# INTEGRAL STUDY OF THE SILK ROADS: ROADS OF DIALOGUE

21-22 JANUARY 1991 BANGKOK, THAILAND Document No. 14

Geological and Archaeological Expeditions in Thailand related to the Maritime Silk Route

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#### **INTRODUCTION**

"Silk Road" is now the acceptable term referring to the trade and cultural exchange between the Eastern world and the West. Initially, interests were emulated by the caravans which carried Chinese silk products to trade with Western countries. However, in the following centuries the lists of various types of exotic merchandise grew longer as new products were carried to their destinations by what were at that time three newly-found main routes: the desert, the steppes and the sea. Accompanying the goods were the inevitable and usually longer lasting exchanges of culture and technology.

The maritime silk route emerged contemporarily with the development of ship building and sailing techniques. Small boats, which were then commonly sailed along the rivers and coastlines, developed into complicated larger vessels onto which much larger shipments of merchandise could be loaded. Around the 1st century A.D. Arabs navigators came to an understanding of the monsoon cycles which made it possible to sail across the ocean (Barraclough, 1982: 24). Because the voyages could be more or less scheduled and the benefits of the growing number of successful trips easily seen, the sea route became more and more significant in the distribution of Silk trade traffic. It also became an important means for social and cultural exchanges including various religious missions. The possibilities of an increasing variety of goods and raw materials were explored through made relations among the regions involved, especially along the sea route, where exotic goods could be found in the different climactic zones and on the islands. Moreover, during the same century, the Roman Empire extended its power eastward and there were many Roman colonies and trade centers located in South Asia such as at Muziris and Paduka in South India and at Mantire in Sri Lanka (Francis, 1987: 4-8).

There is evidence indicating that there were connection among the countries in the Eastern world along the coastline of the Asian continental mainland and its many associated archipelagoes from the Arabian Peninsula, South Asia (including India, Pakistan, Bangladesh, and Sri Lanka), Southeast Asia (including Thailand, Burma, Malaysia, Singapore, the Indonesian Archipelago, Cambodia, Vietnam, and the Philippines), the Far East (including

China, Korea, and Japan) via sea routes from as early as prehistoric times. Sailors at that time did not consider which season would be best for setting sail, and instead relied on prevailing coastal winds. Hence, they sailed along the coastlines using a tracking technique that not only required many days at sea but also meant that the seamen could not keep to any particular schedule. It is not difficult to see, then, how an understanding of the monsoon cycle would do much to promote the more efficient and financially lucrative business of maritime trade among these countries.

This paper will attempt to compile the results of geological and archeological work in Thailand of sites that, for one reason or another, indicated a high probability of being in the ancient international maritime trade route from the period when the monsoon system was discovered around the 1rst century AD until the flourishing of the maritime trade before direct contact with Westerners in the 16<sup>th</sup> century AD.

### The Maritime Silk Road and Navigator Southeast Asia

Geographically, the shape of Southeast Asia is a peninsular land bridge protruding from the Asian continental mainland in the north to archipelagoes in the south. The region, located between the equator and the Tropic of Cancer (Latitude: 0 to 22 North and Longitude: 90 to 130 East), is directly affected by the influence of monsoons as well as by many other local currents and prevailing winds that benefits the water traffic networks from many directions. Because the peninsula separates the Andaman Sea in the Indian Ocean from the South China Sea in the Pacific Ocean, which lie on its west and east coasts respectively, any sea route connection between either the Western world from the Mediterranean or the Middle East or South Asia and the Far East could be made only via Southeast Asian waters.

### The understanding of the monsoon phenomena opened a new era for the world maritime trade including the Southeast Asian region.

First of all, the sailors learned about seasons and the relationships between the directions of the monsoons (the most influential seasonal winds of the South and Southeast regions Asian regions) and the starting point and destination of the trip. The northern monsoon blows from China from November to February while the southern monsoon blows from the India Ocean from May to October. If one wanted to sail to Southeast Asia eastward from the Middle East, for example, one should schedule the voyage so that the transit could be made in South Asia (in India or Sri Lanka) before beginning of the southern monsoon season. From South Asia (between latitude 5 to 6) the vessel would sail with the wind direction (northeast) to the coasts of the Southeast Asian Peninsula (Myanmar or Thailand.

