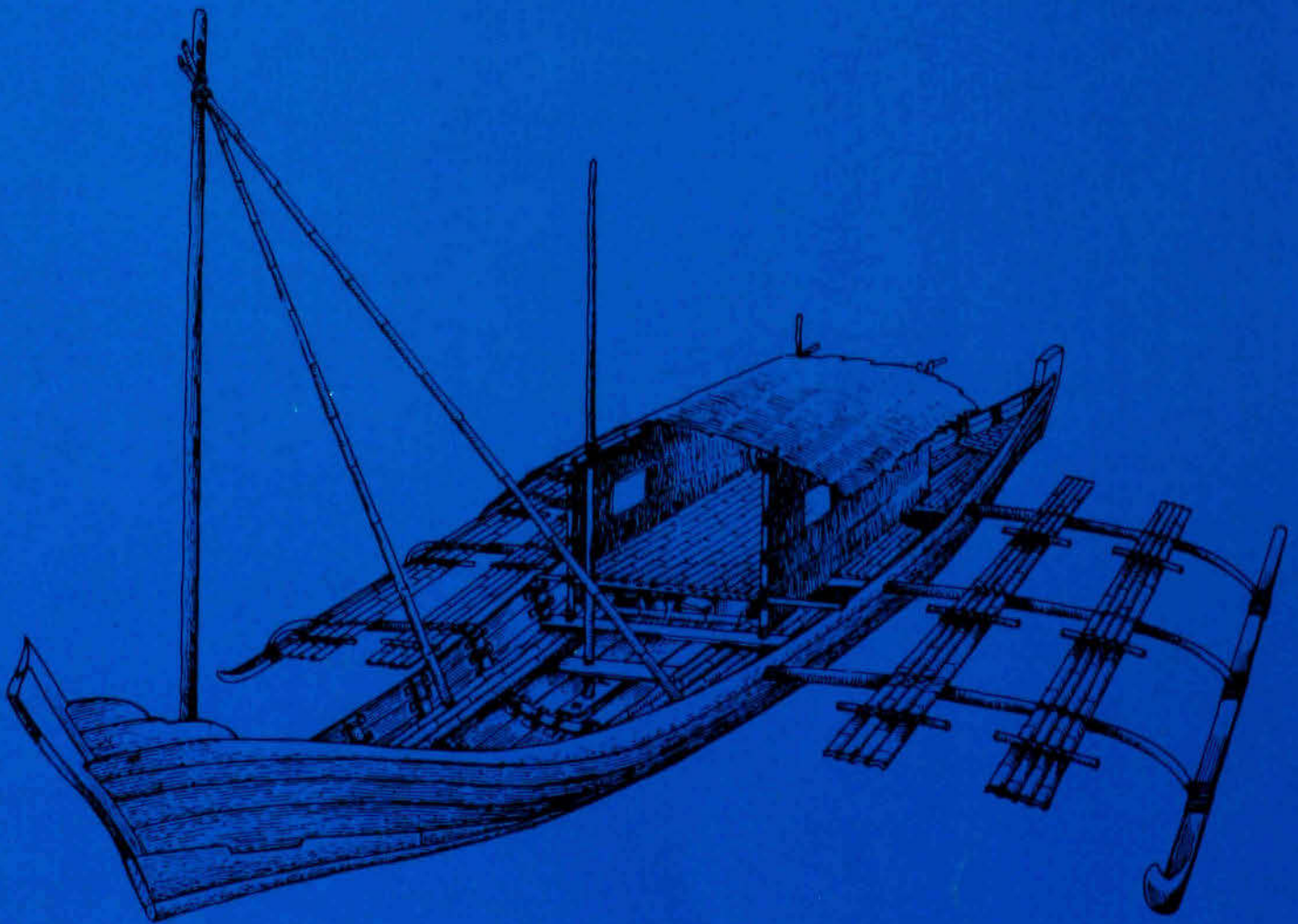


# SPAFA DIGEST



Journal of SEAMEO Project in  
Archaeology and Fine Arts (SPAFA).  
*Published by SPAFA Co-ordinating Unit.*





# SPAFA DIGEST

Vol. II NO. 1

1981



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## The Cover

This illustrates the *balanghai*, the boat used by the early settlers of the Philippines. It was about 15 meters long and four meters wide and made of long wooden boards joined at the edge by wooden pegs. See article on page 18.



*SPAFA Digest is published bi-annually by the SEAMEO Project in Archaeology and Fine Arts Coordinating Unit, Darakarn Building, 920 Sukhumvit Road, Bangkok 11, Thailand. It is printed by the Professional Publishing Co. Ltd., 2/2-3 Soi Kluay-nam-Tai, Sukhumvit Road, Bangkok, Thailand. Tel. 392-9673.*

## Workshop Paper

# Exports of Chinese Porcelains Up to the Yuan Dynasty

By Professor Feng Xian Ming

## Background to the Export of Chinese Porcelains

China is known the world over as the "country of porcelains". Far back in the Eastern Han period, more than seventeen centuries ago, mature green-glaze porcelains appeared in Zhejiang province, thus completing the transition from proto-porcelains to full-fledged ceramics. During the Tang dynasty, porcelain-making techniques were further advanced. The green porcelains of Yuyao county, the white-porcelains of Lincheng county, the underglazed porcelains of Changsha and the three-colored porcelains of Gongxian county won fame throughout the country for their unique local flavor and style.

Chang'an, capital of the Tang dynasty, was one of the centers of international trade in the orient and its West Market was reserved for trade with foreign merchants. Products of the kilns of Yuyao, Lincheng, Changsha and Gongxian, appearing for the first time on the market in Chang'an, caused a sensation among foreign merchants who hunted around for specimens to take back to their own countries. The market for Tang dynasty porcelains grew. They were shipped overland on the old Silk Road and overseas in Arab and Chinese bottoms to many countries in Asia. In those days Chinese porcelains were unique, since no other Asian countries had them as yet. Moreover, they were much more attractive than pottery.

### Contributing Factors to Increased Exports

In the Song dynasty, exports increased dramatically both in volume and in the number of foreign markets. There were five factors behind this development:

1. In the early days of the Song dynasty new attention was given to overseas trade. An agency was established for the administration of foreign trade and related matters and mercantile shipping offices were later set up in such cities as Guangzhou, Mingzhou (today Ningpo in Zhejiang province),

*This is the first part of the paper presented by Prof. Feng on the Workshop on Ceramics of East and Southeast Asia. Prof. Feng is a research fellow at the Palace Museum, Beijing.*



- |                     |             |
|---------------------|-------------|
| ■ Kiln-sites        | ● Ports     |
| 1 Yuyao             | 1 Guangzhou |
| 2 Lincheng (Ningpo) | 2 Mingzhou  |
| 3 Changsha          | 3 Hangzhou  |
| 4 Gongxian          | 4 Quanzhou  |

*The map indicates the location of the kiln sites and ports mentioned in the article.*

Hangzhou and Quanzhou along the southeastern coast. The Guangzhou shipping office was established in the fourth year of the Emperor Tai Zu (971) and followed soon after by others in Hangzhou and Mingzhou. The one in Quanzhou appeared in the second year of the reign of Emperor Zhe Zong (1087). Large quantities of Song dynasty porce-



lains were exported from these ports to Asian and African countries.

2. Officials were dispatched abroad to open up trade routes. In **History of the Song Dynasty and Chronicles of Major Events of the Song Dynasty**, it is recorded that during the reign of the Emperor Tai Zong, eight court officials with credentials and four boatloads of gold and silk were dispatched to countries in the south seas to make gifts to their sovereigns and to purchase spices, medical substances, rhinoceros horns, elephant tusks, pearls and precious stones. Each official had a number of blank credentials to be filled in and presented in each country they came to.<sup>1</sup>
3. In order to increase tax revenues, the Song court instituted a system of rewards. In the **Chronicles of Major Events of the Song Dynasty**, the Emperor Gao Zong of the Southern Song dynasty is recorded as saying in the year 1137: "Much profit can be made from merchant ships. Correctly handled they may bring in as much as a million strings of cash."<sup>2</sup> In the year 1146 he is again recorded as saying: "The profits from merchant shipping are most beneficial to the state. It is advisable to keep up the old practice of attracting foreign merchants to do business."<sup>3</sup> For this purpose, the Song court even conferred official posts on foreign merchants as a form of reward and incentive. The section on

spices in the Register of Comestibles in Volume 185 of **History of the Song Dynasty** contains the following passage:

"In the sixth year of Shaoxing (1136) the magistrate of Quanzhou, Lian Nanfu, sent a petition to the court to the effect that appropriate promotions should be given to ships' masters who could attract foreign merchant ships upon whose merchandise taxes amounting to fifty thousand and one hundred thousand strings of cash could be extracted. The Arab official, Luo Xin, sold frankincense to the value of three hundred thousand strings of cash and the Chinese ship's master, Cai Jingfang, brought in ships with cargoes that yielded nine hundred and eighty thousand strings of cash in taxes. Both were given the official post of Receiver of Imperial Messages. The officer in charge of maritime affairs in Fujian and Guangdong provinces obtained a million taels of silver worth of taxes on frankincense for which he was given a promotion."<sup>4</sup>

By means of rewards and incentives the Song court acquired enormous revenues, as recorded in the **Miscellaneous Records of Affairs In and Outside the Court Since the Reign of Jian Yan**:

