and Persian turquoise glazed wares and mosaic glass beads found at the ports of the West coast and the East coast, which are regarded as an indicator of trans-oceanic exchange between the West and the East, have been found at the hill temple sites of both coasts. The contact between main religious communities on the southern Peninsula was confirmed by the same type of local earthenware found at the sites.

4. Although some of the sites had been serving as religious places for many centuries, others had not and still others had been shifted within a single area. A site that has shown evidence to have served as a hill temple for several periods is Khao Si Wichai which revealed the existence of religious buildings of different religious cults; that is to say, Hindu Śaivism, Vaiṣṇavism, Mahāyāna Buddhism, which some were of contemporary buildings, particularly between the late sixth and seventh century CE.

Conclusion

Archaeological findings from the 2009-2018 excavation at Khao Phra Noe hill temple and Khao Nui cave on the western coast, and at Khao Si Wichai hill temple and Khao Phli Muaeng cave on the eastern coast lead to the confirmation of the hypothesis of the East-West coast link with a trans-peninsular route to facilitate the transfer of trade goods and religious traditions since the late sixth century CE. Furthermore, these findings obtained from Khao Si Wichai hill temple, the land route connection southward to Khao Kha hill temple and down to the ancient town of Yarang on the eastern coast, as confirmed by the same symbolic pattern on fine grain pot, locally made, found at the site. This land route was used by the Buddhist followers, therefore, a stone Dharmacakra consecrated at Khao Si Wichai, is comparable to those found at Nakhon Si Thammarat and the ancient town of Yarang, in Pattani Province. However, a bronze four spoked Dharmacakra from excavation at Khao Si Wichai hill temple is a testimony to the far-flung connection across the sea to central Java in the late eighth century CE. The local Buddhist tradition of making cave as a holy place by deposition votive tablets and votive stūpas interred in the cave started from the late sixth century CE on the western coast and spread through southern peninsular Thailand but fired clay tablets were additionally deposited in a stūpa at the hill temple or at the low land from the eighth to thirteenth century CE.



Comparison of stone Dharmmacakras at Khao Si Wichai, Nakhon Si Thammarat (unknown provenance) and Yarang, Pattani



Left: Bronze four spoked Dharmacakra from Khao Si Wichai, Right: Engraved Dharmacakra Candi Mendut



Religious Objects found at Khao Si Wichai:
 Left: Śivaliṅga of Hindu Śaivism / Viṣṇu of Hindu Vaiṣṇavism
 Right: Parts of Buddha images of Buddhism

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Archaeological Sites and Findings on the Lower Peninsula
of Thailand from the Seventh to Thirteenth Century
Reflecting the Maritime Silk Road

Siriporn Sanghiran



Bronze Head of Bodhisattva found at the Ancient Town of Yarang, Pattani Province
(*Photograph: Courtesy of Songkhla National Museum*)

Abstract

The aim of this article is to present an overview of archaeological sites and findings on the Lower Peninsula of Thailand in early historic periods between the seventh and thirteenth century CE. Archaeological findings from six sites and twenty-nine sites from surveys suggest that prehistoric cave-dwellers dating back to 9,000 years ago moved to settle to lowland at least 300 BCE and the historic tradition from overseas was adopted by the indigenous people from seventh century onwards. Findings from two main distinctively geographical areas, the Sathing Phra Peninsula (modern-day Songkhla Province) and the Pattani basin (modern-day provinces of Pattani and Yala) that featured overseas contact of locals as well as export-import, commodities, point of contact, trans-peninsular routes and overseas route are discussed in the paper.

These findings obtained prior to being a part of Śrīvijaya kingdom in the late eight century CE, the early historic states of the two main areas adopted Hinduism and Mahāyāna Buddhism. Owing to being the city port of several periods and had made contact with several countries in Southeast Asia and overseas, Singkhara-nagara state on the Sathing Phra Peninsula absorbed various foreign influences whereas Langkasuka state in the Pattani basin featured the impact of Mahāyāna Buddhist state of seventh to eighth century CE.



Introduction

Previous archaeological excavations on the Lower Peninsula of Thailand were undertaken by foreign and Thai archaeologists at two main areas: Sathing Phra Peninsula and the Pattani Basin were reported to be excavated and found significant evidence. The excavated sites are as follows: the ancient town of Sathing Phra and Khok Thong by Janice Stargardt (1971-1972), the Pa-O kiln, the ancient town of Sathing Phra and Phang Lung (an ancient reservoir by Tharapong Srisuchat (1979-1980), the Prawae site in the ancient town of Yarang by Chusiri Jamonman et al (1979-1980), the Prawae and Ban Wat in the ancient town of Yarang by David J. Welch and Sawang Lertrit (1984-1985), four brick stūpas at the ancient town of Yarang by Pornthip Punthukovit and Phakpadee Yookongdee (1988-2006) and the Prawae Site and Bandi kiln site by Daniel Perret, Amnat Sombutyanuchit and Siriporn Limwijitwong (1997-1998).

Since 2002 to 2018 archaeological inventory to collect data and identify early historic to historic sites on the lower southern peninsula of Thailand has been undertaken by the 11th Regional Office of Fine Arts under the project entitled “Study and Dissemination of Knowledge about the Area around the Songkhla Lake”, “Prehistoric and Early Historic Archaeology in the Area of Songkhla and Satun Provinces” and “Project of Study and Dissemination of Knowledge about the Ancient Town of Yarang in Pattani Province”. The study area covers four provinces of the eastern coast, namely, Songkhla, Pattani, Yala and Narathiwat provinces and Satun Province on the western coast. As a result of 35 sites, 7 sites were registered as the national property by the Fine Arts Department. Excavation had been conducted at six sites, three in Songkhla province, namely, Khok Thong, Khao Khuha and the ancient town of Sathing Phra; one site at Tham Silp in Yala Province and one site at the ancient town of Yarang in Pattani Province.

Geographical Features of Lower Southern Peninsula and Location of the Site

The lower southern peninsula is a part of Peninsular Thailand, widely known as the Malay Peninsula, flanked by the Gulf of Thailand in the east and the Andaman Sea in the west. The main mountain ranges of the peninsula are the Banthat Mountain Range and the Sankalakhiri Mountain Range. The Banthat Mountain Range is running in a north-south direction in the western part of Songkhla Province, eastern part of Trang and Satun provinces, while the Sankalakhiri Range is lying in a west-east direction as a part of the provinces of Songkhla, Yala and Narathiwat. It is a natural border between Thailand and Malaysia. The water resources from the Banthat mountain range form rivers and canals affecting the Songkhla Basin of 2,500 square kilometres in the official polity of Songkhla, of the provinces of Phatthalung and Nakhon Si Thammarat. The Sankalakhiri Range that formed the Pattani Basin of 3,858 square kilometres including Yala and Pattani provinces.



Rock-cut temple
(Khao Khuha)
at the Conglomerate Hill,
Sathing Phra Peninsula,
Songkhla Province



Songkhla Lake



Limestone Hill,
a Part of the Sankalakhiri Mountain Range



Western Ditch of Ancient Town of Sathing Phra,
Sathing Phra Peninsula, Songkhla Province

The geological rock formation of the region gives various topographical features such as limestone outcrops with cliffs, shelters, grottos and caves, shale hills and conglomerate hills that have provided several kinds of places for humans to live in or adapt them to a functional place, accordingly. These are exemplified by a limestone rock shelter: a prehistoric dwelling at Lang Wat Khao Rup Chang rock shelter in Songkhla Province, dating back to 7,000 BCE; a conglomerate hill at Khao Khuha at Songkhla Province being adapted to be a rock-cut temple of Hinduism dating back to seventh to eighth century CE and a religious building constructed on the shale hill at Khao Noi (Songkhla Province) dating back to eighth century CE.

Between Songkhla Lake and the Gulf of Thailand, a long sandbar, namely, the Sathing Phra Peninsula, emerged, running from the north to south. Archaeological findings on the peninsula reveal several dwellings, occupation from the seventh century CE to the present-day. The tropical rainforest environment of this region has led to a wealth in natural resources such as, mineral, flora and fauna and other products from the forest that benefit the inhabitants and has been one of important factors of human development over times. The abundance of rivers, canals, lakes, seashores, bays and archipelagos which abound with natural foodstuff from waters, result in habitats moving from the high land to settle in the river basins and along the seacoast. Apart from this, the waterway systems facilitated communication and transportation inside and outside the region. Therefore, overseas foreigners have voyaged to the region owing to the natural resources of the area. When sedentary communities of early historic periods involved in exchange of goods with other people outside, either near or far sites, these natural resources people were in demand much more than locals used. To supply the exchange system natural resources were collected and distributed. The growth of consumer needs and economics concerned within the area was a factor for increasing trade routes both domestic trans-peninsular routes, and overseas contacts. The richness of the regional natural resources had been a crucial factor in socio-cultural development from the prehistoric communities to the moated settlement of the early historic communities before the advent of the historic states on the lower southern peninsula.



Painting on the Inner Wall of the Southern Chamber
at Khao Khuha, Sathing Phra Peninsula, Songkhla Province



A mould depict Buddha Image
found at Khok Thong,
Sathing Phra Peninsula,
Songkhla Province



Intaglio Seal depicting a Bull and a Crescent Moon above,
found at Khok Thong, Sathing Phra Peninsula, Songkhla Province

Identification and Analysis of Archaeological Findings

In Table A: Archaeological Sites and Findings shows 35 archaeological sites reveal the development of settlements and activities of dwellers from the seventh to thirteenth centuries CE on the lower southern peninsula of Thailand as follows:

1. Outstanding Sites and Religious Objects

Two main areas, i.e., the Sathing Phra Peninsula (Songkhla Province) and the Pattani Basin (Pattani Province) were occupied by townsmen who adopted Indian religious traditions.

1.1 Sathing Phra Peninsula: Four significant sites on the peninsula are:

1.1.1 Khok Thong, located on the upper part of the peninsula, likely an inner port on the bank of Khok Thong canal connecting the Songkhla Lake and the Gulf of Thailand. It was a trading spot that had been active since the seventh to seventeenth century CE, exemplified by a carnelian intaglio seal, glass beads and gold ornament (seventh - ninth century CE), and Chinese ceramics (eleventh - seventeenth century CE). The religious objects reported to be found at the site suggest that people practiced both Hindu and Buddhist traditions, exemplified by stone statues of Śivaliṅga, intaglio seal engraved with a bull figure and a crescent moon, a number of finials of stūpas and a ruin of a brick shrine [see Table A. No.1].

1.1.2 Khao Khuha was a rock-cut temple of Hinduism dating back to the seventh century CE; two chambers were dug out to be used as a Devalaya of the Hindu Gods. These chambers were adapted by engraving the ceilings, the walls, and floor as sacred room, with painting of OM on the inner wall of the southern chamber and in front of the northern chamber, the brick building was found.

A sacred pond, namely, Phang Phra, was dug in the east of the shrine in which a bronze image of Agastya of the eighth century was found (Srisuchat 1985). Additionally, a Śivaliṅga, a base of statue, a torso of Vishnu image of the tenth century CE were found at the site (Siriporn Limwijitwong 2000: 3-12).

1.1.3 The Ancient Town of Sathing Phra and Phang Faem, located at the middle sandbar of the Sathing Phra Peninsula, was in rectangular shape covering 0.9 square kilometres, and lies about 500 metres west of the Gulf of Thailand and 3 kilometres east of the Songkhla Lake. From the 1979-1980 excavation, the basements of two large brick buildings were found in the middle of the town (Srisuchat 1979 a: 27). Import commodities such as Chinese ceramics, glass beads and a Chinese bronze mirror were found in the town and its vicinity. Some considerable religious objects are: (1) A volcanic stone image of Buddha in meditation (found at Phang Faem) which is comparable to those found in Angkor Borei in Takeo Province of Southern Cambodia and from the Mekong Delta in Southern Vietnam; (2) A stone Gaṇeśa image found at Phang Lung, dating back to seventh century CE (Srisuchat 1979 b: 121); (3) A stone image of Viṣṇu found at Wat Khanun, Sathing Phra Peninsula, Songkhla Province, dating back to the eighth century CE; (4) A stone Śivaliṅga found at Phang Lek; (5) A number of bronze statuettes such as image of Buddha in meditation, a Bronze Image of a standing Śiva, four armed Avalokiteśvara, Bodhisattava Padmapāṇi, Tāra, Kubera (Srisuchat 2014: 160, 122, 126, 216, 220, 248, 292).



Buddha Image found at Phang Faem,
Sathing Phra Peninsula
(Photograph: Courtesy of Songkhla National Museum)



Candraśālā found at Khao Noi,
Singhanakhon District, Songkhla Province
(Photo: Courtesy of Songkhla National Museum)



Śivaliṅga found at Phang Lek,
Sathing Phra Peninsula



Bronze standing Image
of Śiva found at Wat Khanun,
Sathing Phra Peninsula,
Songkhla Province

Owing to its location that the waterway connecting the town to the Gulf of Thailand and the Songkhla Lake, the town also functioned as a trading port being active between the seventh and fifteenth century CE, exemplified by the Chinese Tang ceramics (eighth to tenth century CE), by Song ceramics (tenth to twelfth century CE), Yuan ceramics (thirteenth to fourteenth century CE) and blue and white Ming porcelain (fourteenth to fifteenth century CE).

1.1.4 Khao Noi, the shale hill, located on the lower part of the Sathing Phra Peninsula, on which a brick rectangular religious building was found. The 1986 excavation was undertaken at the site. Significant objects found by excavation were antefixes showing a head of a man or deity (?). These antefixes are in the form of the moon-shaped blind window called *candraśālā* in Sanskrit (Tamil: *kudu*) which are comparable to those found at U-thong in Suphan Buri Province, central Thailand (*Dvāravatī* town) and found at An Giang Province in Southern Vietnam dating back to the seventh century CE (Guy2014: 186-187). The ancient town was later known as the state/town of Singkhara-nagara (Songghora-nagari-malayu) or Singkhara/Singora/Singor (Thai: *singkhon*), literally meaning mountain/ mountain-city (Srisuchat 2014: 12, 123 -131).

1.2 The Pattani Basin: two major sites on the area are:

1.2.1 The Ancient Town of Yarang, located on the sediments of the old Pattani River, 4.5 kilometers away from Pattani River and 15 kilometers from the Gulf of Thailand, covering 0.9 square kilometres in the modern Yarang District in Pattani Province. A large number of bricks *stūpas* were found. Of 44 *stūpa* mounds, 4 *stūpa* mounds were excavated which uncovered 4 large brick *stūpas*: Ban Jalae No.2, approximately 7 meters in square plan, Ban Jalae No.3, 13.15 meters in square plan, Ban Jalae No.8, 13.50 meters in rectangular plan, Ban Wat No.9, 12 meters in square plan. Some significant religious objects from surveys at the town consist of a stone *Śivaliṅga*, *Dharmacakra* (the Wheel of the Law) , a bronze image of *Sūraya* (Sun god) and fragments of *Candraśālā*, fragments of sandstone door frames, sandstone molds for casting earrings and fragments of sculpture mortars. The 1992-1997 excavations of the four *stūpas* revealed a large number of votive tablets and votive *stūpas* made of sun baked clay and refined clay with inscriptions depicting a Buddha teaching 'verse' (aphorism) written in Pallava characters and using Sanskrit language, a stone bull sculpture, bronze statuettes of *Bodhisattva Avalokitésavara*, a head of *Bodhisattva Avalokitésavara*. Apart from these, a few Persian turquoise potsherds were found in the *stūpas* No.3 that suggest that the Buddhist community made contact with the overseas merchants through trade that brought a type of ceramic from the Middle-East to the ancient town of Yarang.



Stone Śivaliṅga found at The Ancient Town of Yarang
(Photograph: Courtesy of Songkhla National Museum)



Votive stūpa, found from Excavation
at the Ancient Town of Yarang
(Photograph: Courtesy of Songkhla National Museum)



Stone Bull found at Ancient Town of Yarang,
Pattani Province



Brick Stūpa, BJL. No.3, at Ban Jalae,
Ancient Town of Yarang, Pattani Province
(after Excavation and Restoration)



Stone Dharmmacakra found
at Ancient Town of Yarang, Pattani Province

1.2.2 Thasap - Wat Khuhaphimuk, located 7 kilometers distant from Pattani River, situated in Na Tham Sub-district, Mueang Yala District, Yala Province. The significant feature of the cave site was in the eighth to tenth century CE belonging to Mahāyāna Buddhism. The cave called Tham Phra Non (literally meaning a cave of reclining Buddha) because in which a lime-brick image of a reclining Buddha is placed. The cave is used as a Buddhist temple known as Wat Khuhaphimuk. Another significant cave is Tham Silp (literally meaning Art Cave) and the wall depicts a painting of Buddha. Some significant religious objects from surveys at the mountain consist of a Buddha image, votive stūpas, votive tablets, and a bronze miniature stūpa.

The ancient towns on the Pattani basin, known as 'Lankāśobha', an eastern port of port of Suvarṇabhūmi in the second century CE and were later known as the state of Langkasuka (Srisuchat 2014: 93-101).

2. Inscribed Votive Stūpas and Votive Tablets

During the course of the eight-century Śrīvijaya and/or Śailendra from Java reinforced its conquest of several kings on peninsular Thailand, the Mahāyāna cult was more powerful because of the political influence of Śrīvijaya over the territory, as confirmed by a number of Bodhisattvas, Tārā, Jambala which are comparable to those found in Java (Indonesia) and Chaiya (the upper southern Peninsula) (Srisuchat 2014: 11- 16). The tradition of making votive tablets and votive stūpas with inscriptions of a Buddha teaching 'verse' that were interred in the caves, exemplified by votive stūpas and votive tablets found at Tham Phra Non, Tham Silp, Khao Kampan in Yala Province and Tham Yimit in Satun Province are comparable to those found in Malaysia and Indonesia. The Vajrayāna cult from Java and Cambodia, owing to the maritime contacts, was prevalent on the peninsula during the tenth to eleventh and the twelfth to thirteenth century CE, respectively. Furthermore, a bronze stūpa found at Wat Khuhaphimuk in Yala Province is comparable to those of the Vajrayāna stūpa found at Nalandā Mahāvihāra and at Bodh Gaya, Bihar State, India dating back to the ninth century CE.

3. Ceramics

The lower southern peninsula of Thailand processes a long and straight coastal and sandbar of the East coast to the Gulf of Thailand, leading to an increase of overseas commercial contacts northwards (China) between the seventh and seventeenth century CE, and southward (Java, Sumatra) between the twelfth and thirteenth century CE rather than westwards (India and the Middle-East). The main commodity that was an indicator of trade interaction with China is Chinese ceramics from various kilns in China such as white glazed bowl of the Tang Dynasty, Longquan celadon dishes of the Song Dynasty and Qingbai ceramics from Déhù kiln, that were found in several sites in different periods in the region (see Table A. No.6, 8, 11).



Votive Tablets found at
Wat Khuhaphimuk, Yala Province



Wat Khuhaphimuk, Yala Province



Chinese Ceramics found at Several Sites in Songkhla Province

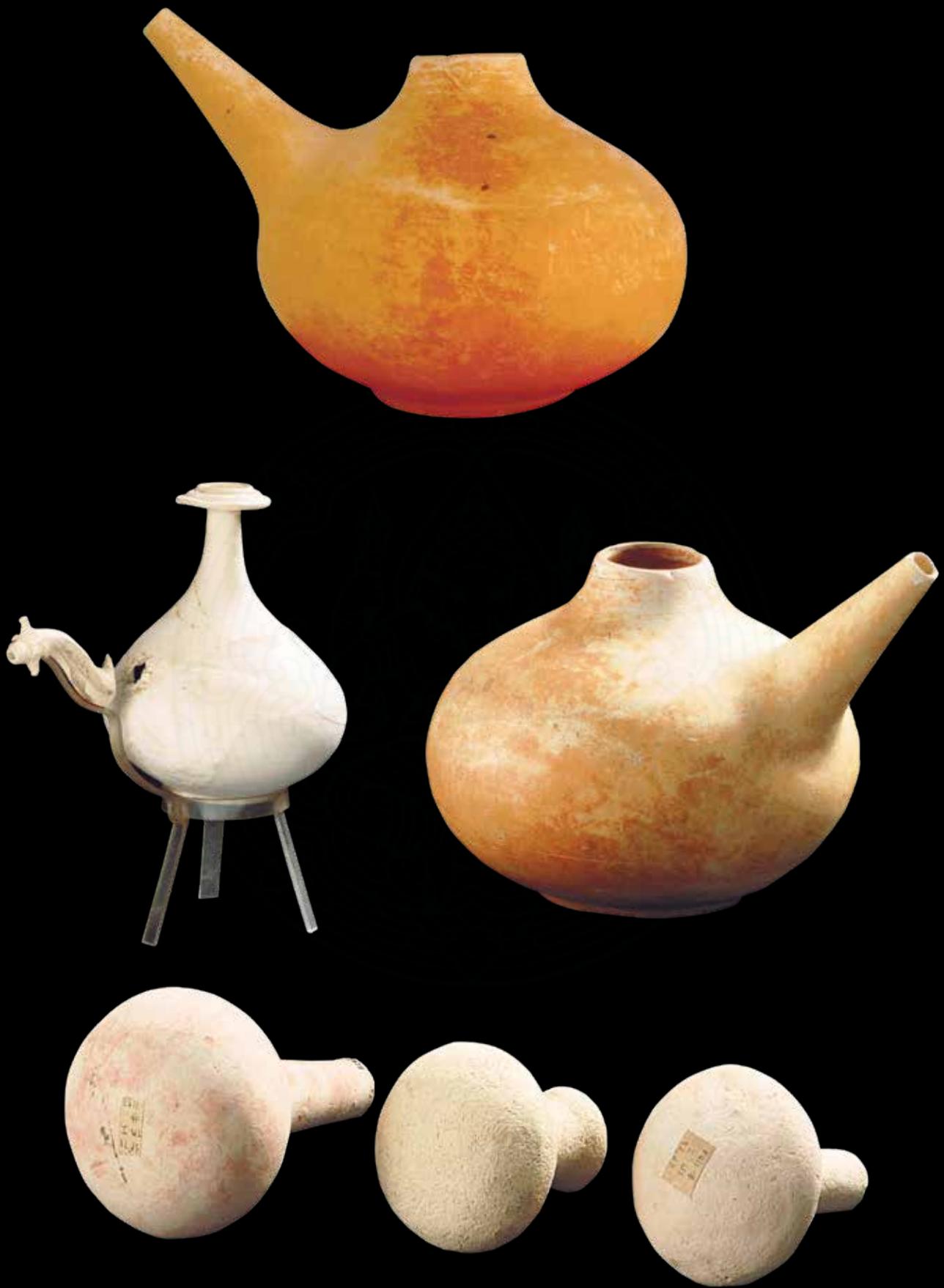
4. The Organic Commodities

like agarwood (alorswood), sugarcane palm, rice etc. of local products which were mentioned in the Chinese accounts in the twelfth and thirteenth century CE as important export- goods from lower southern peninsular Thailand, due to the tropical condition of the region, left no trace of the organic items, even though lower southern Peninsula of Thailand abounds with good quality of flora. On the other hand, an important local inorganic product of the region; that is to say, the fine grain spouted pot (also known as kendi), was produced from kilns at Pa-O site (see Table A. No. 24), 17 kilometres to the south of the ancient town of Sathing Phra in the Sathing Phra Peninsula, in the twelfth to thirteenth century CE (Srisuchat 1990: 9). They were found in archaeological sites on the same peninsula, which are Ban Nai Lop, Khok Kham Thaen, Khok Kham Mot Daeng, Khok Kham Mu, Khok Phang Nian, Khok Phang Khi Lek, Khok Muang, Phang Yom, and Phang Phao (see Table A. No.8, 14 -21) and outside the peninsula, such as, two important ancient towns on upper southern Peninsula of Thailand: the ancient town of Chaiya (Wat Wiang site), Surat Thani Province, the ancient town of Phra Wiang, Nakhon Si Thammarat Province. The pottery as a trade item exported overseas to Trowulan in East Java, Kota Cina and Muarajambi in Sumatra, and Polonnaruwa in Sri Lanka (Srisuchat 2014: 129). Despite the typically local product was widely exported as mentioned above, no Chinese accounts or any other foreign accounts did refer to this commodity item.

Result of Study Reflecting Maritime Silk Road

The study of archaeological evidence from the 35 identified sites in association with significant finds on the lower southern peninsula of Thailand from the seventh to the thirteenth centuries suggests that:

1. The adoption of the Hindu tradition as well as the Buddhist tradition by indigenous people of the lower southern peninsular Thailand was evidently be at the same time.
2. Two major areas of establishment of the ancient towns in the seventh to eight century CE located on the Sathing Phra Peninsula and the Pattani River basin suggest that the influence of the Buddhist tradition was stronger than the Hindu tradition.
3. The first inner port on the river bank (Khok Thong site) of the Sathing Phra Peninsula that functioned in the seventh to eighth century at the same time when people of the peninsula adopted both Hindu and Buddhist tradition. The port has evidently been active since the early period of the seventh century CE to the historic period of the Thai kingdom in the seventeenth century CE, as the findings from the site confirmed.
4. From the seventh to thirteenth century CE locals of lower southern peninsula of Thailand had exercised and developed their own political and religious centre and trading ports, accordingly.



Kendi (Spouted Pot) and Clay Anvil from Excavation at Pa - O Kiln, Songkhla Province

5. Between the seventh and eighth century CE the people of towns on the Sathing Phra Peninsula practiced both Hindu and Buddhist traditions and converted to the Mahāyāna Buddhism during the eighth and tenth century CE when the Mahāyāna cult was more powerful owing to the political influence of Śrīvijaya over the territory, as confirmed by a number of statues of Bodhisattvas, e.g. Avalokiteśvara, Maitreya, Tārā, Jambala, which are comparable to those found in Java (Indonesia) and Chaiya (on upper southern peninsula). The Vajrayāna cult from Java and Cambodia, owing to the maritime contacts, was prevalent on the peninsula during the tenth to thirteenth century CE. The ancient town of Yarang on the Pattani River basin mainly practiced the Mahāyāna tradition and the cult of building several stūpas was adopted since the seventh to eighth century CE. The tradition of making votive tablets and votive stūpas with inscription showing a Buddha teaching 'verse' (aphorism) that is comparable to those found in Malaysia and Indonesia.

6. The ancient town of Sathing Phra (on the Sathing Phra Peninsula) and that of Yarang (on the Pattani River basin) were a part of the Śrīvijaya Federation States in the eighth to tenth century CE. They were the main political and religious centres to distribute the religious practice of placing the Mahāyāna votive tablets and votive stūpas interred in caves and stūpas. Apart from a large number of brick stūpas at the ancient town of Yarang, a few were found in other Buddhist sites on the lower southern peninsula of Thailand.

7. The lower southern peninsula of Thailand processes a long and straight coastal and sandbar of the East coast to the Gulf of Thailand, leading to an increase of overseas commercial contacts northwards (China) between the seventh and seventeenth century CE and southwards (Java, Sumatra) between twelfth and thirteenth century CE rather than westwards (India and the Middle-East).

8. The interaction with other areas in terms of religious traditional exchange is confirmed by some religious art styled objects that are comparable to those of the Upper Southern Peninsula of Thailand, Dvāravatī towns at U Thong (Suphan Buri) in Central Thailand, Southern Vietnam, Java, Sumatra and Nalanda (Bengal) in India.

9. The significant local products of organic matter (flora) referred to in the Chinese accounts, have no remains to be traced, but a local inorganic product that had no reference in the Chinese account, was found as an important export item to Indonesia and Sri Lanka. This was a spouted pot (kendi), the typically local earthenware, produced from the Pa-O kiln site of the Sathing Phra Peninsula between the twelfth and thirteenth century CE.



Bronze image of Tārā bearing the Post-Pallava script with Sanskrit language on the back side of it, found at Sathing Phra District, Songkhla Province, 9th century CE. National Museum, Songkhla.

(Photograph & Caption: Courtesy of Dr. Amara Srisuchat)



Baked clay sealings depicting stūpas, Buddha flanked by two stūpas with the ancient Indian script underneath, from excavation at Stūpa No. 3 in the Ancient Town of Yarang, Ban Chale, Yarang Sub-district, Yarang District, Pattani Province, 8th century CE. National Museum, Songkhla.

(Photograph & Caption: Courtesy of Dr. Amara Srisuchat)



Bronze image of Bodisattva Maitreya found at Ban Lan Kwai, Yarang District, Pattani Province, 8th century CE. National Museum, Bangkok

(Photograph & Caption: Courtesy of Dr. Amara Srisuchat)

Archaeological Prospective to Further Archaeological Research

The archaeological research on the peninsula of Thailand reveals a large number of data. From 2002 to present, the Fine Arts Department has done more disciplinary research. In 2018, the 11th Regional Office of Fine Arts has a project entitled “Project of Study and Dissemination of Knowledge about the Ancient Town of Yarang in Pattani Province” in which further scientific surveys and analysis methods were applied in order to provide new archaeological insight in the field. However, further research should be undertaken at both main areas as well as other promising areas in order to find out the evidence of the missing link, nine hundred years from three hundred BCE to sixth century CE.



Archaeological Sites and Findings
on the Lower Peninsula of Thailand

Table A Archaeological Sites and Findings

No.	Name of Site	Administrative				UTM	Topography				Period			Operation Archaeology		Signification findings as site indicator	Religious			
		Village	Sub-district	District	Province		MCH	L	R	Co	PH	E	H	Su	E		HD	B		
1	Khok Thong	Khok Thong	Ranot	Ranot	Songkhla	47N 646888.00 m E 860669.00 m N			R				E	H	Su	E	Beads, intaglio seals, mould depict Buddha Image, parts of stupa, gold ornaments, brick buildings, Śivaliṅga, ankhor	HD	B	
2	Wat Makam Thao	Ranot	Ranot	Ranot	Songkhla	47N 646128.26 m E 860142.26 m N		L						H	Su		Spidle whorl, grinding stone		B	
3	Wat Phang Yang	Phang Yang	Phang Yang	Ranot	Songkhla	47N 650613.03 m E 852494.44 m N			R					H	Su		Moated site, Bodhisattava Image		B	
4	Wat Chedi Ngam	Chedi Ngam	Bo Tru	Ranot	Songkhla	47N 653288.87 m E 845569.86 m N		L						H	Su		Bodhisattava Image, brick building, magara water pipe figure		B	
5	Wat Si Yang	Si Yang	Bo Tru	Ranot	Songkhla	47N 653728.01 m E 843956.77 m N		L					E	H	S		Moated site, Bodhisattava Image, brick building,		B	
7	Khao Khu Ha	Pakho	Chumphon	Sathing Phra	Songkhla	47N 653588.40 m E 840883.40 m N	MCH							E	H	Su	E	Rock-cut temple, Śivaliṅga, part of Viṣṇu image, brick building, sacred painting in word of "Om", sacred pond, with Agastaya Image, base of Śivaliṅga	HD	
6	Koh Pho	Koh Pho	Sanamchai	Sathing Phra	Songkhla	47N 0656230 E 0835322 N		L						H	Su		Pa-o potteries, Ming ceramics, Bang Boon Potteries	-		
8	Ban Nai Lop	Kradang Nga	Kradang Nga	Sathing Phra	Songkhla	47N 657536.66 m E 830185.63 m N		L						E	H	S	Pa-o potteries, Ming ceramics, Bang Boon Potteries			
9	Bo Ma Lia	Kradang Nga	Kradang Nga	Sathing Phra	Songkhla	47N 0657043 E 0832046 N		L						E	H	S	Pa-o potteries, Chinese ceramics			
10	Samnak Song Ati Wanawas	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658420 E 0827341 N		L						E	H	S	Pa-o potteries, Chinese ceramics			
11	Ancient Town of Sathing Phra	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658636.00 m E 826819.00 m N		L						E	H	S	E	Moated site, brick building, a large number of Religious both Buddhist and Hinduism Images, Pa-o potteries, chinese ceramics, glass ornament, ankhor	HD	B
12	Khok Mai Phai	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658489 E 0826135 N		L						E	H	S	Pa-o potteries, bricks, Chinese ceramics			
13	Khok Si Dok Mai	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658848E 0826237N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
14	Khok Kam Taen	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658778E 0826572N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
15	Khok Kam Mot Daeng	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658643E 0826474N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
16	Khok Kham Moo	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658628E 0826648N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
17	Khok Phang Nien	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658510E 0826410N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
18	Khok Phang Ki Lek	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658437E 0826298N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
19	Khok Muang	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 658546E 0825980N		L						E	H	Su	Pa-o potteries, bricks, Chinese ceramics			
20	Rongrien Phang Phao	Phang Phao	Chating Phra	Sathing Phra	Songkhla	47N 659282.57 m E 824539.04 m N		L						H	Su		Pa-o potteries, Ming ceramics, Bang Boon Potteries, Sangalok ceramics, ankhor			
21	Phang Yom	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 659159.92 m E 824388.63 m N		L						H	Su		Pa-o potteries, bricks, Chinese ceramics			

No.	Name of Site	Administrative				UTM	Topography				Period			Operation Archaeology		Signification findings as site indicator	Religious		
		Village	Sub-district	District	Province		MCH	L	R	Co	PH	E	H	Su	E		HD	B	
22	Phang Lek	Phang Phao	Chating Phra	Sathing Phra	Songkhla	47N 659262.47 m E 824704.66 m N		L					E	H	Su		Śivaliṅga, Pa-o potteries, bricks, Chinese ceramics	HD	
23	Phang Faem	Chating Phra	Chating Phra	Sathing Phra	Songkhla	47N 659945.8104 825324.2551N		L					E	H	Su		Volcanic stone seated Buddha		B
24	Pa –O Kiln	Pa-O	Nong Hoi	Singhana khon	Songkhla	47N 664605.70 m E 809285.26 m N			R					H	Su	E	four kilns with products; potteries, clay anvil		
25	Khao Noi	Khoa Noi	Hua Khao	Singhana khon	Songkhla	47N 672068.95 m E 798037.14 m N	MCH						E	H	Su	E	Candraśālā , brick building		B
26	Khok It	Khok It	Pron	Tak Bai	Narathi wat	47N 170141.43 m E 688915.39 m N			R				E	H	Su		brick building, inscribed bricks		B
27	Rim Nam Su-Ngai Kolok	Su-Ngai Kolok	Su-Ngai Kolok	Su-Ngai Kolok	Narathi wat	47N 829409.35 m E 666653.42 m N			R				E		Su		Amaravati style Buddha image		B
28	Ancient Town of Yarang	Bitumudi, Ban Wat, Ban Jalae	Yarang,Wat	Yarang	Pattani	47N 755051 E 747891 N		L					E	H	Su	E	Moated site,44 mounds, brick buildings, a large number of votive tablets and votive stupa, Persian ceramics, Śivaliṅga, Bodhisattva image, Suriya image, Dhammakra fragment of Candraśālā, stone mould	HD	B
29	Ban Lan Kwai	Ban Lan Kwai	Kolum	Yaring	Pattani	47N 757646.46 m E 735920.79 m N		L					E	H	Su		Bodhisattva Maitreya Image		B
30	Ban Trang	Ban Trang	Trang	Mayo	Pattani	47N 760628.00 m E 742194.00 m N		L					E	H	Su		stone post		
31	Thasap-Khuhapimuk	Na Tham	Na Tham	Meaung	Yala	47N 0745997E 0722200N	MCH				PH		E	H	S		Cave shrine, reclining Buddha, miniature of stupa, votive tablets, votive stupas, ceramics		B
32	Tham Silp	Na Tham	Na Tham	Meaung	Yala	47N 0745997E 0722200N	MCH				PH		E	H	Su	E	prehistoric sherds, Cave shrine, Prehistoric painting, Buddhist painting, votive tablets, stucco Buddha image		B
33	Khao Kam Pan	Na Tham	Na Tham	Meaung	Yala	47N 0746865E 0722985N	MCH				PH			H	Su		prehistoric sherds,Cave shrine, votive tablets, stone Buddha image		B
34	Khao Kao	Han	Khao Kao	La Ngu	Satun	47N 0589332 E 0763295 N	MCH		R		PH		E		Su		prehistoric sherds, part of votive stupa, beads,polished stone adze		B
35	Tham Yi Mit	Wang Pra Chan	Wang Pra Chan	Kuan Done	Satun	47 N 0624917 E 0748258 N	MCH				PH		E		Su		prehistoric sherds,Cave shrine, votive tablets, miniature stupa		B

Abbreviations in Table:

MCH = Mountain, Cave, hill L = Low land R = near river
 PH = Prehistory E = Early History H = History
 S = Survey n E = Excavation
 HD = Hinduism B = Buddhism



Portable X-ray Fluorescence Analysis
of Artefact from Ban Jalae No.8,
Ancient Town of Yarang, Pattani Province



Excavation for Collecting Soil Sample
for Thermoluminescence Dating at Ban Jalae No.3,
Ancient Town of Yarang, Pattani Province



The 2018 Archaeological Surveys at the Ancient Town of Yarang,
Pattani Province, in “Project of Study and Dissemination of Knowledge
about the Ancient Town of Yarang in Pattani Province”

Conclusion

There was a gap of nine hundred years between the first settlement of prehistoric people on the lowland and the establishment of the early historic states that two religious forms from India were obviously practiced. The Hindu and Buddhist traditions were contemporary, established in both areas at the beginning of the seventh century CE. Before the advent of the Śrīvijaya's socio-religious influence on the Lower Peninsula in the late eight century CE, a Mahāyāna Buddhist state was well developed at the Pattani basin, later known as Langkasuka, as confirmed by several brick stūpas and associated finds, whereas very few ruins left to show religious monument at the ancient town of Sathing Phra on the Sathing Phra Peninsula, except a Hindu rock-cut temple at Khao Khuha and an early port at Khok Thong on its upper part. The central part of the peninsula was developed continuously to be the capital city and main port from the eighth to thirteenth century CE, later known as Singkhara-nagara/Singora. As the state of Śrīvijaya kingdom and being a principle port of the Lower Peninsula which had a commercial contact with overseas countries by its own business, the stream of various traditions from Dvāravatī (central Thailand), Khmer, Cham, Java, Bengal, and China was prevalent in the Sathing Phra Peninsula rather than in the Pattani basin, as confirmed by a comparable style of religious art and imported wares (Chinese, Vietnamese and Khmer wares). In the twelfth to thirteenth century CE, local made wares from Pa-O kiln on the peninsula were produced for commercial use and exported overseas. The 2019 archaeological project will be focused on further research at the Pattani basin to learn about the period before and after seventh-century Langakasuka and searching for a nine hundred-year missing link.

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Tracing Zhēnlà Beyond Cambodia:
Archaeological Findings
on the Lower Mekong River Basin

Chaowanee Lekkla



Abstract

The paper is an attempt to explain how twenty-four inscriptions found in southern Laos PDR and northeastern and eastern Thailand were related to Zhēnlà, the early kingdom of Cambodia, known to the Chinese by the sixth century CE, centered on the delta of the Mekong River.

Identification of inscriptions' sites and associated findings from excavation will be provided to figure out how Zhēnlà's influence shaped the states in the lower Mekong River basin, as compared with some independent states flourishing in the area at the same time.

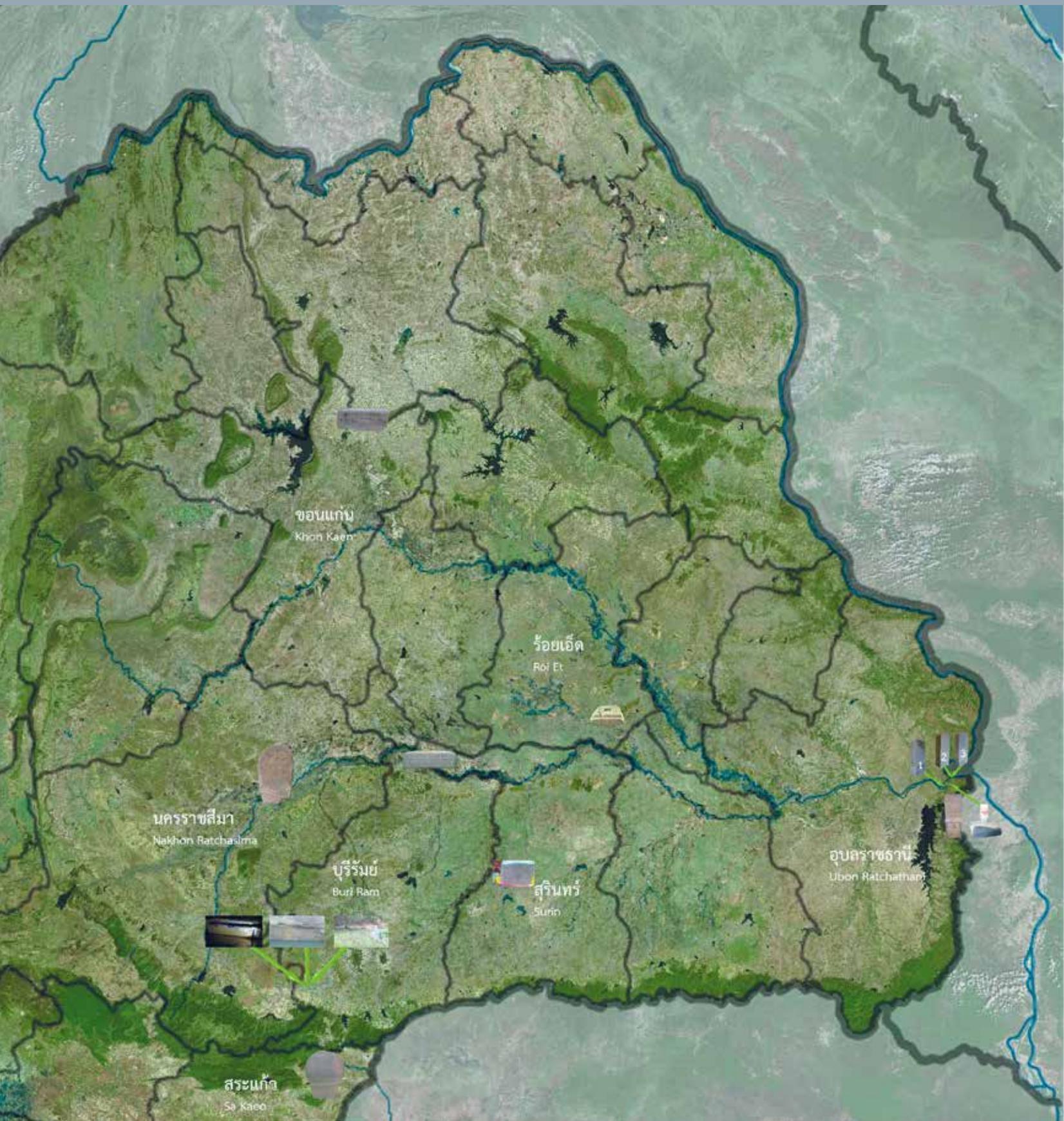
The findings indicate that the Zhēnlà's influenced states followed the Hindu Śaivist tradition of Zhēnlà kingdom in Cambodia, whereas the independent states in the Lower Mekong basin adopted tradition of Hindu and Therāvada Buddhism in different ways resulting in the creation of their own religious styles of art. The Mekong River and its branches that flow to the South China Sea facilitated communication and transportation between the overseas countries (China, India), Zhēnlà kingdom in Cambodia and states in southern Laos PDR and northeastern and eastern Thailand.



The sixth-century stone lintel from the western side of the northern Towered shrine of Prasat Khao Noi, Aranyaprathet District, Sa Kaeo Province

Introduction

Zhēnlà, the name of an ancient country on the mainland Southeast Asia, was first referred to in the Chinese accounts 606 CE of the Sui dynasty. According to scholars' research, Zhēnlà was the first country of the Khmer, known as 'Kambu' or 'Kambuja', in the central part of present-day Cambodia. However, the earlier Sanskrit inscriptions of the Zhēnlà's king also found in northeastern, eastern and central Thailand, and also in southern Laos PDR suggest that the Zhēnlà's political power spread over the area in the late sixth to seventh century CE. The sites where the Zhēnlà's inscriptions were found are mostly located in the Mekong River basin; that is to say, the Mekong River (Thai-Lao-Cambodian borders) and its branches, namely, Mun, Lam Dom Noi, Chi, and Sieo. Beyond the Mekong River basin, a number of Sanskrit inscriptions related to Zhēnlà were found in the provinces of Khon Kaen and Nakhon Ratchasima in northeastern Thailand, the province of Sa Kaeo in eastern Thailand and Phetchabun Province in central Thailand. From 1924 to 2018 archeologists of the Fine Arts Department conducted excavations at four sites where the inscriptions were found, namely, Don Khum Ngoen in Roi Et Province, Khao Noi in Sakaeo Province, Dong Mueang Toei in Yasothon Province and Wat Thong Thua-Chai Chumphon in Chanthaburi Province. The findings from the sites and the aforementioned inscriptions will be discussed on three major points as follows: (1) Zhēnlà in scholars' reports in which a literature review and background information are provided; (2) Identification of sites of inscriptions and associated findings related to Zhēnlà in which two Tables showing data of the inscriptions and location of sites related to the inscriptions are drawn; (3) Crucial Information from Inscriptions in relation to excavations' evidence is explained based on data showing in Table 1 and 2.



Map showing sites of inscriptions with reference to King Citrasena of Zhēnlà



Tonle Sap, the large lake of Cambodia

Zhēnlà in Scholars' Reports

The early country or kingdom of the mainland Southeast Asia was Fúnàn, centred in the delta of the Mekong River, first appeared in a Chinese account of the 220s and most scholars associated the first political centre of the country with the early site known today as Oc èo in An Giang province of southern Vietnam (Le Thi Lien 2014: 118). At the beginning of the early seventh century CE, another country known to the Chinese was Zhēnlà which had arisen in the Mekong River basin. We have learned the link between two countries by the Chinese Súi dynasty's account that Fúnàn sent its last mission to China between 618 and 649, whereas Zhēnlà began sending missions to China in 616, as mentioned in the history of the Súi (súi shū). The Chinese account informed us that the location of the country is 'the southwest of Línyì and was originally subject to Fúnàn'. Therefore, many scholars have accepted that the country of Línyì in the Chinese name is equivalent to 'Campā (Champa)' referred to in the Sanskrit inscriptions which was a country centred around what is today Quảng Nam Province in central Vietnam, i.e. Mi-Son and Zhēnlà's territory centred around what is today 'Tonle Sap', the large lake of Cambodia. Geoff Wade (2014: 26-27) proposed that the pronunciation of the Hokkien Chinese for the word 'Zhēnlà' provides an almost perfect correspondence with 'Tonle' in the Khmer pronunciation. The History of the Súi also informed us that Zhēnlà incorporated Fúnàn in the reign of King 'Zhì-dūo-sì-nā' and was later replaced by his son 'Yī-shē-nā-xiān' who lived in 'Yī-shē-nā-yù'. Epigraphists and Philologists like Paul Pelliot (1903) and George Cœdès (1937-64) explained that king 'Zhì-dūo-sì-nā' is equivalent to King 'Citrasena', King 'Yī-shē-nā-xiān', 'Īsānasena (Īsānavarman) and 'Yī-shē-nā-yù' was the kingdom (yù) of Īsānasena or Īsānapura in the Sanskrit inscriptions found in Cambodia and Thailand.



'Phu Kao' in Champasak, Laos PDR



The Present Champasak Province in which Wat Phu, the World Heritage site, is located.



Sambor Prei Kuk,
Kampong Thom, Cambodia

Archaeologists recovered the monumental site ‘Sambor Prai Kuk’ in central Cambodia, acceptable to be the centre of Īsānapura, the political central of Zhēnlà. In the seventh century, the Chinese Súi shū again recorded that the capital of the kingdom was ‘Ling-jia-bo-po-shān’ (the mountain of Ling-jia-bo-po), and on top of which was a temple that was always guarded by five thousand troops. It notes: ‘They respect their spirit to this degree. They greatly revere the Law of the Buddha and also greatly trust in Brahmanical practitioners. Both the Buddhists and the Brahmanical followers place images in the temples.’ (Wade 2014: 26). The Chinese term ‘Ling-jia-bo-po-shān’, as explained by the aforementioned scholars, is equivalent to the Sanskrit ‘Liṅgaparvata’.