However, a navigator could readjust his route to a more eastern approach by sailing below the monsoon direction or by hitting the west coast of the peninsula and then catching the coastal prevailing winds and sailing southward to the archipelagoes.

If one wanted to sail Southeast Asia from the east, such as from China, the trip could be scheduled according to the northeastern monsoon season. From the Far East, vessels would sail to the tip of the southern cape of Vietnam and then into the Gulf of Thailand and to the southern part of the peninsula. However, the sailor could readjust his route northwards to dock in the central part of Thailand by sailing along with the prevailing coastal (the "Tapao Wind blows from February to May) and then continue through the rivers to an inland port such as at Ayudnaya or Supan Buri.

Secondly, the development of the "Junk" was beneficial to maritime trade. Its efficiency in sailing and the enlargement of the cargo holds encouraged the expansion of networks and markets. Southeast Asia is the perfect location for providing an entrepot where merchandise could be exchanged between East and West. Furthermore, fertile Southeast Asia has wars been a prime source for agricultural products, such as rice and spices and forest products such as horns and antlers, leather and wood.

Thirdly, a long journey was required for a vessel to travel from its home port to its destination because the ships had to wait for the right seasonal wind. Because both northeast and southwest monsoons hit Southeast Asia, it was seen as a convenient spot to dock and to exchange merchandise and the ships did not have to take any added risks with longer journeys. Because the ships did not have to wait for the right wind to sail, a return trip in any direction from Southeast Asia took approximatively a year. In connection with this, many coastal communities in Southeast Asia developed so that they were able to offer all conveniences in docking and the transportation of imported goods as well as taking advantage of their position as middlemen for both local and international markets.

#### Thailand as a Junction of the Maritime Route

Thailand is located on latitude 5°37' to 20°27': North and longitude 97°22' to 105°37 East. Although a major part of the total area connecting it to mainland Asia is inland, its southern part is a long and narrow strip as the Malay Peninsula. Apart from its excellent location in relation to the monsoons, there are many other advantages and attractions which Thailand contributed to the maritime trade route:

1) Mountainous landmarks. There are many types of rock formations in the Malay Peninsula which provide clear landmarks for many places particularly at the river mouths and sheltered bays, spots which are always densely populated by the local communities. Sailors steered their boats toward landmarks such as Khao Phra Hill at Kura Euri neat the river mouth, Phangra Province, and on the Andaman coast which was a major destination for ships which sailed from India or the Middle East. On the east coast, the Chinese ships navigated according to the Khao Sam Roi Yod's oddly shaped limestone mountains in Prajuabkirikan Province or steered towards Khao Luang in front of the So Chon River mouth and at the Nakorn River Mouth, Narkorn Sri Thammat Province.

- 2) Numerous bays and harbors lying on both coasts of the peninsula provide good shelter for ships and furthermore, many of these bays enjoy the double protection provided by small islands or sandbars. Examples of these sites are Chum Pron Harbour, Ban Don Bay and Kakorn Harbor on the east coast and Phanga Harbor and Au Kuk Bay on the west coast.
- 3) There are many rivers and canal systems connecting the coastal ports to the inland communities
- 4) There were many natural resources in worldwide demand such as tin, lead, forest products, and spices.
- 5) Many inland communities had already developed to sophisticated levels of agricultural and technological expertise, a complex, state-based political system, and a transportation system. Examples of these communities are represented by the Ban Cheng Site and Nong Han Site in Udonthani Province. Therefore, they were more than capable of developing into international trade centers.

Although there were many advantage to docking into Thailand's ports, some merchants captains considered it inconvenient to have to dock and then to transport the merchandise across the peninsula. Many ships sailed southward along the coast and went to ports in Malacca, Sumatra and other islands in Indonesia –either to China or to Western countries.

From the reason mentioned above, it is still too early for us to consider whether Thailand was really the center of the ancient maritime trade. If it was, additional extensive archeological survey as studies needs to be carried out first in order to locate sites in Thailand and their archeological and historical contexts should be carefully examined and interpreted.