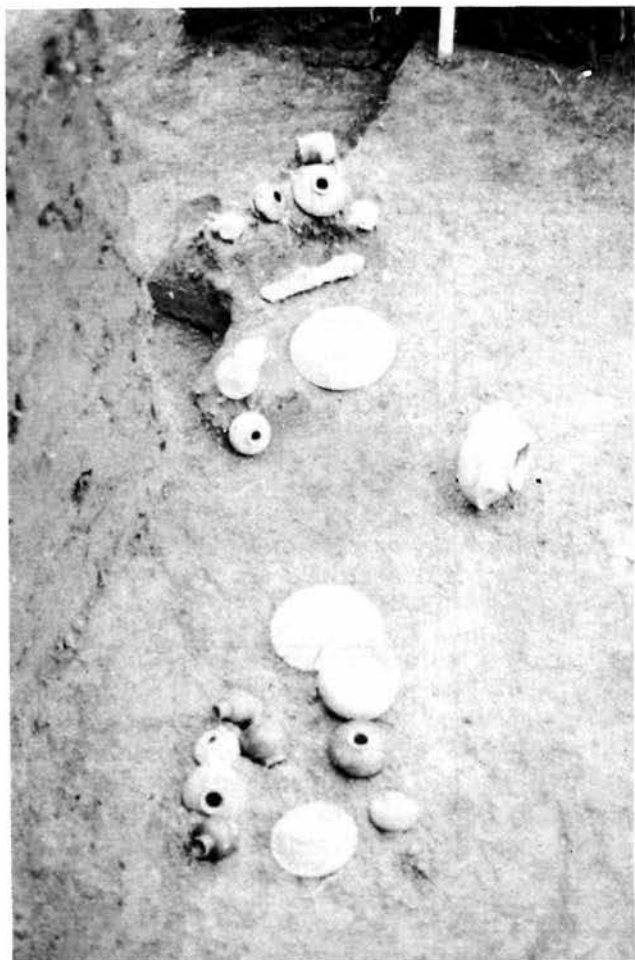
"In the seven years between the second year of Jian Yan (1128) and the fourth year of Shao Xing (1134) the maritime office in the city of Quanzhou gained profits amounting to nine hundred eighty thousand strings of cash; and in the final years of Shao Xing, the maritime office in Guangzhou and Quanzhou obtained as much as two million strings of cash every year from taxes and purchases."<sup>5</sup>

From these accounts, it can be seen that the tax money obtained by the Song court increased year by year.

4. The Song court put much effort into developing shipbuilding. During the reign of the Northern Song dynasty, shipbuilding was highly developed in the Fujian and Guangdong districts along the southeastern coast. Shipbuilders were able to construct ocean-going merchant vessels with a displacement of as much as two thousand dou (piculs). These ships were well-equipped with appliances for piloting, weighing anchor, jibbing their sails and depth sounding and, moreover, had compasses for navigation. Shen Kuo's **Mengxi Notes** contains a description of the structure and principles of the compass.

The **Diary of the Emperor Xuan He's Envoy to Korea** described how ships' officers observed the stars and the sun during clear weather but took their bearings from the compass on cloudy days and nights. Such well-equipped ocean-going sailing vessels were among the most advanced in the world at the time. Merchants and envoys from other countries found much pleasure sailing in these ships when coming to China. This had a substantial effect on promoting friendly contacts and com-

*An assemblage of unique export ceramic wares decorated in underglaze iron oxide, copper red and cobalt blue were found in excavations in Pila, Laguna, Philippines.*



merce between China and countries in Asia and Africa.

5. With the flourishing of porcelain manufacture, new kilns rose in different parts of China like bamboo shoots after a rain. Many were built near port cities in Fujian, Guangdong, Zhejiang and Jiangsu provinces along the southeastern coast to meet the need for exports.

Exports of porcelains were even greater during the Yuan Dynasty. At the outset, the Song practice of setting up maritime offices was continued. Pu Shou-gen, Song dynasty administrator in charge of shipping in the city of Quanzhou, was induced to work for the new regime and given important power. Other measures adapted were the following: a twenty-two-article law on merchant shipping was promulgated and foreign trade was placed under the direct control of the government. The income obtained every year from merchant shipping was quite considerable.

### Important Historical Data on Exports of Chinese Porcelains

Export of porcelains had already started during the Tang dynasty. It is regrettable, however, that historical records are lacking for the study of these exports. In 1225, during the Song dynasty, a book called **A Description of Foreign Countries** was written by Chao Rushe. The author, an official in charge of maritime shipping in Fujian province, wrote in a preface:

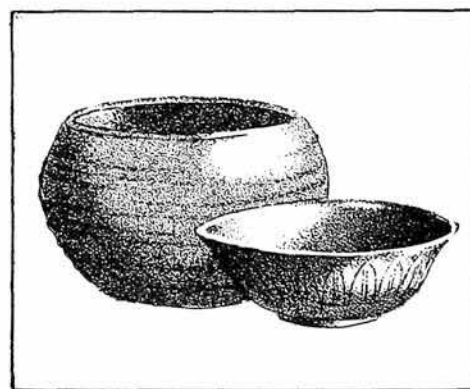
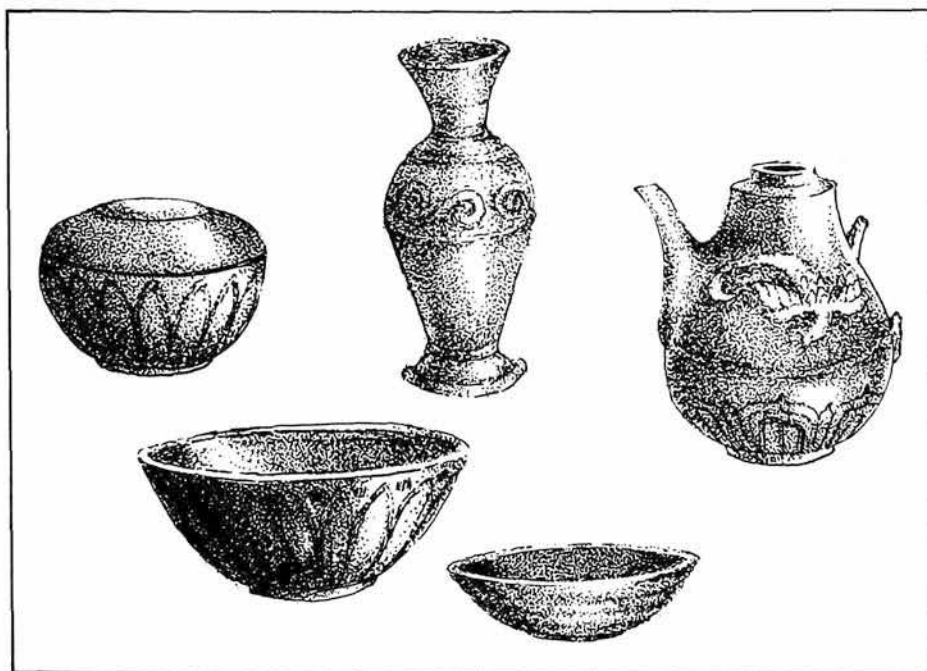
"I was ordered to read up on foreign countries during my spare time. In all the books I perused, there was nothing about the islands in the South Sea which I questioned foreign merchants about, the names of the countries there, customs and habits of their peoples, their distances from China and their mountains and rivers and natural resources. I translated their replies into Chinese, delet-

ing all that was extraneous and keeping the essence which I wrote into the book **A Description of Foreign Countries.**"<sup>6</sup>

The preface also contained an account of the writing of this book and the author's views and opinions.

The book itself listed fifty-six countries in Asia and Africa, fifteen, or one-quarter, of which had dealings with China in porcelains. This is an extremely important historical record and the only complete document for the study of lines of communication, trade and friendly contacts between China and foreign countries during the Song dynasty. As such, it is most valuable and significant. The countries mentioned in the book with which trade in porcelains was conducted were:

Country	In Today's	Items Exported
Zhan-cheng	Vietnam	Porcelain
Zhen-la	Kampuchea	Porcelain
San-fo-qi	Indonesia	Porcelain
Dam-ma-ling	Malaysia	Porcelain
Fo-luo-an	Malaysia	Porcelain
Ling-ya-si-jia	Malaysia	Porcelain
Lan-wu-li	Indonesia	Porcelain
Xi-lan	Sri Lanka	Porcelain
Ya-po	Indonesia	Light-blue Porcelain
Nan-pi	India	Porcelain
Gu-lin	India	Porcelain
Ceng-ba	Tanzania	Porcelain
Bo-ni	Malaysia	Green porcelain
Xi-long-gong	Indonesia	White porcelain
M-yi	The Philippines	Porcelain
San-yu	The Philippines	Porcelain
Ma-li-lu	The Philippines	Porcelain



2

*Varieties of export wares from the Song to the Yuan Dynasties found in excavations in the Philippines:*

1. *tê-hua* types, *ch'ing pai* and other white wares
2. *grey wares.*



*Some typical forms of celadons exported during the Song to the Yuan periods.*

Green, light-blue and white porcelains are mentioned respectively in trade dealings with three different places; porcelain ware is a general designation; and green, light-blue and white porcelains are exported to more than one place.