The previous inventory of the aforementioned inscriptions and the text from the Chinese accounts lead to the question of the location of the sacred mountain ‘Liṅgaparvata’ and of the communities of both Buddhist and Brahmanical followers. Translation text of the Wat Luong Kao inscription (later known as the Devanika inscription) has two versions, one is by George Cœdès (1956:209-20) and another one by K.V. Ramesh (2002: 211-215), revealed the first reference to the sacred mountain ‘Liṅgaparvata’ in the oldest text. It is believed that the mountain now is known as ‘Phu Kao’ in Champasak, southern Laos PDR, on the west bank of the Mekong River. The Sanskrit inscription dates back to the later part of the fifth century and its text is considered to be the oldest record of the cult of Śivaliṅga and it speaks of the ‘Śrī Liṅgaparvata’ (literally, the auspicious mountain liṅga) which is understood as one of Śiva natural Liṅga. The three faced liṅga pillar was found at Huei Thamo site, Pathumphon town in Champasak Province, (Srisuchat 2015: 66). The faced liṅga in the shape and style that is not comparable to those found at any other sites in Vietnam or Thailand which were consecrated in later periods (Srisuchat 2015: 66-71; Lekkla 2015: 16- 25).

However, the term ‘Lingaparvata’ later was referred to in several inscriptions found in Cambodia and Thailand, particularly in northeastern Thailand. It is difficult to find evidence to support the Chinese record about Buddhist communities in association with the Brahmanical followers (the Hindu). However, scholars found out that there are several early Buddhist sites on both the west and the east banks of the lower Mekong River basin; that is to say, southern Laos and northeastern Thailand.

Identification of Sites of Inscriptions and Associated Findings related to Zhēnlà

The presence of Zhēnlà on both sides of the Mekong River basin and at sites on the river’s branches (Mun, Chi, Sieo, Khlong Suea Ten, Khlong Mat (Thailand) as well as other far-flung sites that had a direct land route connecting to the political centre of the Zhēnlà kingdom in modern Cambodia should be known by inscriptional evidence. The text of the inscriptions, some were deciphered and translated in French by George Coedès (1930, 1937), published in *Bulletin de L’École Française d’Extrême Orient* Vol XXII and ‘*Inscriptions du Cambodge* Vol 7’. These inscriptions and other inscriptions later found in Thailand and Lao PDR all were transliterated and translated by Thai epigraphists of the Fine Arts Department and the Silpakorn University. Most were published in Thai entitled “charuk nai prathet thai lem nueng phutthasakkarat 2559” (Inscription in Thailand Vol.1, 2016). Nevertheless, some inscriptions are in worse condition, resulting in undecipherable texts and no report to confirm the provenance of the inscriptions.



Ban Wang Phai Inscription,
Phetchabun Province



Chong Sa Chaeng Inscription,
Sa Kaeo Province



Inscription on the exterior wall of Tham Pet Thong,
Buri Ram Province



Inscription on the interior wall of Tham Pet Thong,
Buri Ram Province

Table 1 and 2 designed to show data of the provenance of twenty-four inscriptions in order to identify site location that was associated with finds and distance related to the centre of Zhēnlà are shown below. Details of inscriptional texts and of archaeological findings will be provided in the next topic, followed by discussion of the significant relation between archaeological findings and literary evidence.

Table 1 : Data of Inscriptions found in Laos PDR and Thailand related to Zhēnlà

	Date CE	Inscription's name/text	Provenance	Significant site /Object
1	550-611	Ban Wang Phai Inscription [PCh. 2] - Sanskrit inscription referred to King Bhavavarman I	Ban Wang Phai, Bo Rang Sub-district, Wichian Buri District, Phetchabun Province.	- Plain site, 10 kilometers from ancient town of Si Thep (in which stone statues of Hindu Sun god and Viṣṇu, brick Buddhist stūpas, dharmacakra and Pāli inscriptions were found)
2	550-611	Chong Sa Chaeng Inscription [PCh. 5] - Sanskrit inscription Referred to King Mahendravarman	Prasat Khao Chong Sa Chaeng, Ban Ta Phraya, Ta Phraya Sub-district, Ta Phraya District, Sa Kaeo Province	Thai-Cambodian mountainous border where a brick ruins a brick pond found on the Mountain's pass.
3	550-611	Exterior wall of Tham Pet Thong Inscription [BR.4] - Sanskrit inscription referred to King Citrasena (Mahendravarman)	Pet Thong Cave, Pakham Sub-district, Pakham District, Buriram Province	Rock shelter, 800 meters from Khlong Mat canal (the same site as shown in No.4 and No.5)
4	550-611	Interior wall of Tham Pet Thong Inscription [BR.3] -Sanskrit inscription referred to King Mahendravarman	Pet Thong Cave, Pakham Sub-district, Pakham District, Buri Ram Province	Rock shelter, 800 meters from Khlong Mat canal (the same site as shown in No.3 and No.5)
5	550-611	Wall of Tham Pet Thong Inscription [BR. 5] - Sanskrit inscription referred to King Mahendravarman	Pet Thong Cave, Pakham Sub-district, Pakham District, Buri Ram Province	Rock shelter, 800 meters from Khlong Mat canal (the same site as shown in No.3 and No.4)
6	550-611	Pak Dom Noi Inscription [UB. 28] - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Kham Khuean Kaeo, Khong Chiam Sub-district, Khong Chiam District, Ubon Ratchathani Province	- near the mouth of Lam Dom Noi canal, Kaeng Tana National Park, on the bank of the Mun River



Pak Nam Mun Inscription No. 1, No.2



Pak Dom Noi Inscription



Wat Supattanaram
Inscription No.1



Tham Phu Manai Inscription



Wat Si Mueang Aem Inscription



Don Khum Ngoen Inscription, Roi Et Province

	Date CE	Inscription's name/text	Provenance	Significant site /Object
7	550-611	Pak Nam Mun Inscription No. 1 [UB.1] - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	River Mun Delta, Khong Chiam Sub-district, Khong Chiam District, Ubon Ratchathani Province	- at the Mun River delta, near the mouth of Mun River (the same site as shown in No. 8)
8	550-611	Pak Nam Mun Inscription 2 [UB.2] - Sanskrit inscription referred to King Citrasena (King Mahendravarman) and King Bhavarman I	River Mun Delta, Khong Chiam Locality, Khong Chiam District, Ubon Ratchathani Province	- at the Mun River delta, near the mouth of Mun River (the same site as shown in No. 7)
9	550-611	Tham Phu Manai Inscription [UB. 9] - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Prasat Cave (or Phu Manai Cave), Khong Chiam District, Ubon Ratchathani Province	- Rock shelter also known as Tham Prasat (Prasat Cave) near Mun River - ruins of brick building - broken fragment of Liṅga with a moon stone shaped pedestal
10	550-611	Wat Supattanaram Inscription 1 [UB. 4] - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Prasat Cave (or Phu Manai Cave), Khong Chiam District, Ubon Ratchathani Province	- Rock shelter also known as Tham Prasat (Prasat Cave) near Mun River
11	550-611	Wat Si Mueang Aem Inscription [KhK.15] - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Wat Si Mueang Aem Temple, Dong Mueang Aem Sub-district, Khao Suan Kwang District, Khon Kaen Province	- The moated site, 200 meters from Suea Ten canal - ruins of brick building, a stone statue of Nandi (Śiva's bull) and a stone Śivaliṅga inside the moated site
12	550-611	Don Khum Ngoen Inscription [RE.6] Sanskrit inscription referred to King Citrasena (King Mahendravarman) and King Bhavavarman I	Ban Nong Khun, Den Rat Sub-district, Nong Hi District, Roi Et Province	Plain site, 200 meters from Siao canal, Objects found during excavation at the site: a basement of brick shrine, a well with four lumps of brick inscribed with four Pallava letters: 'la, ja, pa, ya' at the edge of the well, and a gomukha (somasūtra).



Wat Ban Khwao Inscription



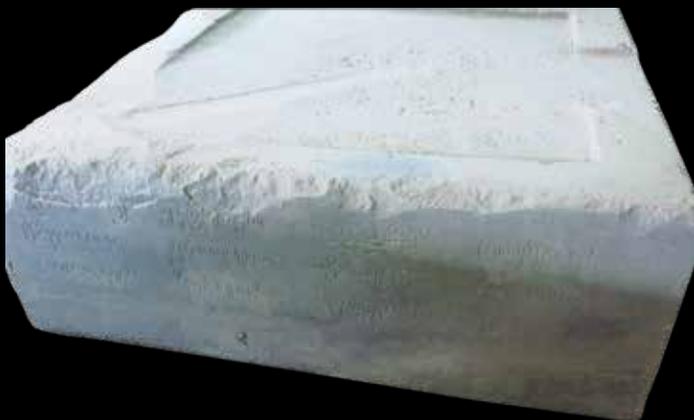
Phra Chao Citrasena Inscription



Sanskrit Inscription of Phou Lokhon



Surin City Pillar Shrine Inscription



Champasak Inscription



Champasak Inscription

	Date CE	Inscription's name/text	Provenance	Significant site /Object
13	550-611	Wat Ban Khwao Inscription [BR. 38] - Sanskrit Inscription referred to King Citrasena (King Mahendravarman) and King Bhavavarman I	Wat Tham Prasit Suttharam (Wat Ban Khwao), Prakhiam Sub-district, Khu Muaeng District, Buriram Province	It was found interred under the base of the ancient ordination hall of a Buddhist temple, Wat Ban Khwao, associated with, pottery bronze and iron objects.
14	550-611	Phra Chao Citrasena Inscription [NM.63] (Phimai National Museum 121/2507) - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Storage of the Phimai National Museum, Phimai District, Nakhon Ratchasima Province	reported to be collected from the provinces of Buri Ram or Srisaket or Ubon Ratchathani
15	550-611	Surin Inscription (Wat Chumphon Inscription) - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Wat Chumphon Temple, Surin Province	No more detail of the provenance and the exact location of the temple
16	550-611	Surin City Pillar Shrine Inscription. - Sanskrit inscription referred to King Citrasena (King Mahendravarman)	City Pillar Shrine, Surin Province	No more detail of the provenance
17	550-611	Inscription Sanskrit de Phou Lokhon (Lao PDR) - Sanskrit inscription referred to King Citrasena (King Mahendravarman) and King Bhavavarman	Ban Sura, Champasak Province, Lao PDR.	Reported to be found on a mound, opposite the confluence of the Mun River and the Mekong River
18	550-611	Champasak Inscription - Sanskrit inscription referred to King Citrasena (King Mahendravarman) and King Bhavavarman I	Champasak Province, Lao PDR	Reported to be found at Huai Sa Hua near Wat Laung Kao, the same place that Devanika inscription was found.
19	550-611	Champasak Inscription - Sanskrit inscription referred to King Citrasena (King Mahendravarman) and King Bhavavarman I	Champasak Province, Lao PDR	Reported to be found at Huai Sa Hua near Wat Laung Kao, same place of Devanika inscription be found.



Khao Noi Inscription



Ban Kut Tae (Phra Chao Bhavavarman II) Inscription



Wat Thong Thua-Chai Chumphon Inscription



Ban Tung Lung Inscription

	Date CE	Inscription's name/text	Provenance	Significant site /Object
20	611-635	Wat Thong Thua-Chai Chumphon Inscription [ChB. 3 & ChB. 4] - Khmer and Sanskrit inscription referred to King Īśānavarman	Phaniat or Mueang Kawai, Mu 4, Khlong Narai Sub-distict, Mueang Chanthaburi District, Chanthaburi Province, moved to Wat Thong Thua or and Wat Chai Chumphon Temple, near Phaniat site	Plain site, Phaniat or Mueang Kawai, (the ancient town of Kawai), an excavation site, found laterite wall.
21	637	Khao Noi Inscription [PCh. 16] -Sanskrit and Khmer inscription referred to King Bhavavarman II	Wat Khao Noi Si Chomphu Temple, Khlong Nam Sai Sub-district, Aranyaprathet District, Sa Kaeo Province.	- Brick Hindu Temple on the top of Khao Noi Hill, near Thai-Cambodian border. The Hill Temple with stone lintels showing a styled depictions, similar to the Sombor Prai Kuk style
22	635-640	Ban Kut Tae (Phra Chao Bhavavarman II) Inscription [PCh. 26] - Sanskrit inscription referred to King Īśānavarman and King Bhavavarman II	Wat Kut Tae, Ban Khao Noi Si Chomphu, Khlong Nam Sai Sub-district, Aranyaprathet District, Sa Kaeo Province	Plain site. Probably removed from Khao Noi Hill.
23	640-657	Museum of Wat Phra Si Ratthanasatsadaram Inscription [KT. 297] - Sanskrit Inscription referred to King Īśānavarman and King Jayavarman I	From Srisaket Province	Reported to be found from Si Saket Province by a local local people who presented it to H.R.H. Princess Maha Chakri Sirindhorn
24	550-611	Ban Tung Lung Inscription [UB.49] -Sanskrit inscription referred to King Citrasena (King Mahendravarman)	Ban Tung Lung , Khong Chiam Sub-district, Khong Chiam District, Ubon Ratchathani Province	Near Mun River.

Table 2: Location of Inscriptions' Provenance and Distance to Zhēnlà

No.	Date CE	Inscription	Findings I= only inscription A= associated finds	Direction/ Distance from Sambor Prei Kuk (kilometers)	Way to connection
1	550-611	Champasak	I	North 240	Waterway (Mekong River)
2	550-611	Pak Mun I, II Pak Dom Noi Tham Phu Manai Wat Supattanaram	I I I/A I/A	North 290 North 290 North 290 North 290	Waterway (Mun River) Waterway (Mun River) Waterway (Mun River) Waterway (Mun River)
3	550-611	Don Khum Ngoen	I/A	Northwest 376	Waterway (Siao)
4	550-611	Wat Si Mueang Aem	I/A	Northwest 500	Waterway (Khlung Suea Ten)
5	550-611	Wat Ban Khwao	I	Northwest 436	Waterway (Mun River)
6	550-611	Exterior wall of Tham Pet Thong Interior wall of Tham Pet Thong Wall of Tham Pet Thong	I	Northwest 416	Waterway (Khlung Mat)
7	550-611	Chong Sa Chaeng	I/A	Northwest 400	High land and a pass (Ban That mount)
8	550-611	Ban Wang Phai	I	Northwest 600	Waterway (Khlung Huai Sai)
9	635-640	- Khao Noi - Phra Chao Bhavavarman II	I/A I	Northwest 400	Land
10	611-635	Wat Thong Thua Chai Chumphon	I	West 419	Land
11	Late 6 th to 7 th century	Dong Mueang Toei	I/A	North 400	Waterway (Chi river)



The Devānīka inscription,
Campasak, Laos PDR



Stature of a bull 'Vriṣbha' from Wat Laung Kao,
Campasak, Laos PDR



Don Khum Ngoen in Roi Et Province

Crucial Information from Inscriptions in Relation to Excavations' Evidence

In this topic, I try to figure out what essential information from some inscriptions and coordinating finds from the same site in order to explain the similarity and distinctive findings from the comparative sites. Based on Table 1 and 2, the following are significant remarks of inscription's texts:

1. The Devānīka inscription referred to several Indian Sanskrit influenced names related to Hindu beliefs in polytheism based on religious treatises and literature: Vedas, Mahābhārata, and Purāṇās. The most significant names that were adopted locally were Liṅgaparvata to be a name of a religious centre, the Śaiva cult that has the supreme god, Śiva, dwelling atop of the highest mountain. The worship of Śivaliṅga as a natural symbol of god Śiva was practiced here and likely handed down to Zhēnlà, as confirmed by 6 inscriptions of King Mahendravarman (Citrasena, 550-611 CE), the second king of Zhēnlà, referring to consecration of 'liṅga' at several sites. Also the cult handed down to people of Śaṅkhapura, an independent town beyond the influence of Zhēnlà. The concept of purifying by the flow of holy water; that is to say, Gaṅgā, and the analogy of the Mekong River is to suggest Gaṅgā and a sacred pond, brought water from the river which was built for the public was transferred to the Zhēnlà's kings, Mahendravarman (550-611 CE) and Bhavavarman II (635-640 CE).
2. Apart from the concept of establishment of a liṅga on the top of a hill or mountain, King Mahendravarman was the initiator of the establishment of a liṅga at a site adjacent to the mouth of the river and consecration of a statue of 'Vriṣbha' (a form of a bull, probably, represents Nandi, the bull-vehicle of Śiva) as a symbol of victory and devoted merit to his parent and uncle (Srisuchat 2011: 256-257).
3. All names of five kings of Zhēnlà ruled from 550 – 657 CE beginning with King Bhavarman I and followed by King Mahendravarman (Citrasena), King Tīśānavarman, King Bhavavarman II and the last, King Jayavarman I appear in two inscriptions found in Thailand. The majority of the Zhēnlà inscriptions found in Laos PDR and northeastern and eastern Thailand was erected by King Mahendravarman as his name suggested in each inscription (18 inscriptions in total). The name of King Bhavavarman II appears in two inscriptions found at sites near one another in eastern Thailand (today Sa Kaeo Province) as an authority to erect the inscriptions. The name of King Bhavarman I was mentioned in some inscriptions of King Mahendravarman showing their relationship.



Soil with salt on the surface at Don Khum Ngoen, Roi Et Province



Prasat Khao Noi,
Sa Kaeo Province



Dong Mueang Toei,
Yasothon Province

4. The official Sanskrit name of the country, known to Chinese as 'Zhēnlà', did not appear in the inscriptions, however, some significant place-names were referred to in the inscriptions: names of King Bhavavarman II's hometown or a birth place, Śaṅkaragrāma, and that of central religious town, Jyeṣṭhapura, supported by the king, and the name of the town of his foe, Śambūka.

With new evidence from excavations and analyzed findings from four significant sites that new understanding of the early states can be taken into consideration:

1. Don Khum Ngoen (today Roi Et Province, northeastern Thailand), located on the bank of Siao waterway, the middle part of the Chi River basin, which is 376 kilometers from Sambor Prai Kuk, the political central of Zhēnlā, is considered to be a faraway place where King Mahendravarman led his force to occupy. According to archaeological survey's information, soil at Don Khum Ngoen is rich in natural 'rock salt' and making salt extracted from the soil has been practiced till to day. To acquire the salt from this area, it might be a reason why King Mahendravarman exercised his political power over the land.

After conquering power in the town, it was likely that the town was used as a military base to step up to conquer the town of Sri Mueang Aem (today Khon Kaen Province, upper northeastern Thailand), 200 km from Don Khum Ngoen. The town marked the farthest-flung outpost of the Zhēnlà kingdom in his reign. A stone Śivaliṅgam and a stone statue of Nandi are material evidence found here to confirm King Mahendravarman's announcement of erection of the two sacred statues to be a sign of his victory over the land.

2. To follow his grandfather's example King Bhavavarman II (635-640 CE) claimed his political power over the Khao Noi area in the present-day Sa Kaeo Province, eastern Thailand, by centralizing Hindu Śaiva community with a hill temple known as Prasat Khao Noi, made of brick, erected atop of a hill. It was a great distance from his political centre of Zhēnlà; that is to say, from his capital, Sombor Prai Kuk, the king and his troops had to march 400 km to the place.



Hindu temple in the ancient town of Si Thep,
Phetchabun Province



Sun god from Si Thep, Phetchabun Province

3. Dong Mueang Toei, a town of an independent state, located in the lower part of the Chi River basin of today Yasothon Province in lower northeastern Thailand, and Sombor Prai Kuk, a central political city of Zhēnlà, were contemporary. The distance between the two towns is approximately 400 kilometers by waterway. Both shared the Hindu Śaivist influenced cult, but each developed its own religious artistic styled architecture and sculpture in creation. According to an inscription found at Dong Mueang Toei, the main city of the state was likely to be 'Śaṅkhapura'. Though the town was a Hindu Śaivist influenced tradition, there is insufficient evidence to suggest that the town lay within the Zhēnlà's area of political influence. Archaeological findings show that Dong Mueang Toei had its own iron industrial production.

Zhēnlà might have acquired this kind of metallic material for making hard utensils and weapons from a large area of iron ore deposit site at Sai Tho Number Five in Ban Kruat District, Buri Ram Province. It is conjectured that the iron materials were locally casted from the site to supply Zhēnlà. Therefore, there is no reason to overthrow Dong Mueang Toei for its iron mine.

4. The ancient town of Si Thep, located in the Pasak River basin and the river flows passed the ancient town southward to the Gulf of Thailand. The town is also regarded as an independent state beyond Zhēnlà's influence. However, an inscription known as Ban Wang Phai inscription was found at the site, 10 kilometers from the ancient town of Si Thep. In the inscription's text the name of King Bhavavarman I was referred to, but no history of him to be told. Even some stone statues of Hindu gods like Sūrya, Kriṣṇa were found in the town, they are lesser in numbers compared to two huge brick stūpas and several large or small brick buildings related to Buddhism as well as Buddhist Pāli inscriptions and Dharmacakras suggesting the strong Dvāravatī cultural influence on the town at the same time.



The ancient town of Dong Mueang Toei, Kham Khuean Kaeo District, Yasothon Province

Upper left: The 2014 excavation at Dong Mueang Toei

Upper right: Iron smelting furnace found in situ, The 2014 excavation at Dong Mueang Toei

Middle: The late 6th to early 7th century Inscription found at Dong Mueang Toei

Lower left & right: Architectural parts of a building found at Dong Mueang Toei

Conclusion

Zhēnlà, the first kingdom of the Khmer between 550 – 657 CE left their trace in the area of the West and East banks of the Mekong River basin. The analysis of 24 Sanskrit and Khmer inscriptions and archaeological findings at the inscriptions' provenance related to Zhēnlà found in Thailand and Laos give an insight into the political and cultural influence of Zhēnlà to the region as well as the socio-economic condition of some independent states flourishing at the same time.

The independent states in today's northeastern and central Thailand and the Zhēnlà state had its own way to adopt and adapt Indian tradition. The Zhēnlà embraced a strong Hindu Śaivist tradition, whereas the independent states embraced Hindu tradition to different degrees and strongly embraced the Theravāda Buddhist tradition to support their states' development. The Mekong River and its branches of the region played an important role in connection and expansion of Zhēnlà and the independent states beyond with overseas like India, a source of Hindu and Buddhist tradition. The Mekong riverine system of communication and transportation generated the socio-cultural exchange among the people of the early states and the rapid development of the states in the region.



The Mekong River at the Thai-Laos PDR Border

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Si Thep: An Early Town of the Intersection between Indigenous Tradition and External Influence

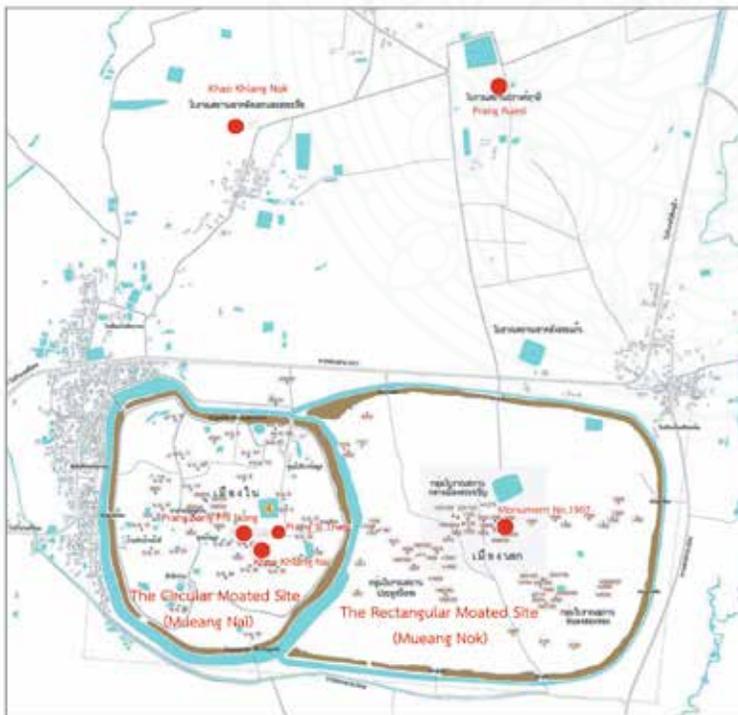
Suriya Sudsawat



The 2016 excavation area at undulating mound, located near the centre of in the circular moated site (Mueang Nai) of the town of Si Thep

Abstract

The aim of this paper is to highlight the ancient town of Si Thep, a significant inland town which is considered to be an early town of the intersection between indigenous and external influence traditions in the early history of the Southeast Asian region. Geographical and environmental information of the site as well as a sequence of settlements inside the town and vicinity obtained from archaeological findings from surveys and excavations will be discussed in this paper. Academic reports on the site and findings from surveys and excavations from 1904 to the present are briefly reviewed. The chronology of the site is much more realizable as confirmed by relative and absolute dating of samples from archaeological finds. It is suggested that the first occupation of the land of Si Thep occurred by the late prehistoric people dating back to 240 - 390 CE. The moated site was first set up between 414-602 CE and had developed continuously to be a town of either Buddhist or Hindu devotees for approximately eight hundred years. As an inland town near a waterway connecting port towns of the Dvāravatī kingdom in the south and linking the landmass of the northeastern region into Zhēnlà and/or the Khmer kingdom, therefore, distinctive traditions from overseas, particularly, Buddhist and Hindu cults as well as local traditions of neighboring towns or kingdoms that reflected cross cultural influences and socio-political developments of the town of Si Thep will be discussed in the paper.



Plan of the town of Si Thep showing the circular shaped moated site (Mueang Nai) adjacent to the extended moated site to the east (Mueang Nok) that formed the rectangular moated town



Prince Damrong Rajanubhab, the first scholar who discovered the ancient town of Si Thep

Introduction

Situated in Si Thep District of Phetchabun Province, the ancient town of Si Thep is 261 kilometres north of the Gulf of Thailand. Geographically, the town is situated at latitude 15°27' 58" north and longitude 101° 09' 02" east. It was located on the central highland of the country between the northeast plateau, Lopburi-Pa Sak River and the Upper Chao Phraya River basin in the central plain of Thailand. The Pa Sak River, five kilometres west of the town flows downward and joins the Chao Phraya River in Phra Nakhon Si Ayutthaya Province before flowing to the Gulf of Thailand. Therefore the sites at Si Thep, as an inland area, had played an important role in exchange of culture and trade of a long distant route between inland and ports from late prehistoric time to the early thirteenth century CE which is considered a meeting point between communities of the inland and coastal regions.

This study is focused on the findings previously and recently found from surveys and excavations at the ancient town of Si Thep and its vicinity.

Archaeological Surveys and Excavations at Si Thep

In 1904 CE Prince Damrong Rajanubhab led an expedition to the town of Wichien Buri in Phetchabun Province. He learned that an abandoned moated site called "the town of Aphaisali" by locals, according to historical accounts, the moated site was known as "the town of Si Thep" and the governor of the town was "Si Thamorat", named after "Khao Thamorat", a limestone outcrop having a cave and in which carved images of Buddha and Bodhisattavas depiction on a column shaped stalagmite-stalactite (Damrong Rajanubhab 2000: 143, 146).

Between 1935 and 1937 the ancient town of Si Thep was nationally registered as a protected site by the Fine Arts Department of Thailand. H.G. Quaritch Wales conducted the first archaeological surveys of the town and reported in *Indian Art and Letter* Vol. X No.11, 1937. In his article "The exploration of Sri Deva and Ancient City of Indochina", two brick buildings were identified as Indian Hindu architectural styled shrines of the sixth to eighth century CE. He also referred to the discovery of an inscription (K 978 - according to George Coedès' *Inscription du Cambodge* Vol.7, 1937) related to the kingdom of Zhēnlà and some sculptures of Khmer Influence.

Between 1962 and 1963 CE, the 3rd Regional Office of the Fine Arts Department at Sukhothai conducted archaeological surveys and mapping of the town's plan for registration of several buildings found inside and outside the town including Thamorat cave. The town of Si Thep covers a total area of 4.7 square kilometres. Surrounded by an earthen wall, it has two parts; a circular moated site (1.87 square kilometres) called "Mueang Nai" by locals and a rectangular moated site (2.83 square kilometres).



Western moat and earthen wall of the town of Si Thep



Northern moat and earthen wall of the town of Si Thep



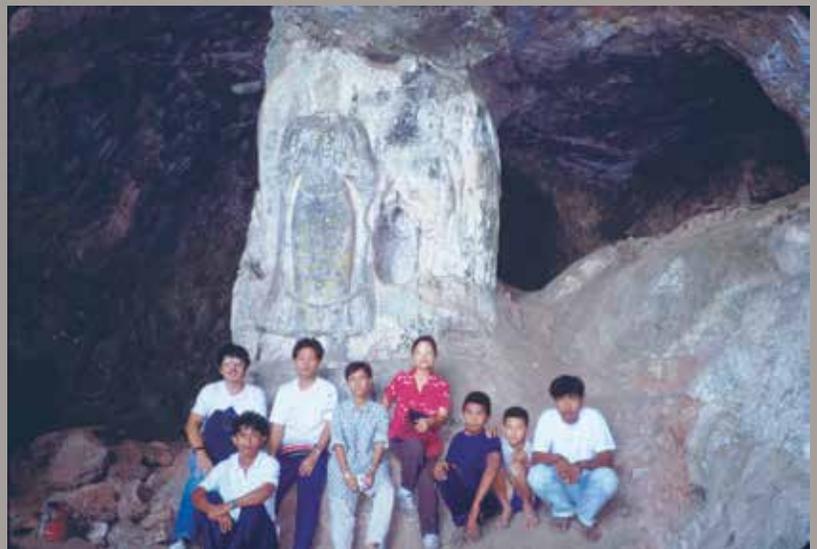
Khao Khlang Nai, a brick stūpa with laterite base, located at the circular moated site (Mueang Nai) of the town of Si Thep



Sa Prang, a large pond of the circular moated site (Mueang Nai) of the town of Si Thep



Silver coins with 'Śrīvatsa' and 'Rising Sun' on the reverse, found at the circular moated site, 6th – 7th century CE



Carving of Buddha and Bodhisattva Images on the column shaped stalagmite-stalactite of Khao Thamorat's cave

(Photograph: Courtesy of Archaeological Research Team of Division of Archaeology, Fine Arts Department, 1991)

The circular moated site with a diameter of 1,230 metres diameter has six entrances. The rectangular moated site, called “Mueang Nok” by locals, is adjacent to the east of the circular moated site. The eastern side is curved. It is 1,500 metres wide and 1,840 metres long, and has six entrances. It is reported that three large and significant archaeological sites, namely, Khao Khlang Nai, Prang Si Thep and Prang Song Phi Nong are located within the circular moated site. Two ancient buildings, Khao Khlang Nok and Prang Ruesi, located two kilometres to the north of the town, were mapped and have been registered as a National Monument in 1963.

In 1966 CE the 3rd Regional Office of the Fine Arts Department at Sukhothai moved some important sculptures including Śivaliṅga, a Pāli inscription, lithic Gong, stone bases of images, and decorative stone pillars to be exhibited at the Ramkhamhaeng National Museum, Sukhothai.

In 1983 CE the 3rd Regional Office of the Fine Arts Department at Sukhothai conducted two test-pit excavations at the area between a large brick building with a laterite base called “Khao Khlang Nai”, and a pond called “Sa Prang” (Sathaporn Thiengham, Thada Sangthong, Payung Vongnoi and Thawatchai Chanphaisansilp 2007: 31)

Between 1983 and 1986 CE the project of archaeological and historical research and restoration of the town of Si Thep had been undertaken in order to establish a “historical park” at the place. Therefore, a draft master plan of Si Thep Historical Park was completed in 1986. Excavation and restoration at two Hindu towered shrines, Prang Song Phi Nong and Prang Si Thep, were a pilot activity of the project.

From 1987 to 1990 CE the master plan of Si Thep Historical Park was completed and submitted to be approved by the Fine Arts Department in 1991.

Between 1988 and 1989 CE Si Thep Historical Park conducted an excavation at Monument No. 0971, supervised by Niti Saengwan, revealed evidence of the late prehistoric to early historic communities in the area of the circular moated site called “Mueang Nai”, and excavation at the north side of a large brick with a laterite base called “Khao Khlang Nai” was conducted. In the meantime two outstanding findings were unearthed from the town of Si Thep; a dharmacakra and a pedestal of an image with Pallava inscription were moved to be exhibited at the Ramkhamhaeng National Museum, Sukhothai.

Between 1990 and 1991 CE two seasons of excavations at Ban Nong Daeng, twelve kilometres to the southeast of the ancient town of Si Thep, were conducted by Niti Saengwan and Vichai Tankittikorn, Head of the Historical Park, respectively. It revealed evidence of the late prehistoric to early historic communities in Si Thep’s vicinity (Utthayan prawattisat si thep 1989).



Prang Song Phi Nong, a two brick towered shrine on the same laterite base in the form of Khmer architecture, located at the circular moated site (Mueang Nai) of the town of Si Thep



Prang Si Thep, a brick towered shrine with laterite base in the form of Khmer architecture, located at the circular moated site (Mueang Nai) of the town of Si Thep



Left: The 2008 excavation at Khao Khlang Nok
Middle: A stone image of standing Buddha was found in situ at Khao Khlang Nok
Right: The image of standing Buddha after treatment



An upper part of a stone pillar depicting a garuda face - like figure above the pallava script, 7th century CE

Between 1991 and 2001 CE Under “Archaeological and Restoration Project of Si Thep Historical Park”, excavations supervised by Vichai Tankittikorn had taken place in the town including thirty-five earthen mounds at a circular moated site called “Mueang Nai”, and at the earthen mounds in the rectangular moated site called “Mueang Nok” and nineteen ponds as well as a group of earthen mounds outside the town’s wall revealed a number of brick and laterite religious buildings, belonging to either Hindus or Buddhists. Evidence of a water-gate made of laterite has been disclosed by excavation at the southern moat and southern town gate. Excavation and restoration of the earthen town’s wall, Prang Song Phi Nong and Prang Si Thep were done completely. Several findings from the excavation were found; outstanding images, such as a stone image of the Sun God (Sūrya), a bronze image of Maitreya, were moved to the National Museum Bangkok. Between 2001 and 2003 CE, in the course of consolidation of Prang Si Thep, re-excavation at the base of the shrine revealed parts of a brick structure built before the foundation of Prang Si Thep, but not much evidence to identify the age of the brick structure, was revealed (Kongphol Suphanroj 2002).

In 2006 CE ten earthen mounds in the rectangular moated site (Mueang Nok) of the town of Si Thep were excavated and ten small buildings with laterite base were recovered.

In 2008 CE an excavation at the largest and highest mound, two kilometres outside the ancient town’s wall to the north, was conducted and disclosed a square base stūpa (the upper part had collapsed) which was sixty-four square metres in area and twenty metres high. The stūpa was considered the biggest brick stūpa with a laterite base in Thailand. The edifice known to locals and scholars as “Khao Khlang Nok” (literally means “the hill of treasure outside the town”) has been unearthed and a sandstone image of a standing Buddha (59X16 cm) was found at the lower level of the brick structure. By iconographical study, the image of Buddha is comparable to those found in several Dvāravatī sites in central and western Thailand dating back to the seventh to eighth century CE. Scattered around the main stūpa were twenty-four earthen mounds which were recovered from surveys (Sampaongern, 2015).

In 2009 CE, excavation at an earthen mound in the circular moated site (Mueang Nai), supervised by Thawatchai Chanpaisalsilp, revealed a burial site with grave goods. It is comparable to several burial sites in the Lopburi-Pa Sak River basin, dating back 2000 years. The findings suggest that the area of the moated site had been used by people of the late prehistoric time before the occupation of the townspeople who constructed the circular moated site of the town of Si Thep (Thawatchai Chanpaisansilp 2009).



The large mound called Khao Khlang Nok, before the 2008 excavation



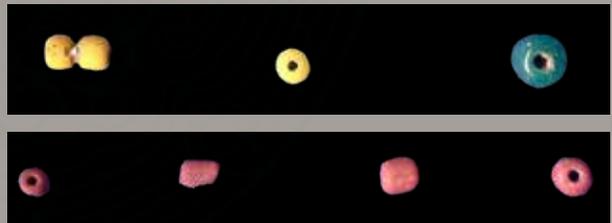
The 2008 excavation revealed a brick stūpa with laterite base at Khao Khlang Nok (the northern side)



Human skeleton with a domestic dog and grave goods (Burial No.5), unearthed from the 2016 excavation



Carnelian, rock crystal and agate from the 2016 excavation



Glass beads from the 2016 excavation



Agate pendants from the 2016 excavation

Between 2014 and 2015 CE a research project at Khao Khlang Nok site was undertaken. The excavation was supervised by Mr. Pongdhan Sampaongern, Head of Si Thep Historical Park, and Mr. Anurak Deephimai, an archaeologist, at eleven mounds around the biggest stūpa. These findings obtained four laterite-brick stūpas at four directions which were embellished with stucco depicting floral motifs, comparable to those found at Dvāravatī sites. Thus, they were considered the main subsidiary stūpa. Other buildings were used as ordinary subsidiary stūpas and a place for installation of dharmacakra (the Wheel of the Law). The floor covering with brick can be traced (Anurak Deephimai 2014, 2015).

In 2016 CE an excavation conducted at the circular moated site (Mueang Nai) was conducted by Decha Sudsawat and Suriya Sudsawat, Head and archaeologist of Si Thep Historical Park, respectively. Burials consisting of five human skeletons, bones of a dog and grave goods such as pots, iron tools, a spindle whorl and two agate pendants were found. According to the Carbon-14 dating (AMS) of a samples [a human's tooth] from the burial site dates back to 240-390 CE (Sudsawat 2018).

Between 2017 and 2018 CE, four test-pit excavations at Khao Khlang Nai, Prang Si Thep, Prang Song Phi Nong and Monument No.1907 were conducted. Restoration of four main subsidiary stūpas and a building for installation of a dharmacakra, and excavation at nine earthen mounds in the vicinity which are not yet registered, supervised by Decha Sudsawat, was completed before departing to Lopburi to be Head of researchers of the 4th Regional Office of the Fine Arts, Lopburi Province. In February 2018 CE Suriya Sudsawat was appointed Head of Si Thep Historical Park and has supervised the project of restoration of the eight stūpas and dharmacakra's installation place, and a research project on the settlement in the town of Si Thep. The first draft of a script on the town of Si Thep was written by archaeologists of the Fine Arts Department in order to submit it to the UNESCO's World Heritage Centre to being included in the 2019 Tentative Lists.

Chronological Development of Si Thep based on Archaeological Findings of Sculptures and Architectural Buildings

Archaeological evidence from excavations suggests that before the foundation of the town of Si Thep it was used to be a burial site for people during 240-390 CE (during late prehistoric time in Thailand). People practiced the burial tradition by placing grave goods such as utensils, ornaments, food and a domestic animal (domestic dog) with the dead body. Some precious items or exotic goods like glass beads suggest that the late prehistoric community that was settled in Si Thep was engaged in the interaction with other communities which probably made contacts with overseas (see TABLE No.1).



Left: A left part of stone Buddha image with the inscription on the base
Right: A close-up of the base with the inscription



Ban Wang Phai Inscription,
late 6th to early 7th century CE,
found at Ban Wang Phai,
10 km north of the town of Si Thep



A fragment of an annular shaped stone with inscription



Stone Dharmacakra found at Khao Khlang Nok

The earliest evidence of using the area to practice the burial tradition (C-14 dating of a human tooth from the site) yielded an age of $1,730 \pm 30$ BP, equivalent to 240 - 390 CE (Prasit Auetrakulwit 2016: 1).

The first construction of the brick stūpa at Khao Khlang Nok Site, two kilometres from the northern wall of the town of Si Thep, that is known by using brick samples to be dated by means of Thermoluminescence yielded the date 270 - 490 CE, 385 - 563 CE, 401 - 599 CE, 414 - 610 CE, respectively. The first formation of the circular moated site (Mueang Nai) of the town of Si Thep (using a soil sample to be dated by means of Thermoluminescence) yielded the date 414 - 602 CE (Krit Won-in 2017: 16) suggest that the advent of adoption of Buddhism and the construction of the circular moated site appeared in the early historic period. However, there is no evidence to suggest whether they were the same group of people who practiced the burial tradition and settled here before.

By the early fifth to early sixth century CE there is evidence of the formation of the circular moated site at Si Thep which is considered a town of the early historic period. Religious evidence was found at the site including construction of a brick stūpa with laterite base that is comparable to those found in Dvāravatī sites in Thailand. During this time the Buddhist and Hindu tradition had an important influence in the foundation and development of the town of Si Thep as confirmed by religious buildings, icons, objects, and inscriptions. The significance of the findings will be discussed as follows:

1) The findings reflecting the Buddhist Theravāda tradition consist of two brick stūpas with laterite base (stucco sculptures around the base were added in the later periods); namely, Khao Khlang Nai and Khao Khlang Nok, the Pāli inscription (refer to Dhammacakrapavattana Sutta chanting) from Monument No. 0996, the Pāli inscription at the base of a stone Buddha image, a part of an annular shaped stone with Pāli inscription (paṭiccasamuppāda), and dharmmacakras (see TABLE No.7, 8, 9).

2) The findings reflecting the Hindu tradition are: statues of Viṣṇu, Kriṣṇa, and Sūrya (the Sun God).

3) The long distant relation with Zhēnlà (Si Thep is located about six hundred kilometres to the northwest of the center of Zhēnlà), the ancient Khmer kingdom in the sixth to seventh century CE, is confirmed by Wang Phai inscription referring to the name of Hindu King Bhavavaraman, the first king of Zhēnlà (see TABLE No.5,10).

In brief, the circular moated site, considered to be the first town of Si Thep, was the first occupation by the Theravāda Buddhist community that had a major role in the town since the early fifth century CE.

Between the early sixth and late seventh century CE the area of the town extended to the east for 1.84 kilometres; therefore, the circular moated town became a rectangular moated town known as “Mueang Nok” in which sixty-four ruins were found, mostly made of laterite.



The 7th to 8th century Hindu stone statues found at Si Thep:
Upper Left: Viṣṇu in triple flexion (tribhaṅga)
Upper Right: Kīṣṇa Govardhana
Lower Left: Sūrya (Sun god), the left one was found from excavation at the cross-pass way towards Prang Song Phi Nong



Clay votive tablet with a Post-Pallava script and Sanskrit language and the Chinese characters on the reverse side, 8th- 9th century CE



Clay votive tablet with inscription found at Monument No. 1580, 9th - 10th century CE



The 8th to 9th - century Bodhisattvas of Mahāyāna:
Left: Bronze Bodhisattva found at Monument No. 0923
Middle: Bronze Maitreya found at Khao Khlang Nai
Right: Stone head of Maitreya found at Khao Thamorat

A soil sample was collected from the ruin No. 1907 for absolute dating by means of Thermoluminescence and yielded the date 505 - 681 CE (Krit Won-in 2017: 17) suggesting the beginning of activity in this extended area.

During the centuries the fascinating materials of the Hindu influence are two statues of Viṣṇu and two statues of Kriṣṇa as well as seven statues of Sūrya (Sun God). Even though it is reported that they were found at Si Thep, there is some doubts as to whether the statues belonged to a shrine inside the town or not. As data available only one stone Sūrya found interred at the cross-pass way towards Prang Song Phi Nong (Vichai Tankittikorn 1995: 136).

The Hindu images of the late seventh century CE are comparable with those found at far-flung sites that had direct contact with Indian voyagers from sea routes. They are also comparable to those found at the site of eastern Thailand, in the Mekong delta, i.e., of the Zhēnlà (pre-Khmer kingdom) remind us of the early seventh century Ban Wang Phai inscription and the text which refers to the Hindu Zhēnla king's name, Bhavavarman. This inscription is considered as literary evidence confirming that Si Thep was one of the original areas influenced by Indian culture and a significant town in the early historic time and was contemporary with Zhēnla. It is obvious that early towns that were linked to Si Thep were in contact with the Khmer territories to the east; particularly in the Mekong delta. Therefore there appeared the Sanskrit inscriptions refer to King Bhavarman the First and King Mahendravarman (King Citrasena), such as Pak Mun Inscription No. 2 found at River Mun Delta, Khong Chiam District in Ubon Ratchathani Province, Don Khum Ngoen Inscription, Nong Hi District in Roi Et Province, Wat Ban Khwao Inscription, Khu Mueang District in Buri Ram Province (see TABLE No.5).

In the second half of the seventh to ninth century CE, people of Si Thep practiced Buddhist cult and maintained the Dvāraṇī tradition at the large brick with laterite based stūpa which is evident at Khao Khlang Nok.

In the eighth to tenth centuries, Mahāyāna Buddhist cult played a role at Si Thep, as confirmed by the bronze images of the Bodhisattva Maitreya found at Monument No. 0923 and Khao Khlang Nai, a standing Buddha and Bodhisattavas carved on a column shaped stalagmite-stalactite of the cave of Thamorrat limestone outcrop, fifteenth kilometres from the western wall of the town. Some clay votive tablets with Sanskrit inscriptions were found at Monument No. 1580 at the circular moated town, at Ban Nong Suang, ten kilometres from the south wall of the town and a clay votive tablet depicting the Buddha with a post-Pallava script and Sanskrit language and the Chinese characters on the reverse side was reported to be found at Si Thep, dating to the eighth to ninth century CE (see TABLE No.12, 13, 15, 16, 17, 18).

Between the tenth and eleventh century CE, at Nong Mai So, Bo Rang Sub-district, Wichien Buri District, Petchabun Province, twelfth kilometres north of the town of Si Thep, an inscription with Khmer script and language was found, and the one line text referred to a Khmer officer and his female servant. It suggested that there were the Khmer speaking people in the area.



Śivaliṅga found at Prang Si Thep



Four Armed Śiva, found at Prang Si Thep, 11th -12th century CE



Lintel depicting Śiva and Umā on Nandi (Umāmaheśvara) at Prang Song Phi Nong



Bronze Images of Viṣṇu and Lakṣmī found at Khao Khlang Nai, 12th century CE



Nandi bull found at Prang Song Phi Nong



Chinese and Khmer ceramics found at the town of Si Thep, 12th - 13th century CE



Stone image of Dvārapāla, found at Prang Si Thep, early 13th century CE

In the eleventh to twelfth century CE it is evident that the brick Hindu temples: Prang Si Thep and, Prang Song Phi Nong were built and served as a Hindu shrine according to Śaivism in the eleventh century CE (compared to the Bapuan styled architecture, 1017-1087 CE) and in the late eleventh to twelfth century CE (compared to the Bapuan and Angkor Wat styled architectures and sculptures, 1107 - 1177 CE), respectively. The analyzed results of the soil samples dating, 736 ± 33 BP = 1214 - 1247 CE (Krit Won-in, 2017: 17) at Prang Song Phi Nong and a sandstone Dvārapāla (door guardian) statue found at Prang Si Thep, comparable to those found in the Khmer Bayon style dating back to 1177-1237 CE suggest that two Khmer architectural styled monuments had been functioned until the late twelfth or the early thirteen century CE before the decline of the town of Si Thep.

Concluding Remarks and Query for Further Research

Archaeologists have embraced the methodology of scientific and relative dating analysis to reconstruct the present and existing town of Si Thep; however excavation and sample analysis for absolute dating are not adequate for as final knowledge or complete reconstructing the history of the town.

As much as the current data available, therefore the evidence of using a land for practicing burial tradition of people in 240 - 390 CE is considered to be the first period of the settlement. The formation of the circular moated town of Si Thep and constructing a brick stūpa with a laterite base, and Buddhist symbolic objects that are comparable to those found at Dvāravatī sites in Thailand started between the fourth and six century CE by the Theravāda Buddhist followers; around eighty to ninety years the moated town was extended to the east, and formed the rectangular moated town. The construction of a large stūpa outside the town to the north emphasized the practice of Dvāravatī tradition. The adoption of Hindu Vaiṣṇavism's tradition and the Sun God worship appeared in the seventh to eighth century CE. The Mahāyāna tradition flourished inside and outside the town in the eighth to tenth century CE. In the late tenth to thirteenth century CE there appeared the Khmer-Hindu influence over the town before the decline of the town. To query why Si Thep had merged and was able to prosper for approximately eight hundred years, the answer is that the land is fertile enough for agriculture and farming, and safe from flooding.