### **Archaeological Investigation Fran Documents to Field Work**

A great deal of research has been carried out and many books have been written (including old records such as the "Mahavamsa" of Sri Lanka and also Ptolemy's Geographic Records of Eastern Asia) about: the significance of Southeast Asia on the maritime silk route. Information from background research inspired the author to investigate archaeological sites in this field. Therefore an extensive survey has been ongoing since 1977.

- 1. Ptolemy's Geographic Records of Eastern Asia was written around the 1<sup>st</sup> or 2<sup>nd</sup> century. In this record, "Chryse" 'Golden Land" or "Golden Island") was mentioned in cross-reference to "Suvanabhumi" (Golden Land") in the Mahavamsa which was written around the 5<sup>th</sup> century AD (although its contents involve events which took place as early as the 3<sup>rd</sup> century BC).
  - In the Mahavamsa (Geiger, 1950: X-LXIII), Suvanabhuma was the land to which Ashoka the Great Kinf of India, sent two Buddhist venerable, Sonadera and Uttaradera, on a mission to establish Buddhism. Many scholars presumed that Suvanabhumi or Chryse as in Southeast Asia at a location were Thailand and Myanmar are now situated. Unfortunately, there is not yet any evidence of Buddhism existing in this area as early as 3nd century BC. Since no large amount of gold has ever been found in this region, the application of Chryse or Suvanabhumi as "land rich in gold" would not be the case. However, to interpret the words meaning "land rich in resources and economic traffic" or "ideal land" (utopia), would make the location a viable contender for the term.
- 2. Gerine (1909:186) noted that according to Claudius Ptolemy's Geographical record, there, was on Chryse, a port called "Takola". Gerini established an hypothesis to examine wither or not the modern name of "Takuap" was derived from the word "Takola". Many scholars followed his idea and added that this same port might well have been Kalah" as mentioned in Arabic inscriptions in the 9<sup>th</sup> century because many surface finds which indicate Arabian origins were found in the Koh Ko Kao are of Phangna Province on the Andaman coast. If that was the case, this same port at "Takola" or "Kalah" would have been receiving ships for more than 800 years and a thick cultural layer or successive cultural layers were expected which the earliest containing evidence at least the 1rst century AD.
- 3. In "Researches on Ptolemy's Geographic Records of Eastern Asia (Further India-Malay Archipelago G.E Gerini:1909) Gerini tried to located the place names in

Ptolemy's record according to their probable latitudes, longitude and their approximate area. Durign his reexamination, the author found many errors. For example, Gerini located the town "Perimula" in the Pang Singha Area, Ban Ket Kai Kai Village, Muang District Narkorn Sri Thammat Province. However, the latitudinal and longitudinal coordinates given for this site would have been shifted its location into the Gulf of Thailand, off the east coast of Hua Sai District in Narkorn Sri Thammat Province. He located "Takola" at Bang Sai Village, Takua Pa District, Phangna Province but the latitudinal and longitudinal coordinates given shifted it eastward also in the Gulf of Thailand, 15 kilometers east if Lamae village, Lang Suan District, off the coast of Chumporn Province.

4. Paul Wheatley (1986) believed that there were transportation systems from the east coast to the west coast via trans-peninsular routes, which took advantage of streams instead of a route which would have meant sailing down the Malay Peninsula and then back up again. His studies were carried out using only images and aerial photographs and although a proper ground survey would be required to adequately verify his hypotheses, he proposed six plausible major routes along the streams and mountains passes.

From the above mentioned observation leads the present writer to involve in searching the solution by means of field work.

Archeological activities were implemented to the following concerns:

- 1. Archeological surveys in a search for sites that contain maritime trade evidence as well as port sites and the habitation and industrial sites associated with those ports.
- 2. Archeological survey on trans-peninsular routes, the connections between ports along the coast lines and between ports and inland sites.
- 3. Excavation promising sites such as ancient cities, ports and productions sites.

#### **Results**

Archeological work was carried out between 1977-1989, at sites that appeared to have connections with the Maritime Silk Road during the beginning of the Christian Era to the  $16^{th}$  century AD.