As far as states or kingdoms are concerned, the seventeen were situated in what are today Vietnam, Kampuchea, Malaysia, Indonesia, the Philippines and India on the Asian continent and Tanzania in Africa. When Chao Rushe questioned the foreign merchants, it was quite possible that certain details were missed, including details about trade in porcelain. Thus the number of countries to which porcelains were actually exported may not have been limited to the seventeen mentioned. As regards sailing distances, the longest voyages were to Zanzibar in East Africa. Archaeological discoveries have confirmed the reliability of the accounts in the book **A Description of Foreign Countries**.

#### China's Trading Partners

In the Yuan dynasty, Zhou Daguan, a native of Yong Jia in Zhejiang province, wrote a book called **An Account of Local Conditions and Customs in Cambodia**. In 1296 Zhou Daguan accompanied an imperial envoy to Cambodia and returned to Mingzhou in 1297 to write his observations and impressions. He wrote in a section devoted to the demand in Cambodia for Chinese goods that: "Chinese gold and silver come first in demand since that country does not produce any; next come light and colorful silks; then pewter ware from Zhenzhou, lacquerware from Wenzhou and blue porcelains from Quanzhou ..."

**Descriptions of Island Foreigners**, ranking in importance with the book **A Description of Foreign Countries**, provided indispensable materials for the study of Yuan dynasty exports. The author, Wang Dayuan, sailed abroad in the Zhi Zheng reign (1341-1368) and after returning wrote down what he had seen in the countries he visited, including a list of the

goods employed in trade with these countries. Porcelain is mentioned in connection with forty-five of the places described. These are:

Name of Country	In Today's	Porcelain for Trade
Liu Qiu	Japan	Rough bowls and green wares from Longchuan (celadon)
San Dao	The Philippines	Blue-and-white bowls
Wu Zhi Ba	India	Green-and-white wares from Longchuan (celadon)
Zhan Cheng	Vietnam	Blue porcelain bowls
Dan Ma Ling	Malaysia	Blue-and-white bowls
Ri Li	Indonesia	Green ware, rough bowls
Ma Li Lu	The Philippines	Porcelain dishes, porcelain water jars from Longchuan (celadon)
Xia Lai Wu	Malaysia	Green ware, rough bowls
Peng Heng	Malaysia	Porcelain
Ji Lan Dan	Malaysia	Blue-and-white wares
Ding Jia Lu	Malaysia	Blue-and-white wares
Rong	Malaysia	Blue-and-white bowls, vases and ewers
Lou Wei	Malaysia	Blue-and-white bowls
Lou Duo	Thailand	Green wares
Dong Chong Ge La	Malaysia	Blue-and-white bowls, big and small jars
Lu Lou Ga	Malaysia	Blue-and-white wares
Dan Miao	Malaysia	Coarse bowls, green wares
Jian Shan	Malaysia	Blue bowls, and big and small jars for water
Ba Jie Na jian	Indonesia	Blue wares and jars
Xiao Pen	Indonesia	Green wares
Java	Indonesia	Blue-and-white bowls
Wen Dan	Indonesia	Green wares
Su Lu	Indonesia	Porcelain wares from Longchuan (celadon)
Long Ya Xi Jiao	Malaysia	Blue-and-white wares

*Continued on page 22*



## Research Notes



*A general view of the excavation site in Ban Wong Samrong*

## **The Thai Ceramics Dating Project**

For the first time in Thailand, the Telemag, a fully automatic digital magnetic surveying equipment developed by Dr. John Stanley of the University of New England, Australia, will be used in locating buried kilns. This will take place in the excavation to be conducted in Ban Ko Noi, a major ceramic center of Ancient Thailand, by the Thai-Australian team undertaking the Thai Ceramics Dating Project. The field work is scheduled from December 1981 to January 1982.

### **The Project Goals**

The Project is a five-year research venture between Thailand and Australia. It seeks to investigate the history of the Thai export ceramic trade between the 12th and the 16th centuries A.D. Dating the various ceramic wares of Sukhotai and Sawankhalok and tracing the

development of the ceramic industry during the periods under study are the focus of the investigation. The research activities are grouped into two major ones: field work to be carried out in Thailand annually within the life span of the Project and continuing research and laboratory analyses which are to be implemented in both countries.

### **Sample Tests**

Trial excavation was conducted early this year in Ban Wong Samrong occupation site in Amphoe Sisatchanalai, Sukhotai Province. The samples uncovered are currently undergoing different testings in Australia. Professor Prescott and Dr. G. Robertson of the Physics Department of the University of Adelaide are doing the TL test. The Radiocarbon Laboratory of the Australian National University

headed by Dr. Henry Polach conducts the C-14 test while Dr. William Spencer of the Australian Mineral Development Laboratories heads the group which analyzes the glazes and clays. The sherds retrieved are being classified in Thailand by Sechawat Naen-na and Anat Bamroongwong of the Fine Arts Department.

Since the beginning of the Project in 1980, over 2000 titles and references in western languages have been collected and computerized. Further work involves gathering bibliographic materials on the subject which are written in Thai.

The Ban Wong Samrong excavation has directed the research team to concentrate in the Ban Ko Noi area for the second phase of the Project. Aside from the Telemag, a device able to take samples for paleomagnetism will be employed



in the second field work. Unlike the samples from AD. 1200-1300 those produced from 1300-1450 do not lend itself well to C-14 tests due to the rapid geomagnetic field changes that occurred in that period. Palaeomagnetic testing suits the specimens of the era better. Dr. Mike Sarbetti of Sydney University will supervise the use of the device.

### Research Supervisors

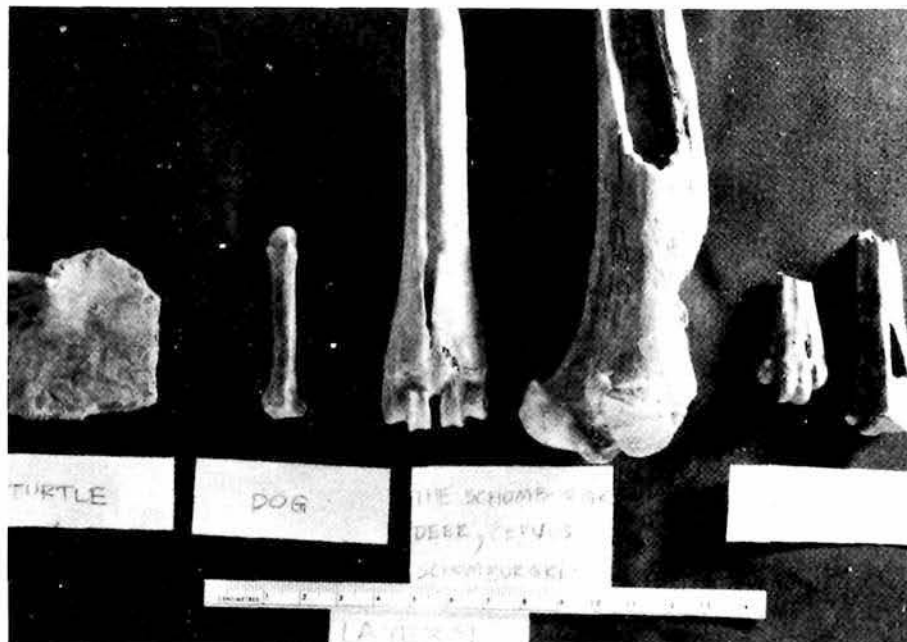
The principal researchers of the Project are as follows: Dr. P.L. Burns, Senior Lecturer in Southeast Asian History at the University of Adelaide; Richard Richards, Curator of Decorative Arts of the Art Gallery of South Australia; Donald Hein, Curator of the same gallery; Prachote Sankhanukit, Director of the Sukhotai Regional Office; Khemachart Thepchai, then from Sisatchanalai Branch of the Sukhotai Office; and Seehawat Naen-na, Khonkaen Office. The Thais are all archaeologists from the Fine Arts Department.

### Funding

Funds for the Project come from several Australian institutions, namely, the Australian Research Grants Council, the Australian Foreign Affairs Department and its sponsors — the University of Adelaide and the Art Gallery of South Australia. Thailand's contribution cover the expenses of the Thai members of the team and the provision of necessary equipment and facilities.