There is a basis for querying, what was the relation between dwellers of burial tradition and those who established the first moated town and established the Buddhists buildings.

There has been some doubt about whether a number of stone Hindu statues (of the late seventh century CE) were found in the moated town of Si Thep and how they are related to the history of an unknown political town that likely was contemporary with the first Hindu Zhēnlà's king, Bhavavarman, according to the mid sixth to seventh-century Ban Wang Phai inscription.

A question mark exists as to whether the prior Theravāda tradition existed when the Mahāyāna tradition flourished in the eighth to tenth century CE and the latter likely predominated in the town of Si Thep.

Predominance of the Khmer-Hindu tradition likely replaced the Mahāyāna tradition in the tenth to thirteenth century CE has been called into question about the Khmer political power, or only the Khmer art styled influenced over the town of Si Thep.

There are still many unsolved questions in the rising, flourishing and decline, particularly, who were the people and the authority playing important roles in the dynamic development of the town of Si Thep in different periods of settlement.

The quest to answer the aforementioned questions needs much more archaeological excavation work and scientific analysis continuously both inside and outside the town for a long period of time to come.

TABLE showing a Chronological Sequence of Si Thep, based on Analysis of Findings

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
1	C-14 dating = 1,730 ± 30 BP = 240-390	The 2016 excavation area at undulating mound located near the center of the circular moated town (Mueang Nai)	1. Burial site with grave goods; - bone of a domestic dog - iron tools - pottery vessels - spindle whorls - agate pendants 2. Radiocarbon dating of a sample of a male's tooth at the age of twenty-five to thirty-five.	1. Burial sites found from excavations in the circular moated town of Si Thep (1988, 1994 and 2009 excavations) 2. Burial site with grave goods at Ban Nong Daeng, Sa Kruat Sub-district, 12 km southwest of the town of Si Thep; Kut Ta Raeo, 5 km. west of the town of Si Thep. 3. Burial tradition sites in the Lopburi-Pa Sak River basin, such as, at Tha Kae, Lopburi Province (200 BCE-300 CE), Sap Champa, Lopburi Province (400-300 CE) and Pong Takhop, Saraburi Province (1618 ± 30 BP = 300-360 CE), and in the Korat Plateau, e.g. Noen U-lok in Nakhon Ratchasima Province.	1. The early settlement in late prehistoric time appeared at later the town of Si Thep 2. The late prehistoric community occupied an area (12 km) in the vicinity of Si Thep. 3. Prestige goods ; carnelian, agate and glass beads found at the moated site of Si Thep and vicinity showing trade and cultural contact of inland communities in Lopburi-Pasak basin and Korat Plateau and probably between them and those from the far flung places; i.e. overseas.	- Vichai Tankittikorn 1995 (2538 BE). - Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi and Thawatchai Chanphaisansilp 2007 (2550 BE). - Sampaongern 2015. - Prasit Auetrakulvit 2016 (2559 BE). - Ciarla and Rispoli 2016. - Sudsawat 2018.

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
2	270-490 385-563 401-599 414-610	Khao Khlang Nok site, two kilometres outside the northern town's wall of Si Thep	Three brick subsidiary stūpas with laterite base at the north, the west and the south of the main stūpa.	The first period of Khao Khlang Nok stūpa (see No.3 below).	1. The first period of building of stūpas outside the town of Si Thep 2. No brick sample of the main stūpa is available for TL-dating, therefore the first period of construction of the main stūpa is still unknown.	- Anurak Deephimai 2014 (2557 BE). - Anurak Deephimai 2015 (2558 BE). - Nontharat Nimsuwan 2015 (2558 BE).
3	414-602	The circular moated site of the town of Si Thep (Mueang Nai)	1. Khao Khlang Nai: a brick stūpa with laterite base. 2. The first layout of a town in a circular shape with a moat and earthen wall.	1. No dating site of a brick stūpa of the period is available to be comparable. 2. The circular moated site such as this, which is considered to be a typically Dvāravatī town are as follows: Ban Khu Mueang in Singh Buri Province, Mueang U-taphao in Chai Nat Province, Chansen in Nakhon Sawan Province, Bueng Khok Chang in Uthai Thani Province	1. The rectangular based stūpa, restored in the late period with added stucco decorations. 2. Formation of the ancient town of Si Thep and foundation of Buddhist stūpa inside the moated town.	- Excavated by Decha Sudsawat in 2016 (2559 BE). - TL-dating by Krit Won-in, 2017. - Phasook Indrawooth 2005 (2548 BE). - Sampaongern 2015.
4	505-681	The rectangular moated site (Mueang Nok)	1. The layout of the town in the rectangular shape with moat and earthen wall. 2. The ruin: MN1907, a large laterite building, likely a religious edifice located at the rectangular moated site.	1. The rectangular moated town of Dvāravatī culture are exemplified by Khu Bua town in Ratchaburi Province, Si Mahosot town in Prachin Buri Province. 2. The scattering of mounds with laterite structure found in the rectangular moated site (Mueang Nok)	1. The rectangular shaped moated site which is prevalent in towns of Dvāravatī. 2. A soil sample, collected from MN. 1907 for absolute dating suggests the beginning of activity in the rectangular moated site of Si Thep.	- Phasook, Indrawooth, 2005 (2548 BE). - Test pit at the site was excavated by Decha Sudsawat in 2016. - TL-dating by Krit Won-in, 2017 (2560 BE).

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
5	550 -611	Ban Wang Phai, Bo Rang Sub-district Wichien Buri District, 10 km north to the town of Si Thep	Wang Phai Inscription, Pallava script, Sanskrit language, the name 'Bhavarman' is mentioned in the inscription.	- King Bhavarman I, King Mahendrarman are mentioned in the Sanskrit inscriptions using the Pallava script found in the Northeast of Thailand, such as, Pak Mun Inscription No.2, Khong Chiam District in Ubon Ratchathani Province, Don Khum Ngoen Inscription, Nong Hi District in Roi Et Province, Wat Ban Khwao Inscription, Khu Mueang District in Buri Ram Province.	1. Si Thep made contact with the Khmer territories to the east; particularly in the Mekong Delta. 2. The early Hindu influenced towns used the same system of writing and the same language.	- Krom Silpakorn 2016 (2559 BE)
6	542-726	The southwest of the main stūpa at Khao Khlang Nok site	1. A brick basement for installation of a laterite dharmachakra 2. Fragment of a dharmachakra found in situ	A place for installation of a dharmachakra, such as at U-taphao in Chai Nat Province, U- thong in Suphan Buri Province.	It is conjectured that the installation of a dharmachakra was done in the first period of construction of stūpa at the site.	- Anurak Deephimai 2014 (2557 BE). - Anurak Deephimai 2015 (2558 BE). - Nontharat Nimsuwan 2015 (2558 BE).
7	Late 6 th -7 th century	The circular moated site	1. Silver coins decorated with Śrīvasa and rising sun on a reverse.	1. Silver coins found at the several Dvāravatī towns in Thailand, such as U-Thong in Suphanburi, Dong Khon in Chainat, Si Mahosot in Prachinburi Province, and also found at Oc Eo in Vietnam, Sombor Prei Kuk in Cambodia, and Beikthano in Myanmar.	1. Si Thep is considered to be an important meeting point on trade-cultural network among the ancient towns in the early history of Southeast Asia.	- Phasook Indrawooth 2005 (2548 BE). - Krom Silpakorn 2016 (2559 BE).

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
			<p>2. Inscription from Monument No.0996 (Dhammachaka pavattana sutta Chanting is mentioned in the inscription)</p> <p>3. A part of an annular shaped stone with Pāli inscription (paṭīccasamuppāda)</p>	<p>2. Pāli inscription on parts of the Wheel of the Law (dhammacakra) was found in several sites such as; Wat Phra Si Rattana Mahatat in Lopburi Province, U-Taphao in Chainat Province.</p> <p>3. Pāli inscription (paṭīccasamuppāda) on parts of dhammacakra from Sap Champa, Lopburi Province.</p>	<p>2. The establishment of Theravāda Buddhism in the circular moated site of the town of Si Thep.</p> <p>3. The establishment of Theravāda Buddhism in Lopburi-Pa Sak River basin.</p>	
8	7 th century	Si Thep vicinity	<p>1. Pāli inscription at the base of an image of Buddha</p> <p>2. Pāli Inscription 'Ye Dhamma' aphorism</p>	Inscriptions with the Pāli, 'Ye Dhamma' aphorism, were prevalent in Dvāravatī towns in central, western and northeastern Thailand: Nakhon Prathom Province, U- Thong in Suphan Buri Province. Mueang Sema in Nakhon Ratchasima Province.	Establishment of Theravāda Buddhism at Si Thep and Dvāravatī towns in central, western and northeastern Thailand.	- Krom Silpakorn 2016 (2559 BE).
9	7 th - 8 th century	Vicinity of Khao Khlang Nok	A large sized of dhammacakra (the Wheel of the Law).	Large sized stone dhammacakra such as this, found at Dvāravatī towns: Nakhon Prathom Province, U-Thong, in Suphanburi Province	Concept of installation a base for placing of a dhammacakra is considered a Dvāravatī tradition.	-Sakchai Saisingha 2004 (2547 BE). - Phasook Indrawooth 2005 (2548 BE).

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
10	7 th - 8 th century	Inside and outside the town of Si Thep	<p>1. Two images of standing Viṣṇu in 'tribhaṅga' (triple flexion position)</p> <p>2. Two images of Kriṣṇa Govardhana</p> <p>3. Seven sculptures of Sun God or Sūrya</p>	<p>Carving Viṣṇu in 'tribhaṅga' on the cave wall at Tham Phra Phothisat in Saraburi Province</p> <p>2. Kriṣṇa Govardhana found at Wat Koh, Cambodia, Phnom Da style of the Khmer art.</p> <p>3. Sūrya Deva sculpture found at Phnom Bathe (642-707 CE), Prei Khmeng style of the Khmer art</p>	<p>1.1 The first presence of the Hindu: Vaiṣṇavism at the town of Si Thep</p> <p>1.2 The Vaiṣṇavism also appeared in the eastern and southern Thailand that contacted with the overseas, particularly, India.</p> <p>2. Si Thep likely made contact with the Khmer territories who created Hindu sculptures, based on the Viṣṇu-Kriṣṇa cult.</p> <p>3. The presence of Sūrya sculptures reflects the adoption of worshipping Sun God of people in Si Thep.</p>	<p>- Diskul 1979.</p> <p>- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi and Thawatchai Chanphaisansilp 2007 (2550 BE).</p> <p>- Sampaongern 2015.</p>
11	720 -848 821 -875	Khao Khlang Nok site, outside the town of Si Thep , 2 km north to the town of Si Thep.	<p>1. The main stūpa at Khao Khlang Nok</p>	<p>1. The 1st phrase of Chula Prathon chedi, Nakhon Pathom Province</p>	<p>1.1 Plan of square shape monument with a stair adjacent to the middle of each side, prevalent in the seventh-century Gupta architectural style of Indian art.</p> <p>1.2 The TL-dating of brick samples from the northern side of the main stūpa's base yield the date 720-848 CE and the eastern side of it yields the date 821-875 CE</p>	<p>- Phasook Indrawooth 2005 (2548 BE).</p> <p>- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi and Thawatchai Chanphaisansilp 2007 (2550 BE).</p> <p>- Leksukhum 2009.</p> <p>- Sampaongern 2015.</p> <p>- Anurak Deeppimai 2015. [2558 BE].</p>

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
			2. A stone image of standing Buddha found in situ on the upper floor close to the western side of the main stūpa's body at Khao Khlang Nok	2. Images of standing Buddha in double Vitarkamudrā such as this were found at Ban Fai, Lam Pai Mat District in Buri Ram Province, Dong Si Mahaphot in Prachin Buri Province.	2. The typical style of Dvāravatī art found in the aforementioned comparable sites reflects the close relationship between people of Si Thep and those of the eastern and northeastern regions.	- Nontharat Nimsuwan 2015 (2558 BE). - Krit Won-in 2017 (2560 BE). - Decha Sudsawat 2018 (2561 BE).
12	8 th - 9 th century	Khao Khlang Nai at the circular moated site	1. Khao Khlang Nai: a brick stūpa with laterite base decorated with stucco figures of elephant, lion, monkey, bull and floral patterns. 2. A bronze image of seated Buddha in Meditation 3. Two bronze images of standing Buddha 4. Bronze images of Maitreya	1. Monument No.18 at Wat Khong Suwankhiri, the town of Khu Bua , Ratchaburi Province; this Dvāravatī stūpa date back to 7 th - 8 th century CE 2. The images of Dvāravatī style, inspired by Pāla Buddhist art have been found in Dvāravatī towns, such as votive tablet depicted Buddha in Meditation found at U- Thong in Suphan Buri Province. 3. Bronze images of standing Buddha from U-Thong, Suphan Buri Province	1. The same rectangular based stūpa in the Buddhist tradition of the two sites indicates that the stūpa structure is the prevalent form of the Dvāravatī architectural style during the period. 2. The typical style of Dvāravatī art found in the aforementioned comparable sites reflecting the close relationship between people of Si Thep and those of the western regions. 3. Mahāyāna Buddhism was adopted and dominant in Si Thep. 4. Images of Maitreya in meditation have been found at the site only.	- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi and Thawatchai Chanphaisansilp 2007 (2550 BE). - Utthayan prawattisat si thep 1989 (2532 BE)

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
13	8 th - 9 th century	Monument No.0923 at the circular moated site (Mueang Nai)	1. Base of a laterite building. 2. Bronze images of Bodhisattava (Maitreya) found at 1994 Excavation.		Mahāyāna Buddhism was adopt and dominant in Si Thep (Mahāyāna Buddhist tradition was practiced in the town of Si Thep).	- Utthayan prawattisat si thep 1994 (2537 BE).
14	8 th - 9 th century	The rectangular moated site (Mueang Nok)	Sandstone standing Buddha in double Vitarkamudrā	Standing Buddha in double Vitarkamudrā found at Ban Fai, Lam Pai Mat in Buriram Province	1. It was reported that the image, exhibited at Norton Simon, USA, was found at Si Thep. 2. The style of Dvāravatī art reflecting the close relationship between people of Si Thep and those of northeastern regions.	-Sakchai Saisingha, 2004 (2547 BE).
15	8 th - 9 th century	Thamorat Cave, 15 km West to the wall of the town of Si Thep	A stalactite -stalagmite that formed the column on which the carving depicts images of standing Buddha, standing Bodhisattava, stūpa and dharmacakra.	Limestone caves that have some parts carved and were used as a holy place by the Buddhists, found in central and western Thailand, such as Bodhisatta cave in Saraburi Province, Khao Ngu, a cave in Ratchaburi Province.	The Mahāyāna Buddhism was adopt and dominant in Si Thep and its vicinity.	- Srisuchat 1991.
16	8 th - 9 th century	Si Thep vicinity	A clay votive tablet depicting the Buddha with a post-Pallava script and Sanskrit language and the Chinese characters on the reverse side.	Votive tablets from Ban Nong Suang (10 km. south of the town of Si Thep) and votive tablet found at Sap Champa, Lopburi Province	1. It was reported to be found at Si Thep (exhibited in Somdet Phra Narai National Museum in Lopburi Province) 2. Mahāyāna Buddhism's tradition was existed in Si Thep.	- Utthayan prawattisat si thep 1994 (2537 BE). - Puthorn Pumathon 2015.
17	9 th -10 th century	Monument No.1580 at the circular moated site	1. A laterite base of a building. 2. A clay votive tablet with inscription found at Monument No.1580 (The 1994 excavation)	Votive tablets from Ban Nong Suang (10 km. south of the town of Si Thep).	Mahāyāna Buddhism's tradition was prevalent in Si Thep.	Utthayan prawattisat si thep 1994 (2537 BE).

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
18	9 th -10 th century	The circular moated site (Mueang Nai)	Glazed ware from Changsha kiln in south-eastern China was found at southwest of the pond called "Sa Prang".	Khlong Ta Ruea, Nakhon Si Thammarat Province, Belitung shipwreck, Indonesia.	Si Thep was an inland town that was a meeting point between the inland communities and port communities that engaged in trade with China.	Natthaphat Chandavij 1994. - Samnak borannakhadi lae phiphiththaphantha sathan haeng chat thi ha sukhothai 1998 (2541BE). - Saritpong Khunsong 2016 (2559 BE).
19	10 th -11 th century	Prang Song Phi Nong	An Inscription using the Khmer script and the Khmer language found at Prang Song Phi Nong	Nong Mai So Inscription using the Khmer script and the Khmer language, Bo Rang Sub-district Wichien Buri District, Phetchabun Province, 12 km. north of the town of Si Thep.	The town of Si Thep and its vicinity were inhabited by the Khmer speaking people.	- Coedès 1937. - Utthayan prawattisat si thep 1991 (2534 BE).
20	11 th -12 th century	The circular moated site (Mueang Nai)	<p>1. Prang Si Thep : a brick shrine with a laterite base</p> <p>2. Prang Song Phi Nong : A laterite base supporting two brick, served as Hindu shrine</p> <p>3. Religious objects of the Hindu Śaivism such as a stone sculpture of four armed Śiva found at Prang Si Thep, Lintel depicting Śiva and Uma on Nandi (Uma maheshavara), decorative pillars at Prang Song Phi Nong.</p> <p>4. Religious sculpture of the Hindu Vaiṣṇavism : bronze Images of Viṣṇu and Laksami found at Khao Khlang Nai</p>	Prang Nang Phom Hom, Lopburi Province, Prasat Hin Phimai, Nakhon Ratchasima Province.	<p>1.-2. Two shrine were built in the form of khmer architecture and followed the Hindu Śaivism tradition reflecting the influence of Hindu-Khmer culture in Si Thep.</p> <p>3.-4. Śaivism and Vaiṣṇavism were practiced in the Town of Si Thep, probably the cults spread from Lopburi and Nakhon Ratchasima.</p>	<p>- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi, Thawatchai Chanphaisansilp 2007 (2550 BE).</p> <p>- Sampaongern, Pongdhan 2015.</p>

No	Age CE	Site	Significant Findings	Relatives Sites	Remark	References
21	Early 13 th century	Prang Ruesi located two km. from the northern wall of the town of Si Thep.	1. Prang Ruesi : a brick shrine with laterite base, built in the form of the khmer architecture following Śaivist tradition. 2. Sculpture found at site : Yoni base, Śivalinga and a Khmer inscription.	Prasat Hin Mueang Tam in Buriram Province.	1. The impact of Hindu-Khmer culture appeared in the town of Si Thep and its vicinity. 2. Śaivism was practiced in the Si Thep and its vicinity	- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi, Thawatchai Chanphaisansilp, 2007 (2550 BE). - Sampaongern, Pongdhan, 2015.
22	Early 13 th century	Prang Si Thep at circular moated site of the town of Si Thep	1. Prang Si Thep : a brick shrine with laterite base and a block of sand stone in the shape of antefix (found in 2001 excavation), A stone statue of a door guardian (Dvālapāla) 2. At foundation of Prang Song Phi Nong, a soil sample from test pit collected for TL Dating	- Dvarapalas, Bayon stlye of art, Cambodia	1. Mahayana Buddhism in the reign of King Jayavarman VII (1181-1219 CE) was spread from Khmer Kingdom to several towns in central and northeastern Thailand including the Town of Si Thep. 2. A result of a soil sample from test pit at the foundation yields the date 1214 - 1247 CE (736 ± 33 BP)	- Sathaphorn Thiengtham, Thada Sangthong, Payung Vongnoi, Thawatchai Chanphaisansilp, 2007 (2550 BE). - Sampaongern, Pongdhan, 2015. A test pit at the foundation of Prang Song Phi Nong was excavated by Mr. Decha Sudsawat in 2016. - Krit Won-in, 2017 (2560 BE).

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The Stream of Merchandise at Ayutthaya, an International Maritime Market

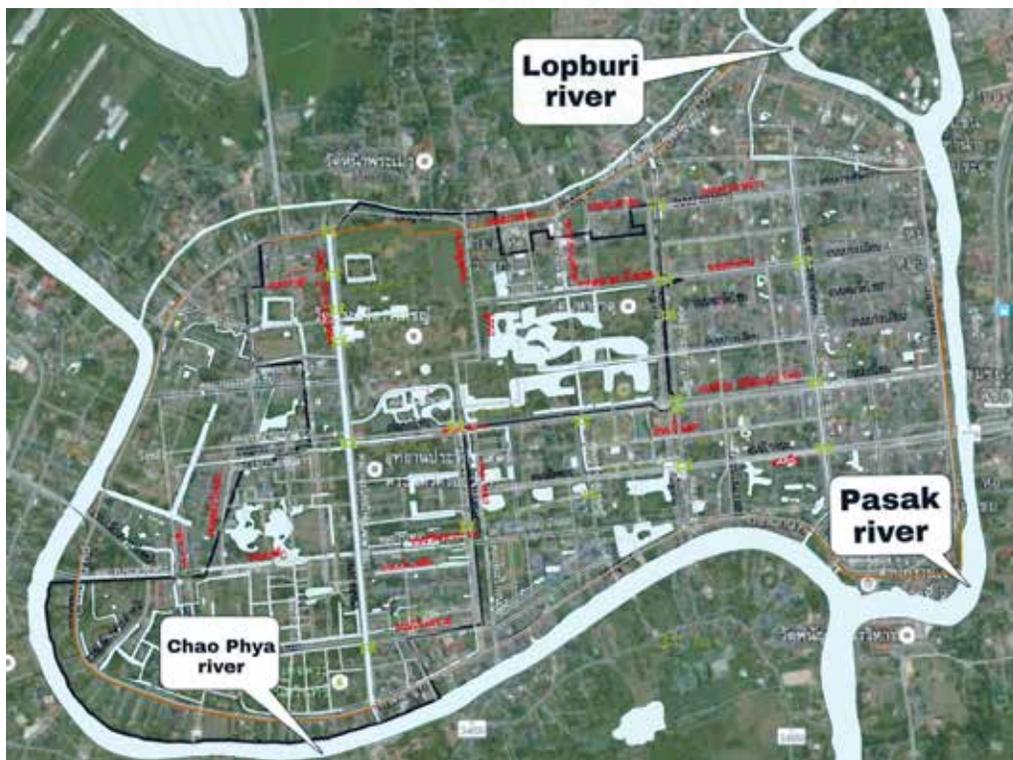
Suthipob Chantrapakajee



Model depicting of various merchandise imported to Nagasaki ports, Japan. 17th - 18th century CE, Nagasaki Museum of History and Culture, Nagasaki Prefecture, Japan

Abstract

This article is an attempt to compile information from historical records and archaeological findings about merchandise in local and international Ayutthaya's trade markets. The royal trade policy that conducted monopoly trading right on specified import and export such as ceramics, jungle products, war equipment and tax system dealing with foreign merchants and overseas trade will be discussed in the paper as well as a description of commoners' trade in either street market or boat market and trade routes from all directions of the country to the capital city, Ayutthaya, from 1350 - 1767 CE. A table showing native product at Ayutthaya, the inland port and international market for export and another table showing foreign merchandise imported to the entrepôt at Ayutthaya and being overseas are provided in the paper. It is found that the main foreign traders engaged in Ayutthaya trade were the Chinese, the Japanese, the Indian, the Persian, the Portuguese, the Dutch, the French, the English, the Spanish and the Javanese. Two ways of exchange of products had been identified. For example, a domestic deer hide was exported to Japan for making a Japanese armor that imported it to Ayutthaya; an ivory was exported to China and medicine which has ivory as an ingredient was imported to Ayutthaya. A commodity like ceramics was produced locally and exported from Ayutthaya market and ceramics of Chinese, Japanese and European origins were imported to Ayutthaya market for local consumption and export. Design pattern for textile production was sent to India and ceramic production was sent to China that were made for the Ayutthaya market.



Map of Ayutthaya, the Capital City of the Siamese Kingdom, 1397 - 1767 CE

Introduction

Ayutthaya had been the capital of the Siamese kingdom (the former name of the kingdom of Thailand) also known as the Ayutthaya kingdom. It had been the capital of the kingdom from 1350 -1767 CE with thirty-three kings having ruled the successive kingdom for four hundred twenty - seven years. The city is located at the confluence of three major rivers, the Chao Phya, the Lopburi and the Pasak rivers flowing through important cities to the inner part of the country, from the north towards the Gulf of Thailand.

The political territory of the kingdom is not only the core area of the capital city at Ayutthaya and the satellite towns in central Thailand, but also of dependent states, such as Nakhon Si Thammarat, Songkhla and Pattani in the South, Chiang Mai in the North and Nakhon Ratchasima in the Northeast and sometime covering the farer neighboring countries like Laos, Cambodia, Tanintharyi (Tanasserim, the present day Myanmar) and some upper states of the Malay Peninsula (the present day Malaysia) such as Malacca, Kedah and Kelantan. In this way, the Ayutthaya kingdom got various economic products and had its land connected to the sea and the land from all directions that facilitated the land and overseas trades and brought the capital city to the hub of import - export commodities.

In the sixteenth century CE, Ayutthaya expanded its territory to the East and the North. In this time, Ayutthaya was rising to its zenith, it conquered Sukhothai that became an Ayutthaya's satellite state, town, respectively. Therefore, ceramic business of Sukhothai was taken over by the royal treasury of Ayutthaya.

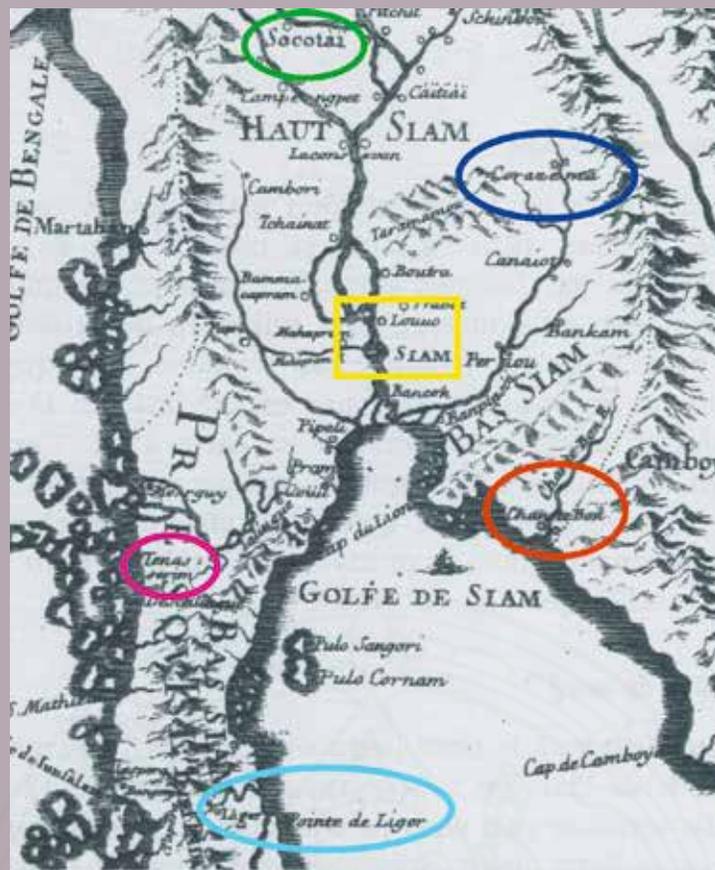
The kingdom of Ayutthaya appeared in Europeans maps and in a number of the Western and the Eastern accounts, because Ayutthaya was regarded as an international market which played an important role in economic movement of the East during the time of the West meet the East.

Jeremias van Vliet, a servant of the Dutch East Indian Company, who in the course of his career spent his time in Siam (Ayutthaya) from 1629 to 1634 CE wrote

“A Description of the Kingdom of Siam”. He noted:

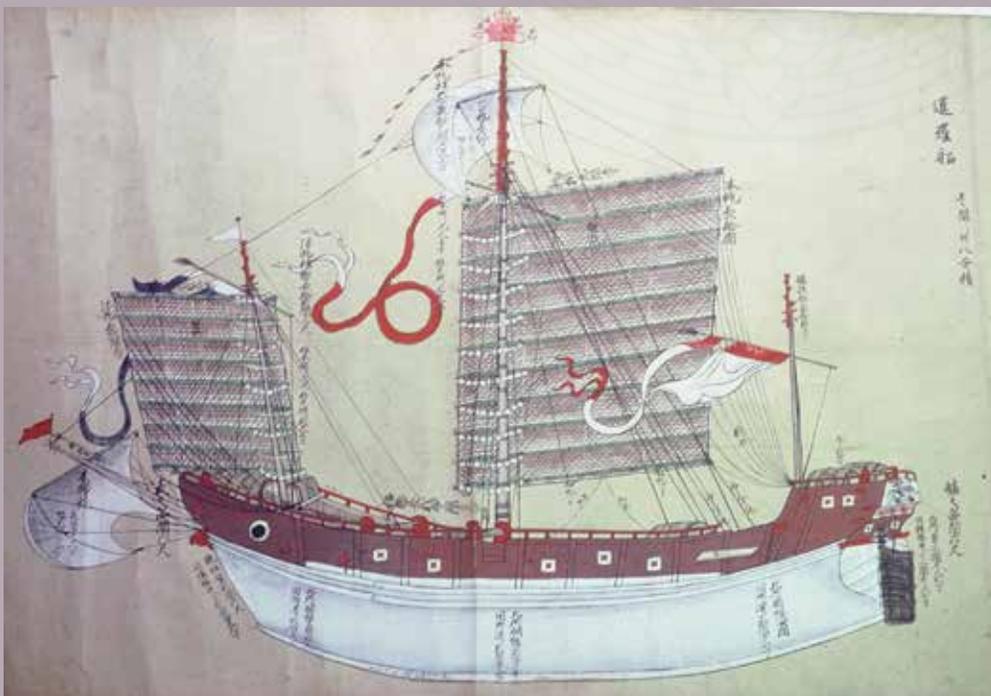
“In short Siam is a country that has more than most other countries of everything that the human being needs... The many roads leading to this brilliant town are crowded with people. This is the supreme capital of the world adorned with the nine kinds of precious stone” (van Ravenswaay 1910: 9, 17).

In this paper I will discuss the roles and trade routes of merchandise that appeared at the Ayutthaya market as import and export commodities for household use and trade by locals and foreigners according to archaeological findings and historical accounts.



Map of Upper Part of the Siamese Kingdom showing the capital city - Ayutthaya and satellite state/town

- ▭ Ayutthaya, The capital of the Kingdom
- Sukhothai, supplier of Sangkhalok ceramic
- Khorat/ Nakhon Ratchasima, the largest emporium of the Northeast Region
- Chanthabun/ Chanthaburi, the largest emporium for jungle products and spices of the East Region
- Tanintharyi/ Tanasserim, the western port
- Nakohn Si Thammarat/ Ligor, the southern port, the emporium of tin/ lead ores and jungle product



Picture of Siamese Junk
 Storage of Matsuura
 Historical Museum,
 Hirado City, Nagasaki Prefecture,
 Kyushu Island, Japan
 Japanese Art, 18th century CE,
 Paint on Silk Scroll.
 Collection: the 34th Generation
 of the Matsuura Family,
 Matsuura Historical Museum,
 Hirado City, Nagasaki Prefecture,
 Kyushu Island,
 (Photograph & Caption:
 Courtesy of Dr. Amara Srisuchat)

The Royal Trade Policy of the Ayutthaya Kingdom

A progress or a decline of the trade depended on the business administration in the port, and tax system in accordance with a treaty or a contract, including diplomatic relations. Therefore, the kings of Ayutthaya and their government had the policy to strengthen its political and economic power as follows:

1. Ayutthaya had monopolized Sangkhalok production (from Sukhothai) and the related trade export management.
2. New ceramic kilns such as Bang Pun kiln in Suphan Buri Province, Mae Nam Noi kiln in Sing Buri Province and Sa Bua kiln in Phra Nakhon Si Ayutthaya Province, were established near the port city to produce ceramics of all shapes and sizes as containers for trade commodities.
3. Junks flying the Ayutthaya's flag sailed to make direct trade connections with the East and the West.
4. Overseas trade stations were opened in foreign territories, especially in India, organized by Muslim consul on behalf of Ayutthaya's monarch, thus Ayutthaya gained market share in silk and cotton commodities of India.
5. Contract-exchanges between Ayutthaya and the European countries were made. (Srisuchat 2017: 32).

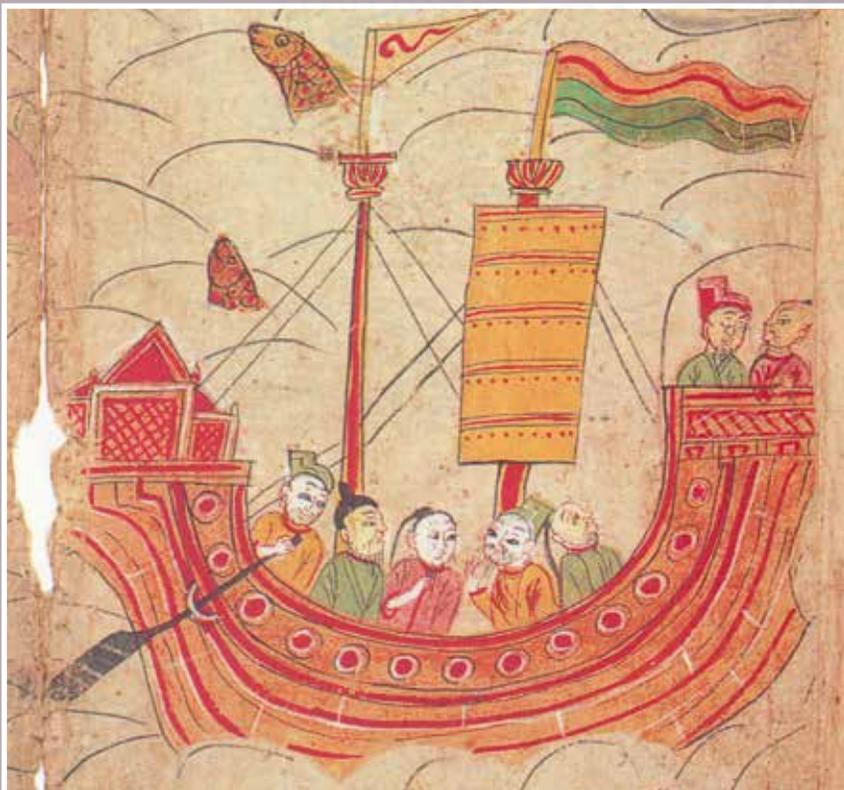
Merchandise of the Royal Monopoly Trading Rights

The import and export of monopolized commodities was authorized by royal departments. Two maritime trade departments of Ayutthaya were called by paired name.

The Eastern Department, was known in Thai as the Krom Tha Sai (literally, the harbor department of the left) and its counterpart was known as the Krom Tha Khwa (literally, the harbor department of the right). As trade improved, royal monopolies were imposed on the more popular goods. No one could buy or sell until the king's authorities had taken their pick - at a price they set. Only the king, armed with his monopolies, was strong enough to complete contracts with foreign merchants. It made the king extremely rich and the monarchy became a prize to be gained, and fought over (Garnier 2004: 60).



Pom Phet, an important fortress and boat market in the southeastern corner of the Ayutthaya City
(Its present condition after reconstruction)



The Chinese junk in illustrated manuscript of Traibhumi, National Library, Bangkok, Ayutthaya Art, 17th to 18th century CE
Paint on paper, W. 20 cm. L. 53.5 cm.
(Photograph & Caption: Courtesy of Dr. Amara Srisuchat)

Export merchandises, monopolized by the royal treasury are elephants, ivory, black wood, red wood, sappan wood, eagle wood, Mansoniagei (a medium-sized of evergreen tree like sandalwood), resins, lacquer, shellac, tin, lead ingots and saltpeter.

Import monopolized by royal treasury merchandise was war equipment material; cannons, guns and gunpowder.

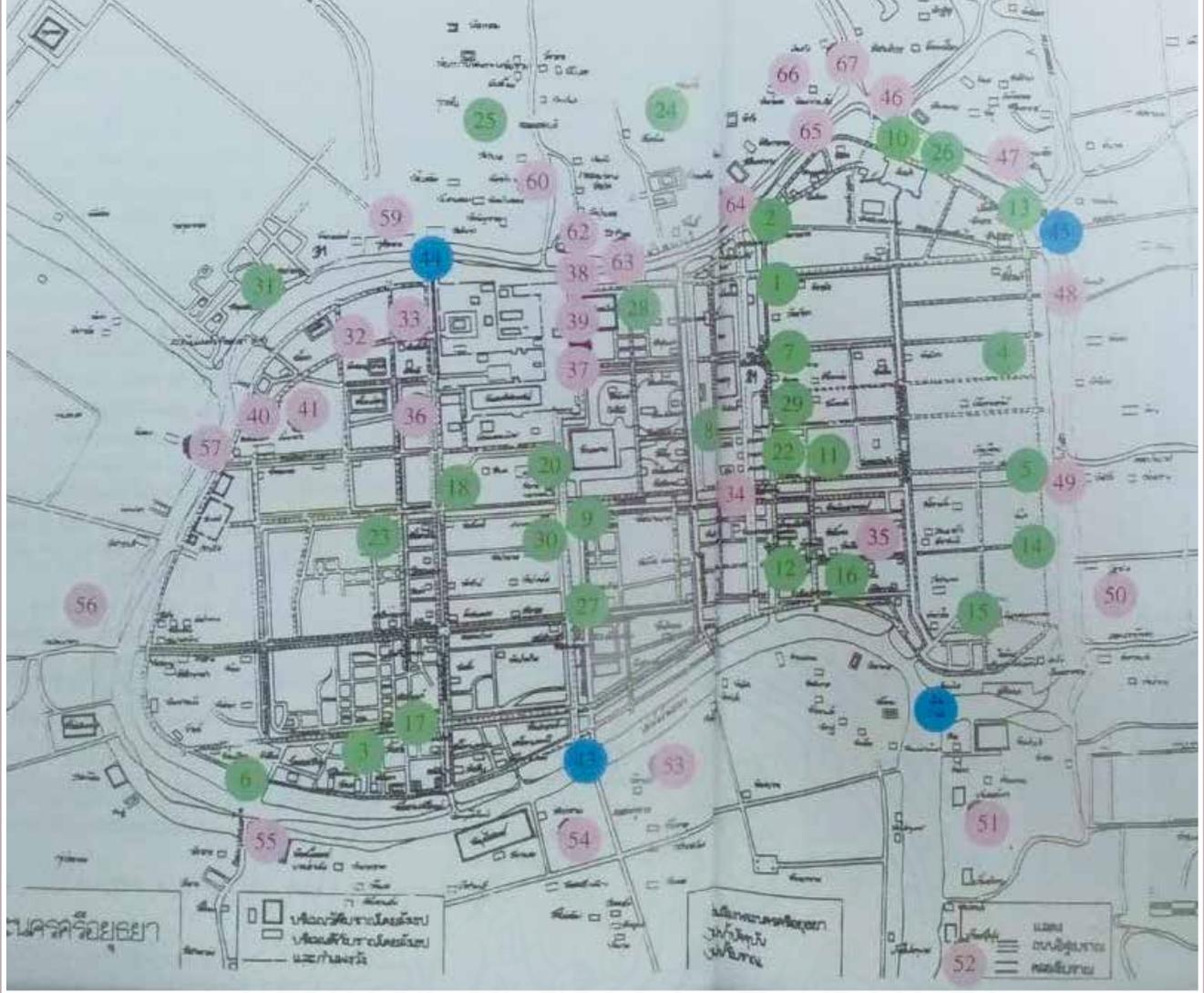
The terms of the royal monopolies that impacted local commercial transaction were exemplified by the main economic goods of Sukhothai. After that kingdom was under the political sovereignty of the kingdom of Ayutthaya, the royal treasury of Ayutthaya was monopolized of Sangkhalok exportation in the reign of King Chao Sam Phraya to King Ramathibodhi II (1438 - 1530 CE).

Some local trade representatives were giving long-term appointments in important ports and they managed local transaction for the sale of crown cargoes and the purchase of goods or shipment back to the royal warehouse.

Taxation on Ayutthaya Trade

The Ayutthaya's government collected taxes on goods that were imported and exported by private traders. According to one report in the early 1500s, the export duty in Ayutthaya was 6.7 percent. Chinese traders paid 16.7 percent on import and were thus in a favored position, because other foreign traders paid 22.2 percent (Pires 1994 i: 104 - 5). The tariff changed overtime, and almost a century later rate at Ayutthaya was only 5 percent on imports as well as exports (Floris 1934: 37). The rate reported in the capital at the end of the Ayutthaya period was 3 percent for ships from countries that maintained friendly relations with the Thai, and 5 percent for all others (Krom silpakorn 1972: 280).

Provision in the law may have given shippers the incentive to supply the royal warehouses with specific goods needed by the government. By the mid -1500s, the Ayutthaya government began to impose a second type of tax, which varied according to the size of the vessel (Cruz 1953: 204). The tariff at the end of the Ayutthaya period applied to vessels with at least 8 meters (Thai: 4 wa) wide was charged at the rate of 6 baht (worth about 90 grams of silver) per meter for ships from countries with friendly relations and 10 baht per meter for all others (Krom silpakorn 1972: 280). Crown junks of Ayutthaya were also able to engage in trade at other Chinese ports, where they paid the same anchorage and fee import - export duties that private Chinese traders paid. They also had to pay the entire range of official charges: anchorage fees and import-export taxes in Ayutthaya, plus all taxes in Chinese Ports (Breazeale 1999: 17 - 18).



The sketch of the outline of the city of Ayutthaya depicting street-place for making goods: ●, street market: ○, and boat market: ○.



Gold Areca Nuts, found at the crypt of the main stūpa (Prang) of Wat Ratchaburana, 1421 CE, the City of Ayutthaya, exhibited in the Chao Sam Phraya National Museum, Phra Nakhon Si Ayutthaya Province
(*Photograph & Caption: Courtesy of Dr. Amara Srisuchat*)

Local Merchandise and Common Merchants at General Markets in Ayutthaya

There appeared two kinds of trade markets in Ayutthaya: street market (Thai: “*talat bok*” literally means land market) and boat market (Thai: “*talat ruea*”/ “*talat thong nam*” literally means floating market). The Ayutthaya street-market was described in the account of Simon de La Loubère who came to the kingdom between 1687 and 1688 CE. The text excerpts from the book are as follows:

“...The middle street, which runs North towards the Court, is best inhabited, and full of shops of tradesmen, artisans and handicrafts men. In both these streets were seen more than one hundred houses belonging to the Chinese, Hindustanians and Moors, as they call them...”

“...The rest of the streets are less inhabited, and the houses of ordinary inhabitants are but mean and poor cottages...”

“...The booths, or shops of the town are low, and very ordinary, however, they stand in good order, and in a straight line, as the street are...” (Garnier 2004: 48 - 49)

Merchandise of the street markets that are either import or export products had been described in the late seventeenth-century Thai account, *Phanna phumisathan phra nakhon si ayutthaya* (Description of Places in Ayutthaya) (Winai Phongsiphian 2008: 77- 88). According to the account there were sixty-one markets within the city’s wall of Ayutthaya; forty markets were opened every day from morning to evening and twenty-one convenient stores outside the market opened at a convenient time. Merchandise that was available in the markets and three kinds of them were active in a particular street-place known in Thai as “*thanon-yan*”, such as “*thanon-yan pa thon*”, literally meaning “street-place where abounds with drumbeat” for selling drum, flute and other musical instruments as well as materials for making a music instrument, “*thanon-yan pa phalueang*”, literally meaning “street-place that abounds with yellow robe”, for selling monk’s yellow robes, “*thanon-yan pa khan ngoen*”, literally meaning “street-place where abounds with silver bowls”, “*thanon-yan pa thong*”, literally meaning “street-place where abounds with products from gold”, “*thanonyan pa ya*”, literally meaning “street-place where abound with herbal grass” and herbal medicines and spices of various kinds being available, “*thanon-yan pa mai*”, literally meaning “street-place where abounds with silk cloth from different provenances”,



Bronze container of lime for chewing betel, found in Ayutthaya, exhibited at The Chantharakasem National Museum
(Photograph: Courtesy of The Chantharakasem National Museum)



Bronze bowl, found in the City of Ayutthaya exhibited at The Chao Sam Phraya National Museum
(Photograph: Courtesy of The Chao Sam Phraya National Museum)



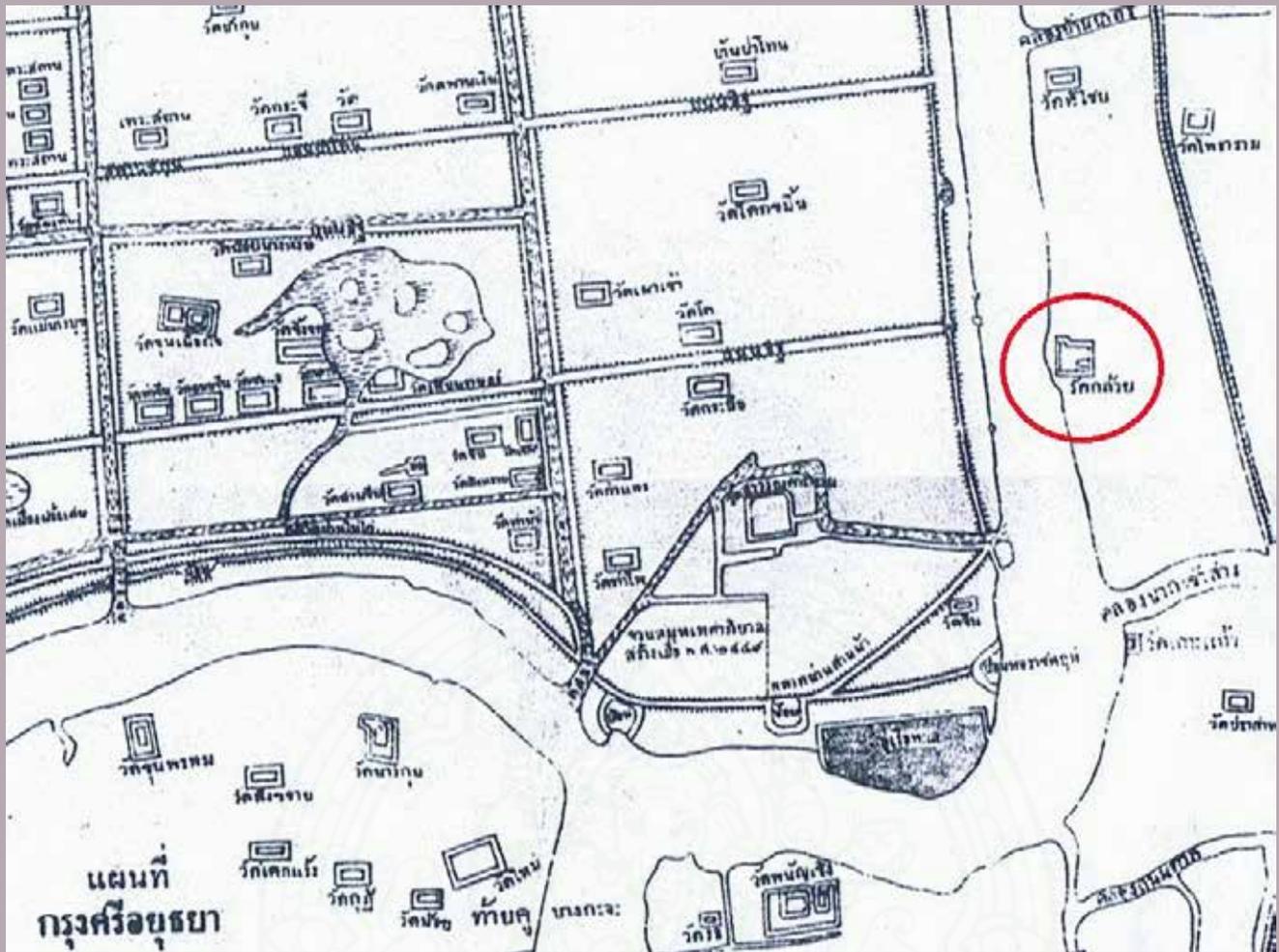
The present condition of "Thanon-yan pa phakhieo", market in the center of Ayutthaya City

“thanon-yan pa lek”, literally meaning “street-place where abound with iron utensils and equipment”, “thanon-yan pa fuk”, literally meaning “street-place where abound with bed’s sheet” for selling bed’s sheet, pillows, mosquito nets, cloth curtains and white satin, “thanon-yan pa phakhieo”, literally meaning “street-place where abounds with green cloth” and various clothes, shirts, blouses, trousers, pants, hats, cloth bags, cloth bags for betel nuts, cloth bags for cigarettes, “thanon-yan ban chang tham ngoen” (street-place at the house of silversmith) where jute, black lacquer, flint rock and gun flint was available, “thanon-yan phram” where baskets, robes, iron chains were available, “thanon-yan chi kun” where shops selling firework, house of metal smith for casting image of Buddha made of bronze, silver, brass and copper alloy was available, “thanon-yan nai kai” where Chinese shops for goods from China like porcelain, glazed wares, silk and satin cloth, iron tools as well as Chinese fruits were available.

Note that at “thanon-yan samma” (literally, street-place called three horses) there were the Chinese craftsmen and metal-smiths who had their own shops and produced various tools, utensils and furniture made of wood or iron. The Chinese merchants also set up a workshop for making Chinese dried pasture or preserved sweets which were favorites of the Ayutthaya people. Markets outside the city’s wall served local people who engaged in trade with boat-merchants from different directions as well as merchants who used land transportation-routes. Therefore, here outside the city, appeared four main floating markets or boat markets near the city-wall and thirty street markets. However, merchandise at the markets were not different from those found at the markets in the city. Archaeological findings from previous surveys and excavations in Phra Nakhon Si Ayutthaya Province that were collected or exhibited in two national museums of the province; i.e., the Chao Sam Phraya National Museum and the Chantharakasem National Museum and data available from archaeological reports during two decades reveal a number of organic and inorganic materials that give us a light to trace back to some merchandise which were currently active in some aforementioned markets.

To understand the local’s way of “boat trade” or “floating market” in the waterways of Ayutthaya, a description of the matter appeared in the Persian account, The ship of Suleiman:

“...Their boats are their houses as well as their markets. They sail their boats wherever they wish. Tie them up alongside one another and do all their buying and selling without going to shore...”



The position of Wat Kluai, a market for gathering and contributing goods from the Lower Northern Region according to a map drawn by Phraya Boran Rachathanin, an eminent Thai historian in 1900s.



The present condition of the mouth of Ko Keao canal, outside the Ayutthaya city to the south-east

Details of the issue were explained by Jeremias van Vliet, a Dutch merchant who came to engage in commerce with Ayutthaya for the Dutch company, VOC, (1633-1642 CE). He noted that there were the simple traders who brought vegetables and fruits from further afield and perhaps more exotic merchandise from outlying provinces. Many people must have lived on floating houses, moored to the banks of rivers and canals. Others appeared to live aboard large boats, though more probably they came from inland villages, stayed to sell their produce, moving from one water-market to another, and then returning home (Garnier 2004: 50 – 51).

According to the late seventeenth century description of places in Ayutthaya various kinds of merchandise, their origin and trade routes unto the markets of commoners at Ayutthaya as well as roles of merchants from various parts of the kingdom and foreign merchants engaged in the commerce at the Ayutthaya's markets of any variety were noted that can be summarized as follows:

1. Merchandise including sugar syrup, tobacco, cotton, beeswax, and various northern goods from Phitsanulok, a principal viceroy town covering the lower north region, were transported in large swing-tail boats that they moored at Ayutthaya's central market and its destination was a market in front of Wat Kluai at the East of the city and a market at the mouth of Ko Kaeo canal.

2. The carts from Nakhon Ratchasima Khorat ("Corasema" in the European maps), the largest emporium of the northeastern region, transported various goods such as silk, checkered cloth, gold-thread, patterned cloth, rhino horn, deer hides, deer sinews, dried meat, bird'swings, lacquer, beeswax, benzoin, tin, and various forest goods, whereas the Khmer with carts from Battambang (in modern Cambodia, close to the eastern border between Thailand and Cambodia) transported rhino horn, cardamom, benzoin, lacquer, tin, silk threads, silk cloth, Vietnamese silk, red gems, and other goods that came from the Khmer region.

In case of a large number of goods brought in at the same time for selling at a meeting point, huts had to be built by the cart-traders for spending the time in the course of buying and selling commodities with locals at the suburb of Ayutthaya. They contributed to build them and to repair them thereafter. In the cart-trading season such as this, the temporary market abounded with various carts and traders brought commodities for selling whereas locals of Ayutthaya brought various foods and products of Ayutthaya for selling to the traders as well.

3. Markets were founded in front of three Buddhist monasteries - Wat Samu, Wat Khanun and Wat Khanan to facilitate merchants from towns in the vicinity of Ayutthaya including Ang Thong, Lopburi, Mueang In (modern Sing Buri), Mueang Phrom, Mueang Sing (modern Kanchanaburi), Mueang San (modern Chainat), and Suphan Buri. Therefore, merchants took boats either large or small to moor here for selling and buying commodities from the town (see Table 1 No.2, 3).



Boat market, Ayutthaya, 100s years ago



Bang Ka Cha village,
an international market,
painted by Engelbert Kaempfer,
late 17th century CE



The present condition
at Bang Ka Cha village

Villagers of three monastery areas had set up mills to mill rice in order to use it for food or making wine or liquor from it and selling it to the merchants. In the era of junk-trade, they also milled rice to sell to the Chinese merchants and sailors on board.

4. Boats from the northwestern region such as the towns of Rahaeng and Tak as well as hawk-tail boats from Phetchabun in the upper central region, transported lacquer, benzoin, thick iron wire, iron steel (Thai: lek nam phi), torches, oil, tobacco, hide, rhino horn and natural products which were available at those places. The boats moored to sell the commodities at the mouth of Suan Phlu canal (literally meaning the betel garden canal) which led to Wat Chao Phanaeng Choeng (modern Wat Phranan Choeng), two kilometers outside the city moat to the southeast.

5. At Bang Ka Cha village, two kilometers to the southeast of the centre of Ayutthaya city, there was an international market near the fort called “Pom Phet” where the foreign boats of Chinese, Indian and Cham (from Vietnam) merchants allowed to be anchored for selling sugar cane, sago palm (*Metroxylonsagu Rottb.*), sulfur, and various things (see Table 2 No. 8 - 10 and 24 – 37).

6. Along the waterway of the city moats of Ayutthaya, particularly, from the southern to the western moats a large number of rafts, approximately twenty thousand, floating on the water ways of Ayutthaya were used as both dwellings and shops, run by Thai, Chinese, Indian, and Muslim Cham traders to buy and sell various goods imported to Ayutthaya and local products of Ayutthaya with trade-boat sailing along the city’s moats and connecting with the small canals, such as Khlong Ta Khian.

7. In front of the entrance at Pratu Tha Hoi (literally meaning the shell port), sea folk traders moored boats to sell mussels, horse mussels, sea crabs, horse shoe crabs, and some grilled and fresh sea fish. There is the Pa Chak village market, three to four kilometers from the center of the town, where villagers made rope, leather rope, rattan, resin and boat stuffs.

8. At the mouth of Khu Cham canal and near Wat Chao Phanaeng Choeng trade boats from the south were moored. For instance, boats with a beam of ten cubits or three fathoms loading food products from the sea, such as shrimp paste, fish sauce, dried fish, sea bass, fermented crab and grilled stingray came from the town of Phetchaburi. Also boats with a beam of six to seven cubits of the Khaek Chawa (literally means the Muslim from Java island) and Malay traders transported goods including betel nut, pandanus basketwork and rattan basket.

9. People from Sawankhalok (a district in modern Sukhothai Province) and the northern cities transported various goods in large swing–tail boats that they moored for trade along the river and in the large canal of Wat Mahathat during the rainy season that had a high tide.



Japanese sword
(*Photograph: Courtesy of Dr. Amara Srisuchat*)



A part of a gilded lacquer manuscript cabinet depicting a fighting scene in which a troop of mercenary is using cannons and guns, 18th century CE, Central Storage of Office of National Museum, Pathum Thani Province
(*Photograph: Courtesy Mr. Tharapong Srisuchat*)



Deer hides, exhibited at a memorial hall of Japanese Village, Phra Nakhon Si Ayutthaya Province

Significant Merchandise: Provenance, Trade Routes and Two Ways of Exchange

A part from local merchants and merchandise referred to in the historical accounts mentioned above, it is also recorded that in the monsoon season there were a large number of merchants who brought various merchandise to markets of Ayutthaya. Merchants in charge of junks, sloops, and clippers sailed up and dropped anchor at the markets in the city. They carry goods up to the buildings that they have bought or rented to open shops for sell their merchandise. The foreign merchants and their significant merchandise were as follows:

Chinese brought Chinese products to Ayutthaya: porcelain, silk cloth, lacquer ware work, copper work, medical product, furniture in lacquered, furniture in varnished wood, silver and gold.

Japanese exported Japanese fan, Japanese sword, Japanese armor, wooden boxes, copper ingots, silver ware, silver coins, gold ornaments, pepper, soy sauce and miso.

Indian exported printed and painted cloth, dyed cloth, British woolen, iron, beeswax and cowrie shells.

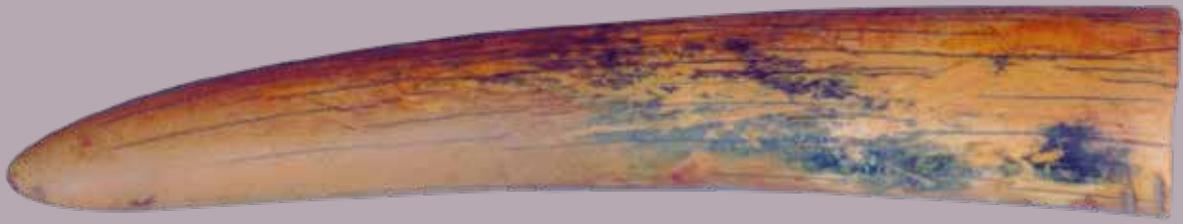
Portuguese's goods were guns, gunpowder, cannons, mercury, armor, armament, velvet, brocade, copper ware and gold ware.

Dutch brought with them to Ayutthaya: ship building equipment, pepper, camphor and cinnamon.

Javanese products were Muslim fabric, camphor, cinnamon, pepper, benzoin and bird's nests.

Two ways exchange of merchandise, exemplified by the object for trade were as follow:

1. Deer hide was a domestic product exported from Ayutthaya. The Japanese merchants dwelling in the Japanese village in Ayutthaya were skilled in preparation of deer hide for export by both the Japanese and Dutch, particularly to Japan. The Japanese needed a large number of deer hides, for a deer hide was a component of Japanese armour. The Japanese, therefore, exported the finished product to Ayutthaya. A large number of ray skin was in demand by the Japanese merchants, because it was used to cover a Japanese sword's hilt (ray-skin cord hilt). The Japanese sword was an acceptable quality product, the Ayutthaya royal court ordered it and several types of Japanese swords imported to Ayutthaya, particularly for the king of Ayutthaya to give it as a royal gift to foreign kings, diplomats and high ranging aristocrats (Srisuchat 2011: 158).



Ivory, found at Bang Krachai shipwreck site
(Photograph: Courtesy of The National Maritime Museum, Chanthaburi Province)



Lead Ingots, found at Khram shipwreck site
(Photograph: Courtesy of Underwater Archeology Division)



Lead Ingot, found at Rang Kwian ship wreck site
(Photograph: Courtesy of The National Maritime Museum, Chanthaburi Province)



Copper ingots
(Photograph Courtesy of The National Maritime Museum, Chanthaburi Province)



Chinese coins, found at Rang Kwian ship wreck site
(Photograph: Courtesy of The National Maritime Museum, Chanthaburi Province)

2. Elephant tusk, ivory, rhino horns and antlers were jungle products of Ayutthaya. Source of the products were in the east and northeast of Thailand such as Chantaburi and Nakhon Ratchasima, areas which were rich with forests. Chinese demand was high for these products to use as ingredients for medicine. Ayutthaya exported these jungle products to China and imported the medicine back to Ayutthaya.

3. Metallic ingot archaeological findings suggest that Thailand was rich in metallic resources like copper, iron, lead and tin. Ancient metallic mines of the metallic items were found in several sites. For example, copper mine at Phu Lon (Loei Province) and Khao Wong Phra Chan (Lopburi Province), iron mine at Bo Nam Phi (Uttaradit Province), lead mine at Muaeng Song Tho (Kanchanaburi Province) and tin mine at Takua Pa (Phang-Nga Province). Findings from some mines and their related sites where the metallic products were produced, such as ingots or finished products suggest the activity of making them as a commodity for internal and overseas export during the late prehistoric time to the time of early states of the country. No evidence to say that the kingdom of Ayutthaya maintained producing the ingots of copper and iron from the domestic resource for overseas export. The Dutch document (Joose Schouten, 1620 - 1628 CE) and the Japanese account (1685CE) referred to a list of Ayutthaya's imported commodities and copper ingot and iron ingot.

A number of copper ingots was found in three shipwreck sites in the Gulf of Thailand. Details are as follows: (1) The Rang Kwian shipwreck near the shore of Chon Buri Province. In the same cargo of the shipwreck, apart from the copper ingots other trade commodities were Sangkhalok ceramics, stoneware jars from the kilns of Bang Pun and Mae Nam Noi, the Chinese ware of the Yuán dynasty and the Chinese bronze coins were found side by side. (2) The Bang Krachai Shipwreck No.2 found near the shore of Chanthaburi Province in the Gulf of Thailand. A number of copper ingots was found in association with Thai heavy duty jars from the Bang Pun kiln (Suphan Buri Province) and Mae Nam Noi kiln (Sing Buri Province), the blue and white wares of the Emperor Wanli's reign (1573-1620) of the Qīng dynasty. (3) The Si Chang shipwreck, near the shore of Chon Buri Province. The associated finds with a number of copper ingots in the same cargo of the shipwreck were stoneware jars from Mae Nam Noi kiln and the Vietnamese blue and white wares. According to the same Dutch document, ingots of lead and tin which were local products of Ayutthaya were in high demand of the overseas markets, and that the above items were exported. The foreign literary information was confirmed by a 2020 lump of lead ingot found in the Si Chang shipwreck (Kong borannakhadi 1988: 108).



Jar with four handles
Si Chang No.1 shipwreck site,
Ban Ko Si Chang, Tambon Ko Si Chang,
Ko Si Chang District, Rayong Province,
1983 Ayutthaya Art, 16th- early 18th century CE.
Central Storage of Office of National Museum,
Pathum Thani Province.

*(Photograph & Caption: Courtesy of
Dr. Amara Srisuchat)*



Stoneware for export,
a product of Bang Pun kiln
in Suphan Buri Province, Thailand

*(Photograph: Courtesy of
The Chao Sam Phraya National Museum)*



Thai Polychrome Porcelain
(Bencharong), exhibited at The Chantharakasem
National Museum, 19th century CE

*(Photograph: Courtesy of
The Chantharakasem National Museum)*



Indian silk cloth with Siamese design
17th- 18th century CE

Collection: The National Museum, Bangkok

Furthermore, a Japanese account (1682 CE) said that copper vessels and copper lamps, silver wares and coins and gold threads were all Japanese metallic products and were imported to Ayutthaya by the Siamese Junk (Ishii 1998: 79). The Japanese iron key was referred to in the book of M. Simon de La Loubère, the French envoy (1691 CE) in the reign of King Narai of Ayutthaya (Srisuchat 2011: 78).

4. Ceramics were produced from various kilns and had two functions for trading, the first was a commodity by itself, and the second was used to be a container for several commodities. There are many types of Thai pottery found at excavation and shipwreck sites in Thailand, but also found in other countries. Mae Nam Noi ware and Bang Pun ware produced from kiln sites in central Thailand found in a shipwreck and at Japan's excavation sites used to be containers for transporting sugar, oil, camphor, saltpeter, etc. There was a four-handed jar of Sing Buri (Mae Nam Noi ware) found in Japan used as containers of fermented fish, salt, rice and saltpeter (Srisuchat 2011: 75 - 76, 199). The archaeological findings confirm commodities mentioned in literal evidence and gives more information. Sangkhalok wares found in several shipwreck sites, especially green glazed and black painting underglaze Sangkhalok were produced as export commodity to Asia, even stoneware jars from Suphan Buri (Bang Pun ware) was a Japanese popular item, which inspired Japanese artists to create jars at the same type. On the other hand, Japanese and Chinese polychrome porcelain imported to Ayutthaya in later periods might serve as a model for future Thai polychrome "Bencharong" porcelain. Ayutthaya officials were sent to China with samples of design patterns for production of porcelain over glazed decorated and gold. The ceramic with Thai motifs known as Bencharong were made in China for the Ayutthaya market (Srisuchat 2017: 33 - 34).

5. Demand for foreign goods to be produced according to Siamese pattern was also exemplified by a type of Thai textile made in India. Ayutthaya officials were sent to India with samples of design pattern for textile production. The textiles with Thai motifs were made in India for the Ayutthaya market (Tan 2012: 233 - 241).



Sangkhalok, found in the Gulf of Siam, Sattahip District, Chonburi Province 15th -16th century CE
(Photograph: Courtesy of The National Maritime Museum, Chanthaburi Province)



Sappan wood, an important merchandise of Ayutthaya,
found at Bang Krachai shipwreck site
(Photograph: Courtesy of The National Maritime Museum, Chanthaburi Province)

Table1: Native Product at Ayutthaya, the Inland Port and International Market for Export

NO.	From (origin) town	Product	royal monopolite goods	good with tax	Date CE	Ship's cargo transportation buyer & shipper (exported by ...)	Destination (for transhipment)	Function / Utility
1	Sukhotai Si Satchanalai	Sangkhalok	✓		15 th c.- 17 th c.	Dutch Dutch east india company (VOC) Thai junk	Japan	Utility / container
2	Sing Buri	Mae Nam Noi's Jar	✓		15 th c.- 17 th c.	Japanese junk Thai junk	Japan	Utility / container
3	Suphan Buri	Ban Bang Pun ware	✓		14 th c.- 17 th c.	Japanese junk Thai junk	Japan	Utility / container
4	Kamphaeng Phet Phitsanulok Nakhon Ratchasima	Deer hide		✓	early 16 th c. - 17 th c.	Dutch ship Japanese junk	Japan	War equipment material
5	Nakhon Ratchasima	Cow hide		✓	early 17 th c.	Dutch ship	Japan	clothing
6	Phetchaburi	Rey skin		✓	17 th c.	Japanese junk	Japan	War equipment material
7	Chanthaburi	Agar wood	✓		early 17 th c.	Dutch ship Japanese junk	Japan	component of Perfume
8	Chanthaburi Chon Buri	Sappan wood	✓		15 th - 17 th c.	Dutch ship Japanese junk Chinese junk	China	Used for dyeing
9	Kedah Chanthaburi	Pepper (suace)		✓	15 th - 17 th c.	Dutch ship	Western Europe	a seasoning
10	Ayutthaya	Spirit		✓	15 th - 17 th c.	Japanese junk	Japan	beverage
11	limestone caves in Lopburi, Saraburi, Kanchana Buri, Phetchaburi	Potassium Nitrate (salt petre)	✓		1567 - 92 1543 - 1616 (Under the Tokugawa shogunate government)	Chinese junk Thai junk / Japanese junk	Japan (Sakai Kango Toshi No.60, located at the heart of Sakai City, Osaka Prefecture, Honshu Island / Tagashima's house site, the house former owner was renown person in Nagasaki)	gun - powder material
12	Ranong	Sulphur		✓	1567 - 92	Chinese junk		fumigation medicine bleaching cloth for production of sulfuric acid
13	Chanthaburi	Mace - Nutmeg seed (sauce)		✓	16 th c.			a seasoning
14	Chanthaburi	Clove (sauce)		✓	16 th c.			a seasoning
15	Southern of Siam	Nest		✓	16 th c. - 17 th c.	Chinese junk	China	medical ingredient foodstuff
16	Nakhon Si Thammarat	Elephant	✓		16 th c. - early 17 th c.	English ship Thai junk	South India	for riding on
17	Chanthaburi	Elephant tooth	✓		early 17 th c.	Chinese junk	China	medical ingredient
18	Chanthaburi Nakhon Ratchasima	Rhino horn	✓		early 17 th c.	Chinese junk	China	medical ingredient
19	Nakhon Si Thammarat	Antler	✓		early 17 th c.	Chinese junk	China	medical ingredient
20	Chanthaburi	Ivory	✓		16 th c. - early 17 th c.	Chinese junk Spain ship	China Malaka	medical ingredient
21	Nakhon Ratchasima	Shellac	✓		early 16 th c.	Portuguese ship	Malaka	used as wax wood finish sealing wax
22	Chiang Mai	Olibanum		✓	16 th c.	Spain ship Portuguese ship	Malaka	extracting essential oil
23	Chiang Mai	Civet		✓	16 th c.	Spain ship		extracting essential oil
24	Nakhon Ratchasima	Benzoin		✓	16 th c.		Malaka	extracting essential oil
25	Chiang Mai Phitsanulok	Beeswax		✓	early 16 th c.	Portugueses ship	Japan	use to make candle, oil
26	Ayutthaya	Indigo		✓	early 16 th c.	Portugueses ship	Malaka	Used for dyeing
27	Ayutthaya	Dyeing colour		✓	early 16 th c.	Portugueses ship	Malaka	Used for dyeing
28	Chanthaburi	Golden shower tree		✓	16 th c.		Malaka	use to make furniture
29	Kedah Nakhon Si Thammarat Nakhon Ratchasima	Tin	✓		early 17 th c.	English ship Thai junk	Japan India	component of alloy
30	Nakhon Si Thammarat	Lead	✓		early 17 th c.	Thai junk Dutch ship	Japan	component of alloy
31	Ayutthaya	Siam fabric		✓	16 th c.		Malaka	clothing
32	Phitsanulok	Sugar syrapp		✓	1612 - 1765	Dutch ship	Japan	a seasoning
33	Phitsanulok	Honey		✓	1613 - 1765	Dutch ship		a seasoning
34	Ayutthaya	Dried fish		✓	16 th c. - early 17 th c.	Portuguese ship	Malaka	foodstuff
35	Chiang Mai	Chaulmoogra oil		✓	early 17 th c.	Portuguese ship	Japan	Herb
36	Chanthaburi Chon Buri	Teak		✓	16 th c. - early 17 th c.	Thai junk / Chinese junk Dutch ship	China	built a junk
37	Central of Thailand Suphan Buri	Rice		✓	early 17 th c.	Portuguese ship Dutch ship Spain ship	China Pattani Malaka the Philippines	foodstuff
38	Phetchaburi	Salt		✓	16 th c. - early 17 th c.		Pattani Malaka	flavoring food
39	Chanthaburi Nakhon Ratchasima	Leather		✓	1612	English ship	Japan	War equipment material
40	Chanthaburi	Ebony wood	✓		17 th c.			use to make furniture
41	Chanthaburi	Rosewood		✓	17 th c.			use to make furniture
42	Chanthaburi	Sandalwood	✓		early 16 th c. - 17 th c.			extracting essential oil use to make furniture
43	Ayutthaya	Printed cotton		✓	17 th c.	Japanese junk	Japan	use as a garment

Table 2: Foreign Merchandise Imported to the Entrepôt at Ayutthaya and Being Export Oversea

NO.	Imported Merchandise	Origin of merchandise	Supplier (Imported by ...)	Date CE	Ship's cargo (Transportation)	Exported destination (For transshipment)	Function / Utility
1	Muslim fabric cloth	Makkah Indonesia India	Portuguese ship Java junk Sumatra junk	mid 15 th c.- early 16 th c.	Spain ship	Manila	<ul style="list-style-type: none"> • Sell in Ayutthaya market • clothing
2	Silk with Siamese design pattern were sent to India for production (hand painted and printed rasist-dyed cloth)	India (Gujarat, Coromandel coast)	British ship Thai junk Indian junk	1701 - 1800			clothing
3	Dyed cotton with painted gold (Indian textile)	India (Gujarat, Coromandel coast)	Dutch ship British ship Thai junk Indian junk	1451 - 1680 1701 - 1800			clothing
4	Dyed cotton (Indian textile)	India (Gujarat, Coromandel coast)	Dutch ship British ship Thai junk Indian junk	1450 - 1680 1701 - 1800	Spain ship	Manila	clothing
5	Chintzes (a cotton fabric decorate with flowery pattern)	Bengal port, India	Malaka Pinang (transshipment center)	early 16 th c.			clothing
6	Clove (spice)	Island in the Molucca and Banda seao (The spice islands) Northern India	Dutch ship Indian ship	early 16 th c.	Dutch ship		<ul style="list-style-type: none"> • flavour beer in Europe • used to flavoured meat dishes • a seasoning
7	Nutmeg - mace (spice)	Island in the Molucca and Banda seao (The spice islands) Northern India	Dutch ship Indian ship	16 th c.- 17 th c.			<ul style="list-style-type: none"> • flavour beer in Europe • used to flavoured meat dishes • a seasoning
8	Sugar cane	China India Vietnam	Chinese junk Indian ship Cham ship	16 th c.- 17 th c.			foodstuff
9	Sago	China India Vietnam	Chinese junk indian ship Cham ship	16 th c.- 17 th c.			foodstuff
10	Sulfur	China India Vietnam	Chinese junk Indian ship Cham ship	16 th c.- 17 th c.			fumigation medicine bleaching cloth for production of sulfuric acid
11	Cinnamon (spice)	Sumatra / Java Songkha Bantam (Indonesia)	Javanese ship Pattani Ship Dutch ship Portuguese ship	16 th c.- 17 th c.	Dutch ship (VOC)	Western Europe	a seasoning
12	Pepper (spice)	Sumatra / Java Songkha Bantam (Indonesia)	Javanese ship Pattani Ship Dutch ship Portuguese ship	16 th c.- 17 th c.			a seasoning
13	Camphor	Sumatra, Sulawesi (celebes), Bali, Lombok, Nueguinea, Timor	Javanese ship Pattani Ship Dutch ship Portuguese ship	16 th c.- 17 th c.			medical ingredient mothballs
14	Shipbuilding equipment	Dutch	Dutch ship	1605 - 1620 (requested by K.Ekathotsarot)			shipbuilding in Ayutthaya (requested by K.Ekathotsarot (r. 1605 - 1620))
15	Velvet	Portugul	Portuguese ship	early 16 th c.			clothing
16	Brocade	Portugul	Portuguese ship	early 16 th c.			clothing
17	Gun powder	Portugul	Portuguese ship	early 16 th c.			explosive substance for causing explosions of gun cannon and fireworks
18	Armour	Portugul	Portuguese ship	early 16 th c.			soldier's metal clothing
19	Armaments	Portugul	Portuguese ship	early 16 th c.			weapon and military equipment
20	(Mexican) Silver (Private trade)	Maxico	Chinese from Amoi (bought from Manila, the Philippines)	1571 - 1586, - 1729 (Siamese - Chinese trade 1685 - 1757)		Malaka	ornament, utensil

NO.	Imported Merchandise	Origin of merchandise	Supplier (Imported by ...)	Date CE	Ship's cargo (Transportation)	Exported destination (For transhipment)	Function / Utility
21	Opium	Bengal port, India	Malaka Pinang (transhipment center)	16 th c.			drug medicine mix with tobacco for smoking
22	British woolen	Bengal port, India	Malaka Pinang (transhipment center)	early 16 th c.			clothing
23	Iron	Bengal port, India	indian junk	early 15 th c.- 17 th c.			equipment utensil vassel
24	Textile	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.	Dutch ship (VOC) Portuguese ship	Western Europe	clothing
25	Silk cloth	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.	Dutch ship (VOC) Portuguese ship	Western Europe	clothing
26	Satin	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.	Dutch ship (VOC) Portuguese ship	Western Europe	clothing
27	Porcelain	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			container decorations ornaments
28	Lacquered work	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			furniture
29	Furniture in lacquered or Vanished wood	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			furniture
30	Rosewood escritaires	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			furniture
31	Candle stick	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			a candle holder
32	Peaper	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			writing material wrapping material
33	Copper work	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			ornament, utensils
34	Medicinal product	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			medical treatment
35	Fans	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.			use for making feel cooler
36	tea	China	Chinese junk Japanese junk	early 15 th c.- 17 th c.		Western Europe	a drink
37	Porcelain with overglaze enamel decoration and gold, know as Bencharong (Pattern were sent to China for production)	China (made in Jing de zhen, China)	Chinese junk	1755 - 1767			for the Siamese royal househole
38	bird nest	Sulawesi (celebes), Bali, Lombok, Nueguinea, Timor	Javanese ship	early 17 th c.			medical ingredient foodstuff
39	shark fin	Sulawesi (celebes), Bali, Lombok, Nueguinea, Timor	Javanese ship	16 th c.- 17 th c.			foodstuff
40	maple of pearl shell	Sulawesi (celebes), Bali, Lombok, Nueguinea, Timor	Javanese ship	16 th c.- 17 th c.			ornaments
41	Iron pan	English / India	British ship Indian junk	16 th c.- 17 th c.			container for cooking
42	Gold	China / Pa - hang	Chinese junk Javanese ship	16 th c.- 17 th c.			ornaments coin auspicious object prestige
43	Sugar	Manila, the Philippines	Spainese ship	16 th c.			a seasoning
44	Cowrie	Manila, the Philippines	Spainese ship	16 th c.			used as a coin or money
45	Japanese sword	Japan	Japanese junk Thai junk Dutch junk	early 15 th c.- 17 th c.			weapon
46	Japanese fan	Japan	Japanese junk Thai junk Dutch junk	early 15 th c.- 17 th c.			use for making feel cooler
47	Japanese armour	Japan	Japanese junk Thai junk Dutch junk	early 15 th c.- 17 th c.			soldier' s matal clothing



Porcelain with over-glazed enamel decoration and gold (Bencharong)

(Photograph: Courtesy of The Chao Sam Phraya National Museum)

Cowrie found in the crypt of the main Prang of Wat Ratchaburana, Ayutthaya, 1424 CE

(Photograph: Courtesy of Dr. Amara Srisuchat)



Japanese Armor

(Photograph: Courtesy of Dr. Amara Srisuchat)

Conclusion

The ideal location of Ayutthaya, the capital of the Siamese kingdom (1350 - 1767 CE), that provided land and water routes of transportation was a key factor for growing and expanding of the domestic and international markets of Ayutthaya. The wide territory of the kingdom covering mountainous areas, plateau, alluvial plains, seashores, has led to rich sources of natural products which would fulfill demands for several kinds of raw materials and finished products. The main domestic natural products which were available in Ayutthaya's markets were ivory, rhino horn, deer skin, sappan wood, eagle wood, shellac and saltpeter, whereas ceramics and some instant food like sugar, spirit, dried fish, fermented fish were goods for local consumption and for export.

Historical accounts and archaeological findings suggest that the Ayutthaya's markets played a role as a place for exchange of foreign commodities from countries near and far, such as Java and Sumatra (Indonesia), China, Japan, India, the Netherlands, Portugal, France and England.

The Ayutthaya kingdom's control over these resources and commodities relied on its sovereign power; therefore, the royal treasury conducted monopoly trading right on specified import and export and imposed on trade taxation. Furthermore, there were contract - exchanges of trade with countries from the West (Europe) and from the East (China and Japan), the Ayutthaya's royal government had a direct junk - trade connection with the East and the West and had overseas trade station. Significant merchandise which was related to Ayutthaya's socio - economic development had been recognized and considered to be the evidence of trade routes: from its origin, its function, its transshipment and its destination. Merchandise that reflected two ways of exchange like deer hide, elephant tusks, rhino horns, metallic ingots, ceramics and textile was regarded as internationally marketable products for two hundred to two hundred fifty years of the mid - late Ayutthaya period. Since the eighteenth century CE they have the smallest share of the international markets.

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A Reappraisal of Tao Thuriang: Recent Findings from Excavation at Sukhothai Ceramic Kilns

Thongchai Sako



The Cluster of Thuriang Kilns close to the Northern Moat of Wat Phra Phai Luang

Abstract

Recent archaeological excavation (2016-2018) conducted at the Tao Thuriang kiln cluster of the ancient town of Sukhothai and analysis of findings is the main aim of this research. The scientific and relative dating of kilns suggest the periods of operation of the production and gives a new insight of the kiln construction of two types. The data allow the comparison of ceramic dating of the kiln and those found from the sunken ships for trade.

The result provides a remarkable information that the operation of the Tao Thuriang of Sukhothai dating back to the mid-fourteenth century CE, was firstly managed by local artisans and lasted to the early sixteenth century CE. It confirms the hypothesis of prior studies about the starting point of production of Sukhothai's Sangkhalok in the mid-fourteenth century CE. However, the longer period of production for oversea-trade is considered a new discovery in the history of the ceramic used and exported.



The 2016 Archaeological Excavation at the Tao Thuriang kiln

Introduction

Sangkhalok is the term for a typical Thai ceramic from Sukhothai and Si Satchanalai. Sukhothai and Si Satchanalai (50 kilometre north of Sukhothai) were twin-capital cities of the kingdom of Sukhothai (about mid thirteenth to the late fifteenth century CE), the Thai kingdoms in the lower north of present-day Thailand. The Thai term “Tao Thuriang” means “the kiln(s) of Thuriang”. When the word “Tao” for kiln, appears a question mark exists as to whether the word “Thuriang” means “Chaliang” which is the ancient name of a town where a large number of ceramic kilns were found. Some scholars such as King Rama VI when he was Crown Prince (Vajiravudh Makut Ratchakuman 1908: 208-215), Phra Ram (1937: 15-22) and Le May (1933: 166) are defined it as a kiln of Sangkhalok production at the ancient towns of Chaliang (Si Satchanalai/Sawankhalok) and Sukhothai. But the word “Thuriang” is presumably derived from the Chinese name, Fúliáng, a county in Jiāngxī Province. Some of potters are from the county. (Rajanubhap: 1920, Charles Nelson Spinks: 1965).

Some scholars that gave appraisals of Tao Thuriang and Sangkhalok ceramic are as follows:

1. Le May (1933: 156-166) offered that the first Tao Thuriang (Chaliang) production was introduced by Chinese potters that was followed by local potters who built local kilns at Sawankhalok (Si Satchanalai) and Sukhothai. The latter lasted only fifteen years and were not for export.

2. Phra Ram (1937: 13-22) proposed that the first potters at Sawankhalok (Chaliang/Si Satchanalai) came from the North of Thailand bringing with them the practice and technology that was already well-developed and quite old. He suggested that other potters may have been brought down in 1359 by King Lithai of Sukhothai to establish the Sukhothai kilns.

3. Spinks (1965) suggested that two companies of Chinese potters, each associated with distinct ceramic tradition and locality in China came to north-central Siam around the beginning of the fourteenth century CE to establish factories under the patronage of the Thai monarchy.



Somdet Krom Phraya Damrong Rajanubhap, Author of “Tamnan Khruaeng To Lae Thuai Pan”
(A legacy of Table Wares and Ceramics), published in 1964

4. William Willets (1971), Roxanna M. Brown (1977, 1988), and John Shaw (1987) are of the same opinion that the Sukhothai and Sawankhalok ceramic complex was a consequence of Chinese potters or Chinese enterprise. To take advantage of better clays for fine production to be exported, the Sukhothai potters abandoned the Tao Thuriang kiln at Sukhothai to set up and enlarged the Tao Thuriang kiln at Sawankhalok.

5. Charnvit Kasetsiri (editor 1983), proposed the idea that the beginning of Sangkhalok production from both areas (Sukhothai and Sawankhalok) was in the reign of king Mahadharmarajadhiraja I (King Li-Thai, reigned 1369-1399 CE). It was produced for household used inside the kingdom to substitute the Chinese wares that were in short supply in the market at that time.

6. Sayan Praichanjit (In Charnvit Kasetsiri, editor 2002: 308), said that some types of Sangkhalok wares produced at Si Satchanalai and Sukhothai for trade, beginning in the reign of King Ramkhamhang the Great, and reached its zenith in trade in the reign of King Mahadharmarajadhiraja the First.

In the paper the author will focus on the study of Tao Thuriang at Sukhothai. The Sukhotai's Tao Thuriang are a cluster of Sangkhalok kilns, located outside the northern wall of the Sukhothai town. Previous excavations at the kiln sites by archaeologists of the Fine Arts Department have made significant contributions to our understanding of the Sangkhalok production site which are as follows: the 1976 excavation by Patipat Pumpongpaet, the 1984 excavation by Samart Supyen, the 1986 excavation by Thada Sutthinet and the 1993 excavation by Thada Sutthinet (Sutthinet: 1995).

In 2016-2018 CE the author of the paper directed an excavation at Tao Thuriang site. The objective of the task was to get more data about the kilns' structure, technique and production, restoration and conservation. The remains will offer a new learning spot, as well as the aim to manage and conserve the site by the Sukhothai Historical Park to visitors.

The findings from the excavation will provide answers for the following questions:

1. When were the kilns to begin to operate Sangkhalok production, and for how long did they last?
2. What were the kinds of production from the Thuriang kilns of Sukhothai?
3. How was the system of the Sangkhalok workshop production at the Thuriang kiln site related to the social and economic community, internally and externally?



Wat Phra Phai Luang



The 1968 Plan of Ancient Monument of Wat Phra Phai Luang by the Fine Arts Department showing Thuriang Kilns Site Location

Kilns' Location and Excavation

The cluster of Sukhothai's Thuriang kilns are located on the ground close to the outer moat of Wat Phra Phai Luang. The temple (Wat Phra Phai Luang) is located outside the northern town wall of Sukhothai. According to the 1968 plan of the Fine Arts Department, the on-ground kilns were plotted and shown at the area close to the four temples' moats. Nevertheless, the remains of the current data appear in the areas which are defined as its location in the northern and the southern zones, in accordance with the temple's moat directions. There are totally 61 on-ground kilns (57 at the northern zone, and 4 at the southern zones) and 2 slab of clay basins for mixing clay before forming pottery (at the northern and the western zones). Therefore there are 3 ruins of the ancient temples, at the northern zone of the kiln, namely, Wat Ton Chaeng, Wat Tao Thuriang and Wat Rang No.15 (Unknown Wat No.15).

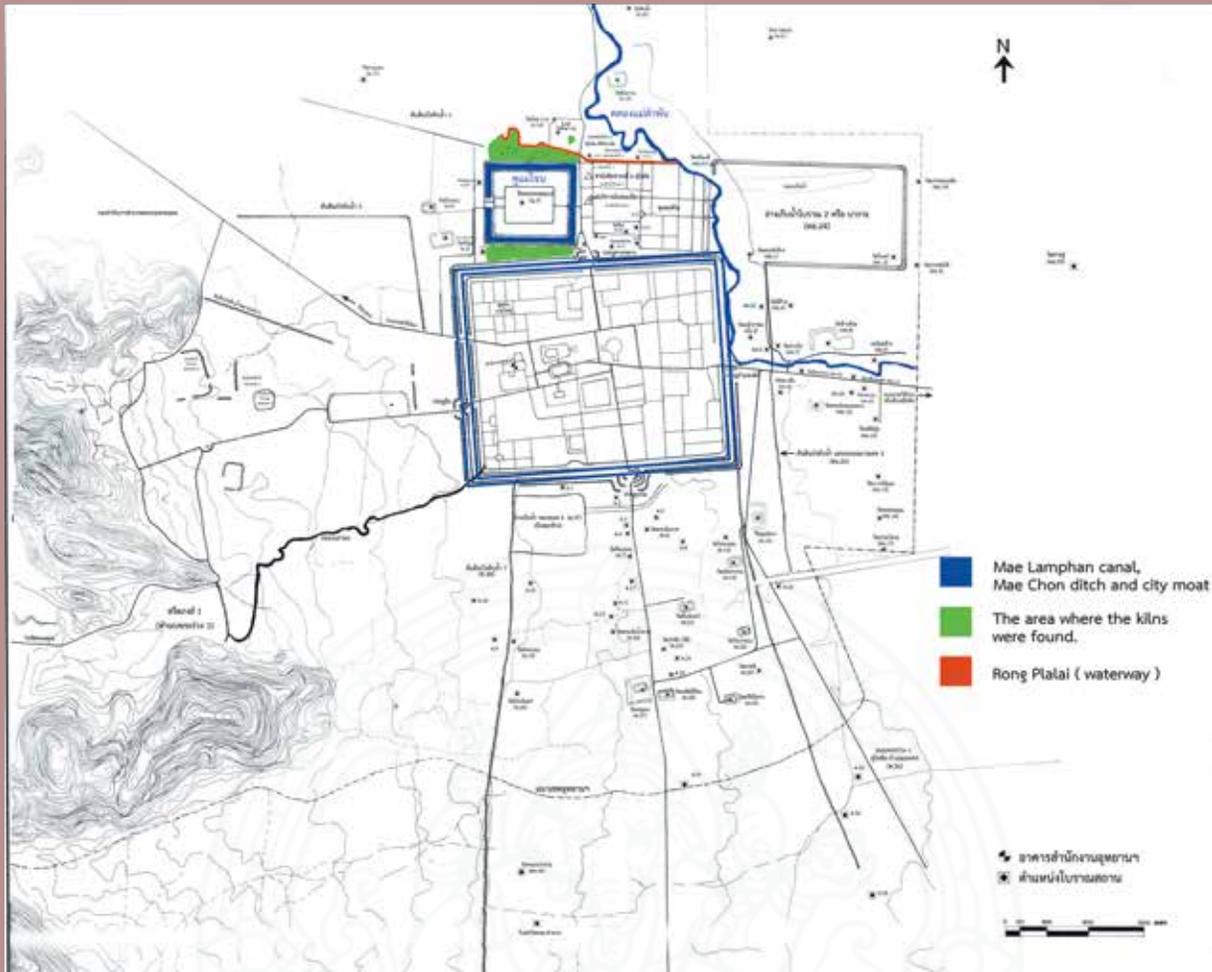
The alignment of the temple and of the 57 kilns from the west to the east with 50 meters in width and 550 meters in length is parallel to Wat Phra Phai Luang's moat and an ancient ditch called "Rong Pla Lai", that has been a waterway. The ancient potter dug the plastic clay up from the ditch for ceramic production and the clay would be mixed and well prepared for forming a pot at a slab of a clay basin. After firing pottery at a cross-draft or an updraft kiln, the finished product would be transported to Mae Lamphan canal that is connected to the Yom River, a branch of the Chao Phraya River flowing to the Gulf of Thailand.

Location of the ancient town of Sukhothai, Wat Phra Phai Luang and the temple's moat, Tao Thuriang kiln, remains of three temples and the Rong Pla Lai waterway are shown in Plan 2.

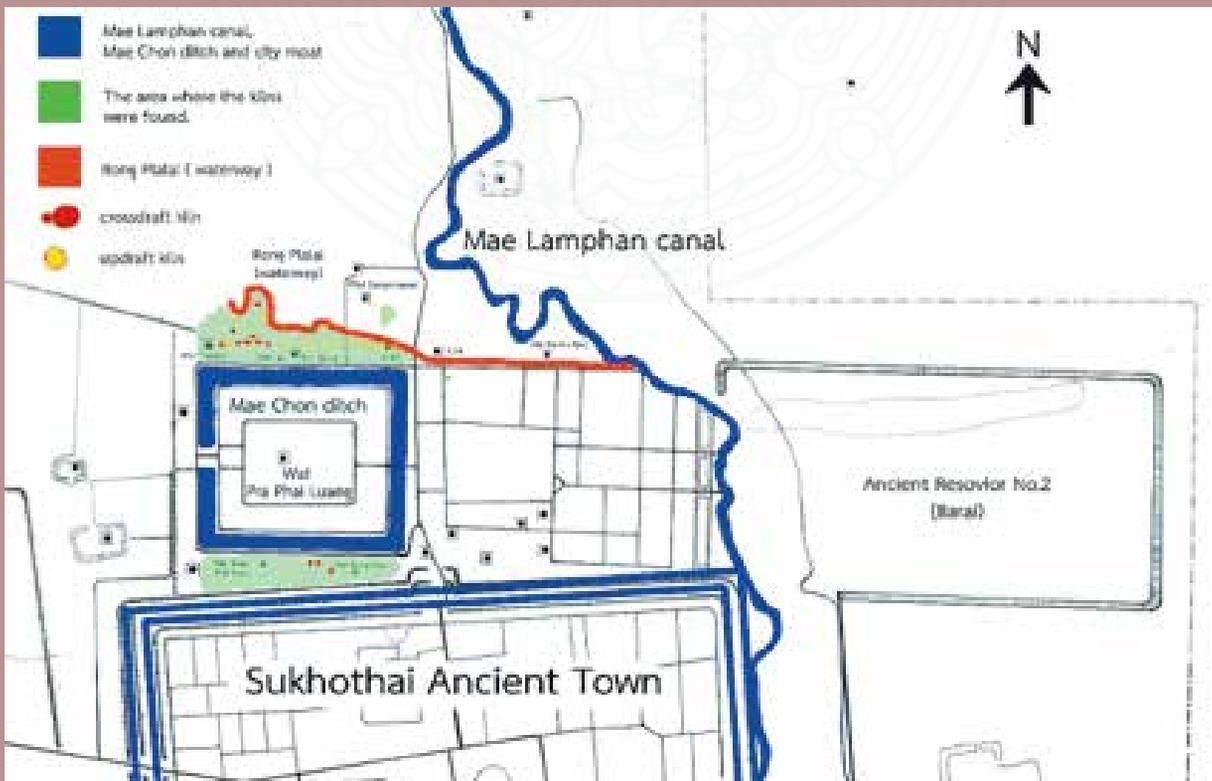
With new evidence of the site from excavation, a new insight of the Thuriang kiln construction and the ages of using them for producing Sangkhalok wares can be identified. The excavation uncovered 61 brick kilns built 1-2 meters high above the ground.

There are two types of kilns: Cross-draft kiln and Up-draft kiln. The cross-draft kiln is oval-shaped with a large chamber for placing wares at the center, a small firing box in the front and a round chimney at the rear. The updraft kiln is round or square-shaped and deep with a firing box in the front.

The excavation reveals 11 cross-draft kilns (8 at the northern area, 3 at the southern area) and 50 up-draft kilns (48 round-shaped, 1 square-shaped at the northern area and 1 square-shaped at the southern area). Regarding the cross-draft type, the level of the chamber for placing wares and the firing box are distinguishable; that is to say, the firing box was 1.0-1.5 meter deep below the chamber for placing wares, whereas the up-draft type was no difference between the chamber and the firing box.



A Plan showing Location of The Sukhothai Ancient Town and Thuring Kilns Site



Enlargement of the above Plan of Thuring Kilns Site

Structure of the Kiln

The field-measurement of all kilns in details provides a range of sizes of certain parts of kilns as follows:

1. Cross-draft kilns (11 in number)

- 1.1 Full body: width 2.5-3.0 meters, length 8.0-10.0 meters.
- 1.2 Fire box: width 2.0-2.5 meters, length 2.5 meters and fire wall height 1.0-1.2 meters.
- 1.3 Chamber for placing wares: width 2.5-3.0 meters, length 5.0-7.0 meters.
- 1.4 Chimney has a round-shape of 1.0-1.2 meters.

2. Up-draft kilns (50 in number)

- 2.1 Full body: width 1.0-2.5 meters, length 2.0-4.0 meters.
- 2.2 Fire box: width 0.5 meters, length 0.5-1.0 meters.
- 2.3 Chamber for placing wares has a round-shape with 1.0-2.5 meters and a square-shape with 3.0-3.5 meters.