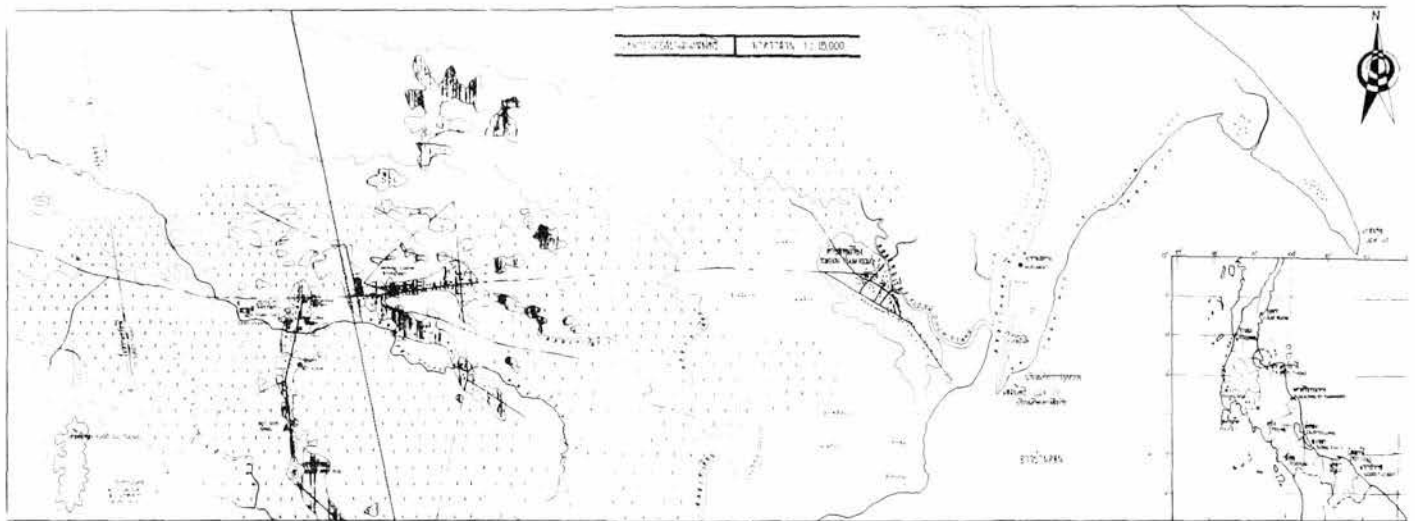


1



2

1. These sherds are samples of the type of stoneware unearthed in Ban Wong Samrong.
2. The Ban Wong Samrong site yielded bones of various animals when it was excavated in 1981.



*The map shows the location of Laem Po and Chaiya environs.*

## Settlement Patterns at Laem Po, Chaiya in the Srivijaya Period



*Work goes on in the coastal area to gather more data to establish the importance of Laem Po.*

The Southern Archaeological project of the Archaeological Division, Department of Fine Arts, Thailand, has undertaken a survey and excavation at Laem Po and Chaiya environs in Surat Thani since early 1981. The research focuses on the settlement patterns including sea-faring, entrepôts and markets of the area during the Srivijaya Period in Southern Thailand from the 8th to the 13th century.

Initial findings indicate the possibility of Chaiya being the centre of trading in the early centuries of the Srivijaya Kingdom. The archaeological evidence yields T'ang ceramics dating back from A.D. 618 to 906, T'ang cash coins going back

to Emperor Kao Tsu (AD. 618-627) where the Chinese characters "Kai Yuan T'ung Po" meaning current money of the Kai Yuan era were inscribed, Sung ceramics of A.D. 960-1280 vintage, local red painted pottery, glass beads, Roman glasswares and iron wares. These point to the possibility that LaemPo was an entrepôt frequented by foreign merchants such as Arabs, Persians, Indians, Romans and Chinese.

The existence of sea-trading during that period is also supported by traces of a shipwreck found in the vicinity. The wooden boat tail uncovered measures 7.17 metres in length. Its pole is 3.85 metres long.

### Signs of Earlier Culture

Evidences of an earlier culture in the area from that currently being investigated were revealed by polished stone implements of late Neolithic or early Bronze Age found near the source of Klong Chaiya or Chaiya River. In addition, a bronze kettle drum shaped like a boat and with symbolic marks was excavated in Koh Samui.

LaemPo is situated in Phumriang village about seven kilometres from Chaiya at the latitude  $9^{\circ} 22' 34''$  and longitude  $99^{\circ} 16' 14''$ . It is on a cape at the estuary of Klong Yai Phumriang or Phumriang River. The mouth is now an open forest grass



fields with a fishing village nearby since the river is wide and deep enough for anchoring.

Surveys and excavations are still continuing to uncover further evidence that will shed light on the significance of LaemPo and its environs during the Srivijaya Period. Data forwarded by other scholars who had investigated the place are re-analyzed and compared with recent findings to make definitive conclusions that possibly will change the history of Southeast Asia.

2



1. These sherds presumably of Tang attribution recovered from the Laem Po site.
2. A water jar discovered intact is identified as of the type used as water storage in long journeys.
3. Types of beads and sherds of export ceramics indicate existence of foreign trade.

3



## A Brief Description

# Ongoing Researches of the Philippine National Museum

The National Museum of the Philippines through its Anthropology Division actively engages in anthropological researches in several parts of the country. These include both archaeological and ethnological studies. Aside from research activities, the Division also conducts support activities like preservation and conservation work and educational programmes to inform the public of its cultural heritage.

### Researches in Archaeology

The archaeological projects currently being undertaken are as follows:

#### 1. Early Man Project in Cagayan Valley

Researches are conducted in open and cave sites. The open-site research consists of pleistocene geological studies to determine the character and distribution of the Awidon Mesa formation and archaeological excavations at the Cortez Site, Calamianigan, Cagayan Province.

Excavations also continue at the various cave sites at the Penablanca limestone formation. Lattuc-lattuc and Callao caves are two of the caves explored.

#### 2. Agusan Valley Archaeological Project

Two sites have been excavated — the habitation site of Upper Caasinan, Cabadbaran, Agusan del Norte (a Song site) and the Ma-ug site at Prosperidad, Agusan del Sur (a Paleolithic and Neolithic site). A thorough exploration of the area is planned.

#### 3. La Union Archaeological Project

This is part of the archaeological exploration being undertaken in the Western flank of the Cordillera Mountain Range and the Ilocos Region in general. Twelve



1. *The Minori Cave in Penablanca, Cagayan has been the object of archaeological work for some time now.*

2. *Mapping is conducted with the aid of modern surveying equipment.*

graves with porcelain, stoneware and earthenware sherds have been discovered.

#### 4. Intramuros Archaeology and Restoration

The National Museum provides support and assistance to this project through excavations of key areas and determination of the historical value of some structures. It conducts laboratory work to ascertain the kinds of stones to be used as replacement for the destroyed portions of the wall.

#### 5. Survey and Census of the Kabayán Mummy Caves

Three burial rockshelters in Kabayán, Benguet were surveyed. The investigation revealed that the following activities have to be undertaken: conservation of



the mummies, improvement of the rockshelter approaches and posting of guards in the area.





*Anthropologists of the National Museum in consultation as they go about mapping the cave.*

#### 6. Palawan Archaeological Project

This involves excavation of key cave sites in Quezon, Palawan and the re-excavation of the Guri Cave, a post-pleistocene habitation site. The activities have shown that the findings of the first and second excavations have to be re-analyzed and collated before some conclusions can be made.

The activity is part of the training programme in pre-history that the National Museum is undertaking with SPAFA.

#### 7. Salvage Archaeology at Abra

A burial site in San Quintin Abra which dates back to the Song period was disturbed by pot hunters. It is now being systematically studied to determine the early burial practices of the people in that area.

### **Ethnographic Studies**

The studies in ethnology are as follows:

#### 1. Ethnographic Survey and Photographic Documentation of the Ilocos Coast and its Ethnic Population

An ethnographic profile of the Ilocos Coast and its ethnic inhabitants — Ilocano, Bago, Kankana-ey, Ibaloy and Tingian — will result from the study. This consists of photographic documentation, collection of representative ethnological specimens and research on subsistence and economic-related activities of the people.

#### 2. Negrito Study

The bandsize, population distribution, subsistence patterns and other cultural activities of the Ata Negrito, a hunting and gathering tribe in the Cagayan Valley, are the subjects of this study. It also includes collection of ethnological specimens.

#### 3. Okir Project

The Philippine ethnic arts and crafts are the research topics of a joint project of the National Museum and the Design Center of the Philippines. It aims to study the ethnographic art traditions of the country and to insure their preservation through adaption/application in contemporary arts and crafts.



*These two scenes taken at different angles show the diggings being done in Chamber D of the cave.*

## Historical Accounts

# **The Relation Between Cambodia and Indonesia in the 8th to the 9th Century**

*By Soewadji Syafei*

*Did Jayavarman II, ruler of Cambodia in 802-850 A.D., descend from the Cailendra Dynasty of Indonesia? The author brings up evidence supporting the hypothesis.*

### **Introduction**

This paper containing preliminary notes looks more closely at the evidence of the relation between Cambodia and Java at the eighth to the ninth century. The eighth century is a troubled period in the history of South East Asia. In Cambodia it saw the partition of the country into several principalities, grouped, according to Chinese sources, into two kingdoms: Water Chenla, in the Mekong basin and the basin of the Big Lake, and Land Chenla, on Korat plateau and the middle Mekong. It also presents an interesting historical problem. Certain historic aspects remain obscure despite the attention that a great number of scholars have paid to the relation between Cambodia under the reign of King Jayavarman II and Indonesia, in this case Java, at the beginning of the ninth century.

In the history of Cambodia, Jayavarman II was known as a king of ancient Cambodia who ruled between 802 AD and 850 AD. He was also known as the founder of the

Angkor kingdom. Unfortunately, he was almost unique among the kings of Cambodia in that he did not leave a single inscription; at least none has been found up to now. Fortunately, the principal episode of his reign was related in some detail in an eleventh century inscription on the stele of Sdok Kak Thom, which cited the following information: *Man vrah pada paramesvara mok amvi jawa piku-run ni nau nagara indrapura* = His Majesty came from Java to reign in the city of Indrapura.