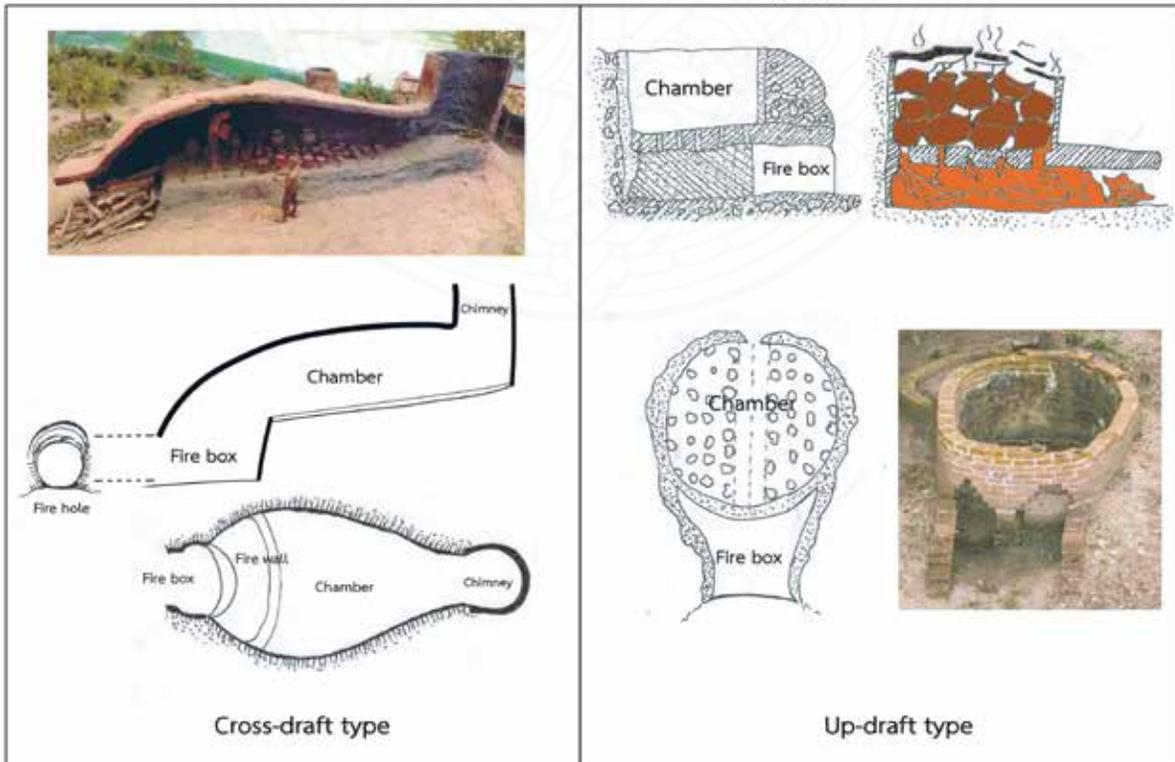
Findings from the Kilns

The result from five excavation pits and scientific analysis of three charcoal samples by means of C-14 dating (AMS) and relative dating comparable to the dating of sunken ships reveals that there were two periods of kiln construction; that is to say, the first period of construction was between 1340 and 1400 CE (C-14 dating) (University of Waikato in New Zealand 2017) and the second period was between 1424 and 1530 CE (C-14 dating and relative dating). Information in details of the issue is provided below:



Cross-draft Kiln (Kiln No.9)

Structure of the Tao Thuriang types



Sketch of a Cross-draft Kiln showing the Kiln's Structure during Firing Operation

The First Period (1340-1400 CE)

The first period of kiln construction represented by two kilns No.1 and No.9 suggest that a kiln construction was formed by a number of slab clay lumps, width 15.0 centimeters, length 28.0-30.0 centimeters and thickness 5.0-6.0 centimeters. The typical kiln is comparable to those found at Si Satchanalai. Two types of the support, tubular shape and disc shape that were found at the kiln, suggest the use of both supports for placing wares in the chamber. Note that two tubular supports inscribed with the Thai Sukhothai script reading “thongdu”, probably, a person’s name. Palaeographically, the inscription is comparable to those found in the reign of King Mahadhammarajadhiraja I (King Li-Thai, 1369-1399 CE). The finds are consistent with the scientific dating of the kiln mentioned above.

The excavation uncovered that in the area close to the two early kilns was used to be a ceramics workshop. The process of ceramic production from the beginning to the end were undertaken here, as confirmed by a large number of wasted materials or products, such as incomplete wares, a lump of white plastic clay and a lump of feldspar.

Sangkhalok products from the kilns of the first period were as follows: plate, bowl, footed plate, jarlet and vase. Among the products of the kiln of this period, the large plate type was mainly produced. These large plates with fish and floral decorations in underglazed iron oxide can be divided into two types by size, the extra-large size of plates with 26.0-32.0 centimeters in diameter and 6.5-8.0 centimeters high was not found in any shipwrecks but the common large plate type with 21.0-24.0 centimeters in diameter and 6.5-8.0 centimeters high found at a shipwreck site known as “Turiang Shipwreck” (The name is derived from the Tao Thuriang kiln). The cargo of the ship also suggests that the first major exports of Thai pottery came from the kiln sites of Sukhothai rather than those of Si Satchanalai. It is reasonable to conclude that the plates of this type was in great demand, compared to the percentage of other ceramics exported by sea-trade.

Judging from raw materials, decorating technique and shapes of wares, no different feature has been accounted between products of Sukhothai and those of Si Satchanalai. However, the firing technique used by Sukhothai potters made Sangkhalok wares of Sukhothai look much more gray in appearance.

The first period of kiln construction and operation was dated by scientific analysis of two charcoal samples for C-14 dating (AMS) yield a dating between 1340 and 1400 CE.



Cross-draft Type (Kiln No.14)



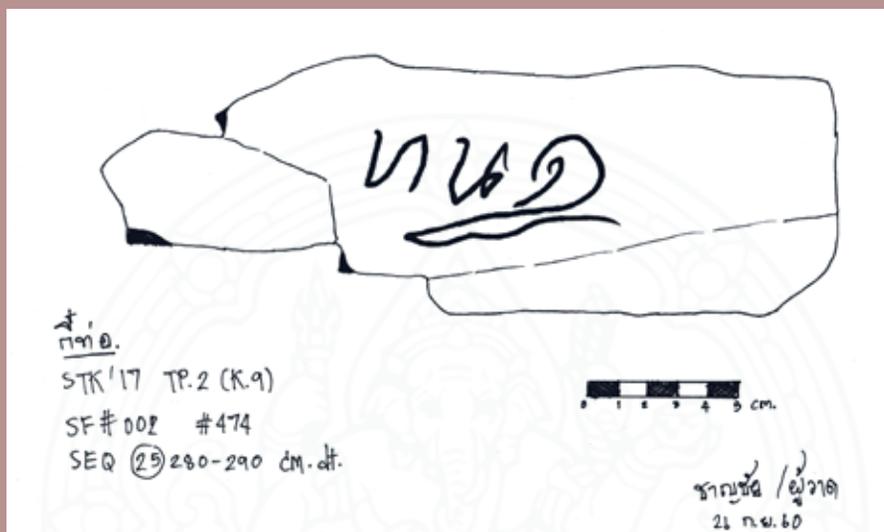
Up-draft Type (Kiln No.5)

The Second Period (1410-1530 CE)

The second period of the kiln construction and operation represented by nine cross-draft kilns (No.3, No.6, No.7, No.8, No.13, No.14, No.47, No.51 and No.52) and fifty up-draft kilns. All kiln constructions were made of bricks. The ground floor of these kilns were higher than those of the first period. For the purpose of strengthening kilns' basement, clay, brick fragments, and gravel were taken to be deposited before construction of the basement of the kilns. Thus, the kilns walls has much thicker than those of the first period, resulting in keeping temperature constant inside the kiln's chamber. The technique was applied by potters at Si Satchanalai for constructing the ground brick kiln. The Sukhothai's brick cross-draft kilns were of the same type of those found in Si Satchanalai, even they produced Sangkhalok ware of different types. Therefore, in the second phase, Sangkhalok wares of Si Satchanalai and those of Sukhothai were made from different materials and different processes of forming pot, as well as their decorating techniques, shapes of pottery that can be distinguished.

It is important to note that the architectural parts and ornaments such as, white glazed roof tile, antefix, finial on the roof ridge, figures of makara and lion were found from the kiln No.14. The findings emphasized that the Sukhothai temples that have the typically architectural parts or ornaments of Sangkhalok products such as these were constructed or reconstructed in this period.

The second period of the kiln construction and operation had to be dated by scientific analysis of only one charcoal sample for C-14 dating (AMS) that yielded a date between 1424-1460 CE (University of Waikato 2017). The production of this period was found in the cargoes of shipwrecks in Asia. The relative dating, 1410-1530 CE, obtained from the ten shipwrecks: Maranei, Nanyang, Long guan, Prasae Rayong, Ko Kram, Pandanan, Ko Si Chang II, Ko Si Chang III, Xuande and Singtai. (Brown 2009: 168-169).



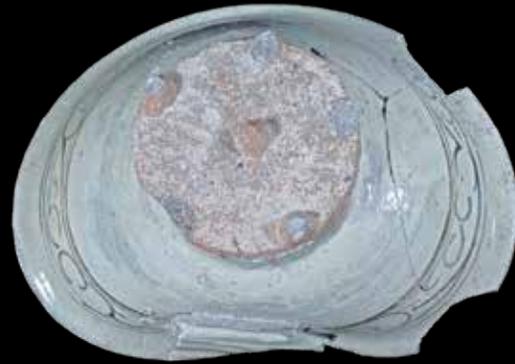
Tubular Support inscribed with Thai Sukhothai script reading “thongdu”



TP.2/2016 in the Northern Zone showing a Large Number of Incomplete Wares of the First Period Production

Table 1 the shipwrecks in which products of Tao Thuriang were found

Site	Location	Age (CE)	Findings	References
Turiang	Malaysia	1370-1400	Sukhothai underglaze black: Plates with fish or floral center medallion, undecorated; Bowl; Two pear-shaped bottles with floral designs painted in underglaze black; Pear-shaped bottle with “melon-blossom” designs in underglaze black; Ring-handle “coconut” shaped jar with underglaze black decoration	Brown and Sjostrand 2000, 2002; Ho and Bronson 2000; Hein 2000
Ko Si Chang II	Thailand	1370-1424	Single floral center very large deep bowl	Rooney 1981, Green and Harper 1983,1987; Charoenwongsa and Praichanjit 1990
Maranei (Pulau Bakau)	Indonesia	1410-1430	Plates with a fish at the center medallion or floral center medallion; Bowl with a floral motif at the center medallion and Bowl with rings at the upper and lower interior wall; Pear-shaped bottle with a fish at the exterior wall; Small “coconut” shaped jar with underglaze black decoration	Flecker 2001; Marie 2002
Long guan	Malaysia	1424-1440	Plates with fish and floral center medallion; Bowl with a stylist floral spray at the center; Bottle, pear-shaped, decorated with floral designs in three panel under eroded glaze	Brown and Sjostrand 2000, 2002
Nanyang	Malaysia	1425-1450	Plates with smudges of white slip on the underglaze base, decorated in underglaze black with a fish at the center and medallion	Brown and Sjostrand 2000, 2002
Prasae Rayong	Thailand	1450-1487	Plates, some with two fish on the center medallion and undecorated; Bowl with fish motif center; Plate with twin-curl blossom floral scroll; Plate with melon-flower scroll	Howitz 1977; Green and Harper 1983b; Intakosai 1984; Intakosai and Charoenwongsa 1988; Charoenwongsa and Praichanjit 1990
Ko Khram	Thailand	1450-1475	Plates with fish and floral center medallion and plain 4 melon-blossom scroll; Bowls	Brown 1975/76; Howitz 1977; Rooney 1981; Green 1981a; Intakosai 1983; Green and Harper 1983b; Praichanjit 1996
Pandanán	Philippines	1460-1487	Plates with fish motif center and rings at the mouth-rim and on the exterior	Loviny 1996; Dizon 1996, 1998, 2002; Diem 1997a, 1998-2001, 2001a, 2002b; Tan 2002a
Ko Si Chang III	Thailand	1460-1487	1990 Bowl with Cakra motif center	Knight 1986; Richards 1986; Green and Harper and Intakosi 1987; Intakosai and Charoenwongsa 1988; Charoenwongsa and Praichanjit 1990; Wacharangkul
Xuande	Malaysia	1520-1530	Bowl with Cakra or Phikun blossom (Sunburst) motif	Sjostrand 1997; Brown 1997; Brown and Sjostrand 2002
Singtai	Malaysia	1510-1580	Bowl with Cakra or Phikun flower (Sunburst) motif	Brown and Sjostrand 2002; www.mingwreck.com



Sangkhalok Plate from the Kilns of the first period



Upper: Sangkhalok Plate from the Kilns of the First Period
Lower: Close-up a Profile of the Plate's Rim showing Gray Color Temper of the Ware



Upper: Sangkhalok Plate from Si Satchanalai
Lower: Close-up a Profile of the Plate's Rim showing Gray Color Temper of the Ware

Table 2 absolute dating and relative dating of the Thuriang kiln

Dating			Period's kiln	King [reign CE]
Absolute dating		Relative dating		
Carbon-14 (AMS)	Sample No.1 STK'TP.1/2016 (Wk-45203)	Conventional age 629 (+- 15) BP [95.4% probability 1340-1400 cal AD] [68.2% probability 1350-1390 cal AD]	The first period [1340-1400 CE]	King Ngua Namthum [1337-1347]
	Sample No.2 STK'TP.2/2016 (Wk-45204)	Conventional age 640 (+- 15) BP [95.4% probability 1350-1390 cal AD] [68.2% probability 1360-1390 cal AD]		Turiang shipwreck
Carbon-14 (AMS)	Sample No.3 STK'TP.2/2016 (Wk-47876) Conventional age 448 (+- 20) BP [95.4% probability 1424-1460 cal AD] [68.2% probability 1434-1450 cal AD]	Si Chang II and Maranei shipwreck	The second period [1410-1530 CE]	King Mahadharmarajadhiraja III [1400-1419]
		Nanyang and Long guan shipwreck		King Mahadharmarajadhiraja IV [1419-1438]
		Prasae Rayong, Ko Khram, Pandanan and Si Chang III shipwreck		King Chao Sam Phraya - King Paramatrailokanat [1438-1488] (Ayuttaya Kingdom)
		Xuande and Singtai shipwreck		King Ramathibodhi II [1488-1530] (Ayuttaya Kingdom)



Upper: Sangkhalok Bowl from a Kiln of the Second Period
Lower: Close-up a Profile of the Bowl's Rim showing Black Color Temper of the Ware



Upper: Sangkhalok Plate from Si Satchanalai
Lower: Close-up a Profile of the Plate's Rim showing White Color Temper of the Ware.



Finial of the Roof Ridge
(Thai: barali)



Figure of Makara



Fragment of a Lion Figure

Discussion about the Findings

The result from excavations and the absolute dating of the Thuriang kilns of the ancient town of Sukhothai provides remarkable answers as follows:

1. The excavation uncovered two types of kilns: cross-draft kilns and up-draft kilns at the cluster of Thuriang kilns, outside the northern wall of the ancient town of Sukhothai. They were different in shape, size and function for operation of Sangkhalok production. Two slab clay basins for mixing clay that were built at the cluster of the kilns emphasize the place was used not only for being the kiln but also for being the communal workshop for all processes of Sangkhalok production. The construction of all kilns including basins for mixing clay at the place where three temples that had been erected evidently, shows a clear picture of ritual practice at the temples of potters/artisans at the beginning of their job. Two groups of kilns were likely divided by the three temples and various signs on disc-supports and the inscription with Thai Sukhothai script reading “thondu” on two tubular, especially the inscription on the rim of a bottle with Thai Sukhothai script.

There were various signs of potters’ trademarks found at the site, that further supporting the claim that at least two groups of potters operated the Sangkhalok workshop here, and they had their own religious place for performing ritual ceremonies before and/or after doing an activity; that is to say, Wat Ton Chaeng is the beginning of a landmark of the kilns, located on the highest area on the West of the northern zone of the kiln-cluster, Wat Tao Thuriang is situated at the center of the kilns’ industry, therefore, there were at least two groups of potters who produced the Sangkhalok wares. Next to the ruin of temple No.15 are places of many up-draft kilns that made earthenware and unglazed stoneware, used for daily-life.

2. The earliest kilns built for Sangkhalok production was Tao Thuriang kiln Number 1 and Number 9. Both were formed by a number of slab clay lump, cross-draft typed kilns that were operated to produce Sukhothai Sangkhalok in the forms of plate, bowl and vase. It is conjectured that the products from the kiln would be used for local use, not for export.

3. For the earliest kilns, these are two results of dating of the earliest activities dating back to 1340-1390 CE and 1350-1400 CE, which were in the reign of King Ngua Namthum (reigned 1337 - 1347 CE), King Mahadharmarajadhiraja I (reigned 1347 - 1368 CE) and King Mahadharmarajadhiraja II (reigned 1368 - 1399 CE) of Sukhothai.

4. The latest kilns, yielded only a dating result of the last activities from the excavation dating back to 1424-1460 CE and relative dating back to 1410-1530 CE which were in the reign of King Mahadharmarajadhiraja III (reigned 1400-1419 CE) and King Mahadharmarajadhiraja IV (reigned 1419 - 1438 CE), when the kingdom of Sukhothai was under the political sovereignty of the kingdom of Ayutthaya the capital-cum-river port which was monopolized for Sangkhalok export in the reign of King Chao Sam Phraya to King Ramathibodhi II (reigned 1438 - 1530 CE). Remarkably a large number of kilns of that period was found at the site; that is to say, of the sixteenth kilns, were found at the West of the northern zone. It comprised of eight brick cross-draft type and eight brick up-draft type. The east of the northern zone comprised of forty-one up-draft kilns situated between two temples, Wat Tao Thuriang and Wat Rang No.15 dominating the northern zone of the Tao Thuriang cluster. Ceramic production from the cross-draft kilns were made of earthenware and unglazed stoneware to be used in daily-life, as confirmed by shards and archaeological findings found at the kiln site, whereas any updraft kilns were known to be produced for firing a biscuit before being glazed and sending for firing at a cross-draft kiln. It is conjectured that the establishment of several up-draft kilns for firing biscuits were likely to solve the problem of incomplete form of finished products caused by one-time firing of the wares by using only the cross-draft type.

5. A distinctive feature of cross-draft kiln technical construction of the first and second periods can be observed; that is to say, a firing box of the early kiln was built under the ground deeper than the latter one. All up-draft kilns were built with the same technique and show no difference because they were built in the same period.



Slab Clay Basin for mixing Clay



Slab clay Basin for mixing Clay



Wat Ton Chaeng,
an Ancient Temple close to the Kilns

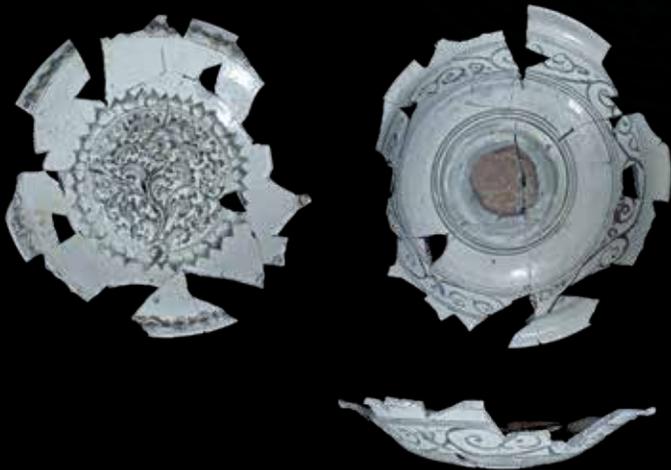


Plate of the Earliest Kilns



Bowl of the Second Period

6. The Sangkhalok production site of the ancient town of Sukhothai should be reconsidered to be the early kilns built for production to serve merely locals need, but the increased number of the kiln in later periods suggests the making of Sangkhalok production for serving local as well as overseas trade demand under the political control of the kingdom of Ayutthaya. As confirmed by a number of similar Sangkhalok wares found at several temple ruined of the ancient town of Sukhothai.

7. The operation of kilns for Sangkhalok production, as the current dating of the kilns being available shows, lasted for approximately 190 years. However, the dating evidence of several shipwrecks and cargoes of containing Sangkhalok wares of the typically Sukhothai ceramics, suggests the production lasted to early sixteenth century CE. Data of the shipwrecks dating are as follows: Maranei, Nanyang, Long guan, Prasae Rayong, Ko Kram, Pandanan, Ko Si Chang II, Ko Si Chang III, Xuande and Singtai. It is conjectured that the Sangkhalok wares from the shipwreck cargoes likely produced from other kilns of the Thuriang cluster, probably at the eastern zone according to the FAD's old plan of kilns. Unfortunately, data of the kilns are unavailable because they were destroyed and replaced by new buildings, no more remains of the kilns are at the place.

Conclusion

For ten decades Tao Thuriang has been recognized and appraised by locals and scholars as a cross-draft kiln for Sangkhalok production. The 2016-2018 excavation at the cluster of Thuriang kilns of the ancient town of Sukhothai gives a new insight of the kiln construction of two types: cross-draft and up-draft types, scientific dating of kilns suggesting two periods of operation of production: The first period of kiln construction and operation dated back to the mid-fourteenth century CE, and the dating evidence available from the shipwrecks loads the same kinds of Sangkhalok wares from the Sukhothai kilns that filled the gap of missingtime. This is a further confirmation that the operation of production of the TaoThuriang kilns of Sukhothai for overseas export lasted to the early sixteenth century CE, longer than the data gained from the excavation site. Additionally, a significant reappraisal of the result from the excavation is to be concluded; that is to say, the use of the site for overall Sangkhalok production process, not only for placing kilns, and the use of temples of groups of potters and/or artisans, at least two groups, separately, for performing ritual ceremonies as a part of the Sangkhalok production operation.



Soil Profile showing Cultural Deposit Layers of the Tao Thuriang Kiln

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Bundit Thongaram is head of Phu Phrabat Historical Park, the 8th Regional Office of Fine Arts Department of Thailand's Ministry of Culture. Prior to his appointment in 2015, he supervised several archaeological field works at the Ancient Town of Si Satchanalai. He directed a re-inventory and management project of Sangkhalok kiln sites on the eastern bank of the Yom River, particularly, a re-excavation and reconstruction at the kiln No.61 which has been developed into a significant site museum. This site is remarkable for its industrial products. He was head of Si Satchanalai Historical Park (2013) and Phanom Rung Historical Park (2014).

He holds a BA in archaeology from Silpakorn University and MA in cultural management from Chulalongkorn University.

In 2009, his article entitled "The Ancient Kiln Sites of Si Satchanalai, Northern Thailand" was published in a catalog, a supplementary to "The Ceramic Road of Southeast Asia Exhibition" by Taipei County Yingge Ceramics Museum, Republic of China.

Sangkhalok of Si Satchanalai: From Local Kilns of Thai Ceramic Products to Asia

Bundit Thongaram



Demon Sculpture and Human Figurine found from Kiln Site of Si Satchanalai

Abstract

This article critically discusses how Sangkhalok kilns and its production at Si Satchanalai in Sukhothai Province, northern Thailand had developed and played a role since eleventh to sixteenth century CE. To present a reappraisal of the kilns' date of construction and production, a re-excavation at kiln No.61 and sample analysis were undertaken. The result of dating by means of thermoluminescence, comparable to those of previous data of the kiln and of other dated archaeological findings and shipwreck sites, are provided in this paper. These findings suggest that in the fifteenth to sixteenth century CE, potters used both underground and on-ground cross-draft kilns to produce unglazed and glazed stoneware vessels for local use and export overseas. However, Sangkhalok in the form of architectural ornaments were only used by locals.



Location and Important Sites of the Ancient Town of Si Satchanalai

Introduction

Thai ceramic known as Sangkhalok was produced in kilns at the ancient town of Si Satchanalai in present-day Si Satchanalai district, Sukhothai Province of lower northern Thailand. The ancient town, which prospered between the fourteenth and eighteenth-century CE, is located on the bank of the Yom river.

The ancient town of Si Satchanalai and the Sangkhalok ware were reported by Thai and foreign scholars as a crucial item of Thai ceramic production. For example, “tamnan khruaeng to lae thuai pan” (A legacy of tablewares and ceramics) by Prince Damrongrajanubhap in 1920 and “The ceramic wares of Siam” by Charles Nelson Spinks in 1965.

From 1960 archaeologists of the Fine Arts Department have known from Si Satchanalai’s locals that Sangkhalok figurines in the various forms of demons and of humans and animals were found at two brick cross-draft kilns known as “tao yak”, literally meaning “kiln (for producing) demon sculpture” and a group of uncovered kiln-mounds known as “tao tukkata”, literally meaning kiln (for producing) human figurines. The two sites are located outside the northern wall of the ancient town of Si Satchanalai with a distance of 200 and 400 meters, respectively.

Furthermore there were several reports from surveys which suggest that several kilns produced glazed ceramics, not only for architectural use but also for household use such as black painting underglazed dish and green glazed bottles.

Since 1975 underwater archaeological works reveal that typical Sangkhalok wares were found in several shipwrecks such as Ko Kram shipwreck and Samui shipwreck.

The aforementioned information encouraged local and foreign scholars to pay attention on Si Satchanalai’s Sangkhalok. Several excavation projects were undertaken at Ban Ko Noi, about five kilometers outside the ancient town of Si Satchanalai, such as the 1980 - 1986 co-excavation by Adelaide University of Australia and the Fine Arts Department of Thailand and the 1986 excavation directed by Mr. Erbprem Vajrangoon, archaeologist of the Fine Arts Department of Thailand. The excavation uncovered an up-draft kiln and three underground cross-draft kilns. In 1988, the site was developed to be a site museum entitled “The Centre of Study and Conservation Sangkhalok Kiln Sites No. 61”.



Tao Tukkata, literally
meaning Kiln
(for producing)
Human Figurine



Some Surface Finds
from the Kiln Site

The site had long been suffered from the underground water and deteriorated. In 2012, a conservation project was taken place to protect and reconstruct the site and re-excavation at the kilns was conducted by the author of the paper.

The 2012 re-excavation at kiln No.61 complex including No.61, No.176, No.177 and No.178, ten samples were collected including kiln's wall, Sangkhalok sherds and support for analysis by means of thermoluminescence dating.

The studies of the aforementioned data have led to questions about the Si Satchanalai kilns and its production. In the paper the author attempts to discuss the issues in three topics:

- (1) The kilns' structure and date of construction and production.
- (2) The distinctive features of Si Satchanalai's Sangkhalok production.
- (3) The significance of Si Satchanalai's Sangkhalok in local and overseas markets.

The Kilns Structure and Date of Construction and Production.

According to archaeological reports, 186 Sangkhalok kilns were built on the banks of the Yom River outside the northern town wall of Si Satchanalai; 182 kilns were built on the western bank of the river, and 4 on the eastern river bank.

There are three types of kilns (1) Up-draft kiln (2) Underground slab cross-draft kiln (3) On-ground brick cross-draft kiln. The result of the study suggests the aforementioned kiln's structure, their production activities and the period of their operation of production which can be summarized as follows:

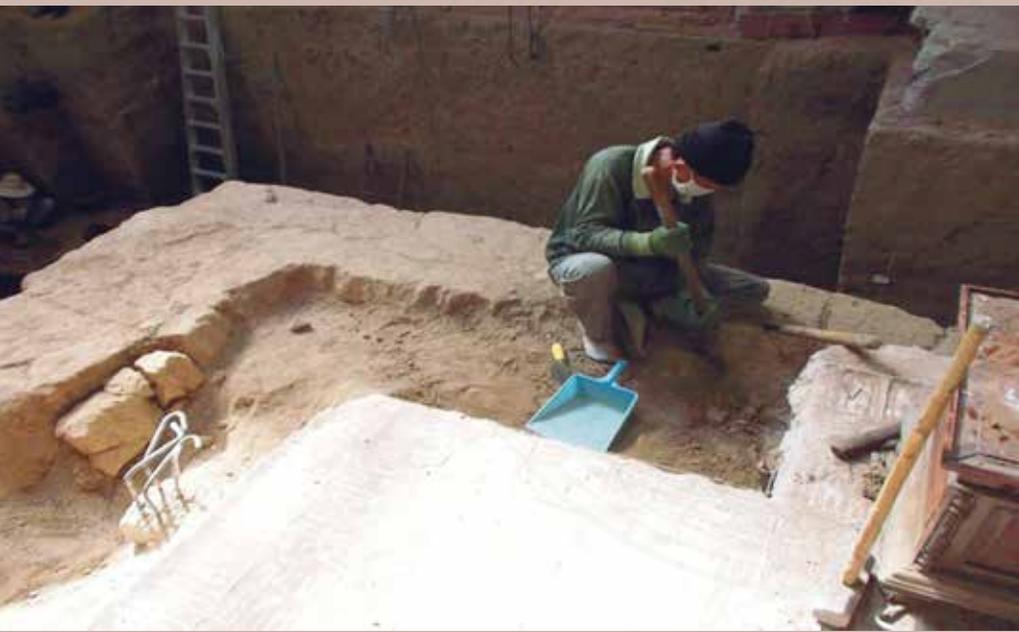
(1) The structure of the aforementioned kilns are definitely not the same. The one with tabular round or square shaped is the up-draft type. Its lower part is the firing chamber (fire box) and the upper part is the chamber for placing earthenware to be fired at around 900 degree Celsius, therefore it is best for unglazed earthenware like roof tile and terracotta. An underground slab cross-draft type was built by digging a tunnel into the bank of the river. The internal wall of this pear-shaped kiln was smeared with clay. It is comprised of a firing chamber at the front. The part higher than firing chamber is a chamber for placing ceramics and the highest part is the chimney.



The Center of Study and Conservation Sangkhalok Kiln No. 61, built to house Kilns unearthed from 1986 Excavation



Up-draft Kiln, unearthed In Situ, the 1986 Excavation



The 2012 re-excavation at Kiln No.61



It can be fired at 1250-1300 degrees Celsius to produce the unglazed stoneware. There is no difference of layout and size between the underglazed slab cross-draft and the on ground brick cross-draft types. The distinctive feature of the latter is its whole structure made of brick and it was placed on the ground. All ceramic productions from the on-ground brick cross-draft type are glazed wares.

(2) Though there are excavations at the up-draft kilns, no report on the scientific dating of this type is available. In 1980, the first scientific dating of underground slab cross-draft kilns at Si Satchanalai was around eleventh century CE from kiln No.101 was published in an article “An Alternative View in the Origins of Ceramic Production at Si Satchanalai and Sukhothai, Thailand” by Don Hein.

The 1986 excavation by the Fine Arts Department of Thailand at underground slab cross-draft kiln No.61, the five charcoal samples for C-14 dating yielded five dates: 470 + 90 BP, 430 + 130 BP, 485 + 80 BP, 590 + 100 BP and 580 + 60 BP (Erbprem Vajrangoon, 1986:104-108). Note that ‘BP’ means ‘Before Present where the reference point is 1950 CE. The reliability of the result of the dating has been questioned because of a broad range of the dates. If the dating results were used, there would be some doubt as to whether the date of construction and functional period of kiln No.61 lasted for 190 years.

Table 1 The 1986 Artifacts’ Carbon-14 Dating

No.#	+	Year (BP)	-	Place	Sample
1	560	470 ± 90	380	Kiln No.176	Charcoal
2	560	430 ± 130	300	Kiln No.176	Charcoal
3	565	485 ± 80	405	Kiln No.61	Charcoal
4	690	590 ± 100	490	Kiln No.61	Charcoal
5	640	580 ± 60	520	Kiln No.178	Charcoal



Underground Slab Cross-draft Kiln



On-ground Brick Cross-draft Kiln



Si Satchanalai's Sangkhalok Bowl
with Floral Pattern



Si Satchanalai's Sangkhalok Bowl
with Fish Pattern

The 2012 re-excavation at kiln No.61 complex including No.61, No.176, No.177 and No.178, ten samples were collected for thermoluminescence dating. They consist of one sample (a kiln's wall) from kiln No.61, one sample (a potsherd) from kiln No.177, eight samples (a kiln's wall, a piece of tabular support, two terracotta and four potsherds) from kiln No.178 (Kamolwan Nitinand 2012: 21-22).

Table 2 The 2012 Artifacts' Thermoluminescence Datings

No.#	+	BP	-	Place	Sample
1	451	423 + 28	395	Above Kiln No.178	Green glazed stoneware
2	493	464 + 29	435	Above Kiln No.178	Unglazed stoneware
3	-	Unavailable	-	Kiln No.178	Terracotta
4	516	466 + 50	416	Kiln No.178	A fragment of tabular support
5	507	470 + 37	433	Kiln No.178	Terracotta
6	505	468 + 37	431	Kiln No.178	Unglazed stoneware
7	486	457 + 29	428	Kiln No.178	Potsherd
8	520	485 + 35	450	Kiln No.178	Kiln's wall
9	552	512 + 40	472	Kiln No.177	Potsherd
10	472	443 + 29	414	Kiln No.61	Kiln's wall

I have come to the conclusion of the underground slab kiln functional period on the basis of the scientific dating result that the kiln No.61 was built approximately in 1478 - 1536 CE in the reigns of King Borommtrailokkanat to King Somdet Phra Chairachathirat of the Ayutthaya kingdom. The kilns No.61 complex was active between 1478 - 1555 CE, in the reigns of King Borommtrailokkanat to King Somdet Phra Maha Chakkraphat of the Ayutthaya kingdom.



Comparable Sections of Sangkhalok wares from Si Satchanalai and Sukhothai;
the former shows a better quality of clay.



Sangkhalok Products from Si Satchanalai's kiln, from the Excavation at Wat Phra Si Rattanamahathat Chaliang,
3 Kilometres South of the Town Wall of Si Satchanalai

Left: Bowl with Floral Pattern
Right: Makara Figure, an Architectural Ornament

The Distinctive Features of Si Satchanalai's Sangkhalok Production

It is conjectured that Si Satchanalai's brick cross-draft kilns were built and used for producing Si Satchanalai's Sangkhalok as an export item during the fifteenth to sixteenth century CE.

In the same cargo of a shipwreck site like Ko Kram dating to the fifteenth century CE the Sangkhalok products from Si Satchanalai and from Sukhothai kilns were found side by side. This is in line with the dating from the 2017 excavation at Thuriang kilns of Sukhothai by Mr. Thongchai Sako. These Sukhothai's brick cross-draft kilns are the same type of those found in Si Satchanalai, even they produced Sangkhalok ware of different types.

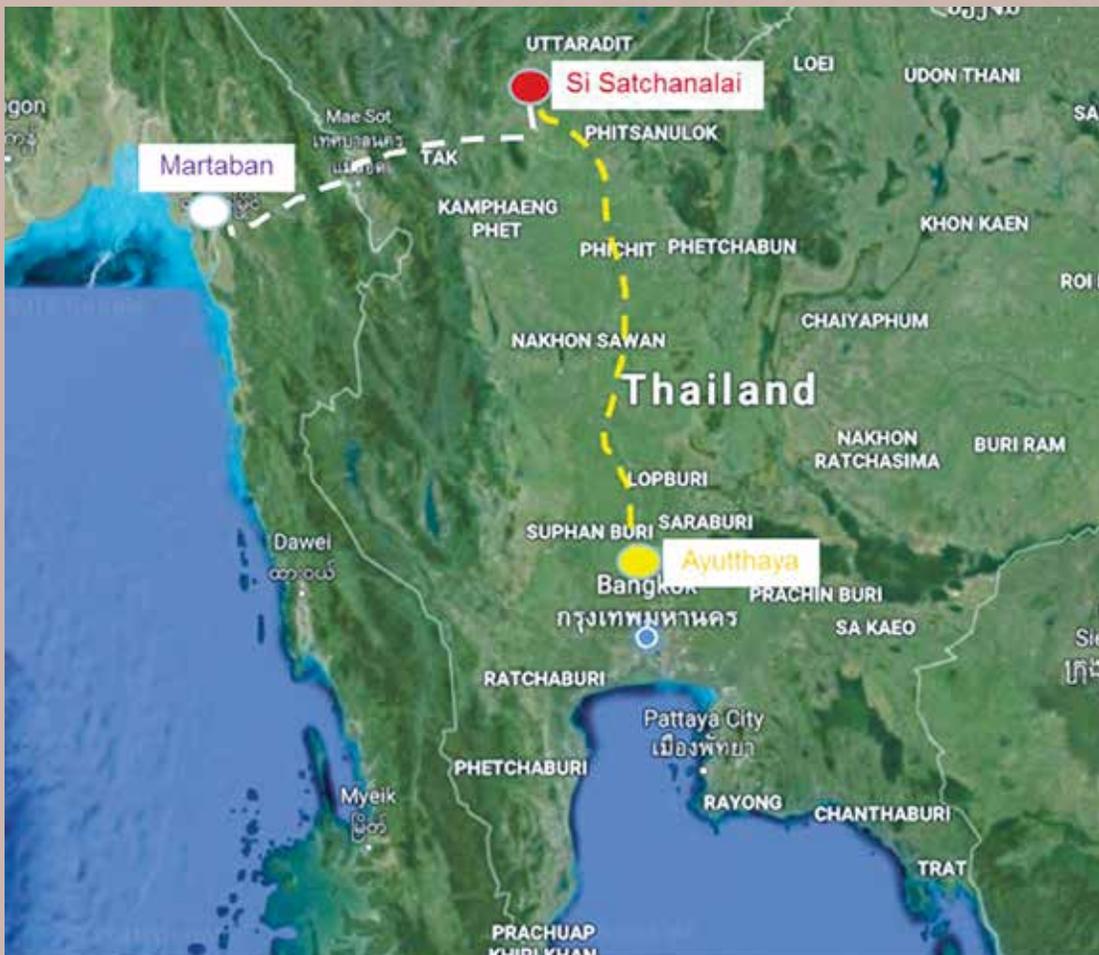
Sangkhalok from Si Satchanalai and Sukhothai were different in term of kiln structure and ceramic production. The common type of kiln (the up-draft and cross-draft) of the two production sites is recognized; however, the use of an underground slab kiln was not yet found in Sukhothai's production site. Therefore, it is regarded as a typically Sangkhalok production kiln of Si Satchanalai. Si Satchanalai's Sangkhalok ware shows a better quality of clay that is uniform in color and free of visible impurities. It is a distinctive feature, whereas Sukhothai's Sangkhalok ware shows high percentage of iron oxide and silica resulting in coarse and dark fabric (Krom silpakon1996: 86-87). Two types of support were used for arranging pottery inside the kiln, the tabular support and disc-shaped support. Furthermore, the use of disc-shaped support that left a distinctive spur mark on the base of dishes.

The Significance of Si Satchanalai's Sangkhalok in Local and Overseas Markets

Sangkhalok wares were produced for local use and export. Architectural ornaments are suggested to be produced for local use only, because it was only found in monastery sites in the Sukhothai and Ayutthaya kingdoms. For example, in Si Satchanalai, the excavation at Wat Phra Sri Ratanamahathat Chaliang in 2008 found a trace of building with brown and white glazed gable-end in the figure of makara (a mythical aquatic animal), white glazed finial of roof ridge and terracotta roof tiles. At Wat Noi Champi found the white glazed floor tiles in the main assembly hall for warship. The fragments of white glazed lantern for decorating the top of lamp pillar found in several monastery sites, such as Wat Chang Lom and Wat Rahu. The others that were not produced for export are water pipes for irrigation and net weight for fishery. The figurines as children's toys or use in ritual suggest cultural activities. These are exemplified by a female with joining palms, the Thai tradition of paying respect known as 'wai', a mother feeding an infant with her breasts, men playing wrestling, a man with their pets (rooster and pythons), a man chewing some snack and the soldier troops with war elephants (Pariwat Thammapreechakorn, 2017: 29-30).



Map 2:
Sangkhalok Wares were found in Several Shipwrecks and Archaeological Sites in Asia



Map 3:
The Transportation of Sangkhalok to the Ports/Towns, controlled by Ayutthaya

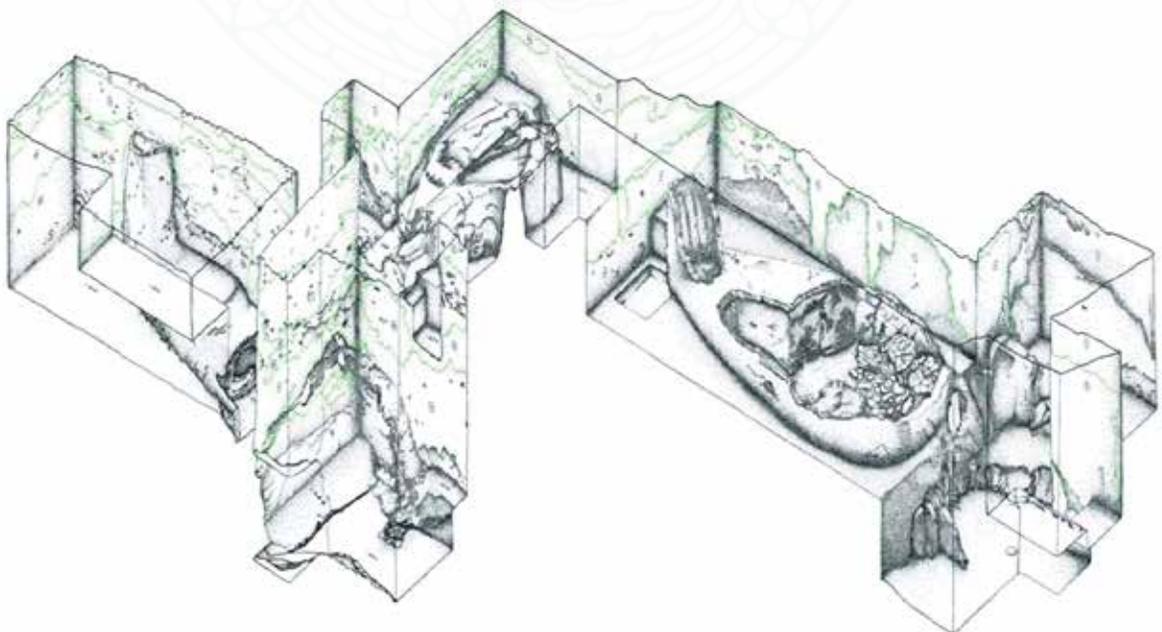
Sangkhalok wares were found in several shipwrecks (Ko Kram, Ko Samui, Royal Nanhai and Nanyang) and archaeological sites (Selayar and Trowulan in Indonesia, Sungai Lumut in Brunei, Santa Ana and Calatagan in the Philippines, Nakijin and Akuseki in Japan). The export Sangkhalok are brown glazed wares and white glazed wares, and the most popular are green glazed wares and black painting underglazed wares (Krom silpakorn 1990: 20-33). Due to the absence of Chinese ceramics in global market which some scholars supposed that it was caused by Ming Gap situation. It was the chance that green glazed and black painting underglazed Sangkhalok were produced for export to Asia to replace of Chinese blue and white wares. The patterns on these Sangkhalok wares were inspired from those Chinese wares such as floral, water plant, fish and conch pattern. The stereotype of Sangkhalok wares are as follows: jar, bottle, dish, bowl, vase, kendi, jarlet, stem bowl and covered box. We are trying to figure out the transportation of Sangkhalok wares to the port-towns, controlled by Ayutthaya. There are two main ports for export Sangkhalok wares by the Ayutthaya kingdom at the Gulf of Thailand and the Gulf of Martaban. In brief, the transport routes are as follows:

1. Ayutthaya and the Gulf of Thailand. At that time Ayutthaya was the capital and important port-town. The merchants from worldwide had trade station there. Sangkhalok wares were transported by boat to the Yom River which connected to the Chao Phraya River running through the capital city of Ayutthaya.

2. The port-town of Martaban in Myanmar, which was controlled by Ayutthaya in the fifteenth century CE. From Si Satchanalai, starting by the road called "Phra Rong's road" going southward to the ancient town of Sukhothai, turning right westward, then crossing the Tenasserim mountain range. Finally, flowing into the Gulf of Martaban trough the Gyaing river. It's about 300 kilometers totally.



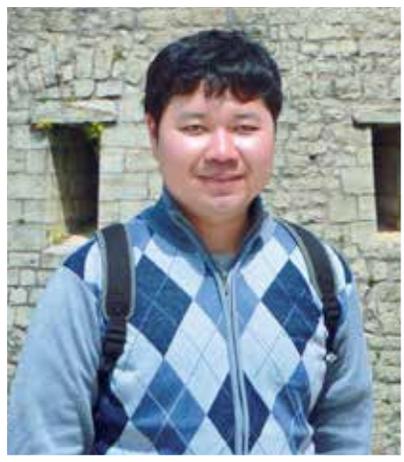
Si Satchanalai's Sangkhalok Wares found In Situ at Ko Kram Shipwreck Site



Sketch showing Kiln No.61 Complex at Ban Ko Noi,
lies 5 Kilometers to the north of the Ancient Town of Si Satchanalai

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Some of Mr. Natthapong’s published papers in Thai are: “Buddhist Artefacts in Wat Phra Mahathat Woramahawihan Nakhon Si Thammarat” (Nakhon Si Thammarat 2013), “Vietnamese Ceramics in Nakhon Si Thammarat National Museum” (Bangkok 2016), and “Wat Noi, a Small Temple in the Centre of the Old City of Nan Province” (Bangkok 2017).

He has been studying and researching on “The Lan Na and Tai Lue textile” and “Thai, Vietnamese, Chinese and Japanese ceramics found in Thailand”.

Chinese Stoneware and Porcelain found in Thailand's Archaeological Sites reflecting Trade Routes and Local Use

Natthapong Matsong



Fragments of Chinese Ceramics found at Wat Tha Pho,
near Khlong Tha Wang waterway, Nakhon Si Thammarat Province

Abstract

This paper describes an attempt to explain how Chinese wares have been found overall Thailand from the ninth to seventeenth century CE.

Previous data and recent studies of sites were found where Chinese wares, either from surface finds or unearthed by excavation have been sequentially recorded and shown in the analytical table of the paper suggesting Chinese wares from its original production. The typology of imported Chinese ceramics including provenance and date related to trade routes and local used will be discussed in this paper.

These findings were obtained, that the Chinese stoneware and porcelain were imported to several ports for export and for local consumption in households of the elites and at religious sites.



Ceramic bowls found at the ancient capital-city of Ayutthya, exhibited at Chantharakasem National Museum, Phra Nakhon Si Ayutthaya Province

Introduction

Chinese stoneware and porcelain have been known worldwide in the international markets.

The Chinese stoneware and porcelain found in archaeological sites around the world provide an amount of information on trade and cultural exchange contributing a major source of data to the insight of long-distance contact, exchange of ceramic technology and art of several periods.

The earliest export stoneware and porcelain were known to be produced from kilns in China starting from the ninth century CE during the Chinese Táng Dynasty. China began to export pottery, which quickly became a prestige commodity in the maritime trade of Asia and Europe. Pottery produced for export is considered as a major industry in China and stimulating the development of the first mass-production techniques in the world. Much of the ceramic industry was located along China's south and southeast coast, particularly near ports that connected China with international markets. More than a hundred years of studying the Chinese ceramics found in Thailand by Thai and foreign scholars, and data from archaeological sites have provided an enormous amount of information on trade and cross-cultural exchanges between Thailand, China and other parts of the world.

Identification of Chinese Wares found at Archaeological Sites

Thirty sites from where the Chinese stoneware and porcelain were found throughout the country were identified and shown in Table No.1- No.5.

The results suggest the following explanation for the discovery of the Chinese wares at the sites of Thailand:

1. The Chinese wares collected from different archaeological sites: surface finds from surveys, unearthed by excavation and underwater excavation.

2. The Chinese glazed wares of the Táng Dynasty from the provinces of Húnán and Hébei dating back to the ninth to tenth century CE were found in the ancient ports of the Andaman coast and of the East coast (Gulf of Thailand). For example, Laem Pho-Payang of the East coast and Mueang Thong Ko Kho Khao of the West coast are considered to be the main ports of the states on the southern Peninsula of the Srīvijaya Kingdom. At both sites, apart from the Chinese Táng wares, turquoise blue glazed wares and colored glasswares from the Middle-East were found. Some fragments of greenish glazed bowls with Arab characters are Changsha type, found at the Laem Pho-Payang port suggest that the Chinese wares must have been ordered and went through the hands of middlemen at the local sea-port (Srisuchat 2014: 16, 284). Some ports lasted a long time and the Vietnamese wares and Thai Sangkhalok wares were found together with Chinese glazed stoneware and porcelain of later dynasties.