If this information can be verified, it will raise some questions about the relation between the ruler of Cambodia and that of Java in the beginning of the ninth century. Who was actually King Jayavarman II? Was he related to the ancient dynasties of pre-Angkorien Cambodia? Or was he an Indonesian who came from Java as a conqueror? What was the historical relation between Cambodia and Indonesia from the end of the seventh century to the middle of the ninth century?

### **Inscription of Jayavarman II**

As Jayavarman II did not apparently leave any inscriptions during his reign, information about him should be gathered from sources dating from the period before or after his reign. For instance, some inscriptions from the region of Sambhupura (Sambor), two of which, dated 770 AD and 781 AD,

emanated from a king named Jayavarman. The inscription of 770 AD came from Preach Theat Preah Srei in Thbong Khmum. That of 781 AD was found at Lobok Srot, in the region of Kratie. (G. Coedès, 1970). I am inclined to think that these two inscriptions had been made by King Jayavarman II before he became king of Cambodia. A serious study of these two inscriptions is necessary to establish the identity of the author

### **Jayavarman's Ancestry**

About the parentage of King Jayavarman II, G. Coedès believed that King Jayavarman II was only distantly related to the ancient dynasties of pre-Angkorien Cambodia. He was the great-grandnephew through the female line of Pushkaraksha, the prince of Aninditapura who became king of Sambhupura through his marriage with a princess of this state. And he was also the nephew of King Jayendrathipativarman. Further, G. Coedès suggested that the family of Jayavarman II which was linked with the dynasties of the eighth century took refuge in Java during the disturbance over the succession. (G. Coedès, 1968). Palmer Briggs assumed that King Jayavarman II was chosen by the ministers of king Mahipativarman who was beheaded by the Cailendra Maharaja. (P. Briggs, 1951). Historians were inclined to think that king Jayavarman II was a Khmer, but they did not

*A reprint from the Majalah Arkeologi, September 1977. The author teaches at the Universitas Indonesia.*

know who his father was. All of the opinions cited showed that the parentage of king Jayavarman II remains unknown.

## The Çailendra Dynasty

G. Coedès in his "The Making of Southeast Asia" remarked that the history of Cambodia in the eighth century and the beginning of the ninth century could not be understood properly without a knowledge of happenings in Indonesia from the end of the seventh century. (G. Coedès, 1970).

Moreover, Louis Finot's translation of the inscription of Sdok Kak Thom: *Alors, S.M. Paramesvara vint de Java pour régner dans la cité d'Indrapura*, inclined us to think that King Jayavarman II was not related to the ancient dynasties of pre-Angkorien Cambodia but, that his forefather came from Indonesia. Hence events in Indonesian history may be helpful in solving the problem of whether King Jayavarman II was in some way related to any Javanese royal family.

## Selendra, the Origin of Çailendra

For some time after the discovery of the West Java Purnawarman inscriptions of the middle of the fifth century, no epigraphic documents about Java had been found. The island re-entered the scene in an Old Malay inscription found at the village of Sojomerto near Batang in Central Java. Paleographically, M. Boechari supposed that this inscription dated from the beginning of the seventh century. This inscription bore the name *Dapunta Selendra* which Boechari believed was the "vamçakara" of the Çailendra dynasty. The name Selendra, a personal name, was undoubtedly an Indonesianized form of Çailendra. Selendra was an ardent worshipper of Civa. (M. Boechari, 1966).

If Boechari's opinion can be verified, it will support the opinion of the late Poerbotjaroko that only one dynasty ruled Central Java, i.e. the Çailendras. According to

the latter, the Çailendras were formerly Civaïtes but for unknown reasons, Sañjaya, a çivaitic Çailendra king who had erected a *linga* temple in 732 AD, ordered his son, Rakai Panamkaran, to abandon the faith of his ancestors and to become a buddhist. (Poerbotjaroko, 1958). Further, in his "Riwayat Indonesia I", Poerbotjaroko proposed that a grandson of King Sanjaya named Gajayana, however, held to the çivaitic religion. Consequently, he had to migrate to east Java where he built a new kingdom in the region of Malang in East Java and, in 760 AD, erected the Agastya temple. (Poerbotjaroko, 1952).

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### *The inscription of Mantyasih enumerates the Javanese kings from Sanjaya to Mahacambhu*

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The name Sañjaya was also mentioned in a Sanskrit inscription of 732 AD found in Cangqal, Central Java. This inscription told of a çivaitic king called Sañjaya and the erection of a *linga* on the island of Java in the country of Kunjarakunja. The ruins of the Çivaite sanctuary where the *linga* had been erected can still be found today on the hill of Gunung Wukir, southeast of Borobudur.

According to a later tradition, i.e. *Kitab Carita Parahiyangan*, King Sañjaya had sent expeditions to Bali, Sumatra, Cambodia and even China. There seemed to be some truth in this tradition since the Vietnamese Annals recorded that in the year of 767 AD, the delta area was invaded by bands from Java.

The name of Sanjaya was found not only in the inscription of Cangqal dated 732 AD and in the *Kitab Carita Parahiyangan* but also in

the inscription of Mantyasih dated 907 AD. This inscription contained a list of Javanese kings who reigned before its author, Çri Mahārāja Rakai Watukura Dyah Balitung Çri Dharmodaya Mahāçambhu. The list, which does not give any account of genealogical relation, is as follows:

"Rahyangta rumuhun ri mdang ri poh pitu, rakai matarām sang ratu Sañjaya; Çri Mahārāja Rakai Panamkaran; Çri Mahārāja Rakai Panunggalan; Çri Mahārāja Rakai Warak; Çri Mahārāja Rakai Garung; Çri Mahārāja Rakai Pikan; Çri Mahārāja Rakai Kayuwangi; Çri Mahārāja Rakai Watuhumalang; Iwiha sangkarika landapan yan pakacapatha Cri Mahārāja Rakai Watukura Dyah Balitung Çri Dharmodaya Mahāçambhu."

It seemed to indicate that King Sañjaya was the founder of the dynasty. (W.F. Stutterheim, 1927).

The inscription of Kalasan dated 778 AD, however, gave evidence that the successor of King Sañjaya, Mahārāja Dyah Pañcapana Panamkaran or Rakai Panamkaran was a Çailendra king who commemorated the foundation of the Candi Kalasan as shrine to the Buddhist goddess Tara. (F.D.K. Bosch, 1928).

If the information of this inscription can be verified, it will raise some questions in the ancient history of Indonesia from the end of the eighth century to the middle of the ninth century. What happened in the history of Indonesia in that period? Were there two dynasties reigning in Central Java of which one were Çivaite kings and the other adherents of the Buddhist religion? Or was there only one dynasty "the Çailendras" that were formerly adherents of the Çivaitic religion?

## Panamkaran, the Successor of King Sanjaya

Some scholars assumed that two dynasties reigned in Central Java from the eighth to the beginning of the tenth century, the Sañjayas and the Çailendras. (Vogel, 1919; Van Naersen, 1947; de Casparis, 1950). According to Vogel's inter-



pretation of the Kalasan inscription, Mahārāja Dyah Pañcapana Panamkarana or Rakai Panamkaran was not a Çailendra king but a vassal of the Çailendra king Vishnu. (J.P. Vogel, 1919). But if we read carefully the inscription of Kalasan, especially strophe 5 and 6, we undoubtedly would conclude that Maharaja Dyah Pancapana Panamkarana was none other than Rakai Panamkaran, a Çailendra king who had built Candi Kalasan, a sanctuary dedicated to the Buddhist goddess, Tara, located in the plain of Prambanan east of the city of Yogyakarta.

This fact was strengthened by the discovery of the Sojomerto inscription which bore the name Dapunta Selendra as a personal name. It was quite possible that the illustrious Çailendra derived their family name from this person. If this supposition can be verified, it is likely that all the king's name in the Mantyasih inscription dated 907 AD were Çailendras. The inscription also mentioned the name Rakai Panamkaran who was known as the successor of King Sañjaya. Undoubtedly, King Sañjaya was also a Çailendra King who adhered to the Çivaite religion.

### Effects of Buddhism

It seemed that after the reign of King Sañjaya, Central Java began to respond to the new influence of Mahayana Buddhism. This sect of Buddhism showed a strong tendency toward assimilation with the Brahmanist cults, especially with that of Çiva. The inscription of Kelurak dated 782 AD told us that during the reign of a Çailendra king known as "the killer of enemy heroes" and crowned under the name of Sangrāmadhananjaya Kumaraghosha, a teacher from the country of Gaudi—India—consecrated in Kelurak an image of the Bodhisattva Mañjuçri. It synthesized the Three Buddhist Jewels (Triratna), the Brahmanic trinity (Trimurti), and all the gods. (F.D.K. Bosch, 1928).

However, it was quite probable that the acceptance of Mahayana Buddhism and, perhaps, of the appointment of Mahayanist

teachers from Bengal to the royal household resulted to the disestablishment of conservative Brahmanist interest associated with the previous regime in Central Java. This, at any rate, was the interpretation of the Chinese sources which mentioned the removal of the kingdom of Holing to the east by a king named Ki-yen between 742 and 755 AD as a result of the acceptance of Mahayana Buddhism in Central Java. Ki-yen was none other than prince Gajayana mentioned in the inscription of Dinoyo dated 760 AD from East Java. This inscription commemorated the foundation of a sanctuary, in honor of Agastya. (F.D.K. Bosch, 1924).

It is quite probable that Gajayana, a son of King Dewasimha, was a grandson of King Sañjaya. He tried to escape from Mahayana Buddhist influence in Central Java and to look for a new place in East Java where he could continue his worship to Civa. (Poerbotjarko, 1952).

It was likely that Rakai Panunggalan, another grandson of king Sañjaya and the successor of Rakai Panamkaran according to the inscription of Mantyasih, also tried to escape from the Mahayana Buddhist influence in Central Java and to seek a new place in Cambodia where he could proceed with his faith. This supposition was strengthened by the fact that Rakai Panunggalan, like King Gajayana, did not leave a single inscription in Central Java.

### Cambodia's Political Condition

Fortunately, he had the good opportunity to develop his political power in Cambodia which passed through a very troubled period for more than a century after the death of King Jayavarman I in 682 AD. Jayavarman I did not seem to have left male heirs and that, probably, among others accounted for the partition of Cambodia. He seemed to have been succeeded by his wife. But nothing indicated when Jayavarman I ceased to reign or when his wife succeeded him, if she did.

An inscription of 713 AD found

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### *Rakai Panunggalan migrated to Cambodia at an opportune time*

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at West Baray, Angkor Thom reflected that at that time the country was ruled by a woman, Jayadevi. In the opinion of Coedès, she was the widow of Jayavarman I who reigned after his death. (Coedès, 1964: 162; L.P. Briggs, 1951:57). In this inscription, Jayadevi mentioned donations to a sanctuary of Civa Tripurantaka and complained of the misfortunes of the time. A group of petty kings sprang into prominence and the country became divided into a Land and a Water Chenla. Water Chenla itself divided into several kingdoms and principalities which, respectively, strove for supremacy over each other. The T'ang history said the division into Land and Water Chenla took place after 706 AD. (Coedès, 1964: 161; P. Pelliot, 1904:211).

### The Conquest of Cambodia

Java might indeed have taken advantage of the partition of Cambodia and launched an expedition against it. The first expedition was more likely sent by King Sañjaya of the Çailendra dynasty in 767 AD. The Vietnamese Annals recorded that the delta area and the southern region of Cambodia was invaded by bands from Java. (Coedès, 1964: 173). This supposition was strengthened by the later tradition of **Kitab Carita Parahiyangan** mentioned before.

The second expedition was more likely led by king Rakai Panunggalan, a grandson of king Sañjaya who left his native country due to political and religious problems in Central Java. Quite probably in 770 A.D., he attacked and occupied the region of Sambhupura, Cambodia, and made this region as the base of his army. This fact was strengthened by the discovery of some inscriptions in this region, two of them dated 770 and 781 A.D. These two



inscriptions were made by a king named Jayavarman, whom G. Coedès named as Jayavarman I (bis). (G. Coedès, 1964: 178). I am inclined to think that king Jayavarman mentioned in those two inscriptions was none other than Rakai Panunggalan who came from Java. It was possible that in order to be accepted by the Khmers, he used the name Jayavarman and placed himself as a valid heir of the Angkor kingdom, especially of Sambhupura.

A Sanskrit inscription of Nha-trang dated 774 AD. told us that a band who came in ships burnt down the temple of Po-Nagar near Nha-trang. But, they were routed and driven back to the sea by the king of Champa. This raid was repeated in the year of 787 AD and another temple of Civa, near Virapura, was burnt down (L.P. Briggs, 1951: 67). I am of the opinion that this invasion was also led by King Rakai Panunggalan who four years before had occupied Sambhupura-Cambodia.

The above account was also confirmed by an early tenth century Arab writer, Abu Zaid Hasan, who told the story of the travels of a merchant named Sulaiman. The latter visited Angkor in the year of 851 AD. and picked up an account of a Javanese expedition against Chenla in the closing years of the eighth century. Although legendary, there is justification in supposing that it may have been inspired by some historical event.

### The Coronation of Jayavarman II

Believing that his power was firm enough, Rakai Panunggalan proclaimed himself ruler of the Khmers of the Angkor and took the name Jayavarman II. According to the inscription of Sdok Kak Thom, Jayavarman II began his long reign by building his capital named Indrapura at a place identified with the archaeological site at Bantey Prei Nokor, east of Kompong Cham on the lower Mekong. The inscription also tells us that in 802 AD., Jayavarman II held a big ceremony at the summit of Mahendraparwata (the hill of Phnom Kulen) to establish himself as sole sovereign (cakravartin) in *Kambujadeca* and

also to liberate himself from all dependence on Java.

In this occasion, he also held a special ceremony to commemorate the establishment of ritual for the worship of *devaraja*. (Soekmono, 1974: 127, 128). The ceremony consisted of founding a *linga* on the hill. This symbolized that his authority was equivalent to that of Mahendra (Civa), the king of the gods. Jayavarman II instituted the cult of the *devaraja*. A sanctuary in a pyramid was erected on a natural or artificial mountain. It sheltered the *linga* as a symbol of *devaraja*. It is likely that the worship done by King Jayavarman II in Cambodia was an effort to think back to his native country, Java, and to continue the worship proceedings of his ancestor King Sañjaya, a zealous adherent of *linga* *Girisa*, as was mentioned in the inscription of Canggal in Central Java.

### Conclusion

All these accounts strongly indicate that King Jayavarman II of Cambodia was none other than Rakai Panunggalan from the Çailendra dynasty in Central Java. Nevertheless, a search for further evidence to support this hypothesis is still needed. A careful study of Old Javanese and Old Kmer inscriptions and the inscription of Sdok Kak Thom will throw more light upon the forefather of King Jayavarman II and the relation between Cambodia and Indonesia, in this case Java, at the end of the seventh century to the middle of the ninth century.

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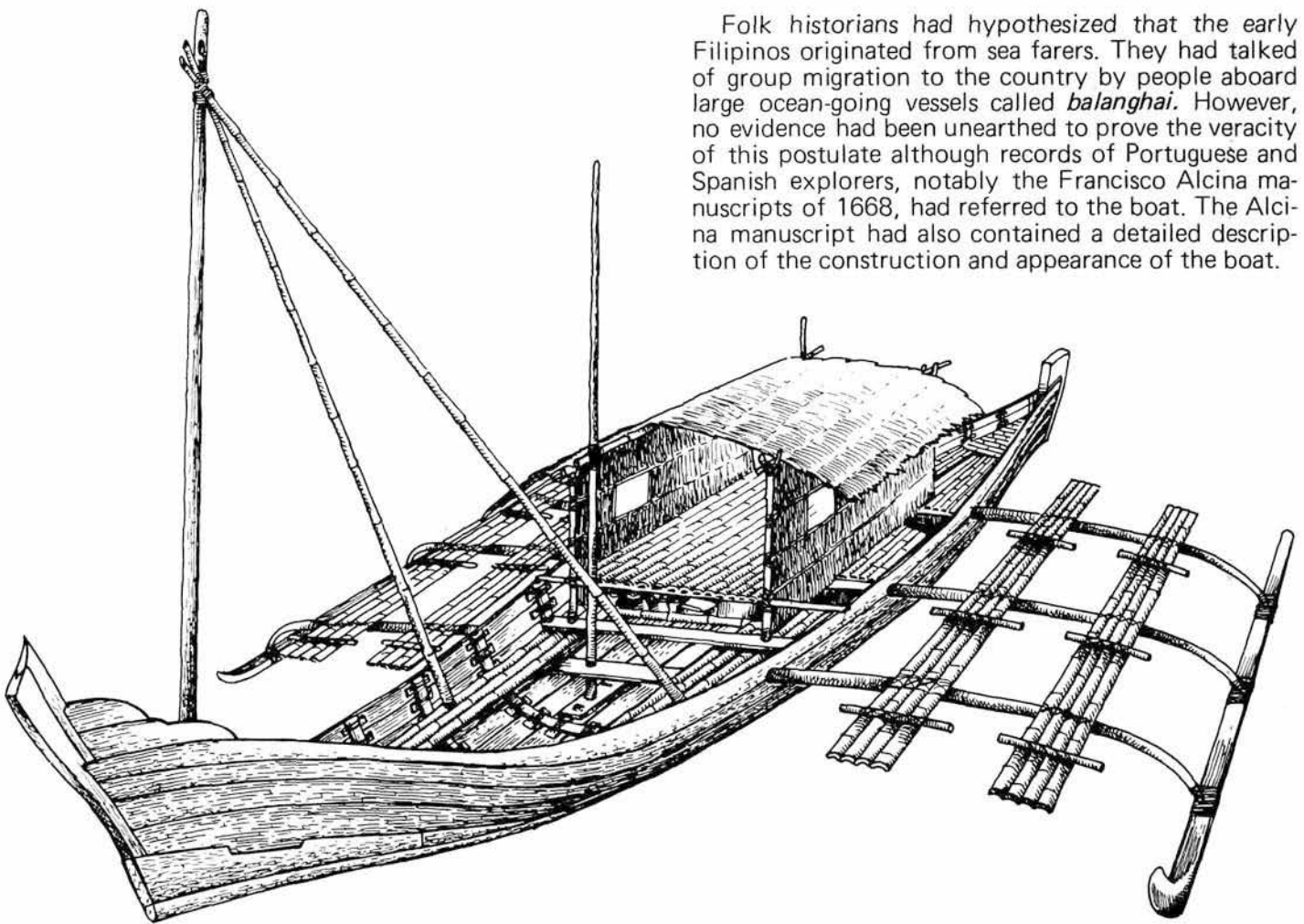
*Continued on page 22*

## An Abstract

# Ancient Mariners of the Philippines

by Jesus Peralta

Folk historians had hypothesized that the early Filipinos originated from sea farers. They had talked of group migration to the country by people aboard large ocean-going vessels called *balanghai*. However, no evidence had been unearthed to prove the veracity of this postulate although records of Portuguese and Spanish explorers, notably the Francisco Alcina manuscripts of 1668, had referred to the boat. The Alcina manuscript had also contained a detailed description of the construction and appearance of the boat.