Note that a Changsha spouted jar with handles found at Tham Phannara rock shelter site, located on the inland of the southern Peninsula, suggests that the Chinese jar was brought from the East of the port or of the West to the inland community reflecting the east-west communication through a trans-peninsula route.



Map showing lower part of Thailand and sites in which Chinese ceramics of T'ang dynasty have been found.



Chángshā bowl with Arab characters,
from Laem Pho-Payang port site,
Surat Thani Province

(Photograph: Courtesy of Mr. Tharapong Srisuchat)



A Chángshā spouted vessel found
in Tham Phannara rock shelter site,
Nakhon Si Thammarat Province

Table 1 : Original Kilns of the Chinese Stoneware of the Táng Dynasty (900 - 960 CE) and Sites in Thailand where the Wares have been found.

No	CHINESE KILN	FINDINGS	SITE		
			NAME	PROVINCE	IDENTIFICATION
1	Tóngguān (Chángshā)	jar, bowl	Laem Pho	Surat Thani	Port site
2			Ko Kho Khao	Phang-nga	Port site
3			Khlong Thom	Krabi	Port site
4			Tha Ruea	Nakhon Si Thammarat	Port site
5	Xíng/Dìng	bowl	Ko Kho Khao	Phang-nga	Port site
6			Tha Ruea	Nakhon Si Thammarat	Port site
7	Yuè	bowl	Laem Pho	Surat Thani	Port site
8			Mae Klong river	Ratchaburi	Port site
9	Fēngkǎi	jar	Laem Pho	Surat Thani	Port site
10			Ko Kho Khao	Phang-nga	Port site
11			Phanom-Surin	Samut Sakhon	Shipwreck in the wetland site
12	Méixiàn	bowl	Laem Pho	Surat Thani	Port site
13	Guān chōng	jar	Laem Pho	Surat Thani	Port site
14			Ko Kho Khao	Phang-nga	Port site
15			Phanom Surin	Samut Sakorn	Shipwreck in the wetland site



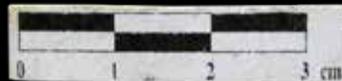
Spouted vessel, White glazed ware, found at Mueang Phra Rot, Chon Buri Province



Fragments of Chinese White Wares, found at Mueang Thong Ko Kho Khao, Takua Pa, Phang-nga Province



Southern Song White Porcelain, found at Tha Ruea, Nakhon Si Thammarat Province, exhibited at Nakhon Si Thammarat National Museum



Chinese ceramic sherds found during excavation at Wat Si Sawai, a temple site of the ancient town of Sukhothai



White glazed cover box of the Song dynasty, found at Tha Ruea site (an ancient port) of Nakhon Si Thammarat Province

3. The Northern Sòng celadon and white porcelain of the tenth to twelfth century CE were exported to Thailand. They were found at port sites in Southern or Central Thailand: Laem Pho-Payang, Tha Ruea, Ko Kho Khao and Mae Klong. However, they were not found in large numbers. It is conjectured that the Northern Sòng wares were used by the elites of Dvāravatī towns, such as Sa Morakot in Prachin Buri Province, the town of Dong Lakhon in Nakhon Nayok Province.

4. The Chinese Southern Sòng dynasty had a policy to export ceramic products. Therefore, a large number of southern Sòng wares were found at several sites in Thailand. The southern Sòng celadon and white wares of the twelfth to thirteenth century CE were found at the same ports from where the Táng and Northern Sòng wares were found. A new sea-port, Sating Phra, for example, emerged on the East coast of the southern Peninsula of Thailand, where the southern Sòng wares of various types were imported. The port handled the import-export activities for many centuries, as confirmed by the Blue and White Míng porcelain of Jingdezhen kiln and Zhangzhou kiln (16th-17th century CE) found at the site.

5. The Northern and Southern Sòng wares as well as Yuán and Míng wares in the forms of a cover box, cover jarlet, were interred close to the base of a Buddhist chedi or prang (a typically Thai stūpa). Sometimes they were placed in situ together with Thai Sangkhalok wares and Vietnamese wares.

The above mentioned glazed celadon and porcelain wares of different types were used as a container for remains of a deceased body after cremation, for instance, at Wat Thao Kot in Nakhon Si Thammarat Province, at Wat Mahathat and Wat Phra Phai Luang in the ancient town of Sukhothai. The findings suggest that the ceramics of good quality whether Chinese ware or other wares were regarded as a rare and valuable item.

The spread of using the Chinese wares to be a part of the locals' traditional ritual from the seashore to the inland that is far from the sea was confirmed by several temple sites throughout the country where the ceramics were deposited as shown in Table 2-3-4 No. 8, 9 and 10.

6. Chinese large bowls, plates and jars of various shapes and patterns which are celadon or porcelain of the Northern and the Southern Sòng, Yuán and Míng wares of the tenth to twelfth century, twelfth to thirteenth century, thirteenth to fourteenth century CE, and fifteenth to sixteenth century CE, respectively, shown in Table 2 No.7, No. 8 and No. 2 were found at a large area of a highland known as Omkoi-Mae Tuen on the Thanon Thong Chai Mountain Range. This area is considered as a grave yard of highlanders who communicated with lowland people in order to exchange their jungle products with various types of ceramics mentioned above. The highlanders deposited the wares for the dead as grave goods.

Therefore, it is evident that the Chinese wares were imported to the highland via a land route from South China through the Yúnnán and the Shan states of Myanmar to the Lan Na kingdom, centered at Chiang Mai.



Omkoi-Mae Tuen burial site on the Thanon Thong Chai Mountain Range



The 2016 excavation pit, found Chinese wares used as ashes containers at Wat Phra Mahathat Woramahawihan, Nakhon Si Thammarat Province.

(Photograph: Courtesy of Mr. Phanuwat Ueasaman)



Earthenware pots containing human bone, interred at the fence of Wat Phra Phai Luang, Sukhothai Province

(Photograph: Courtesy of Mr. Phanuwat Ueasaman)

7. Various shapes and patterns of the Chinese ceramics found at archaeological sites according to the Chinese dynasties are as follows: (1) The Yuán celadon and blue and white wares (thirteenth to fourteenth century CE), consist of large plates, bowls, jars, jarlets and cover boxes, (2) The Míng celadon and white wares (fifteenth to seventeenth century CE) is comprised of plates, bowls, and a jarlet and cover boxes, (3) The Míng blue and white porcelain and polychrome enamel porcelain (fifteenth to seventeenth century CE) consist of large plates, bowls, jars, jarlets and cover boxes, (4) The Chinese Míng monochrome (dark blue or green) porcelain and the glazed stoneware, (fifteenth to seventeenth century CE), is comprised of bowls, jars, jarlets and cover boxes. (5) The Qing dynasty wares from the mid-seventeenth century CE onwards consist of glazed stoneware, white ware, celadon, blue and white, monochrome glaze of various colors and polychrome enamel porcelain (some have a pattern accented with gold), in the forms of plates, bowls, jars, jarlets and cover boxes.

Table 2 : Original Kilns of the Chinese Stoneware of the Northern Sòng Dynasty (910-1127 CE) and Sites in Thailand where the Chinese Wares have been found.

No	CHINESE KILN	FINDINGS	SITE		
			NAME	PROVINCE	IDENTIFICATION
1	Dìng	bowl	Ko Kho Khao	Phang-nga	Port site
2			Tha Ruea	Nakhon Si Thammarat	Port site
3	Nán ān	bowl, cover box	Mae Klong River	Ratchaburi	Port site
4			Wat Phra Ngam	NaKhon Pathom	Buddhist temple
5			Ku Santarat	Maha Sarakham	Buddhist temple
6			Dong Lakhon	Nakhon Nayok	Ancient town
7			Sa Morakot	Prachin Buri	Buddhist temple
8			Umphang	Tak	Burial site
9	Jǐngdézhèn	bowl, jarlet, cover box	Prasat Phanom Wan	Nakhon Ratchasima	Hindu ritual site
10			Prang Nang Phom Hom	Lopburi	Hindu ritual site
11			Ban Wichayen	Lopburi	Residence
12			Mae Klong River	Ratchaburi	Port site
13			Tha Ruea	Nakhon Si Thammarat	Port site



Map of Thailand showing sites where Chinese ceramics of the Yuán dynasty have been found.



Qīngbái wares Southern Sòng Dynasty found at Tha Ruea, Nakhon Si Thammarat



Lóngquán celadon found at Nakhon Si Thammarat



Table 3 : Original Kilns of the Chinese Stoneware of the Southern Sòng Dynasty (1127-1279 CE) and Sites in Thailand where the Wares have been found.

No	CHINESE KILN	FINDINGS	SITE		
			NAME	PROVINCE	IDENTIFICATION
1	Dé huà	bowl, cover box	Kok Mai Den in Phayuhakhiri District	Nakhon Sawan	Buddhist temple
2			Mae Klong	Ratchaburi	Port site
3			Wat Phra Ngam	Lopburi	Buddhist temple
4			Wat Prasirattanamahatat	Lopburi	Buddhist temple
5			Prasat Hin Isan	Isan (Northeastern Thailand)	Hindu and Buddhist temple
6			Prasat Phimai	Nakhon Ratchasima	Buddhist temple
7			Prasat Phanom Wan	Nakhon Ratchasima	Hindu ritual site
8			Ku Santarat	Roi Et	Buddhist temple
9			Tha Ruea	Nakhon Si Thammarat	Port site
10			Thale Noi	Songkhla	Port site
11	Ānxī	bowl	Wat Phra Phai Luang	Sukhothai	Buddhist temple
12			Tha Ruea	Nakhon Si Thammarat	Port site
13			Wat Mahathat	Phra Nakhon Si Ayutthaya	Buddhist temple
14			Omkoï	Chiang Mai	Burial site
15	Nán'ān	bowl	Wat Long	Surat Thani	Buddhist temple
16			Chao Phraya river	Phra Nakhon Si Ayutthaya	Port site
17	Tóng'ān	jarlet	Chao Phraya river	Phra Nakhon Si Ayutthaya	Port site
18	Lóngquán	dish, bowl, ewer,	Omkoï	Chiang Mai	Burial site
19			Sathing Phra	Songkhla	Port site
20			Tha Ruea	Nakhon Si Thammarat	Port site
21			Thale Noi	Phatthalung	Port site
22			Mae Klong river	Ratchaburi	Port site
23	quánzhōu	jar, jarlet, ewer	Thanon Thong Chai	Tak	Burial site
24			Wat Cha Thing Phra	Songkhla	Buddhist temple
25			Wat Nakhon Kosa	Lopburi	Buddhist temple
26			Tha Ruea	Nakhon Si Thammarat	Port site



Lóngquán celadon, Yuán Dynasty,
found in the Ancient Capital-city of Ayutthaya,
exhibited at Chantharakasem National Museum.



Jǐngdézhèn porcelain, Yuán Dynasty,
found from excavation at Wat Phra Phai Luang,
the religious monument site, the ancient town of Sukhothai,
exhibited at Ramkhamhaeng National Museum.



Blue and white porcelain found at Wat Mahathat,
Phra Nakhon Si Ayutthya,
exhibited at Chantharakasem National Museum.

Table 4 : Original Kilns of the Chinese Stoneware of the Yuán Dynasty (1279-1368 CE) and Sites in Thailand where the Chinese Wares have been found.

No	CHINESE KILN	FINDINGS	SITE		
			NAME	PROVINCE	IDENTIFICATION
1	Jǐngdézhen	bowl, jar, jarlet, ewer	Wiang Tha Kan	Chiang Mai	Buddhist temple
2			Wat Ton Kok	Chiang Mai	Buddhist temple
3			Wat Phrachao Kam	Chiang Mai	Buddhist temple
4			Wat Hua Khuang	Chiang Mai	Buddhist temple
5			Wat Klang Mueang	Chiang Mai	Buddhist temple
6			Wat Ton Pho	Chiang Mai	Buddhist temple
7			Wat Phra That Hariphunchai	Lamphun	Buddhist temple
8			Wat That Loi, Sam Ngao District	Tak	Buddhist temple
9			Wat Phra Si Rattana Mahathat	Lop Buri	Buddhist temple
10			Wat Mahathat	Phra Nakhon Si Ayutthaya	Buddhist temple
11			Umphang	Tak	Burial site
12			Wat Phra That Phanom	Phra Nakhon Si Ayutthaya	Buddhist temple
13			Wat Phra Si Sanphet	Phra Nakhon Si Ayutthaya	Buddhist temple
14			Wat Chao Pap	Phra Nakhon Si Ayutthaya	Buddhist temple
15			Ko Si Chang	Chon Buri	Shipwreck site
16			Chan Royal Palace	Phitsanulok	Residence
17	Lóngquán	bowl, jar, jarlet, ewer	Omkoï District	Chiang Mai	Burial site
18			Umphang	Tak	Burial site
19			Wat Phra Si Rattana Mahathat	Phichit	Buddhist temple
20	Lóngquán	bowl, jar, jarlet, ewer	Chan Royal Palace	Phitsanulok	Residence
21			Wat Mahathat	Phetchabun	Buddhist temple
22			Ancient town of In Buri	Sing Buri	residence
23			Wat Nakhon Kosa	Phra Nakhon Si Ayutthaya	Buddhist temple
24			Near Pom Phet Fort	Phra Nakhon Si Ayutthaya	Port site
25			Wat San Paolo	Lop Buri	Religious site
26			Wat Chao Prap	Phra Nakhon Si Ayutthaya	Buddhist temple
27			Ban Wichayen	Lopburi	Residence
28			Wat Nakhon Kosa	Lopburi	Buddhist temple
29			Brick stupa in the Ramkhamhaeng National Museum	Sukhothai	Buddhist temple
30			Umphang	Tak	Burial site
31	Tha Ruea	Nakhon Si Thammarat	Port site		
32	Dé huà	dish, jarlet, jar	Thai Sam Phao	Nakhon Si Thammarat	Port site
33			Wat Nakhon Kosa	Lopburi	Buddhist temple
34			Ramkhamhaeng National Museum	Sukhothai	Buddhist temple
35			Umphang	Tak	Burial site
36			Tha Ruea	Nakhon Si Thammarat	Port site
37			Thai Sam Phao	Nakhon Si Thammarat	Port site
38	Pútíán	dish, bowl	Umphang	Tak	Burial site
39			Wat Phra Phai Luang	Sukhothai	Buddhist temple
40			Ban Bang Pun	Suphan Buri	Kiln site
41			Mae Klong River	Ratchaburi	Port site



Map of Thailand showing sites where Chinese Ceramics of the Ming Dynasty have been found.

Table 5 : Original Kilns of the Chinese Stoneware of the Míng Dynasty (1368-1644CE) and Sites in Thailand where the Chinese Wares have been found.

No	CHINESE KILN	FINDINGS	SITE		
			NAME	PROVINCE	IDENTIFICATION
1	Jǐngdézhèn	jars, jarlets, dish, bowl	Wat Dok Ngoen,	Chiang Mai	Buddhist temple
2			Wat Kaeng Puang	Chiang Mai	Buddhist temple
3			Wat Si Khong	Chiang Mai	Buddhist temple
4			Wat Luang Hot	Chiang Mai	Buddhist temple
5			Wat Chedi Sung	Chiang Mai	Buddhist temple
6			area of the Kamphaeng Phet National Museum	Kamphaeng Phet	Buddhist temple
7			Chan Royal Palace	Phitsanulok	Residence
8			Omkoi District	Chiang Mai	Burial site
9			Chiang Saen	Chiang Rai	Ancient town
10			Wat Mahathat	Sukhothai	Buddhist temple
11			Wat Phra Phai Luang	Sukhothai	Buddhist temple
12			Wat Sa Si	Sukhothai	Buddhist temple
13			Bang Rachan	Sing Buri	Kiln site
14			Royal Reception House (Wichayen's Residence)	Lop Buri	Residence
15			Phra That Phanom	Nakhon Phanom	Buddhist temple
16			Klang Aow (The Australia Tide)	Chon Buri	Shipwreck site
17			Wat Chet Yot Trai Trueng	Kamphaeng Phet	Buddhist temple
18			Wat Awat Yai	Kamphaeng Phet	Buddhist temple
19			Wat Ban Laeng	Rayong	Buddhist temple
20			Wat Phra Mahathat Woramahawihan	Nakhon Si Thammarat	Buddhist temple
21			Wat Khien Bang Kaew	Phatthalung	Buddhist temple
22	Lóngquán	jar, jarlet, dish, bowl	Ayutthaya Historical Park	Phra Nakhon Si Ayutthaya	residence
23			Rang Kwien	Chon Buri	Shipwreck
24			Umphang	Tak	burial
25			Samui	Surat Thani	Shipwreck
26			Phop Phra	Tak	Burial site
27	Dé huà	jar, jarlet, bowl	Royal Reception House (Vichayen's Residence)	Lop Buri	Shipwreck
28			area near Pom Phet Fort	Phra Nakhon Si Ayutthaya	Port site
29	Zhāngzhōu	jar, jarlet, dish, bowl	Umphang	Tak	Burial site
30			Wiang Tha Kan	Chiang Mai	Buddhist temple
31			Mea Sod	Tak	Burial site
32			Trai Trueng	Kamphaeng Phet	Buddhist temple
33			Wat Wiang	Surat Thani	Buddhist temple
34			Ko Mak (Songkhla Lake)	Phatthalung	Village



Ceramics from Excavation at Wat Thao Khot and Chedi Yak, Nakhon Si Thammarat Province, exhibited at Nakhon Si Thammarat National Museum



Ceramic from the collection of Wat Pho Det, Phattalung Province



Ceramic decorations at the Main Chedi of Wat Phramahathat Woramahawihan, Nakhon Si Thammarat Province



Ceramic decorations at the ordination hall of Wat Ban Lang, Rayong Province

Conclusion

Thailand played an important role in the history of the Chinese trade for stoneware and porcelain during several periods. The import of Chinese wares to Thailand found at archaeological sites suggest the import of the products from the ninth to tenth century CE under the Chinese Táng Dynasty, the tenth to twelfth century CE under the Northern and Southern Sòng Dynasties, the thirteenth to fourteenth century CE under the Yuán Dynasty, and the fourteenth to seventeenth century CE under the Míng and Qíng dynasties, respectively.

In Thailand, Chinese ceramics have been found in great numbers at various sites including port, habitation, religious and grave sites. Several archaeological excavations at ancient monuments revealed that Chinese ceramics were used extensively for containing relics and offering to the temple as they were mostly discovered at a base of several ordination halls (uposatha) or assembly hall (vihāra) as well as inside a crypt of chedis (stūpa).

The Chinese stoneware and porcelain found at archaeological sites throughout the countries from the ninth to Seventeenth century CE suggest various objectives of locals towards trade. Between the ninth and tenth century CE the Chinese wares were imported as ordered by local, middlemen and merchants from overseas. The local use of Chinese wares during the periods suggests the use of a trans-peninsula route to linking the East coast with the West coast.

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Recovery of a Lost Arab-styled Ship at Phanom-Surin, the Wetland Excavation Site in Central Thailand

Preeyanuch Jumprom



Abstract

This paper is about the Phanom-Surin shipwreck and its trading route. Archaeological findings from excavation at Samut Sakhon Province, Central Thailand, and its scientific and comparative analysis data are discussed. The wetland excavation revealed that the sewn-planks technique using on the ship structure is the outstanding characteristic of the Arab-styled ship. The analysis result suggests the relation between the origin and function of its cargo. The presence of the Arab-styled ship at the site supports the hypothesis of using the type of ship sailing in trade routes between the Middle-East and the Far East (China) via Southeast Asia. The evidence supports the hypothesis of the Arabian merchants and the Middle-Eastern trade contact with several towns of the Dvāravatī culture in Central Thailand during the ninth century CE.



The Shipwreck's condition when it was found in September 2013

Introduction

The Arab-styled ship was commonly known as “Dhow”, the general name of a number of traditional sailing vessels used in the Red Sea and Indian Ocean region. According to the previous study and foreign accounts, the Arab-styled ship had been a significant seafaring transportation in the Indian Ocean that took Arab merchants engaged in trade with Southeast Asia from the eighth century CE onwards. Previous researches of the field from several archaeological sites in Thailand have provided findings of the Arab origins, but no evidence of an Arab-styled ship was found.

In 2013, the discovery of a shipwreck site in the muddy prawn pond at Phanthai Norasing Sub-district in Samut Sakhon Province, Lower Central Thailand by Mr. Surin and Mrs. Phanom Sri-ngamdi, the owners of the land, revealed the buried ship and associated finds in situ. Informed by them on the find, a group of archaeologists from the 1st Regional Office of Fine Arts Department at Ratchaburi Province cooperated with the Underwater Archaeology Division of Fine Arts Department conducted an excavation and conservation at the wetland site between 2013 and 2015. Some finds were taken to laboratories for scientific analysis and dating (The 1st Regional Office of Fine Arts 2016: 24-25).

This paper is an attempt to provide information and discussion about the evidence of the Arab-styled ship ‘dhow’ types, its cargo and sea - traders sailing to the Southeast Asian region, particularly to Thailand, and result from excavation and analysis of the lost “Arab-styled” ship at the Phanom Surin wreck site.

Background of the Voyage of the ‘Arab styled ship’ to Southeast Asia

The ‘Arab styled ship’ or ‘dhow’ is believed to be originated in India between six hundred BCE to six hundred CE. With the birth of Islam in the seventh century CE in the Middle-East and within a short time the Islamic Arab Empire embraced the whole area of West Asia and appeared on the scene in the long history of navigation and trade. At the beginning of the eighth century CE, there was a rapid invasion of the Islamic Arab power into Egypt and Persia (Iran). Persians were the foremost navigators of the Indian Ocean; therefore, their trade became part of the general Arab trade. Arab, Persian and East African Muslims carried on their business ventures in the East through trading settlements established at port towns in India, Sri Lanka, Indonesia and China (Kiribamune 1990: 180). According to Arab literary evidence, it is possible to draw the conclusion about the sailing routes between the West and the East followed by Arab voyagers from the beginning in the Arabian Sea to the Indian Ocean and to Southeast Asia or via Southeast Asia to China, the final destination.



One type of Dhow in Doha, Qatar
(Photo: Courtesy of Mr. Tharapong Srisuchat)



A statue of Mani at Quanzhou, China, mid-third century CE
(Photo: Courtesy of Dr. Amara Srisuchat)

It is conjectured that the first 'Arab styled ship' as a merchant-vessel that was able to sail from the Persian Gulf ports to the Arabian Sea across the Indian Ocean via Southeast Asia to China was undertaken by the Arab voyagers in the first half of the seventh century CE. The earliest dating evidence was found at Quanzhou in Fujian Province of China, one of the Arab voyagers' destination to China. This is exemplified by Islamic holy tombs (at the southern foot of Ling mountain) of two Muhamad's disciples who came to Quanzhou for missionary in the Wude period, 611 - 626 CE and a statue of Mani (the founder of the Persian Manicheism of Zoroaster religion in the mid-third century CE) that was introduced to China during the Tang dynasty (618-907 CE) (Fujian Provincial Department of Culture, China 2016: 13, 19). However, the early Arab accounts referred to the Arab voyage to Southeast Asia (before going to China) are not before the mid-ninth century CE, such as, 'Akhbār aṣ-Ṣīn wa' l-Hind (Tales of China and India, 851 CE), records of Ibn Khurdādhbih (844-848 CE), Ya'qūbī (875-880 CE), Ibn Rustah (903 CE), Abū Zaid (916 CE), Abū Dulaf (940 CE) and Mas'ūdi (943 CE) (Wheatly 1980: 244-248).

A sunken ship which was a type of 'dhow' was found near the island of Belitung between the islands of Sumatra and Kalimantan of Indonesia, later known as Balitung shipwreck or Batu Hitam shipwreck and objects from its cargo dating back to the ninth century CE (Guy 2003: 13-27). Significant objects from its cargo were Chinese ceramics of Tang dynasty, Middle Eastern wares and glass wares and beads are similar to others found at several early port sites in Sri Lanka (at Mantai or Manthota, the ancient port of Mahatittha)(Wijesuriya 2016: 20; Kiribamune 1990: 182), on the mainland and Archipelagos of Southeast Asia, particularly in Java and Sumatra (for example at Kota Kapur, the island of Bangka), Vietnam (for example at Oc-èo), in southern Thailand (at Laem Pho Payang in Surat Thani Province and at Mueang Thong Ko Kho Khao in Phangnga Province) (Srisuchat 2014: 16). Furthermore, they were found at several moated sites and ancient towns of Dvāravatī culture in eastern and central Thailand. For instance, at Dong Si Mahaphot in Prachin Buri Province, Mueang Phra Rot in Chonburi Province, Khu Bua in Ratchaburi Province, U-Thong in Suphan Buri Province (Srisuchat 1990: 8-10). Apart from these, rare findings from excavations at some ancient towns of Dvāravatī culture in central Thailand have been identified as an example of the Middle Easterner's feature recognized by local people of Dvāravatī. These are exemplified by an engraved brick depicting a Middle Easterner's profile with curled hair and shaped nose found at Chula Pathon Chedi in Nakhon Pathom Province, terra cotta figurines depicting standing men with a big shaped nose and with conical turbans like the Middle Easterners, found at Khu Bua in Ratchaburi Province, the ancient town of Nakhon Pathom in Nakhon Pathom Province and the ancient town of U Thong in Suphan Buri Province.



Glass ware and beads
from Laem Pho Payang
in Surat Thani Province
*(Photo: Courtesy of
Mr. Tharapong Srisuchat)*



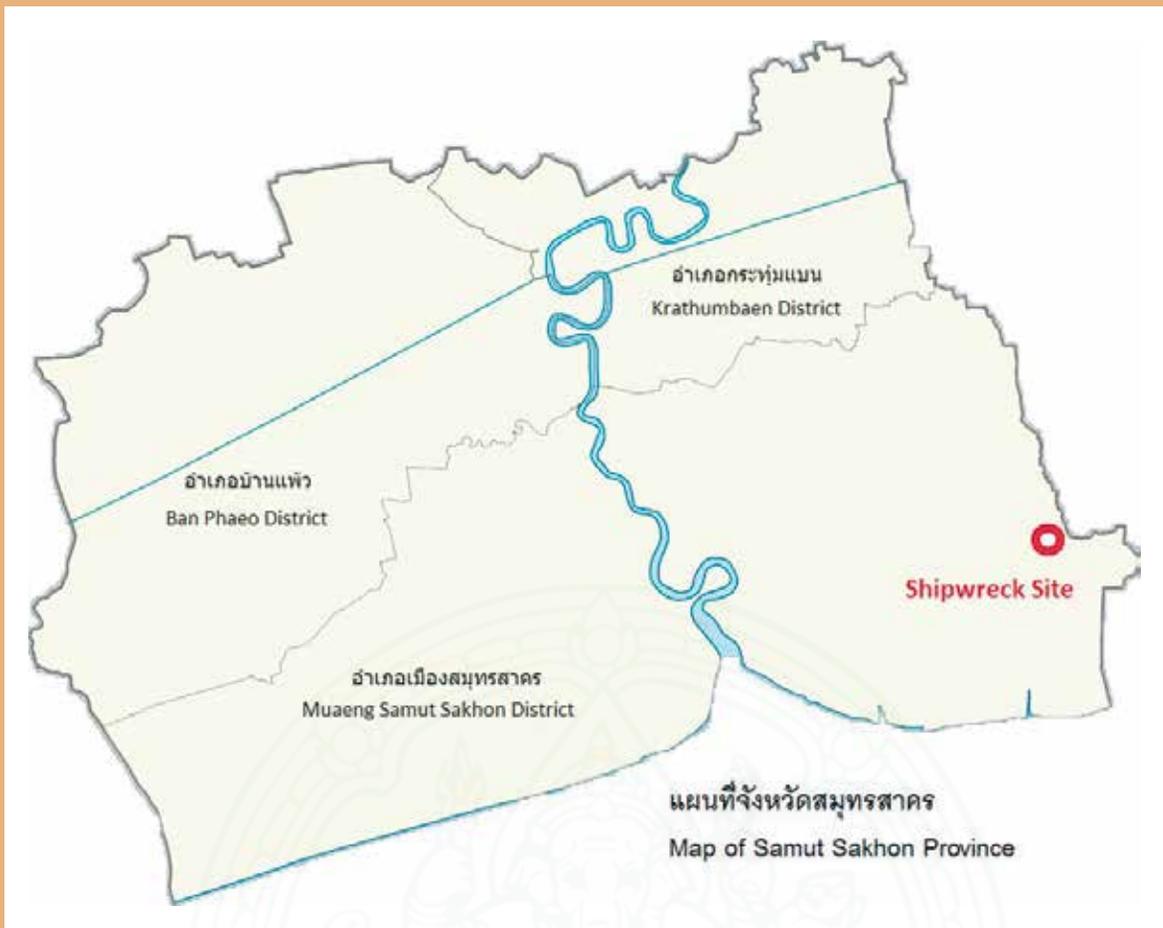
Aerial photograph of Khu Bua,
Ratchaburi Province

Location and Ship Structure

The shipwreck was found to be lying in the prawn pond during rehabilitation of the pond in Phanthai Norasing Sub-district, Mueang Sumut Sakhon District, Samut Sakhon Province. The location of this area is the coastal plain, with the site located eight kilometres from the Gulf of Thailand to the south. The Tha Chin River is the main water course, approximately seventy kilometres long, draining into the sea at Muaeng Samut Sakhon District. Approximately three hundred metres to the west of the shipwreck site, there is a canal called Khlong Sanam Chai while another canal to the east is Khlong Samae Dam Tai. The Phanom-Surin shipwreck is located twelve kilometres eastward off the Tha Chin River. According to the geological surveys and study of the Department of Mineral Resources, the Phanom-Surin shipwreck was found in the meandering channel of an ancient river course approximately two metres below the present ground. It is conjectured that the waterway was a part of the ancient Tha Chin or of a canal connecting to the Tha Chin (Chaimanee 2014: 16). There are Dvāravatī settlements that could be reached via the Tha Chin River. For example, the ancient town of Nakhon Pathom, an important trade destination and a hub to other contemporary cities further inland. The distance from the shipwreck site to the ancient town of Nakhon Pathom is approximately forty five to fifty kilometres in northwest direction. Another Dvāravatī town is Khu Bua in Ratchaburi Province, which is located approximately sixty to seventy kilometres southwest away from the site. Mae Klong River is the main stream connecting the town to the sea.

The shipwreck site is considered to be a wetland and the excavation that was conducted between December 2013 and June 2015 in order to mark the scope of the site and the study of the ship construction and associated artefacts. Since February 2014, plotting of findings in situ and making the database of the wreck site has been facilitated by the use of GIS technique.

The ship structure has an approximate length of twenty metres and a width of eight metres. From the evidence, the south end is presumably the bow of the ship. The hull on the west side is still standing upright. Some planks have fallen down as the sewn fastenings were too decayed to support the structures. The ship hull has obviously collapsed and fell flat down to eastward. The planks are made from hardwood with holes drilled along the edges and assembled with black fibre ropes. 'Wadding' was lashed along the ship length to seal space between planks. This shipwreck appears to have double wadding, inside and outside.



Location of the shipwreck site



The archaeological excavation at the Area 1, December 2013

The keelson is one of the main structures of the shipwreck. It was found in the middle of the ship, having features of a square timber measured length of 17.65 metres. On the larger end, the cross section is 70 centimeters wide and 60 centimeters thick. The other end of the shipwreck is not visible. It is likely that it was severely damaged causing the artefacts spread far out from where the ship end should be found. There were two poles found at the site so far. One was found outside of the western side of the shipwreck. Its total length was 17.37 metres with a circumference of 53 centimeters on the small end and 101 centimeters on the other. On the small end, there is a groove. It is possibly for a sheave fitting. The second spar was found perpendicular to the shipwreck on the eastern side. At the large end, it was cut off semi-circular making one side flat with the other side still round. Rattan ropes were found associated with this spar as well. Considering the size, the second one is a bit bigger than the first spar and has the length of 17.40 metres. The end of the second spar was also found a square tenon of 17 x 53 centimeters. It might be a joining part with another spar. From a comparative study, the ship assembled in such was commonly known among ancient Arab ship-building techniques.

Identification of Objects from the Sunken Ship

Archaeological finds discovered at the shipwreck site are varied, ranging from locally-produced pottery to foreign artefacts. There are a large amount of ceramic sherds. Most of them seem to be from large storage jars, Chinese products. There are also earthenware jars with rounded or pointed bases similar to amphorae, local-produced earthenware and some other unknown vessels. Besides the significant ceramics and pottery, there also various other types of artefacts including a grinding stone and base, a small metal bowl, a one-hole coconut shell as well as various kinds of organic objects. The list of archaeological findings are shown in Table.1 , and the interpretative findings, provided in Table.2.



The sewn technique is similar to those of the Arab-styled ship-building.



Keelson showing cut marks



The first spar



The second spar



Sheave fitting in first spar

Table 1: List of Findings from the Shipwreck

No.	Category	Texture	Type	Number	Weight (grams)
1.	Ceramic	earthenware	Carinated pottery	35	
			Torpedo jar	9	
			Unknown jar	4-5	
		stoneware	Chinese ware	13	
			Persian turquoise ware	2	
2.	Floral	betel nuts		224	approximately 700
		coconut shell		39	
		rice grains		uncountable	
		seeds		178	
		dammar		uncountable	
		basketry		2	
		timber		405	
		rattan rope		14	
		animal leather		uncountable	
		black rope		uncountable	
		brown rope		27	
3.	Fauna	ivory/ tusk		1	
		antler horn		2	
		animal fang		1	
		animal bone		5	
		fish bones		uncountable	
		shells		189	
4.	Stone objects	grinding stone		3	
		grinding plate		1	
		stone disc		1	
5.	Metal object	metal bowl		1	



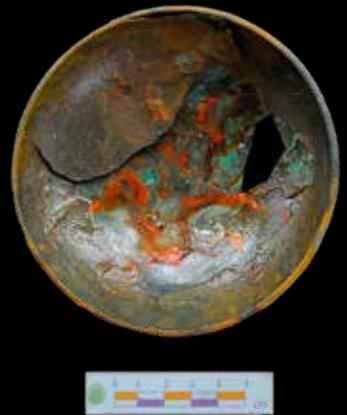
Fragments of ceramic sherds and artefacts removed from the wreck site, placed together here by locals before archaeological expedition



Coconut shell



Stone objects probably a Grinding stone



Small Metal bowl found in the Area 2

Table.2: The Interpretative Findings

no	Product	Origin	Dating	Function / Remarks
1	Chinese ware	Southern region of China	9 th century CE	Storage or container: One of this jar contained a number of betel nuts. One of the rim sherds has a Chinese character incised 吉. At this stage, it is read 大吉 (dà jí) meaning good luck. Another complete jar also has a word 陳(chén) which may refer to one of Chinese common surnames.
2	Torpedo jar	Persian gulf	8 th - 9 th century CE	Storage or liquid container Their interior wall was coated with some substances that presupposed to be bitumen or something else. Inscription in ancient Arabic lettering (?) on the exterior side.
3	Persian turquoise ware	Persian gulf	9 th century CE	Cargo or storage jar
4	Carinated pottery	Central Thailand	9 th - 11 th century CE	Crew' cooking utensil. Most of this pottery showed a smoke residue on its exterior side probably left from cooking.
5	Betel nuts	Malay Peninsula or the Philippines Archipelagos	1240 ± 30 BP [680 - 740 CE]	Cargo or crew' food. Some betel nuts found in a Chinese green glazed jar containing a large quantity of tannin, used for dying fabric like fishing nets. Tannin extracted from betel nuts makes fabric softer and stronger, helping to extend the lifetime of the fibre. The usefulness of the betel nuts is also as an adhesive in wood work.



Unglazed jar and green glazed Chinese four handled jar, Tang dynasty



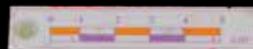
Potsherd of a torpedo jar



Upper part of a Persian turquoise jar



Carinated pot



Betel nuts

Table.2: The Interpretative Findings (continued)

no	Product	Origin	Dating	Function / Remarks
6	Coconut shell	Mainland SEA and Malay peninsula		Food or utensil: some of them are perforated.
7	Rice grains	Mainland SEA		Crew's food. Rice grains with the black substance are stuck to an interior surface of torpedo's sherds.
8	Seeds	Unknown		Cargo or crew' food
9	Dammar	Mainland SEA		Cargo or crew' use. Dammar is usually mixed with oil for caulking the ship and being found on board is likely used for fixing or coating.
10	Pieces of baskets	Mainland SEA		Container
11	Timber	Mainland SEA		Firewood or cargo
12	Animal leather	Mainland SEA		Cargo
13	Rattan rope	Mainland SEA And the Malay peninsula	1280 ± 30 BP [640 - 700 CE]	Large rattan braided ropes were set on board probably for sailing.
14	Black ropes	Mainland SEA and the Malay peninsula		The scientific analysis indicated that black rope is made from tree of a sugar palm.
15	Brown rope	Unidentified	1200 ± 30 BP [720 - 780 CE]	The large-size brownish ropes may have been used for rigging or as lashing devices.
16	Ivory/ tusk	Mainland SEA		Cargo
17	Antler horn	Mainland SEA		Cargo
18	Animal fang	Mainland SEA		Cargo
19	Animal bone	Mainland SEA		Cargo or crew' food
20	Fish bones	Mainland SEA		Crew' food
21	Shells	Mainland SEA		Crew' food
22	Grinding stone	Unknown		Utensil
23	Grinding plate	Unknown		Utensil
24	Stone disc	Unknown		Unidentified
25	Metal bowl	Unknown		Cargo or crew utensil



Seeds



Pieces of baskets, in situ



Rattan braided rope



Black ropes



Brown ropes



Ivory / tusk



Antler horn



Dating of Findings and Its Relation with Local and Overseas Routes

Dating of the Phanom-Surin sunken ship had been obtained by either relative or scientific dating methods from three samples of organic matter; that is to say, betel nut, rattan, and rope for the carbon-14 dating (AMS). It is suggested that the site dates back to 1,200 - 1,300 years ago which is consistent with the Chinese Tang wares and torpedo jar found in the ship. The result compares well with torpedo jars found from excavation at the Great Mosque foundation of Siraf in Iran dating back to pre 803-4 CE and at the residence of the Caliphal palace complex of Dar Al-Amma at Samara, Iraq (Guy 2017: 185 - 186). The jars from Guangdong Province (Xinhui - Guangchong kiln in city of Jianmen and Fengkai kiln in the city of Zhaoqing) were all ceramics of Chinese origin that were very close to the Tang wares from the Belitung shipwreck dating back to the ninth century CE (Guy 2003: 13 - 27). Two Guangdong-Yue type storage jars with Chinese characters (see Table. 2 No.1) are indisputably identified, but an inscription chiselled into a shard of a Torpedo jar was read in four versions differently. The first version transliterated by Mr. Ali Suesaming who said that it is an ancient Arab script which the dating of the year 145 of the Hijara which is equivalent to 766 CE. The second version by Muslim teachers from Samanmitra School of Narathiwat Province in southern Thailand reads "Produced in 721 CE." The third version by Professor Jamsheed K. Choksy said that it referred to "Lofty God" or "40 containers of hot bitumen" (the 1st Regional Office of Fine Arts Department, Ratchaburi 2016: 125). The fourth version by Professor Prods Oktor Skjaervo reads the name of a person. Palaeographically, the inscription can be compared to a Pahlavi-Chinese bilingual inscription found from a tomb excavated in North-West China (Guy 2017: 188). Judging from objects in its cargo, especially a Torpedo jar, container of bitumen, the ship sailed from the Persian Gulf to the Southeast Asia and embarked at some seaports on the Southern Peninsula and/or Indian archipelagos (Kota Kapur, Mueang Thong, Laem Pho, for examples) for collecting local products, such as betel nuts, rattan, ivory and antler as well as Chinese jars used as containers of some local products. Afterwards, the ship sailed to the Gulf of Thailand and used a waterway connecting to encounter with local communities seeking local products and/or selling goods.

It is likely that goods from the ship that were sold to the locals here were torpedo jars containing bitumen and Chinese jars containing betel nuts, because these two products were rare in this area. Local goods that the dhow's merchants and sailors needed were rice grains, baskets, local food in the local carinated pot. Most of them were cooked on board; therefore, smoke residue on their bottom can be traced.

It is conjectured that the ship encountered the place for incorporated local ship-building or repairing and stocking some local materials for ongoing urgent reparation on board. This is confirmed by local material found in the ship, such as the black rope made from the sugar palm fibre, the planks made from Burmese Sal (Thai: teng), and frames made from iron wood (Thai: takien thong). Neither is there any information available from literature document or archaeological evidence on a shipyard in this area.



A Chinese character incised 吉,
reads 大吉 (dà jí) meaning good luck.



A word 陳 reads chén meaning exhibit, old,
which may refer to one of Chinese common surname.



Torpedo jar's sherd with the Arab inscription on its exterior

Conclusion

The excavation and analysis data of the Phanom-Surin sunken ship at the wetland site in central Thailand has fielded the result of two major discoveries: The Arabian styled ship or a type of 'dhow' and a number of significant objects from its cargo and findings in situ. This ship and the objects whether loading on board for voyage's supplying or being commodities gives a new insight into the sailing trade routes between the Middle-East and the Far East (China) via the Southeast Asia and the trading interaction between the Arabian merchants and/or the Persian merchants and the local communities of the Dvāravatī culture in central Thailand.

The Phanom-Surin ship is considered to be the evidence of the oldest 'dhow' found in the wreck site of the Southeast Asian water which has given an informative data on the ancient construction method of sewn-plank technique used in shipbuilding in the ninth century CE.

Judging from cargo on board: a number of Torpedo jars containing bitumen of the Persian Gulf, Chinese jar containing betel nuts, a tusk and antlers, after disembarking from a port of the Middle-East to the Andaman Sea the ship embarked at some ports of the southern peninsula of Thailand and /or of the Indonesian archipelagos before sailing to the Gulf of Thailand. It is conjectured that the merchants of the ship needed to sell some goods and sought supplying as well as a place for repairing the ship and material for the urgent issue. Unfortunately, a poor repair of the ship caused the sinking of the ship in the inland waterway. At present the lost 'dhow' was found and needs a well preservation and conservation in situ for the sake of historical knowledge. Experts' practical advice for the salvage project are welcome to save one of the most important sites of the maritime cross-cultural exchange of Asia.



Sherds of torpedo jar coated by some black substance



Rice grains stuck on the black substance



Green glazed Chinese jar contained betel nuts



Smoke residue on the exterior wall of carinated pots



Phanom-Surin wreck, the Arabian styled ship



Stucco on the Chula Prathon stupa, Nakhon Pathom Province

Engraving on the brick from Chula Prathon Chedi (stūpa), Nakhon Pathom Province depicting a face of a Muslim man wearing 'taqiyah', a specific Muslim cap



Terra cotta depicting Arab merchants from Khu Bua site, Ratchaburi Province

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Shipwreck of the Ancient Trans – Oceanic Trades from the Andaman Sea to the Gulf of Thailand

Sira Ploymukda



Mannok Shipwreck Site is the Evidence of Ancient Trans-oceanic Contact at Mannok Island Rayong, Thailand

Abstract

The purpose of this paper is to explain and analyse the location of shipwreck sites by applying scientific technique and information technology concerning with underwater archaeological survey and excavation. The scientific technique makes it possible for underwater archaeologists to understanding about the sailing routes in the Andaman sea and the Gulf of Thailand. The results indicate that shipwrecks found in the study area were classified by using ship typology; building technique, rigging styles in order to achieve the goal of the research indicating the sailing routes between the Andaman Sea and the Gulf of Thailand.



The underwater archaeologist measures the timber at Rangkwien shipwreck site, Sattahip, Chon Buri Province, Thailand

Introduction

Ancient transoceanic routes in Southeast Asia cover areas from the Andaman sea to the Gulf of Thailand. The underwater archaeological findings provide useful information about cross-cultural contacts of Asia. There are a number of researchers' studies on this matter, including underwater expeditions that rested on the presumption of the Maritime routes. However, there is still controversy over identification of the far-flung sailing routes which have

to determine the ancient maritime route. This led to the understanding of the development of ports, ship construction, and seafaring skills. According to data available this article aims to explain and analyze the location of wreck sites, typology of ship relating to the sailing routes, dating of the findings and transoceanic routes. Furthermore, scientific technique implemented to identify the sites and analysis of finding.

Geographical Approach to the Study Area

Thailand is in a position to have transoceanic contacts, as it is bounded by The Andaman Sea in the West and the Gulf of Thailand in the East. The Andaman Sea is located next to the boundary of Eastern Indian Ocean which covers the West coast of Myanmar, the West coast of Thailand and the Malay Peninsula. It connects to the Gulf of Thailand at the Singapore Strait.

The Gulf of Thailand is the territorial sea which covers the eastern coast of Southern Peninsula, the coastal areas from the Lower Central Plain to the eastern part of Thailand and connects to the Cambodian territorial sea at Ko Kong.

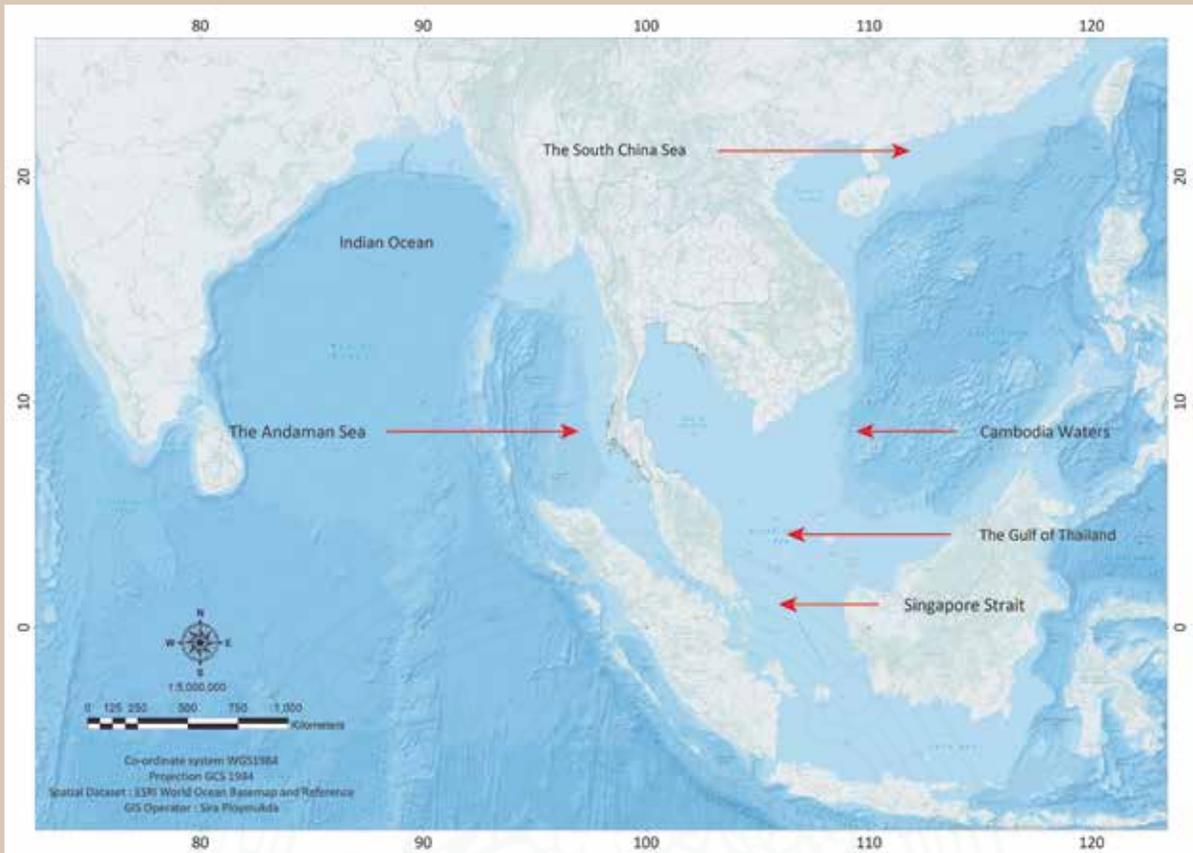
The scope of the field area of Thailand's underwater archaeology covers approximately 150,000 square nautical miles: The Andaman Sea approximately 80,000 square nautical miles and the Gulf of Thailand approximately 70,000 square nautical miles.