The original article appeared in the September-October 1980 issue of *Archaeology*. SPAFA Digest thanks the author, curator of the Anthropology division of the Philippine National Museum, for permission to reprint the illustration of the *balanghai*.

It was only in the seventies that archaeological evidence was uncovered to confirm the hypothesis. Three *balanghais* were excavated successively near Butuan City and their physical features matched the Alcina description perfectly.

### Dating the Artifacts

Since the first *balanghai* was unearthed by pothunters, dating the boat and other artifactual materials like sherds of Yueh ceramics, metallic fragments etc. found in the site posed some problems. The pothunters appropriated many of the artifacts and disturbed the layers of midden surrounding the boat. Luckily, the midden at one end of the boat was untouched. It provided clues on the time sequence of the artifactual materials. Carbon dating showed that the first *balanghai* was 1630 (plus or minus 110) years old while the shell midden layer was dated between A.D. 1310 and 1730. The Yueh wares shreds were of the tenth century. The second boat discovered was 700 years old (plus or minus 90 years).

### Preservation Measures

Recovery and conservation of the boats also caused some difficulties. They had been partially resting under water when discovered, so were waterlogged. The National Museum developed the polyethylene glycol (PEG) method of preservation to prevent them from rotting. The first boat was left in the excavation site while the second, the more intact, was brought to Manila for future exhibition. Work on the third boat has been suspended.

## Staff Training

### Abinon Undergoes C-14 Training

Orlando V. Abinon, head of the Chemistry and Conservation Laboratory of the Philippine National Museum, underwent training on radiocarbon dating at the Australian National University in Canberra on 16 January to 26 March 1981. The training was in line with the plan to establish a radiocarbon dating laboratory in the Philippines to serve not only its archaeological needs but also those of the other Southeast Asian countries.

Abinon's training focused on the transformation of materials to be dated into liquid benzene. This was the most important aspect of the dating process since the accuracy and reliability of the dating depended on the purity of that product. The process involved sample preparation by physical and chemical methods, preparation and collection of carbon dioxide from sample combustion and its conversion to

liquid benzene. He also learned how to calculate the age of the sample. His training done under Mr. Henry Pollach, head of ANU's C-14 Laboratory, covered basic theory and laboratory work.

### Recommendations

In his report, Abinon acknowledged that the short training period limited his preparation to be able to install a C-14 laboratory. He, therefore, suggested the employment of an expert radiocarbon dater as consultant in setting up the laboratory. He also stressed the need for developing relationships with other radiocarbon laboratories, especially that of the ANU, and subscribing to relevant publications.

The Australian Development Assistance Bureau provided the grant which enabled Abinon to study in Australia.

### Santiago Enrols in Archaeology

Rey Santiago, a museum researcher of the Anthropology Division, Philippine National Museum, participated in a short-term training course in Archaeology held in Paris from December 1980 to May 1981. His studies focused on the typology of paleolithic materials. In this regard, he enrolled in the following courses: "Typologie Lithique, Chronologie du Paléolithique et Préhistoire du Monde Indo-Pacifique" at the Université de Paris I in Sorbonne.

### Activities Undertaken

Santiago reported that the training gave him insights on how to develop a system of analyzing the typology of stone materials of the

paleolithic period. He also learned a more efficient, accurate and simple methods and techniques of illustrating stone artifacts. His time was also devoted to the collection of bibliographic materials on the subject. Within the training period, Santiago also had a three-month French Language training in the Centre Audio-Visual de Langues Modernes in Vichy.

Professor Jose Garanger, the Director of the UER D'Art et D'Archéologie of the University, supervised Santiago's training. The course in graphics was conducted in Musée de L'Homme. The French government provided the scholarship to Santiago through the SPAFA.



## SPAFA Affairs

# Ceramic Workshop Proposes Two Projects



*The participants to the Regional Workshop on Ceramics of East and Southeast Asia*

A workshop on ceramics of East and Southeast Asia was held in Kuching, Sarawak, Malaysia on 18-26 May 1981. Sponsored by the SEAMEO Project in Archaeology and Fine Arts, the workshop prepared two project proposals to be incorporated into the SPAFA Development Plans for 1981-1986. One, a training programme, aims to meet the urgent need for trained personnel in ceramic research. The other, a research proposal, will trace the patterns of early maritime shipping and trade networks in Southeast Asia in the protohistoric and early historic times.

### Details of the Proposals

The training programme is directed to professionals and technicians. It will serve as a venue for obtaining a more precise identification, analysis and dating of Asian ceramics and for promoting regional exchange of expertise, facilities, and needed information and documentation. The research program-

me is expected to consolidate existing researches and to conduct other studies on the movement of people and trade goods from CA 500 BC to CA 1800 AD. Four basic researches are recommended: bibliographic studies, nautical studies, archaeo-ethnological

studies, and environmental and technological studies on trade products, both perishable and durable.

Country reports from Indonesia, Malaysia, Philippines and Thailand centered on the status of ceramic research in each country and a description and summary of the ceramic wares unearthed in the different excavation sites. The maritime trade routes that gave rise to the presence of large quantities of export ceramics in the region were also mentioned. A system of classifying ceramic materials was provided for further discussion.

### Papers Presented

In addition, workshop consultants and resource persons presented research papers on archaeological findings which shed light on other aspects of ceramic analysis. A representative from the People's Republic of China, Professor Feng Xian Ming who is a research fellow from the Palace Museum, Beijing, gave the perspective from the major porcelain exporting country in the past, China. He traced the development of Chinese trade with Southeast Asia and other countries and



*Workshop sessions were conducted in the Sarawak Museum at Kuching.*



described the porcelains found in various Asian countries. Dr. Janice Stargardt of the University of Cambridge reported on the "Place of Satingpura Ceramics Sequence in Asian Maritime Trade, 8th to 14th Century A.D." Dr. Pierre Yves Manguin summarized his paper on "The Southeast Asian Ship: An Historical Approach" while Dr. Zuraina Majid-Loewe talked of the temmoku ware and the need to conduct comparative studies of the wares found in Sarawak and those in China.

### Issues Discussed

Discussions on the complexity of dating ceramics were also conducted. They focused on the validity of utilizing associations of ceramics and other categories of artifacts in burial and other archaeological contexts for dating purposes and on the discrepancies found in dating based on archaeological evidence vis-a-vis those based on stylistic grounds.

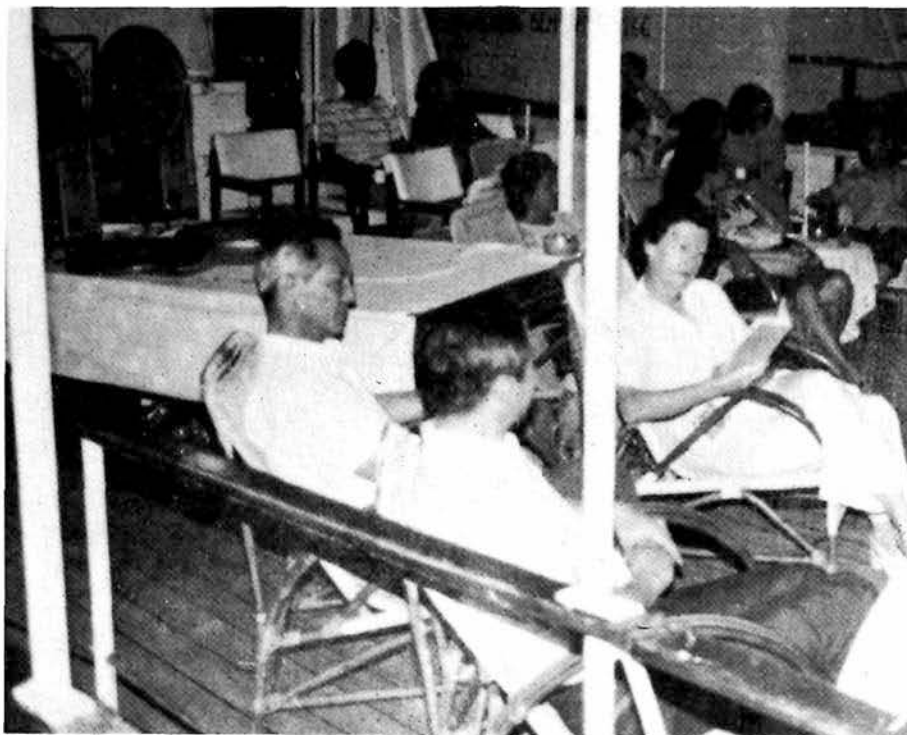
Field trips to archaeological sites in Kabong and the Niah Caves were also organized. These involved all forms of travel: by air, sea, river, land and on foot. The Sarawak Museum also arranged a Ceramics Exhibition where wares excavated in Sarawak and Sabah were displayed.