Archaeological Evidence of Maritime Contact in South East Asia

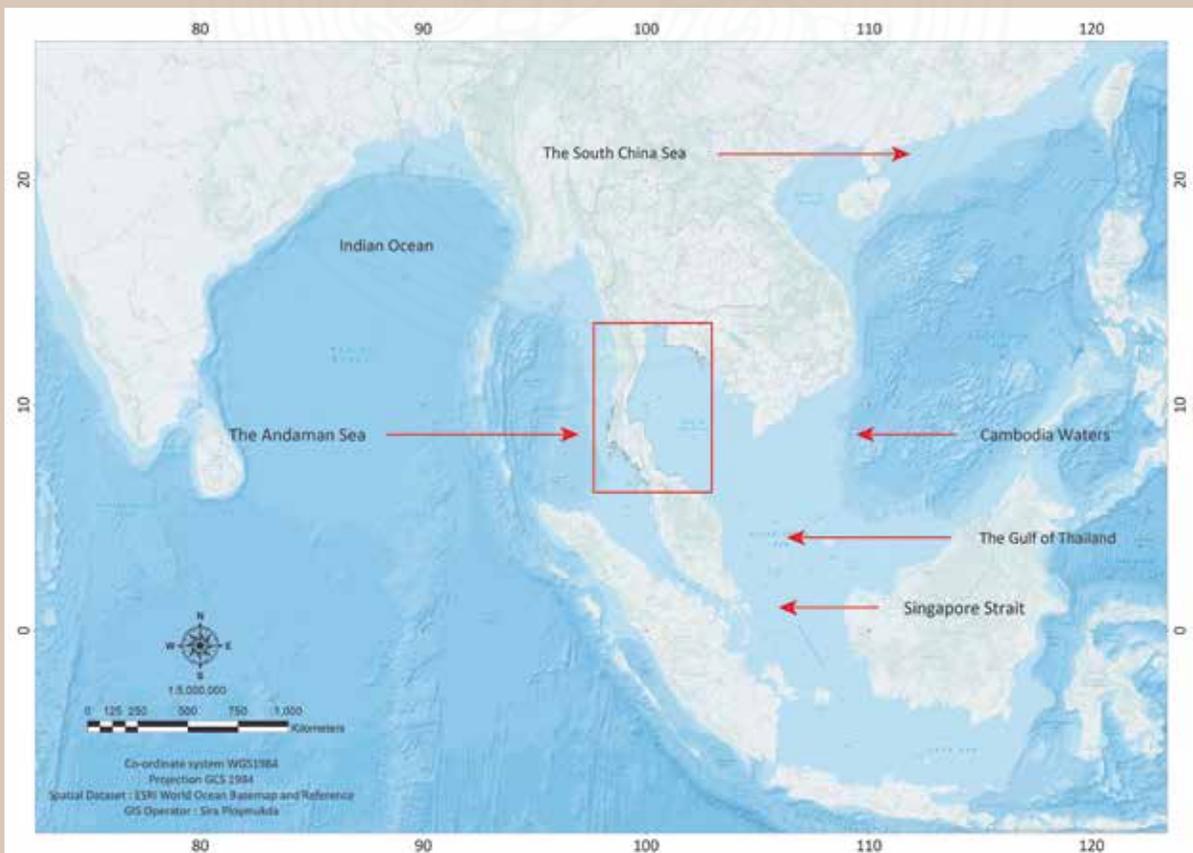
Preliminary findings from archaeological sites indicate that the beginning of the maritime sailing in South East Asia is dating back about 4,000 years, as confirmed by shell bracelets, fishing hooks and necklaces made from the vertebrae of sharks discovered from Khok Phanom Di excavation site in Chonburi Province, 20 kilometres from the recent shoreline.

Depiction of ship has been known from the pictographs on the rock wall of Nakha cave in Phangnga Province, dating back about 3,000 years.

An engraved on bronze kettle drum depicting a group of people in a boat was found in several sites in South East Asia, for example, Ko Samui in Surat Thani, southern Thailand. It was also found in northern Vietnam dating back about the first century BCE. A double masted ship depiction from a bronze seal found at Khuan Luk Pat in Khlong Thom District, Krabi Province. The early port site situated 5 kilometres from the Andaman Sea, dates back about the second century CE.



Map Indicates the Geography of the Andaman Sea and the Gulf of Thailand



The Scope of the Field Area of Thailand's Underwater Archaeology

A single masted shipdepiction from a clay seal dates back to the sixth century CE found at Nakhon Pathom located near Tha Chin River, 40 kilometres from the Gulf of Thailand. A relief depicting a ship sailing through wave and sea animals at Candi Borobudur, Central Java, Indonesia, dates back to the ninth century CE.

As mentioned before, findings suggest that the ancient people in Southeast Asia were seamen, and they knew how to use various types of sailing vessel for long distant voyage. However, the above artefacts cannot give the insight on the real shape of a ship, its structure or details.

Location of Shipwreck Sites

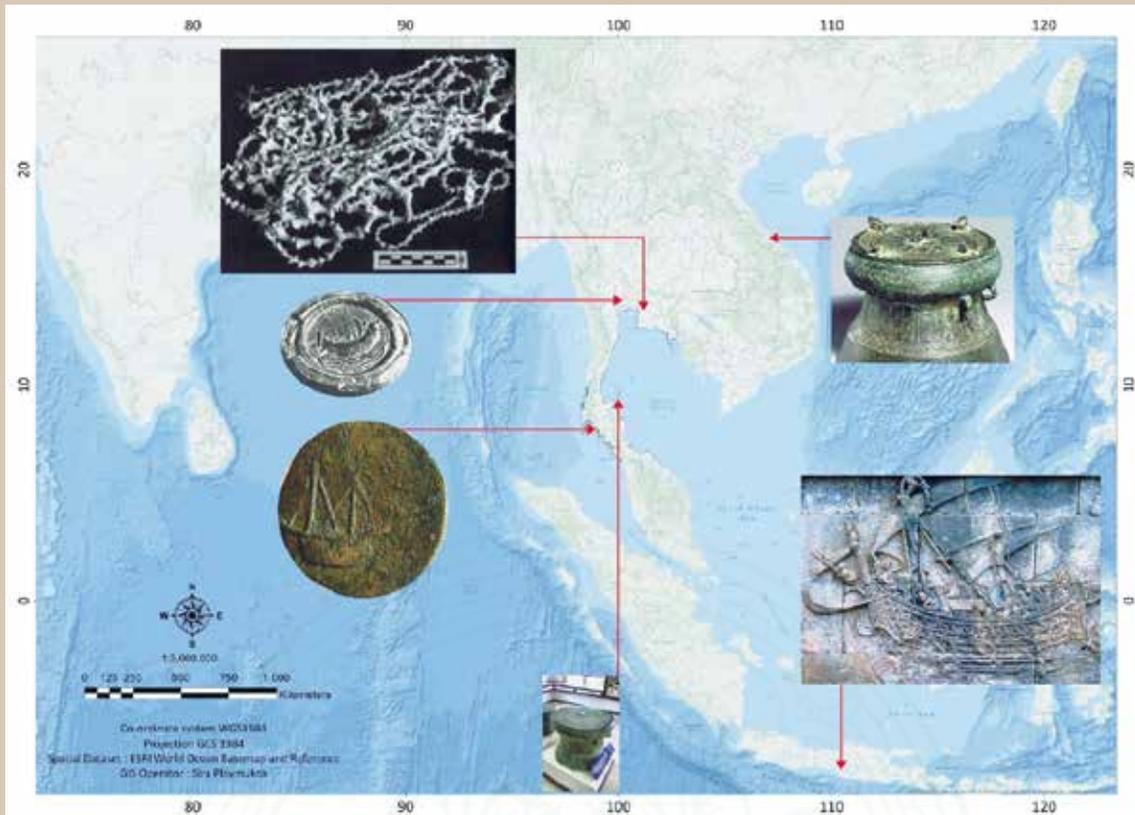
For fifty years of the underwater archaeological expedition in Thailand archaeologists and underwater surveyors conducted field works in the Andaman Sea and the Gulf of Thailand. Scientific method especially, the digital technology and the information system have been applied to the field underwater archaeology in order to locate shipwreck sites.

In the past, locations of shipwrecks were manually documented by using a compass, a nautical map, and a depth gauge for writing a panoramic sketch. Using such a manual technique may result in a less accurate yield at a shipwreck location.

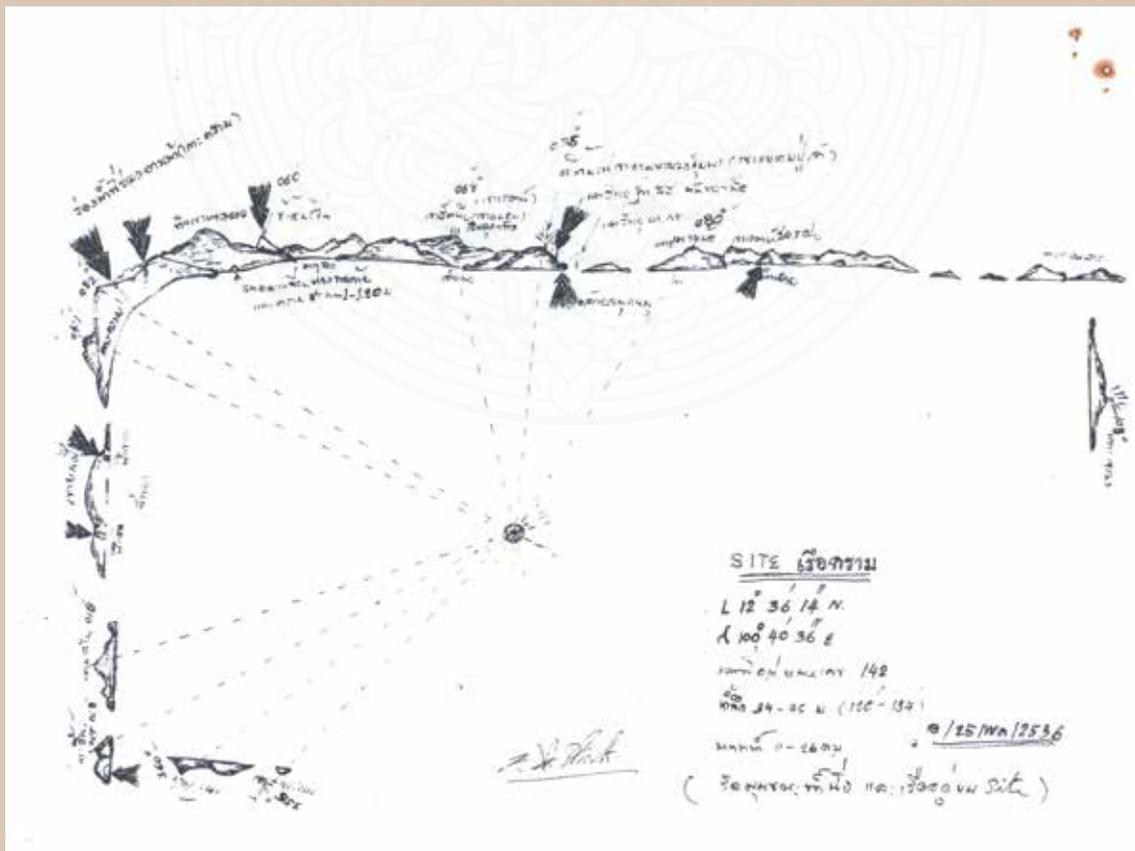
Therefore, the Global Positioning System (GPS) has been applied to verify the accuracy of the shipwreck sites since 1988 and stored the location of the shipwreck as spatial dataset. Afterwards, an archaeologist uses Geographical Information System (GIS) to process the data from the shipwreck sites and stores it as the attribute dataset.

The archaeologists also use a remote sensing technology to detect underwater anomaly and transform it into a digital draft picture of shipwreck called Digital Elevation Model (DEM).

As mentioned before, the dataset integration of the shipwreck sites would provide archaeologist with interpretation and prediction of the ship and its sailing route. Thanks to the advance of the digital technology and the information system which have been used to detect and locate the underwater sites. Fourty-six shipwrecks of the Andaman Sea and the Gulf of Thailand were found and registered.



The Distribution Map of the Archaeological Evidence of Maritime Contact in SEA



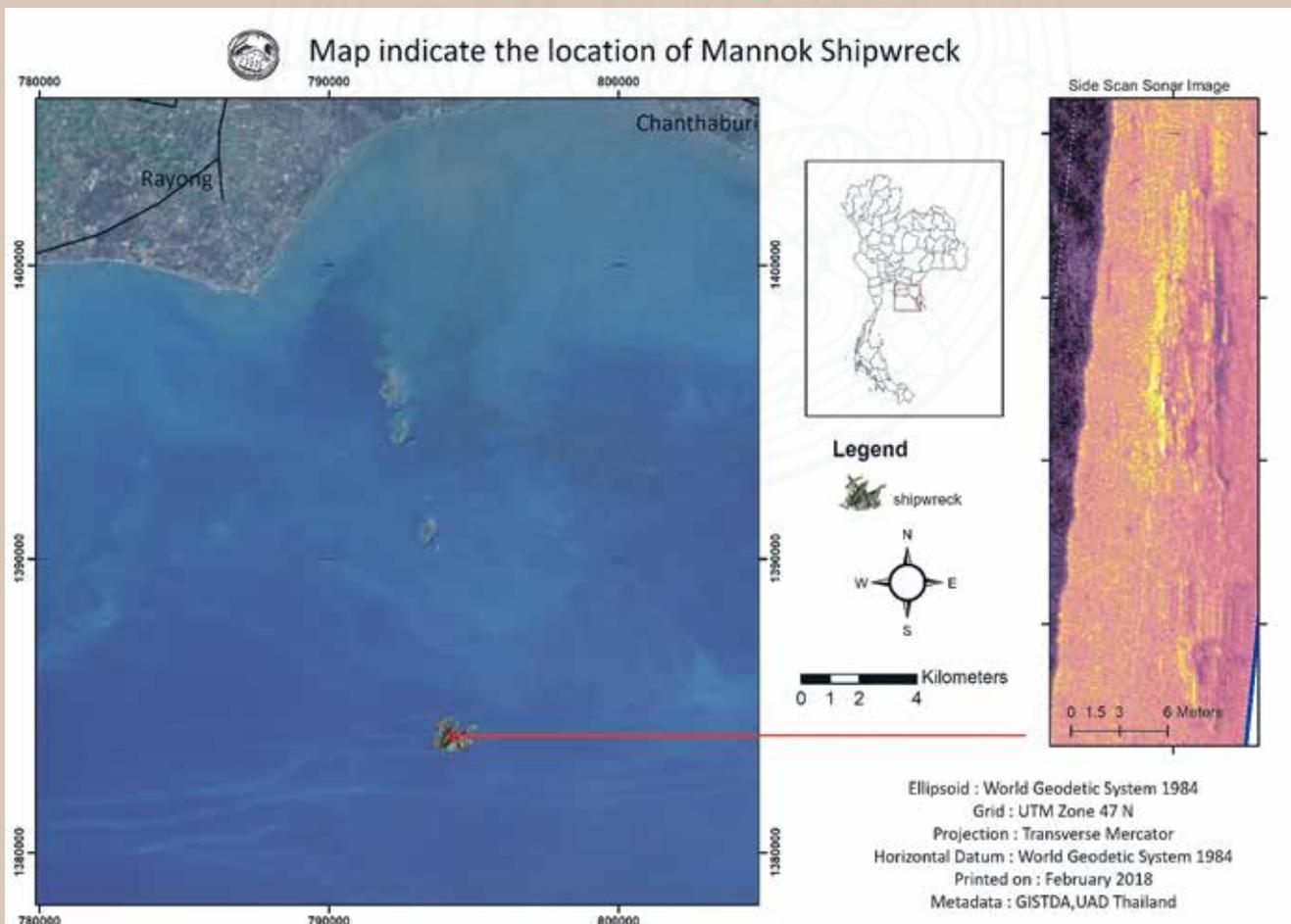
The Panoramic Sketch Technique that UAD uses in the Documentation of Shipwreck Site in the Past

Table Indicates the Details of the Shipwreck Sites in Thailand

ID	Site name	Province	Dating	Typology	Construction sequence
UAD01	Khram	Chon Buri	15 th c. CE	Junk	Frame base
UAD02	Prasae	Rayong	15 th c. CE	Junk	Frame base
UAD03	Pattaya	Chon Buri	16 th c. CE	Junk	Frame base
UAD04	Chang	Trat	19 th c. CE	Stream	Frame base
UAD05	Kradard	Trat	16 th c. CE	Junk	Frame base
UAD06	Rangkwieng	Chon Buri	15 th c. CE	Junk	Frame base
UAD07	Bangkachai 1	Chanthaburi	15 th c. CE	Junk	Frame base
UAD08	Petchburi bremen	Chon Buri	18 th c. CE	Stream	Frame base
UAD09	Talu	Rayong	18 th c. CE	Junk	Frame base
UAD10	Talu (Anchor)	Rayong	19 th c. CE	Junk	Frame base
UAD11	Klang	Rayong	18 th c. CE	Junk	Frame base
UAD12	Rin	Chon Buri	16 th c. CE	Junk	Frame base
UAD13	Samaesarn	Chon Buri	16 th c. CE	Junk	Frame base
UAD14	Pakrawa 1	Songkhla	16 th c. CE	Junk	Frame base
UAD15	Pakrawa 2	Songkhla	18 th c. CE	Junk	Frame base
UAD16	Klong Tha Rue	Nakhon Si Thammarat	16 th c. CE	Junk	Frame base
UAD17	Laem Poe	Surat Thani	18 th c. CE	Junk	Frame base
UAD18	Sametngam	Chanthaburi	17 th c. CE	Junk	Frame base
UAD19	Srichang 1	Chon Buri	16 th c. CE	Junk	Frame base
UAD20	Srichang 2	Chon Buri	15 th c. CE	Junk	Frame base
UAD21	Nachomtean	Chon Buri	16 th c. CE	Junk	Frame base
UAD22	Ban amphoe	Chon Buri	17 th c. CE	Junk	Frame base
UAD23	Samui	Chon Buri	17 th c. CE	Junk	Frame base
UAD24	Tao	Surat Thani	17 th c. CE	Junk	Frame base
UAD25	Srichang 3	Surat Thani	16 th c. CE	Junk	Frame base
UAD26	Hin lak bet	Chon Buri	16 th c. CE	Junk	Frame base
UAD27	Kra	Nakhon Si Thammarat	16 th c. CE	Junk	Frame base
UAD28	Tonhai	Prachuap Khiri Khan	16 th c. CE	Junk	Frame base
UAD29	Bangkachai 2	Prachuap Khiri Khan	16 th c. CE	Junk	Frame base
UAD30	Hardeep	Chanthaburi	19 th c. CE	Stream	Frame base
UAD31	Klang ao	Chon Buri	15 th c. CE	Junk	Frame base
UAD32	Kradan	Chon Buri	19 th c. CE	Junk	Frame base
UAD33	Bangkao	Surat Thani	16 th c. CE	Junk	Frame base
UAD34	Kok Yang	Trang	6 th c. CE	Sewn	Shell base
UAD35	Pattalung	Songkhla	16 th c. CE	Junk	Frame base
UAD36	Hinbush	Rayong	16 th c. CE	Junk	Frame base
UAD37	Lamsing	Chanthaburi	19 th c. CE	Stream	Frame base
UAD38	Hua khao ma rout	Pattani	19 th c. CE	Stream	Frame base
UAD39	Ratchaburi	Pattani	20 th c. CE	Stream	Frame base
UAD40	Bangkao	Pattani	19 th c. CE	Stream	frame base
UAD41	Chanthaburi	Chanthaburi	19 th c. CE	Stream	Frame base
UAD42	Ko kwang	Chanthaburi	6 th c. CE	Sewn	Shell base
UAD43	Kahmah	Chanthaburi	18 th c. CE	Junk	Frame base
UAD44	Hin ai lob	Chanthaburi	16 th c. CE	Junk	Frame base
UAD45	Phanom Surin	Samut Sakhon	9 th c. CE	Sewn	Shell base
UAD46	Mannok mail	Rayong	19 th c. CE	Stream	Frame base



The equipment such as ROVs that Equip with the GPS has been used to verify the accuracy of the shipwreck sites.



The integration of GPS, GIS and DEMs that archaeologist is able to detect and locate the underwater sites apparently.

Typology of Shipwreck Relating to the Sailing Route

Digital datasets of 46 shipwreck sites led to well plan of the underwater archaeological excavation that has been done from 2008 to 2018. Consequently, the recovery of 46 shipwrecks shows two different techniques of shipbuilding; shell base technique and frame base technique.

Shell base technique is considered to be a technology of the West. This technique originated in Egypt around 3,000 BCE. The technique has been widely adopted throughout the Indian Ocean and the Pacific Ocean, as confirmed by recovery of shipwrecks in the Mediterranean, South Asian and South East Asian waters. Shipbuilders build the outer shell of the ship before fixing a keel and frames into its shell. The shell base is the main structure of a sewn boat. The so-called sewn boat is a boat that its planks are stitched together with ropes and shape them in to the hull of the ship in order to hold the tension from water.

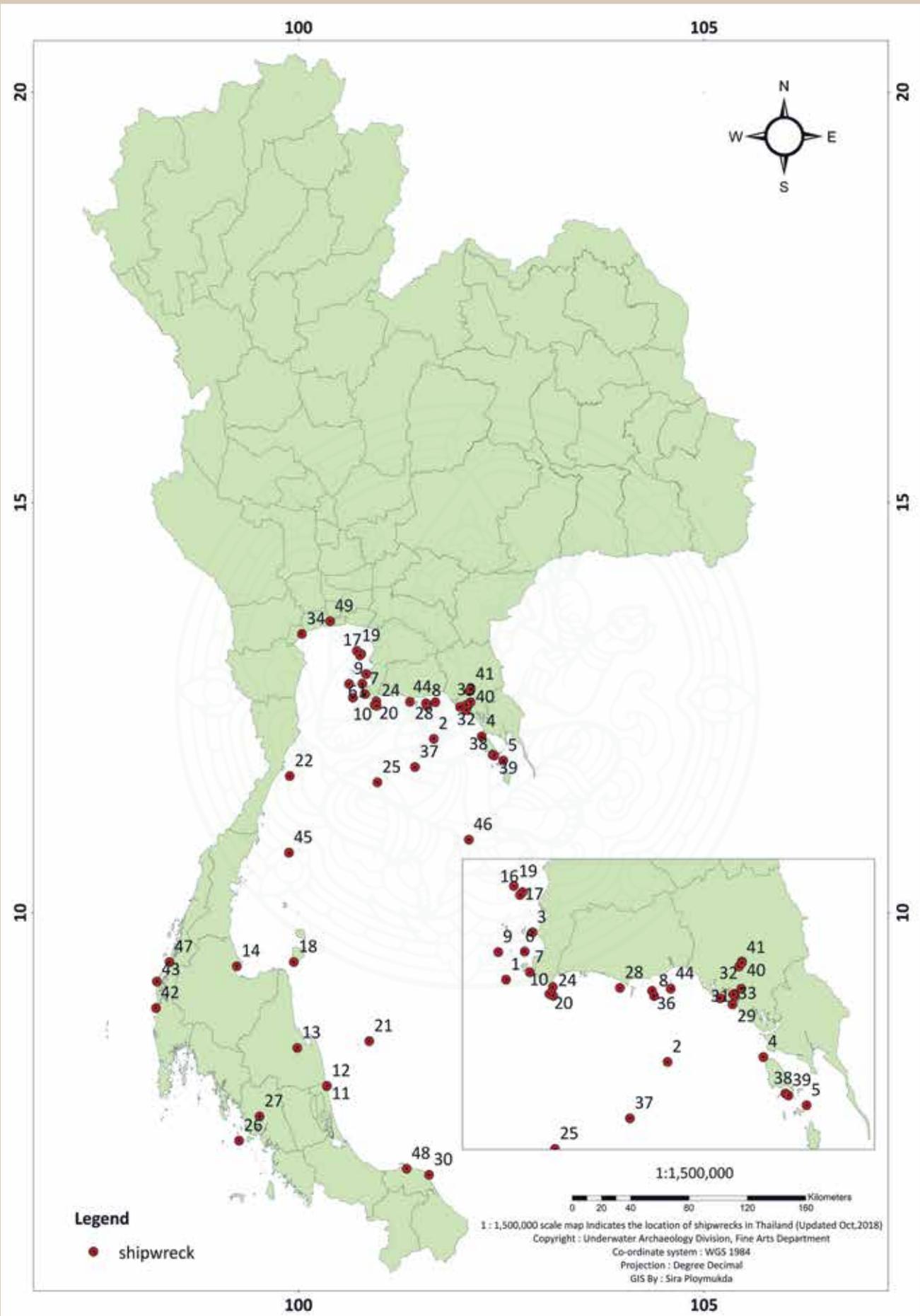
Frame base technique is regarded as the shipbuilding technology from the East, particularly, a Chinese junk. The frame base technique ship originated from the Southern Chinese around the 2nd century CE. The distribution of the technique to the South China Sea and the Gulf of Thailand is confirmed by recovery of the type of junk at shipwreck sites in the area. To build this type of ship, the shipbuilders have to design and calculate the exact structure in details. Beginning with making the keel of the ship and fixing frames with it. The ship's planks are fixed with wooden nails. This type of junk was found in the shipwreck sites in the Gulf of Thailand.

Moreover, technique in ship construction, digital datasets give us an insight of rigging. According to archaeological evidence rigging was first used 5,000 years ago.

However, the shipwreck called Abydos in Egypt dating back to 3,000 BCE. was a strong evidence indicating that people have made use of wind for sailing. The rigging was widely adopted by sailors throughout the Indian Ocean to the Pacific Ocean.

Around the first century CE, Arab navigators came to an understanding of the monsoon cycle which made it possible to sail across the ocean. South East Asia is involved in trade wind direction since 3,000 years ago.

An interpretation of the digital datasets of the 43 shipwrecks by identifying a mast and a mast step suggests that two types of rig have been known as Lateen rig and junk rig. It has been used for ship travelling across the ocean. Lateen rig has been used in several types of ship including sewn boat found in shipwreck sites in South East Asian waters. Junk rig is a type of Lateen sail but the height of the sail is shorter and more symmetrical than the original square sail. It gives a ship a good downwind situation. However, this type of rig requires seafaring skill of the sailor to maintain the direction of the ship in the course of upwind situation. The voyage of junk rig is naturally based on the direction of the monsoon wind.



Map indicates the location of Shipwreck Sites in the Gulf of Thailand and the Andaman Sea

The Prediction of Transoceanic Route through the Shipwrecks

The scientific methods used in this study complemented the prediction of the sailing routes in South East Asia can be divided into three lines: sailing lines of sewn ship, junk and steam ship.

Sewn ship sailed on both the Andaman Sea and the Gulf of Thailand. It is evident that the Kok Yang shipwreck which was a sewn ship sailing to the Andaman coast before sinking, it sailed to contact an ancient port site, known today Khuan Luk Pat (in Khlong Thaom District, Krabi Province), 5 kilometres from the recent shoreline.

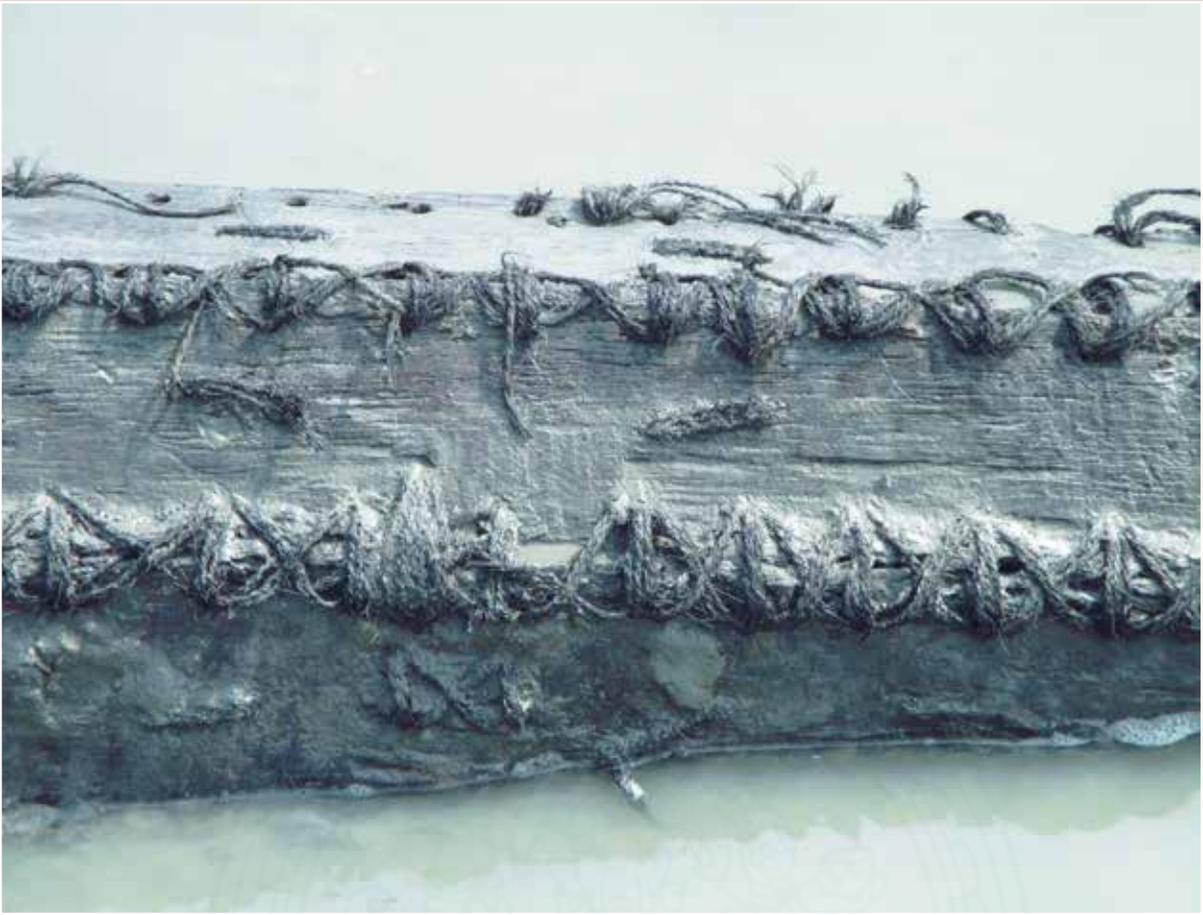
According to the data available, at present 32 shipwrecks found in the Gulf of Thailand were identified as a typical junk. However, this type has not yet been found in the Andaman Sea. Normally, the typical junk is not able to sail across the sea; it has to sail along the coastline. Therefore, the position of the wreck site is less than 30 kilometres from the shore. Naturally, the sailors need fresh water and food stuff for the long voyage beyond the sea. It is evident that before the sinking of Bangkachai II junk sailing to the South China Sea had sailed to a port near a seashore of Chanthaburi in order to load necessary things for long journey.

The era of steam ship technology in Thailand occurred around the nineteenth century CE. The steam ship powered by the steam engine could sail across the ocean without using the wind in a shorter time.

Conclusion

The scientific technology used in this research illustrates overseas route along the coastal area from the Andaman Sea to the Gulf of Thailand. The route had significant association with the development of ports and harbours in many areas of the Malay Peninsula including the establishment of trans-peninsula route. In addition, resources, monsoon winds, and ship typology are considered as main factors to determine ancient seafaring routes. Underwater archaeological exploration has provided confirmation with maritime trade route to Southeast Asia. This is because, a variation of commodities from the cargo of shipwreck sites belong to many part throughout the world.

However, there is insufficient archaeological evidence to identify the maritime route on the Andaman coast during the Ayutthaya period, and that it is necessary for further underwater exploration in the area.

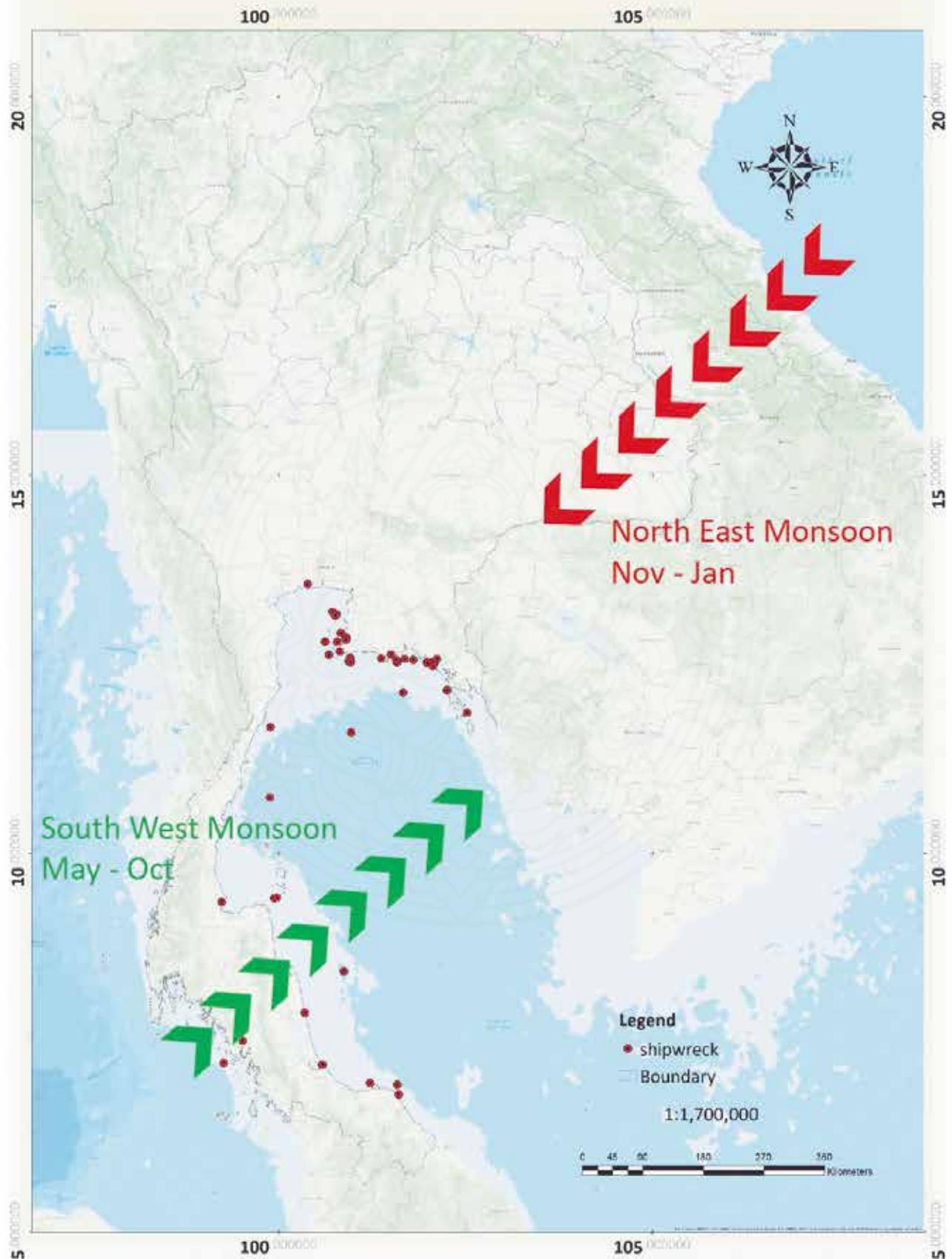


The sewn planks from Phanom Surin shipwreck that its planks stitched together with ropes and shape them in to the hull.

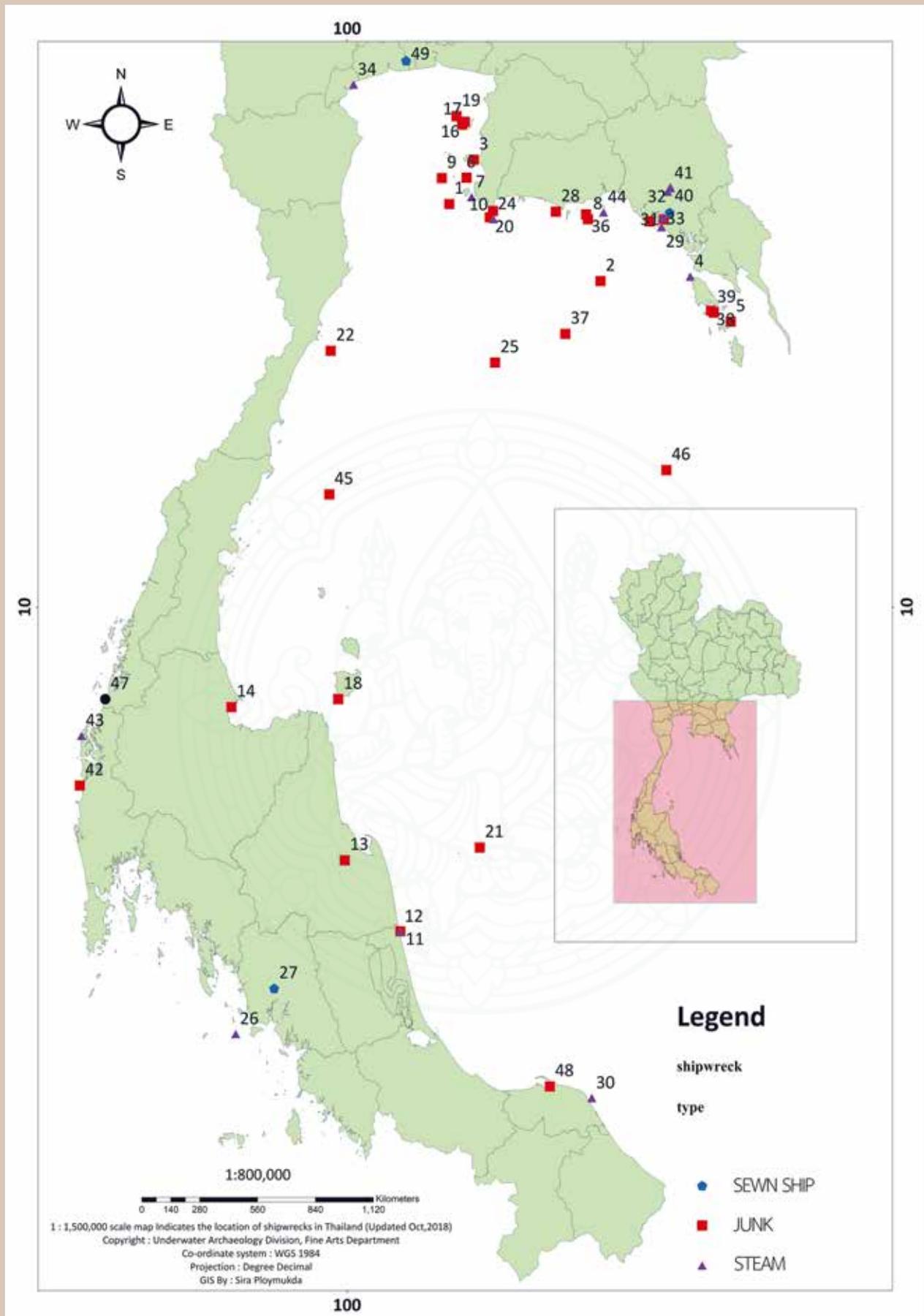


The frame of Ko Khram shipwreck that the keel and frames were made first then fixing planks later.

Map Indicate the location of shipwreck from the Andaman sea to the gulf of Thailand



Map indicates the direction of the monsoon wind in the South East Asia.



Map Indicating the Type of Shipwreck Founded in the Gulf of Thailand and the Andaman Sea

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Sorathach Rotchanarat is an archaeologist at the 4th Regional Office of the Fine Arts Department at Lopburi, Thailand. He completed a bachelor degree in archaeology (2009) and M.A. in Prehistoric Archaeology (2016) from Silpakorn University. After 5 years of working at the Archaeology Section at Lopburi, he supervised fieldworks at Ban Than Plasa, Nakhon Sawan (2013), and at Ban Pong Sawong (2014). He was the field site director of the project at Ban Samran Chai (2015 - 2016). His research focuses on prehistoric sites in Central Thailand. He also has skill in Ethno-archaeology as confirmed by his M.A. dissertation entitled “The Ethno-archaeology of Mani Indigenous Group in Trang and Satun, South of Thailand” (in Thai, 2016) and a paper’s presentation with English abstract entitled “Forager Mobility Strategies in Southern Thailand” at the 2nd SEAMEO SPAFA International Conference on Southeast Asian Archaeology (2016).

Some of his publications in Thai are as follows: The Study of Human Skeleton from Than Plasa Archaeological Site in Nakornsawan (2014), The Excavation Report at Ban Samran Chai (2016), The Study of Leaf-shape Point Bronze/Copper Ingot from Ban Samran Chai in Chaibadan District, and the Distribution of Bronze and Copper from Khao Wong Phrachan Valley, Lopburi (2017).

The Past and Present of Sea People A Link between Prehistoric Pictographs and Ritual Performance of the Chao Le

Sorathach Rotchanarat



Floating Ceremony of Urak Lawoi People at Sanga-ou Village on Lanta Island,
Krabi Province, Thailand

Abstract

This article is to provide a comparative study between the ritual of sea people and the depiction of pictographs on the rock wall in Phang-nga Bay, Southern Thailand, by using an ethno-archaeological and historical approach. Evidence including archaeological finds, historical accounts, and ethnographic data from interviewing has been collected and discussed with the objective to describe the relation between the rituals of sea people and the role of the pictograph. Many symbols of the depictions from rock art sites have been described. It is suggested that some animal and vessel depiction can be compared with the ritual of sea people.



The Scenery View of Viking Cave on Ko Phi Phi Island, Krabi Province, Thailand

Introduction

The presence of sea people found in historical accounts and, in terms of ethnography, suggest they are an aboriginal Austronesian people. The term “chao le” is a Thai word meaning people who earn their living by the sea along the coast and islands of the Andaman Sea, especially in the Phang-nga Bay. The location of the sea people community is situated not far from the rock art sites. By interviewing local people near rock art sites in Krabi Province, it is suggested that the pictographs are related to ancient sea people, and some of the depictions are similar to the beliefs of the sea people who travelled along the Phang-nga Bay. It is hypothesized that their rituals are linked to the prehistoric pictographs.

The aim of this paper is to discuss whether the pictographs of prehistoric people could be related to the practice of the sea people and what the significant depiction and performance are. A brief historical background of sea people from prehistory to the present will be given. Following by a description of sea people’s ritual performances from the field study, discussion of the comparative study of pictographs in the Phang-nga Bay and the Chao Le’s ritual significance is provided to obtain the result that would support the hypothesis.

The Presence of Andaman Sea People in Archaeological Evidence

The Phang-nga Bay is one of the natural wonders of Thailand. The west side of the southern coast is filled with limestone islands in the Andaman Sea. Many of the Limestone Mountains are punctuated by caves and rock shelters. According to archaeological data, many habitat sites and rock art sites have been found along the shore in Phang-nga Bay.

Evidence comes from archaeological sites in the area of limestone mountains and the outcrops near the shores in southern Thailand, such as Lang Rongrien rock shelter in Krabi Province about 37,000 to 27,000 years ago (Anderson 1990), which was in the late Pleistocene, when sea level rose. It was a factor that brought people to the Lang Rongrien rock shelter of the limestone hill. Based on important findings, it can be concluded that there is evidence of habitation by Homo Sapiens Sapiens.

Since 25,000 to 22,000 years ago sea levels had fallen below the present-day sea-level one hundred to one hundred and twenty meters (Dunn and Dunn 1977). Some of the limestone mountains became the mounds. The low sea level as such caused the distance from the Lang Rongrien rock shelter far away from the sea. Therefore, as there were some suitable places to live near the coast, the Lang Rongrien shelter was abandoned.

It is suggested that humans were inhabitants at Moh Khiew cave. Then between 22,000 to 12,000 years ago, hunter-gatherer communities spread over mainland Southeast Asia. The original inhabitants lived in caves and rock shelters, but later they learned to travel by sea, because it is easy to get food resources from the sea. Around 10,000 to 5,000 years ago at Sakai cave, it was found that some skeleton remains were Australo-Melanesian people (Surin Pookajorn et al 1994). Then, about 6,500 to 4,200 years ago, the migration spread into the middle of the



Phi Hua To Cave, Ao Luk District, Krabi Province



Viking cave, Mueang Krabi District, Krabi Province



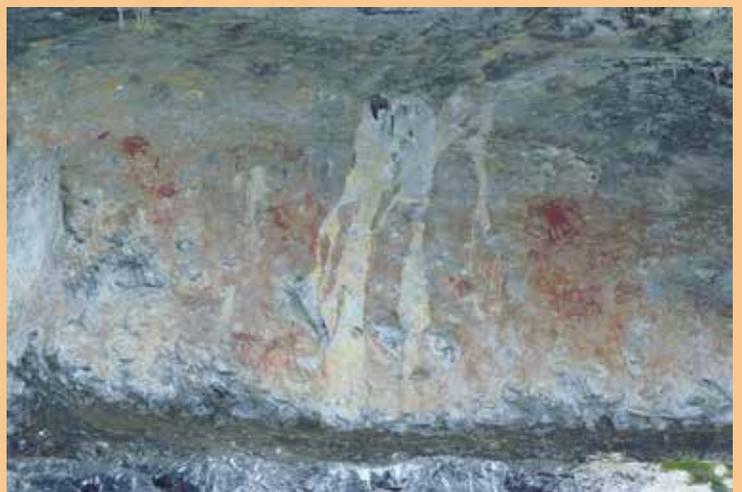
The Depiction of Human with Bird Head at Phi Hua To Cave



The Depiction of Bird at Phi Hua To Cave



The Depictions of Group of People at Chao Le Cave Ao Luk District, Krabi Province



The Scene of Pictographs at Laem Fai Mai Ao Luk District, Krabi Province

southern peninsula and contact with the communities at the coastal area took place. Prehistoric cave and rock shelter sites of the area are Tham Khao Khi Chan, Tham Pak Om, Khao Thao, etc (Pisit Charoenwongse et al 1987). It was to clarify the issues of population movement during the Late Pleistocene to the Holocene.

It is likely that the presence of sea people took place around 5,000 to 2,200 years ago which is confirmed by evidence found at Khao Thao and other rock art sites in Phang-nga Bay. The representative sites of this period are exemplified by Phi Hua To cave, Nak Cave, Khao Raya, Khao Khian, etc. The details of these rock art sites are as follows:

Phi Hua To cave is located in Ao Luk District, Krabi Province. It is a cave in a limestone mountain in Phang-nga Bay. There were found some human bone fragments and shell. The pictographs were found scattered on the walls and ceilings of caves in large groups. The pictographs at this cave are very different from other sites in Thailand. The images found were of people and human limbs, for example hands and feet. Animals were birds, fish, squids, crocodiles, hedgehogs, and shrimp. The figures of fishing tools and vessels such as nets and boats were found too. Most images are painted in red, brown, black and yellow. They used techniques as contours, inside dots and geometric patterns.

Nak cave is located in Song Phi Nong Island, distant from the Khao Raya to the south about one kilometer. There are two large caves at the north end of the island. At the north side of the island there is a cave shed with paintings appearing in red color. The pictures shown include boat images and pictures of fish, using external sketching techniques. Some solid coloring and pointed patterns were found. Some parts of human bones, animal bone fragments, pottery fragments were also found on the floor of the cave. By comparison, the boat image at Nak Cave is similar to that of the boat that found at Khao Khian and Phi Hua To cave.

Khao Raya is a limestone outcrop located on the west side of the Ko Panyi Island. On the eastern side of it, there are red pictographs, geometric lines, parallel lines, intersecting lines, and a grid pattern. It is assumed that the color of the pictographs might determine an age of about 5,000 - 3,000 years ago (Jureekamol Onsuwan 1994).

The pictographs at Khao Khian appear in seven groups. They used varieties of colors, for example yellow, orange, and red. The images are both of humans and animals. Some animal images are dolphins, crabs, and lizards.

The pictographs at Khao Phra At Thao, Phang-nga Province, were painted in red and yellow color. There are pictures of prawns and fish such as dolphins, sharks, mackerels, and sea bass (Torsakul Thirapat et al 1997).

Laem Chao Le (Sea People Cape) is located in Tambon Laem Sak, Ao Luk District, Krabi Province. There are paintings on the hillside of limestone cliffs not far from the Fai Mai cape. It is located about 2.6 kilometers south-east of the city. The paintings are colored in red and orange.

Chao Le cave is located in Ao Luk, Krabi Province. There are monochrome pictographs in red and brown. Three groups of the pictographs were found. The first group is a picture of two men sitting face to face, the second is a picture of a man carrying a bird or a kind of animal and another picture shows a man riding a horse or donkey.



The View of Laem Fai Mai in Ao Luk, Krabi Province



The Pictographs at Laem Fai Mai in Ao Luk, Krabi Province

At Laem Fai Mai (Fire cape) in Ao Luk, Krabi Province, red pictograph is seen on the cliff. There are human figures, jellyfish and stingrays.

Laem Thai Raet (Rhino cape) is located at Ka Rot Island, Krabi Province. Red pictographs on the cliff of a limestone mountain depict a figure of dog head, a human figure, a rhino figure, and geometric figures.

The pictographs on the rock walls of the limestone outcrops in Phang-nga Bay and Ao Luk Bay can be dated back 5,000 to 3,000 years ago according to the shell specimen's dating of the quaternary research at the limestone outcrops by geologist (Sinsakul 1987).

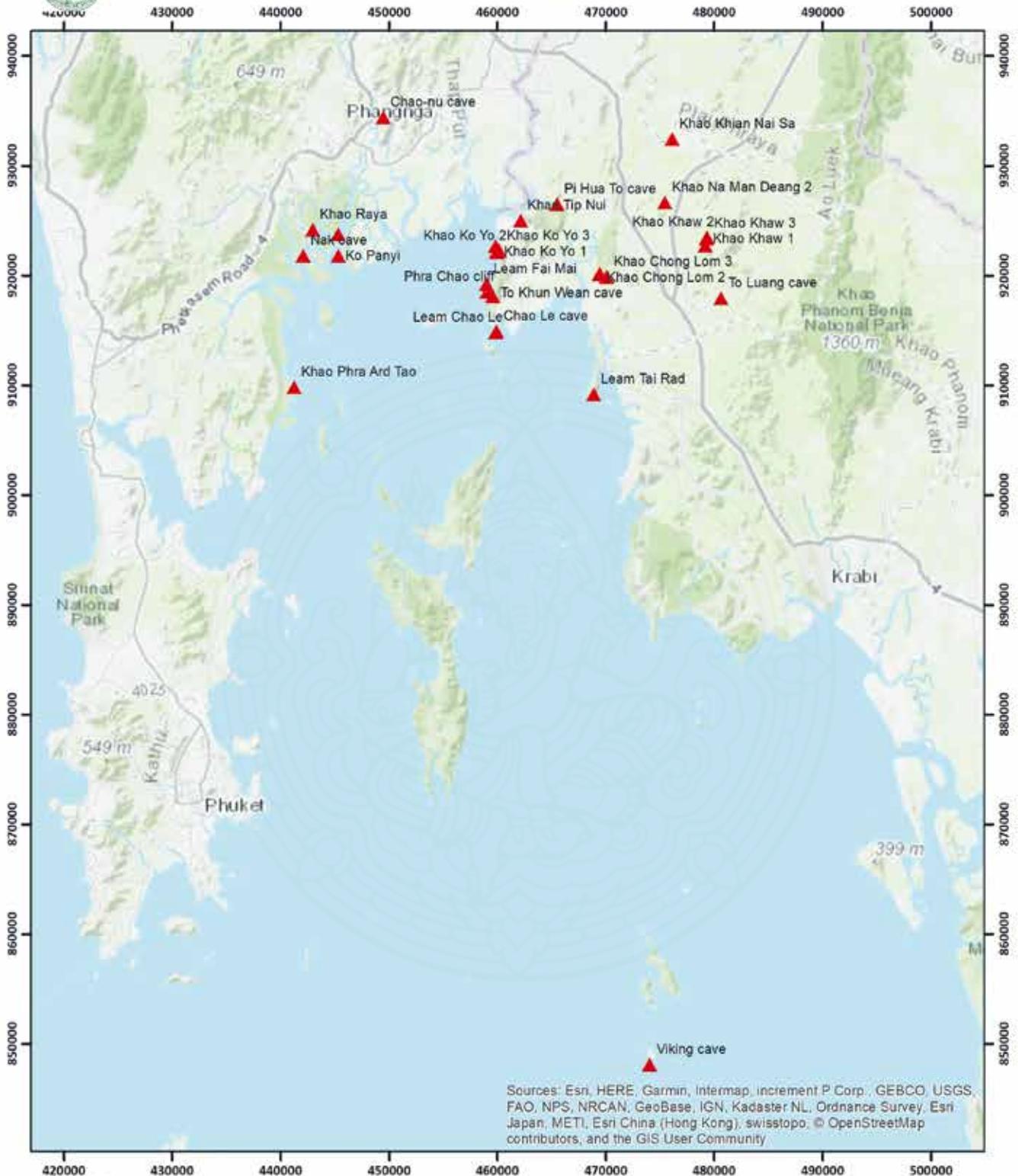
Rock art is wide spread throughout Thailand. The first site was explored at Khao Khian in 1903 (Lunet de Lajonquière 1907). More than 155 sites are known (Srisuchat 2013). Among these, 22 sites are considered to be rock art of the prehistoric to historic periods in southern Thailand that could be linked to the sea people. In this paper, the study focuses on rock art sites located in Phang-nga Bay as shown in Table 1.

TABLE 1 : ROCK ART SITES

SITE NAME	UTM_X	UTM_Y	DISTRICT	PROVINCE	PERIOD
Viking Cave	474044	848092	Mueang Krabi	Krabi	History
Khao Khian Nai Sa	476132	932464	Mueang Krabi	Krabi	Prehistory
Phi Hua To Cave	465504	926510	Ao Luk	Krabi	Prehistory
Khao Chong Lom 1	469484	920151	Ao Luk	Krabi	Prehistory
Khao Chong Lom 2	469446	920169	Ao Luk	Krabi	Prehistory
Khao Khao 1	479202	922752	Ao Luk	Krabi	Prehistory
Khao Khao 2	479338	923478	Ao Luk	Krabi	Prehistory
Khao Khao 3	479312	923384	Ao Luk	Krabi	Prehistory
To Luang Cave	480638	917925	Ao Luk	Krabi	Prehistory
Khao Na Man Daeng 2	475446	926669	Ao Luk	Krabi	Prehistory
Laem Thai Raet	468891	909189	Ao Luk	Krabi	Prehistory
Khao Tip Nui	462145	925012	Ao Luk	Krabi	Prehistory
Leam Fai Mai	459004	919238	Ao Luk	Krabi	Prehistory
Tham Laem Yo Cliff	459857	922701	Ao Luk	Krabi	Prehistory
Khao Ko Yo 1	459935	922114	Ao Luk	Krabi	Prehistory
Khao Ko Yo 2	460155	922221	Ao Luk	Krabi	Prehistory
Khao Ko Yo 3	460200	922244	Ao Luk	Krabi	Prehistory
Phra Chao Cliff	459036	918521	Ao Luk	Krabi	Prehistory
To Khun Wean Cave	459586	918130	Ao Luk	Krabi	Prehistory
Laem Chao Le	459839	914828	Ao Luk	Krabi	Prehistory
Chao Le Cave	459903	914929	Ao Luk	Krabi	Prehistory
Khao Chong Lom 3	470069	919866	Ao Luk	Krabi	Prehistory
Chao Nu Cave	449489	934433	Mueang Phang-nga	Phang-nga	Prehistory
Ko Panyi	445327	921818	Mueang Phang-nga	Phang-nga	Prehistory
Khao Khian	445334	923765	Mueang Phang-nga	Phang-nga	Prehistory
Nak Cave	442108	921827	Takua Thung	Phang-nga	Prehistory
Khao Phra At Thao	441252	909811	Takua Thung	Phang-nga	Prehistory
Khao Raya	442978	924191	Takua Thung	Phang-nga	Prehistory



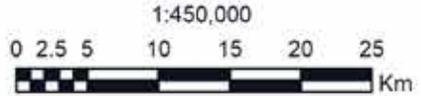
Map of rock art sites in Phang-nga bay Southern, Thailand



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community



Legend
 ▲ Rock art site



Ellipsoid.....World Geodetic System 1984
 Grid..... UTM Zone 47
 Projection..... Transverse Mercator
 Horizontal Datum.....World Geodetic System 1984
 Printed on..... November 2018

The Sea People in Historical Accounts

The sea people appeared in the historical accounts as follows:

In 851 CE, Sulaiman or Solaiman al-Tajir, known as Solomon the Merchant, a Muslim merchant from Siraf in modern-day Iran, traveled to India and from Bengal to China via the Andaman Sea. In the course of his voyage near the West coast of Southern Thailand, he mentioned a community settled along the shore of a town 'Kâlâh Bar', where the people wore a single piece of loincloth (sarong); the men were skilled in swimming and oaring a dugout canoe from one wooden log (lumber), carrying coconuts, sugar cane, banana and alcohol made from coconut (T'Serstevans 1959: 61-68). It is believed that 'Kâlâh Bar' is the same as the known word 'Kalâh' or 'Kalâh-bar' referred to in several Arab and Persian accounts from the ninth to twelfth century CE, which is identified with 'Kra' and/or 'Takola' on the West coast of southern Peninsular Thailand, located at Ranong, Phangnga, Krabi and Trang Provinces (Srisuchat 2014: 12, 117-119). It is conjectured that the indigenous people of the area mentioned in the aforementioned text were 'Orang Laut' or 'Chao Le'.

Between 1313 and 1340 CE, Wáng Tà Yúan, a Chinese traveler in the south Sea reported several countries in the Malay Peninsula including Lóng-yā-moén, literally meaning the 'Dragon-teeth Strait'. The Strait was the Keppel Harbour passage between the south coast of Singapore Island and Blakang Mati. The Chinese traveler referred to the barbarians called 'Tān-mǎ-shí' (Malay: Temasek) which were the Orang Laut or coastal aborigines who were mentioned by most later travelers in this region Wang Ta Yuan also mentioned that the Orang Laut were engaged in piracy, that they gather their hair into a chignon, and wear short cotton bajus girded with black cotton sarongs (Wheatley 1980: 82-3).

During the late fourteenth century CE, according to Sĕjarah Mĕlayu (the Malay Annals), the Island of Temasek was founded by a Sumatran Prince and renamed Singhapura or Lion City, situated within the Majapahit (dynasty from Java) sphere of influence. Singhapura city controlled the Keppel Harbour passage and the majority of Orang Laut settled on the island. To the south-west, a community of Orang Laut haunted the shores of Keppel Harbour and perpetrated outrages on passing junks (Wheatley 1980: 304-5).

The book of MǎHuān, a Muslim interpreter who accompanied the fourth and later expedition of Chèng Hō to explore the West by a caravan of ship from China, recorded in 1451 about Melaka and a community of Orang Laut that had built their huts against the shore, and they revered the laws of Islam, and observed its fasts and penances. The bodies of people were rather dark in color. Their houses were raised on one-story platforms. Most of the inhabitants were occupied by fishing, for which they ventured out to see in boats hollowed from a single tree (-trunk) (Wheatley 1980: 311, 322-2).

In the sixteenth century CE, Tomés Pires' account tells us that the Keppel area was one of the earliest settlements of the Island of Singapore; they (Orang Laut) sold fish and fruits to the trading vessels that passed the area.



The Urak Lawoi People at Ko Lanta Island, Krabi Province

The Moken Village at Ko Surin Island in Phang-nga Province



“Kabang” The Moken Traditional Boat

Between 1819 and 1820 it was recorded by the British who occupied Singapore that there were already thousands of indigenous Malays having migrated from Malaysia to live there and the Kellang River and other rivers had been home to the Orang Laut or Sea Nomads with one hundred people.

In 1922, W.G. White wrote the treatise entitled “The Sea Gypsies of Malaya” in which he recorded the Moken people that he met at the Merqui Peninsula. He mentioned that the Moken language is divided into four languages, one of which is the Orang Laut language on Phuket Island. It is believed that he means the language of the Urak Lawoi or referring to the language that is used by the Moken people living along the Rawai Beach, and they have been getting married to the Urak Lawoi.

In 1958, Hugo Adolf Bernatzik mentioned in his book entitled “The Spirit of the Yellow Leaves” in which he records a trip to the Moken on the Mergui Islands. He said that Moken were captured by the Malay people and married to the Malay-Chinese and Negritos to become Orang Laut or Orang Malay.

In 1965, David E. Sopher wrote the book entitled “The Sea Nomads” presenting the whole of Southeast Asia’s sea people. All relevant documents have been gathered about the Chao Le. He found a record of Nelson Annadale (1903), the first zoologist and anthropologist who explored Southeast Asia. In his note, he stated that he had met the Orang Laut in Trang. It is considered to be the earliest recorded mention of the sea people before White wrote about the sea gypsies in the book “The Sea Gypsies of Malaya.”

In 1972, David Hogan has written an article on “Men of the Sea: Coastal Tribes of the South-West Coast,” which summarizes the three groups of sea people, the Moklen, the Moken and the Urak Lawoi. His study was about the distribution and population of the Chao Le, their social and cultural behavior, living, languages, and rituals. It is considered as one of the important ethnography works that provides very details of the Sea people.

In 1989, Aporn Ukrisana studied the floating boat ceremony of the Chao Le at Ko Lanta. The findings indicate that the essence of the ceremony includes both communal art and the belief of improving the destiny of the community for the next future. The community leaders together with all the members will build and decorate the pajak boat. Before launching it to the sea it will be loaded with all the bad luck and grievances of the community in order to cleanse the community. Then the boat with its negative load will be put to sea. The whole ritual is accompanied by merriment, like singing, drinking and dancing.

In 1991, Prasit Auetrakulvit reports a comparative study of the prehistoric pictographs in Phangnga. He proposed the idea that the pictographs have likely been painted by sea people at that time because the environmental factors and climate did not change much since five thousand years ago to present. The sea people are probably the only ones who were skilled in this area, who earned their living by finding food from the sea. Therefore, they created art due to their beliefs and rituals. Unfortunately, prehistoric pictographs cannot be interpreted as a complete



The Urak Lawoi People setting Their Fish Traps before sinking it into the Sea.



The Urak Lawoi People sinking their Fish Traps into the Sea to trap Fish.

story. Most of them are drawn and depict a sole figure and no link with each other. However, the depiction of overall pictographs of the sites implies perception of the artist and their group about the belief in respect for ancestors, faith and respect for animals or animism, the belief in infertility, and spirits.

In 2014, The Thai book entitled “Taksa Watthanatham Chao Le: Roi Rueang Rao Chao Le (Cultural Skills of the Sea People: Hundreds of Stories of Sea People)” edited by Naruemon Arunothai, presents the data of three groups of the sea people. It gives information to clarify the question about who are the sea people, where they lived and what are their ritual beliefs.

In 2016, several field reports from Thailand gave a number of populations of Urak Lawoi or Orang Laut in Southern Thailand, differently; ranging from two thousand to seven thousand members residing on the islands of Phuket, Phi Phi, Cham, Lanta, Bulon, and on Lipe and Adang of the western coast of Thailand.

Recent researches on the issue summarise that there are three groups of sea people in Thailand normally called “Chao Le”: (1) “Moklen” are sea-faring nomads. Moklen is their own dialect to call themselves meaning people of the sea. They usually live on islands and the seashore along the Andaman Sea. Mainly villages of Moklen are situated in Phangnga Province. (2) “Moken” is another group of sea people. It is also an endonym word to call themselves. Their villages are located on Ko Surin, a group of small remote islands in the Andaman Sea approximately sixty kilometers distant from the western seashore. (3) “Urak Lawoi” is the main group of sea people in Thailand. A large number of their population is settled on Ko Lanta about eighty kilometers away from the town of Krabi. According to thesea people folklore especially by thr Urak Lawoi, the fish symbolizes ancestor spirits, the bird symbolizes shamanism, and boat symbolizes a vessel which carries the spirit after death back to Gunung Jerai mountain in Kedah State of Malaysia, where the spirit ancestor lives eternally. There are many symbolic representations. All are depictions on the rock wall of many caves in Phang-nga Bay. It is conjectured that sea people may be related to all of these depictions.

The Sea People Ritual

There are different beliefs about the ancestors and the natural phenomena, however, a common traditional belief is that the spirits of the ancestors are in animals, places or things in their daily life. Thus, in the making of the ceremony, the sea people would invite the spirits of the ancestors to participate in the ritual performance. Otherwise there are ghosts that lurk in nature, such as ghosts in mountains, forest, islands, capes, bays, the ghosts in the water and aquatic animals as well.

Among the Moken, the worship of two spirit gods, the good and the devil is performed by a shaman. Toq Mor is a shaman who takes on the principle role in the spirit festival. Devotional offerings made at festivals include popcorn, liquor, honey, betel, meat and blood



Ancestor Shrine at Ban Hua Laem in Ko Lanta, Krabi Province



The Figure of Bird on the Roof of the Ancestor Shrine represent the Symbol of Toq Bu Rong



“Pajak” a Miniature Boat in Floating Ceremony



The Procession of Pajak Boat around the Ancestor Shrine at Ban Hua Laem, Ko Lanta Island, Krabi Province

of ducks, chickens, dolphins and turtles. Some Moken totems called “Lor Bong” or spirit poles were used in the feast on the fifth lunar month usually in April or May. It is a festival about the changing seasons between summer and monsoon season. Shamans use the pole as the instrument to contact with spirits. The Moken gather ritual offerings including cakes of rice flour, liquor, betel nuts and cans of soda. The participants will celebrate by singing and dancing in front of the spirit house. The spirit pole is of carved wood decorated with paintings and some figures such as turtles and boats. The turtle symbol contains many meanings to the Moken. It represents all women, especially life-giving mothers. Harpooning a turtle means to marry her. Also the turtles are involved in many important Moken rituals.

The ancestors of the Urak Lawoi usually called “Toq” as a title them. A sacred space for the presence of the ancestral spirits is put in places like islands or stones or specific areas within the house. According to Aporn Ukrisana (1989), the names of the ancestors of the Urak Lawoi are as follows:

Toq Pi Ti Ha Va is the ancestral spirit of the clan. There is a shrine at Ban Hua Laem Klang. Some folktales told that she was a wife of Toq Adap who was the creator of the human.

Toq Ya Ko Ber Ra Tai or Toq Laem Thong is the ancestral spirits of the Ban Hua Laem community. His symbol is a snake. They believe that he is the protector of the garden and the paddy fields.

Toq MerTek Hu Due is ancestral spirit haunting the freshwater pools on Ko Lanta, situated between Ban Hua Laem Klang and Ban Hua Laem Sut. Some folks told that one day a man walked into the jungle to cut a plant for food. On the way back when he was carrying the food back to the boat he walked through the water pool. By accident he stepped down and sank into this pool. It is believed that the pool is the sacred place of the ancestor.

Toq Chaen is an ancestral spirit that dwells in a stone shaped like a boat. Folks say that the stone was originally a ship of Toq Chaen, who came with a group of the crew on arrival at the bay. A storm was beating until the boat was overturned and became a stone. In the South, there is a group of rocks that is believed that a crew that comes with the boat, and another rock in the East, shaped like a jar. It was a fish jar that fell from the ship when it sunk. When they want to do the ritual in this bay, the shaman will have to perform the ceremony to commemorate the consecration.

Toq I-sak Ka Ou is the original name of the bay on Ko Lanta. There are rocks that look like stingrays. Chao Le believe that they are the lure of the ancestral spirits.

Toq La Kae Tam Ba Tu is an ancestral ghost on the northern mountain of Ko Lanta. His symbol is spiny rock crab. Folks told that he was from Si Nga city. He can pull the coconut tree by his own hand. He can disappear and be immortal. He had taught the Chao Le to practice the floating boat ceremony. This legend relates to the fact that the Chao Le people do not eat spiny rock crab. It is believed it is the symbol of the ancestral spirit.



Dancing around the Pajak Boat in Floating Ceremony



“Toq Mor” Who Take the Principle Role in the Floating Ceremony Dispelling Evil and Bad Luck before Floating a Pajak in to the Sea



Bird Figure in Pajak Boat



Turtle Figure in Pajak Boat

Toq Bu Rong is the ancestral spirit of the Chao Le community at Ko Cham. Folks told that there are some anthills on the ground at the original shrine, its shape looks like a bird's head. Some folks said that, one day while they were facing the deep sea monsoon, incidentally, a bird came to the boat. Then it was caught and seated at the bow of the boat. Suddenly the rain became calm. So, they could escape from the wind and rain to the island. It is believed that this bird is the ancestral spirits that helped them to be safe. Some folks might say that Toq Bu Rong was an elder man who had the expertise to detect the wind direction. After he died, they respect him to be an ancestor. At the floating ceremony, the bow of the Pajak boat will be decorated by a bird figure to represent the symbol of To Bu Rong who will guide the boat to the right direction.

Toq Bi Kong is a shark that the Urak Lawoi at Ban Bo Nae told that one day the fisherman went out to sea fishing. Accidentally his ship hit a monsoon and the ship collapsed. It appears that the Toq Bi Kong informs of the shark had saved his life and brought him back to the shore. So, they will make a pilgrimage to Toq Bi Kong on the night of 11th, 12th or 13th and during that time, do not harm or eat any fish such as shark, stingray and another fish ever.

Apart from this, Dugong (Dugong Dugon) is a marine mammal that the Urak Lawoi people respect. There folks told that a pregnant woman who was the youngest sister wanted to eat seaweed. She told her husband to take it. Her husband had dived into the sea to get a seaweed but unfortunately, he drowned. Then the girl jumped down into the sea and drowned too. Finally, her body transformed into the shape of a dugong that has breasts and little hands for swimming. Therefore, they pay respect to her. They have a rule that the youngest daughter is not allowed to eat a dugong.

Floating Ceremony

Urak Lawoi, the sea people, who are mainly inhabiting Ko Lanta Island in Krabi Province celebrate an important festival of voyaging spirit boats into the sea called "Ari Pajak," or floating ceremony. The festival is the occasion to pay homage to their spirits and to dispel evil and bad luck, and start a new life and pay respect to nature. They will prepare offerings of food and other stuff including chicken curry, seven colored sticky rice, sweetmeats, wax candles, betel nuts, leaves, etc. In this ceremony, they did the rite of erecting the masts and building of a miniature boat to be the vessel that would take their ancestral spirits back to Gunung Jerai (the Kedah's peak in the Kedah state of Malaysia) or the land of their origin, according to their belief. The boat called Pajak is about three meters long and has three compartments: one for the crew, a kitchen, and the other for captain or 'To Khi Ri'. The prow was decorated with carved wood depicting sea turtles.



The Depiction of Human with Bird Head at Phi Hua To Cave



The Depiction of Bird and Sailboat at Phi Hua To Cave

Symbols in the Floating Ceremony

Decoration and carving of various animals and geometric forms appear in the Pajak boat as a symbol of various things and conveys a particular meaning. A snake pattern is a symbol of Toq Ya Ko Ber Ra Tai, the ancestor of the Urak Lawoi at the Shrine House in Ban Laem Sut. The jagged pattern represents a shark or Toq Bi Kong. The head of the boat decorated with birds is symbols of the Toq Bu Rong. Generally, birds are believed to be symbols of the ancestor of Urak Lawoi. But after moving to different places, each group would have a symbol of their own, which became different. Toq Bu Rong (bird) is just a symbol of the group of the sea people at Ko Cham. However, they used to make a picture of the bird on the boat's head, so that Toq Bu Rong will keep the boat headed back to the Gunung Jerai. Later, they usually decorate Pajak boat with symbols such as turtles or other figures.

Discussion

The comparison study of pictographs, historical accounts, and ethnographic data from participant observation in floating ceremonies of the Urak Lawoi at Ko Lanta in Krabi Province provide significant results as follows:

1. From the early historical accounts that mentioned the sea people with the later period of rock art that found in Phang-nga bay there are still missing data for one thousand years between the last period of prehistoric people, who created rock art and who have traditionally made rituals.

2. The comparison study of the prehistoric pictographs and the ritual performances of sea people give as result that they have similar animal figures, for example humans, birds, fish, sharks and boats especially at Phi Hua To Cave and Viking Cave, there are all figures that are mentioned earlier at these two sites. Although there is no comparison study of DNA analysis between prehistoric skeletons from archaeological excavations in this area that could be compared with the sea people. Therefore, the hypothesis of the relationship between sea people is not completely convincing with rock art. It needs further study about ancient people's genetic to testify this hypothesis.

3. Their perception about the belief of sea people about Gunung Jarai mountain which is the cultural landmark in early historical period in Malay Peninsular is a result of the assimilation of indigenous and religious belief.

4. The zoomorphic figure such as bird, snake, turtle and fish from the prehistoric pictographs that might influences people in historic period to create the bow and the spirit pole in zoomorphic figure. It is exemplified by building of a miniature boat (Pajak boat) with its prow decorated with carved wood depicting sea turtles or birds; building of a spirit pole is of carved wood decorated with paintings of turtles and boats.

Conclusion

The previous and recent studies of prehistoric pictographs found in southern Thailand suggest that most are located in Krabi and Phang-nga, the area inhabited by the Chao Le people who have been prevalent near the rock art sites. Their lifestyle is related to the sea. They usually use a boat as a vehicle and simple fishing equipment, such as the net and fish trap, including a floating ritual, which floats the spirits after dead back to Gunung Jerai mountain. That is the origin of the Chao Le and lives there eternally with their ancestors. In addition, the belief in the ancestor's worship using animal symbols to represent ancestors and animism. Their beliefs, more or less, link to the pictographs exemplified by the figure of the bird that related to the belief of Urak Lawoi, the symbol of the bird, the head of the boat meaning 'Toq Bu Rong' in the Urak Lawoi's word is a name of their ancestor. They believe that he can control wind and rain. The figure of fish refers to the 'Toq Bi kong'. A picture of a 'Prajak' boat at Phraya Nak Cave is regarded to a boat used in the floating ceremony which represents the ship carried people and animals soul across the ocean of this life to the next life.

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From Highland to Maritime Trade: Lan Na's Highlander and their Jungle Products

Saiklang Jindasu



Thanon Thong Chai Mountain Range, Mae Sariang District
Mae Hong Son Province;
The main area of Lan Na's jungle resources

Abstract

The aim of this article is to present the role of the Lua, ethnic highlanders, as supplier of jungle products to the Tai, the main population of Lan Na, the kingdom of northern Thailand. The socio - economical interaction of the Lua with the royal government of Lan Na, controlled by the Tai, is discussed in the paper. The research combines evidence from Thai and foreign accounts and archaeological findings from excavations at dwellings, industrial sites in the Chiang Mai - Lamphun basin and on the highland's burial sites of Thanon Thong Chai mountain range, and shipwreck sites in Southeast Asia. Available evidence suggests that the Lua's skill in iron metallurgy and gathering jungle products and the high demand of the jungle products for the land and maritime trades made the Lua indispensable to the state policy on monopoly of natural products trade. Therefore the trade control mechanism as such was a factor of Lan Na's prosperity, and it brought relative wealth to the Lua. Furthermore, the Lan Na's government granted special privileges to the Lua on labor exemption and not being enlisted in the army of the kingdom.



The present day jungle products are still resources that the highlanders gather them for selling to people; the photo shows a highlander's shelter of selling products, located on Hot - Mae Sariang Highway.

Introduction

The Thai term “Lan Na” means “Million Rice Fields”. It is referred to the ancient state/kingdom of upper northern Thailand, the area that comprises the present day eight provinces, namely, Chiang Rai, Mae Hong Son, Chiang Mai, Lamphun, Lamphang, Phrae, Nan and Phayao.

Prior to the foundation of the Lan Na kingdom covering the aforementioned area in the reign of King Tilokarat (Tilokaraja) of Chiang Mai (reigned 1441 - 1484 CE), there had been several states in the upper North. The main states were Hariphunchai (Haribhujaya; 800s - 1281 CE), which today consist of the provinces of Lamphun and Lamphang, Hiran Nakhon-Ngoen Yang (638- 1261 CE) at Chiang Saen, today a district of Chiang Rai, Chiang Rai (1262 - 1898 CE) at today Chiang Rai Province, Phu Yao (1100s - 1338 CE) at today Phayao Province, Wiang Kum Kam - Chiang Mai (1286 - 1898 CE) at today Chiang Mai Province, the Nanthaburi (Nandaburi, 1290s - 1898 CE) at today Nan Province, and Phrae (1290s - 1898 CE) at today Phrae Province.

Chiang Mai (the first official name was: Nopphaburi Si Nakhon Phing Chiang Mai) has been established as the capital of the north western area of Lan Na in 1296 by King Mangrai (reigned 1260 - 1311 CE). After the victory of King Tilokarat throughout the western and north eastern area, Chiang Mai finally had been the capital of the Lan Na kingdom since 1449 CE. Therefore, the northernmost area of Lan Na extended to Jinghong (Thai: Chiang Rung, today a part of Yunnan, Southern China) and the southern border land adjacent to Tak, a town of the Sukhothai kingdom. The west of Lan Na extended to the Salawin River and the east to the Mekong River. Geographically, this mountainous area includes the valleys and the river basins between the mountain ranges forming several plains providing people for dwelling.

The area of Lan Na is divided into two parts (the West and the East) one by the Phi Pan Nam mountain range which is the origin of three main rivers, namely, the Yom, the Wang and the Ping. The Nan River originates from the Luang Prabang mountain range in the East, at the border of Lan Na and Lan Xang kingdoms (modern Laos PDR). The capital cities, towns and villages of the aforesaid states are located in the river basins and on the river banks. The four rivers, the Ping, the Wang, the Yom and the Nan flow southward joining at same place in the lower north and upper central Thailand becoming the Chao Phraya River at Nakhon Sawan Province, passing the capital city of the Ayutthaya kingdom before flowing into the Gulf of Thailand. Therefore, transportation and contact between the states of Lan Na and the southern kingdom, that is to say, Sukhothai, Ayutthaya, Thon Buri and Ratanakosin, has been greatly facilitated by the use of the main waterways. In this way, people of the states of Lan Na were able to engage in the maritime trade through the southern kingdoms along the periods of time.



Maps showing Location of Lan Na and Satellite Image showing Topography of Lan Na



Left:
 Lua woman at Pa Pae Village,
 Mae Sariang District, Mae
 Hong Son Province

Right:
 Spirit's pillar of Lue, Sakang
 pillar, in Pa Pae Village,
 Mae Sariang District, Mae
 Hong Son Province



Tai Lue woman, Ban Yuan Village,
 Chiang Kham District,
 Phayao Province

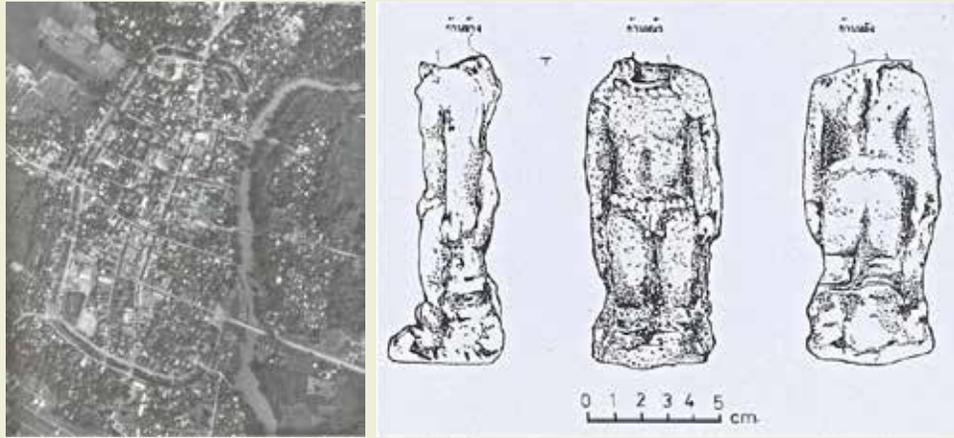
Indigenous people of Lan Na are divided into two groups; the majority of them was the so-called “Tai” and the minority of them comprises several ethnic groups dwelling in the mountainous area known as the hill-tribes or highlanders. The Tai have occupied the plain area of the river basins and developed their communities to smaller or large villages and towns, respectively. The fertile soil of the river basins have made the Tai people group living mainly by wet rice cultivation.

The establishment and development of the Lan Na kingdom encompassing the five states aforementioned was not only completed by the Tai or the lowland people, but also by some ethnic groups of the highland. According to Lan Na historical documents the term “Lua” was used by the Tai group of Lan Na to call any ethnic groups who communicated in non-Tai languages.

The Presence of the Lua (the Highlanders) in Historical Accounts and Archaeological Findings

Previous and recent excavations at the lowland area of the Lamphun river basin (close to the Kuang river, a branch of the Ping river) suggest that dwellers of the area practiced the burial tradition with grave-goods, exemplified by sites of Wang Hai dating back to 478 - 578CE, San Pa Kha site, 138 - 618 CE, and Yang Thong Tai 500 BCE - 100 CE (Suphaphon Nakbanlang and Chinnawut Winyalai 2007: 50 - 51). Iron equipment was one of the grave goods of an unknown corpse. However, it is evident that a large production site of iron tools was found in the Lamphun basin, for example, at the Ban Hong site, dating back to 554 - 595 CE (Yoddanai Sukkasem 2018: 42). The ethnic minority who practiced the burial with grave goods tradition and iron making are not definitely identified. Nevertheless, they were likely part of a powerful group which had occupied the lowland before the coming of the Dvāravatī cultural group from Lavapura kingdom (today at Lopburi Province), led by Princess Chamathewi (Camadevī), who was the founder of the Haribhuñjaya state (Phraya Prachakitkorachak 1906: 195 - 180).

Before the emergence of the Haribhuñjaya state, some legends of Chiang Mai mention that the group of the Lua in the Chiang Mai basin was living in harmony with the Tai group and accepted Buddhism instructed by a hermit who was the founder of the city named “Chetthaburi” (Sanskrit: Jeṣṭhapurī, literally meaning ‘the town of the elder brother’) for the Lua people. The hermit also instructed the social, political and moral principles to Phraya Wiwo, the chief of the Lua. Moreover, nine families of the Lua were appointed as protectors of three natural resources comprising of gold, silver and rock crystal. Therefore, three families, each protected three sites of gold, of silver and of rock crystal. It is important to note that the former name of the city of Chiang Mai, Nopphaburi, literally meaning the city of Nine, which is related to the nine families of the Lua (Sommai Premjit, Phaitun Promwichit, Urai Chaiwong and Sawat Deesai 1994: 14).



Left: Aerial Photograph showing Haribhuñjaya urban communities
 Right: Terracotta Figurine showing a common style of Dvāravatī reflects the powerful groups moved from central Thailand to occupy the lowland of the Lan Na basin in the eight century CE.



The author's sketch depicts the procession of Lua leading a black dog in front of the king while entering the gate of the Chiang Mai town; it's regarded as an important activity of the foundation ceremony.



The inscription around the base of bronze statue of Īśvara in Kamphaeng Phet National Museum, that specified a year is 1510 CE, mentions that the governor's issuing an edict ordering his subjects not to sell their cattle to members of the ethnic group, "Lua".

(Photograph: Courtesy of Kamphaeng Phet National Museum)

Some northern accounts such as *Jinakalamali-pakaranam*, *Camadevivamsa*, and *Tamnan Phuen Mueang Chiang Mai* (Old Legend of Chiang Mai) say, that after the founding of Haribhujaya with the help of ascetics, the capital city was attacked by a large military force led by “Philangka” or “Khun Luang Wilangkha” who was called by the Haribhujaya’s people “Phaya Milakkha” (king of the barbarians). Finally, Philangka was defeated and moved his subjects to settle near the foothill and on the highland. Tai groups that developed their community in the area of Chiang Rai and in the Chiang Saen basin had long lasting relations with the “Milakkha” and called them “Lua” (Pipad Krajaejan 2016: 4 - 5). It is conjectured that Lawachangkarat, the progenitor of King Mangrai, was descended from a Lua. The Lua are natives of Lan Na who had processed the skill of iron metallurgy and practiced a tradition of burial with grave goods, as confirmed by some burial sites of the Lua at the highland area of the Thanon Thong Chai mountain range and some historical accounts referring to activities of the Lua which is related to iron mining and iron distribution to Lan Na (Chusit Chuchat 1989: 38). Therefore the Lua ethnic group settled on the lowland of Lan Na’s river basin at least in the late fifth century CE and iron resources were founded by the Lua who first explored the iron mine and produced iron tools for agriculture and fighting with other minority groups, before escaping to live on the highland. According to excavations at Lamphun and some chronicles of Lan Na, other powerful groups which occupied the lowland of the Lan Na basin from the eighth century CE, were (1) The *Dvāravatī* people (Mon?) from central Thailand (Lavapura) who settled in the Lamphun basin and set up the Haribhujaya urban communities; (2) The Tai people who settled in the Lan Na’s basin at established towns. Both adopted and practiced Theravāda Buddhism. The Buddhist Tai also instructed the lua in the Buddha Dharma to, but the Lua still practiced their own rituals based on tradition. As a major ethnic group of Lan Na they had close a relationship with the Tai for a long time, The Lua played an important role in strengthening social and economic ties with the Lan Na kingdom. King Mangrai (reigned 1260 – 1311 CE) had to negotiate and compromise with the Lua. Some Lua people still engaged in business with the lowlanders, particularly, in the royal business. For example, “Ai Fa” a Lua’s leader, was a spy in Haribhujaya resulting in King Mangrai’s capturing the town in 1283 CE, and he was appointed ruler of Haribhujaya by the king in 1296 CE. It is interesting to note that in the procession ceremony for the foundation of Chiang Mai, a group of the Lua leading a black dog in front of the king while entering the gate of the town (Khana kammakan chamra prawattisat 1971: 106). Though the Lua’s way of life gradually changed from a sedentary community to a highland community as seen in a chant of the Tai suggesting the different way of living between the Tai and the Lua: “Let not the vegetable on the upland field of the Lawa(Lua) die in their swedes; let not the rice of the Tai wither and die in their paddy field.” (Nimmanahaeminda 1967: 214).



Lua's burial site on Bae Lae hill



Lan Na played a role as central market of jungle products and meeting point of merchant from various places.

An inscription around the base of a bronze statue of Īśvara in Kamphang Phet National Museum in Kamphang Phet Province that specified the year 1510 CE mentioned that the governor's activities included leading Buddhist, Hindu and Tantric traditions being revitalized, irrigation for rice planting, and issuing an edict ordering his subjects not to sell their cattle to members of the ethnic group, "Lawa"(Lua) (Srisuchat 2016: 96).

For more than six centuries the Lua played a role in Lan Na's economic system as supplier of natural resources of the highland. The Lua played a major role in seeking for jungle products to support the Lan Na's internal and external trading. The above mentioned historical accounts provide information of the Lua as suppliers of jungle products to the Tai of the Lan Na kingdom, but the need of the Lua for exchange of products is not available in the accounts.

The information on the matter has been obtained from archaeological field work. The archaeological surveys on the hills in Om Koi District, Chiang Mai Province, reveal circular shaped mounds, at more than one hundred places that have been known by the locals as "Wong Ti Kai" literally meaning "Cock Fighting Circular Yard" or "Lum Fang Sop Lua" literally meaning "The grave-mound of Lua". The size of a circular shaped grave-mound is about 10 to 30 meters in diameter and about 0.5 - 1.0 meters high and each is encircled by a ditch with 1.5 - 2.0 meters in width and 0.5 meters in depth. Some grave-mounds were disclosed by looters seeking for grave goods. Therefore, the finds looted from the grave-mounds suggest that a corpse was buried together with a large number of various objects. The grave-goods are as follows: glazed stoneware of Sukhothai, of Lan Na and of Myanmar, Chinese and Japanese porcelain, glass and semi-precious stone beads and bronze utensils. It is indisputable that the buried tradition of the Lua had been practiced by using prestige goods imported from suppliers, either the townspeople or foreigners outside the Lan Na kingdom. This reflects the exchange of natural products provided by the Lua with the man-made products from various townspeople and merchants.

Chiang Mai as a Station of External Trade

Chiang Mai, the capital of the Lan Na kingdom, served as a hub of jungle goods for trade with upper kingdoms; i.e. the Shan State, the Yunnan State and the lower kingdoms: Sukhothai and Ayutthaya as well as the towns of Maulemain and Martaban in which ancient ports of Myanmar were active at that time. The evidence of the external trade of Lan Na is first known in 1586 CE by the account of a London based merchant named Ralph Fitch who journeyed from Hongsawadee (the Mon State in the southern part of present-day Myanmar) to Chiang Mai searching for goods. He met the Yunnan merchants who took products such as gold silver and civet imported to Chiang Mai. At that time the Lan Na kingdom was occupied by the Burmese.



Sappan wood was found in Bang Ka Chai shipwreck site,
Chanthaburi Province, eastern Thailand



Howdah (Thai: Sappakap) is a king's seat on the back
of elephant, decorated by ivory. This howdah
is of Major Chao Kaeo Nawarat, the ninth king
of Chiang Mai, used by King Prajadhipok (King Rama VII)
on the royal visited Chiang Mai
(exhibited in Chiang Mai National Museum)



Japanese ceramics and Burmese stoneware
from the burial sites of Lua

It is likely that Chiang Mai was an entrepôt for natural products imported from the Shan state of Burma (modern Myanmar) and from South China, and exported to sea ports of Burma and Ayutthaya. Therefore, Lan Na was regarded as an economic corridor which connected sea ports to inland towns. The importance of this trade route is acknowledged by later generations. In the late nineteenth to the early twentieth century CE, Holt S. Hanllett, a British railroad explorer, had planned to build a railroad that would link the Burmese coast with South China. He thought that it is an ideal route for trade between China and Burma under British colonization (Rattanaporn Sethakhul 2009: 141).

According to a Dutch Merchant's account (1608 - 1620 CE), the high quality of frankincense (olibanum) was available in Chiang Mai, and was in demand in the international market, and foreign merchants like the Dutch who came to the place for obtaining the product (Nantha Suthakul 1970: 58 - 59,69). Beeswax and jewelry were considered the main natural products of Chiang Mai and the demand of these were high by Ayutthaya's Royal Treasury between 1628 and 1656 CE (Usnee Thongchai 1983: 105 - 108). Therefore, merchants of Lan Na who engaged in the trade such as this were middlemen who played an important role in the external trade during the late sixteenth to seventeenth century CE.

Tracing Export of Natural Products from Lan Na

Evidence of exporting jungle products from Lan Na that confirmed the high demand of products in the oversea markets had been found in the cargoes of shipwrecks in the Indian - Pacific Ocean and the South China Sea. For example, sappan wood and ivory had been found in the cargo of the Bang Ka Chai shipwreck (Chanthaburi Province) dating back to the late fourteenth century CE (C 14 dating = 1380 ± 50). The sappanwood was cut into 2,000 pieces with the length of each one being approximately not more than 2 meters (Erbprem Vatcharangkul and Worawit Husapak 2011: 75).

Other Lan Na's products including frankincense (olibanum), civet, beeswax indigo, dyeing colour and cassia fistula or Indian laburnum or golden rain tree (Thai: maikhun) were reported by Western merchants who engaged in trade with Ayutthaya and Lan Na during the sixteenth century CE that they were loaded on Spanish or Portuguese ships for Malaka's market, except beeswax to Japan. In addition to the items listed in the accounts, several items of jungle products were found at shipwreck sites in Southeast Asian waters. Although we do not know the origin of the objects, it is a testimony that the items were popular in the regional trade. These included elephant tusks, deer antlers, frankincense, candle nut, plant resin, sappan wood, that was found at shipwreck sites in Thailand (e.g. Phanom Surin Wreck, Ko Si Chang III Wreck), in Indonesia (e.g. Java Sea Wreck, Intan Wreck), and in Malaysia, e.g. Fluit Rasdam Wreck (Derek Heng 2018: 15 - 25).



Sappan



Frankincense



Lac



Civet

The natural resources from the highland that were in demand by other kingdoms outside Lan Na were reported in the early Ratanakosin period are as follows: deer skin, rhino horn, ivory, teak wood, frankincense, honey, beeswax, lacquer, and lac or shellac (resinous secretion of lac insects) (Phithinai Chaisaengsukkul and Arunrat Wichiankhieo 1989: 9).

The products such as deer skin, rhino horn, ivory and teakwood were materials for making equipment or art products; they have been the material heritage of Royal and National Museums. Other products like beeswax and lacquer were used as subordinate material for making equipment and art products.

Social and Economic Interaction between the Lua and the Lan Na's Government

For the trade mechanism of jungle products of the absolute monarch, kingdom like Lan Na, a king was the center of the politic - economic system, and the king's policy had to be indisputably adopted. According to historical accounts a king of Lan Na issued a law that forcefully required a tribute from the Lua who would supply him and his government with jungle products, including deer skin, rhino horn, ivory, teak wood, frankincense, honey, beeswax, lac, and lacquer. Therefore, the king and his government took advantage of selling such products. The Lan Na government had an imposing monopoly on the aforementioned jungle products and was therefore able to keep prices high.

The Lua played an indispensable role in seeking jungle products to supply the Lan Na government. They were willing to do so because the government privileged their group over others by granting labor exemption and/or be able to avoid military service to the kingdom. Furthermore, the king did profit directly from their offering and/or selling jungle products to the royal government. The interaction with the government as such brought relative wealth to the Lua. It is conjectured that the Lua were wealthier than other ethnic people of Lan Na, as confirmed by the exotic objects like Chinese and Japanese ceramics, semi-precious stone ornaments as grave-goods found at the burial sites of the Lua.



Semi-precious stone beads and Chinese ceramic
as grave-goods found at burial sites of the Lua

Conclusion

Lan Na, the kingdom of upper northern Thailand, flourished between 1296 and 1898 CE. Two major indigenous people of Lan Na from the past to present are the Tai and the Lua. The Tai has occupied the plain area known as the lowlander and the Lua are considered to be the highlander. The land of Lan Na was mostly governed by the Tai and established the Lan Na kingdom with the help of the Lua. Prior to the founding of the kingdom by the Tai, the Lua were a powerful group which had occupied the lowlands. Archaeological findings from surveys and excavation sites at the lowlands and highlands of Lamphun and Chiang Mai support the historical accounts that the Lua had possessed skill of iron metallurgy, gathering jungle products, and practiced a tradition of burial with grave goods of exotic items.

Chiang Mai was established as the capital of the Lan Na kingdom in 1296, the ideal location and various natural resources available in the area brought it to be a hub of jungle goods for trade with other states or kingdoms for centuries. Therefore, Lan Na was an economic corridor which connected sea-ports to inland towns of the Thai kingdoms (Sukhothai, Ayutthaya, Thonburi and Ratanakosin), to the east of Myanmar and to the south of China, and supplied the natural products to the states/kingdoms. The high demand of products exported from Lan Na, as confirmed by archaeological findings of shipwrecks and foreign accounts, suggests that Lan Na had to have the trade mechanism of jungle products and imposing monopoly on them. The Lan Na's king and his government acquired the jungle products from the Lua who played an important role as supplier. The Lua enjoyed special privileges because of their links to the Lan Na's government and their economic prosperity was confirmed by luxurious grave goods at their burial sites.

To understand the maritime trade mechanism of the region, we have to know archaeological findings at ports and underwater sites as well as sources or provenances of commodities, transportation routes, and socio - economical interaction between those who, were involved in the particular trade system, like the Lua and the Tai of the Lan Na kingdom.

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