### The Participants.

The participants coming from the Southeast Asian countries were as follows: Indonesia — Mrs. Satyawati Suleiman, Mr. Santoso Sugondho, and Mrs. Sri Soejatmi Satari; Malaysia — Mr. Adi Haji Taha, Mr. Lucas Chin, Mr. Jimmy Foo, Mr. Michael Chong, Mr. Mohd Mokhtar bin Abu Bakar, Mr. Mohamed bin Haji Abdullah, Mr. Tuton Kaboy, Mr. R. Nyandoh, and Mr. Edmund Kurui; Brunei — Mr Ahmad bin Sha'ari; Philippines: Dr. Alfredo E. Evangelista, Dr. Jesus T. Peralta, and Mrs. Leonisa Ramas; Thailand — Dr. Phasook Indrawooth, Mrs. Natthapatra Chandvij, and Mr. Seehawat Naenna.

*Continued on page 22*

## Other Workshop Activities in Photo



*The participants relaxed in the boat which took them to the Kabong site.*



*Going to the Niah Caves meant walking through forest areas.*



*The sherds excavated in Kabong were laid out for inspection of the participants.*

### *The Relation .....*

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### *Ceramic .....*

The consultants/resource persons were the following: Prof. Feng Xian-Ming and Mr. Li Hui-Ping from China; Dr. Janice Stargardt from Cambridge University; Dr. Pierre-Yves Manguin from Ecole Française D'Extrême-Orient; Prof. Meitoku Kamei from Kyushu Historical Museum; and Dr. Zuraina Majid-Loewe from the Universiti Sains Malaysia. Dr. Rosa Tenazas represented the SPAFA Coordinating Unit.

Jiu Gang	Indonesia	Longchuan celadon and big and small jars
Pu Ban	Indonesia	Green-ware rough bowls, and big and small jars
Wen Lao Gu	Indonesia	Green wares, jars and the like
Long Ya Men Hua Mian	Indonesia Indonesia	Longchuan celadon Rough bowls and green Longchuan porcelain
Dan Yang	Indonesia	Rough bowls and the like
Gou Lan Shan	Indonesia	Green wares and the like
Ban Da Li	India	Blue-and-white wares
Man Tuo Lang Nan Wu Li	Unidentified Indonesia	Green wares Blue-and-white wares
Jia Li Na	Iran	Blue-and-white wares
Qian Li Ma Xiao Ba Nan	Unidentified India	Rough bowls Blue-and-white wares
Peng Jia La	Bangladesh	Blue-and-white wares
Tian Tang	Saudi Arabia	Blue-and-white wares
Tian Zhu	India	Blue-and-white wares
Gan Mai Li	Iran	Blue-and-white wares, jars and vases
Wu Die	India	Blue-and-white wares

The above list mentions green procelains (celadons) fifteen times, Chu hou porcelains five times, blue-and-white floral porcelains sixteen times, blue and white porcelains three times, porcelain ware three times and rough bowls five times. Most of the exports came from the kilns in Jiangxi and Xhejiang provinces and a lesser number from those in Fujian province.

(to be continued)

#### Footnotes

<sup>1</sup> Page 1868, Vol 3, Zhonghua Shuqu edition.

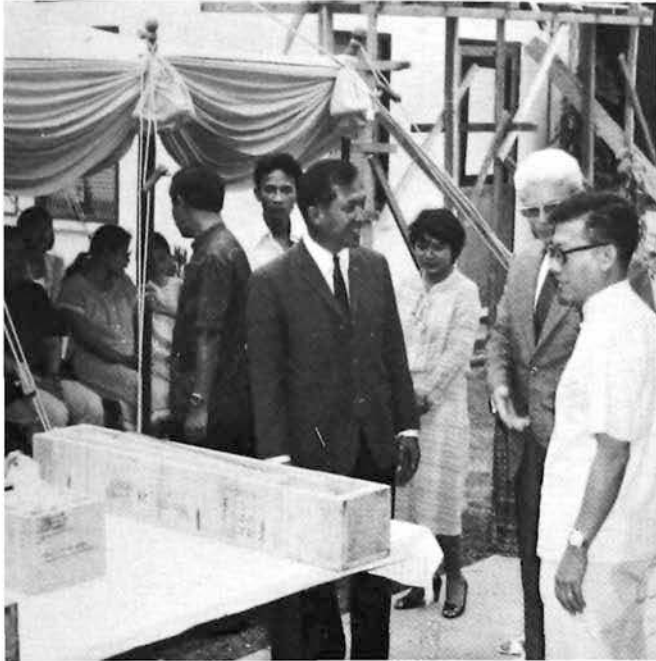
<sup>2-3</sup> Page 2516, Vol 3, Zhonghua Shuqu edition.

<sup>4-5</sup> Page 4537-38, Vol 13, Zhonghua Shuqu edition.

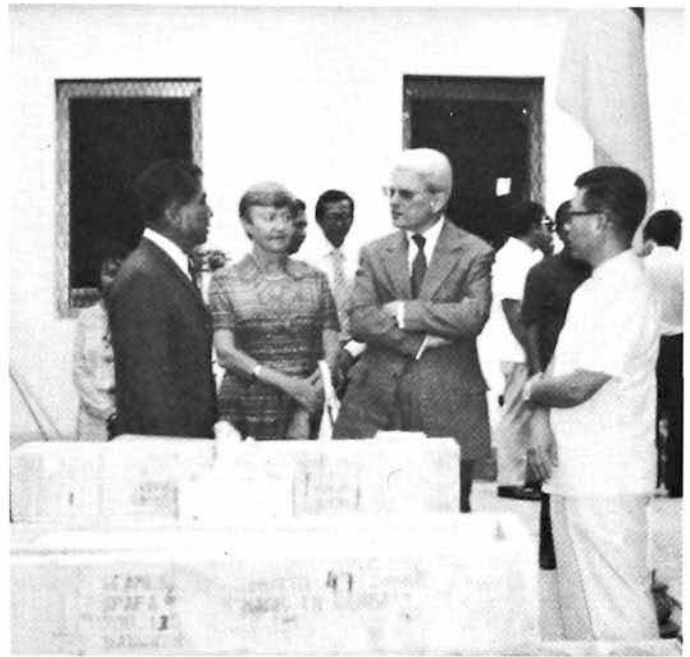
<sup>6</sup> "Zhu Fan Zhi, Revised and Annotated" Page 5, 1966 edition, Zhonghua Shuqu edition.

<sup>7</sup> Page 7, "Ku Jin Yi Shi" (photomechanical Printing).

## Germany Donates Underwater Archaeology Equipment



*The Government of Germany through its Ambassador to Thailand, Walter Boss, presented the Thai SPAFA sub-center with some underwater archaeology equipment. Ambassador Boss confers with H.E. Dr. Sippanonda Ketudat, Minister of Education and Mr. Vidya Intakosai, head of the Underwater Archaeology Section.*



*Mr. Vidya Intakosai expresses his gratitude for the donation to Ambassador Walter Boss. Others in photo are Dr. Marianne Lapper, counselor of the German Embassy, and Dr. Sippanonda Ketudat.*

In 1978 the Federal Republic of Germany commissioned a Consultant, Dr. H.H.E. Loofs from the Department of Asian Civilizations of the Australian National University, to conduct a survey of the SPAFA Sub-Centres to determine urgent needs in the form of equipment to facilitate the implementation of SPAFA training programmes. This survey culminated in the donation by the FRG of underwater archaeology equipment to the SPAFA Thai Sub-Centre.

The donation amounting to US\$ 80,000 were in the form of the most up-to-date equipment. They were as follows: two man decompression chamber/treatment chamber with air cylinders, high-pressure compressor for oxygen, diesel-generator for the compressor, one set of underwater communication system.

These pieces of equipment were installed by German technicians who came from Germany to the SPAFA Thai Sub-Centre's Underwater Archaeology Station at Sattahip, Chonburi Province early in 1981.

### Bibliography on Prehistory Released

To acquaint scholars with available materials on Southeast Asian archaeology/prehistory and fine arts in the region, the SEAMEO Project in Archaeology and Fine Arts (SPAFA) is undertaking the compilation of a comprehensive bibliographical data on the subject. They are meant to facilitate the conduct of comparative studies among Southeast Asian scholars also.

As part of this effort, SPAFA has published recently the first of the special bibliographic series. It contains a list of sources of prehistory materials only. The list can be divided into two major headings: the general references and the country-specific bibliography. The latter covers Southeast Asia — Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, Philippines, Thailand and

Vietnam; China and Hong Kong; Oceania; and Madagascar which, though in Africa, has been highly influenced by Malay language and culture.

However, the bibliography is not exhaustive. Financial constraints limited data gathering to 20 institutions — 3 in Indonesia, 8 in the Philippines, 1 in Singapore and 8 in Thailand. Funds for the documentation projects in the Philippines and Indonesia came from the Ford Foundation grants while the Bangkok Bank supported similar activities in Thailand.

Currently, the holdings of the SPAFA Library and Documentation Centre number over a thousand. A bulk of the collection comes from donations of the Governments of France and Netherlands.