### A) <u>Archaeological Sites</u> (their locations and significance)

### 1. Archaeological Sites Dating from the Beginning of the Christian Era to the 2nd century A.D.

Bam Don Ta Pet in Kanchanaburi Province indicates the connection between Thailand and the West (The Mediterranean and India around 360-390 BC, according to C14 dates (Glover 1990:155)). People seem to have reached an understanding of the monsoon phenomena sometime before the 2<sup>nd</sup> century AD which is the approximate age of the artifact found at Kha Khao Sam Kaeo sites and the Klong Thom Site, Krabi Province. Within these sites, there are indications that they were not only ports but also production sites for certain merchandise and although no religion or cult icons were found, inscriptions were discovered on small seals.

### 2. Archaeological Sites Dating to between the 3<sup>rd</sup> and 6<sup>th</sup> centuries A.D

Religious and cult icons accompanied the new religions of Hinduism and Buddhism which were introduced to this area and there were early cult icons produced by local people as well. Although inscriptions are present on many artifacts, their contents provide insufficient information to piece stories together or to ascertain the name given to the area or the political system in effect during that time. The existence of international relations cannot be denied and many earlier sites developed into larger ports such as Khuan Lukpat Pat Site, Klong Thom District, Krabi Province and other newly discovered sites such as Khuan Phun Pin Site, Surat Thani Province, Phu Khao Thong Site, Ranong Province and at Yarang Site, Pattani Province.

### 3. Archaeological Sites dating to between the 7th and 8th centuries

Inscriptions reveal the names of states and statesmen, lifestyle, religions, politics and languages. The establishment of cities and towns and the creation of a "cosmosphere" are reflected in the myriad of language used. Mon, Pali, Sanskrit were used as were Pallava, Mon, Kharosathi scripts. Buddhist and Indus co-existed in the same community. Hindu icons were found in association with Buddha image, votive tablets and stupas. Rivers and canals provided a communication network for the people. The port system and its management had not yet been had not yet been properly established and trade with China was not yet popular. There were some vague Islamic influences in Southeast Asia (in the southern part of the peninsula of this peninsula). Among the cities and towns which flourished during this period are the Nakorn Pathom Site (in the province of the same name), Ding Muang Teuy Site in Ubon

Rajathani Province, San Pa Ka Site in Chiang Mai Province, Sathing Ohra Site in Songkhla Province and Yarang Site in Pattani Province.

### 4. Archaeologica Sites dating to between the 8th and 10th Centuries

From the second half of the 8<sup>th</sup> century until the 40<sup>th</sup> century, there were major cultural changes and developments. More nationalities and languages can be detected in the presence of different scripts and inscriptions such as Tamil and Khmer languages and there was cultural adaptation which created microcosmic local identities. Although Buddhism and Hinduism had spread throughout Southeast Asia by then in Southern Thailand, Mahayana, Buddhism was now predominant there while in the Northeast, Hinduism was popular in the northern part and Buddhism popular in the southern part. In Central Thailand, Theravada Buddhism seemed to dominate the religious scene. In this period, trans-peninsular routes were used regularly to connect the two coasts and ports which existed for this purpose (for example Kho Ko Kao, Phangna Province on the west coast and Lam Pho site), Surat Thanni Province on the east coast). Furthermore, there were inland trade centers scattered around major populated areas along major rivers such as the Satuk Site on the Mun River, Northeastern Thailand. This area takes on the additional significance as a center for the export of Buriram ceramics which produced at sites nearby. Kho Ko Kao was not only know as a port but also a as production site for glass beads. Other contemporaneous sites for this site period include the Buriram Kiln Site in Buriram Province, Dong Lakorn Site in Nakonnayok Province and Dong Sri Mahabodi in Prachin Buri Province.

#### 5. Archaeological Sites Dating to between the 11th to 13th centuries

During the period, the variation in religious beliefs decreased and gave way to the predominance of Mahayana Buddhism for the whole region. The old ports along the coast declined and new ports were founded in greater abundance on the east coast of the peninsula and in the Gulf of Thailand. There were many production sites for ceramics such as at Pa-O Kiln Site, Buriram Kiln Site, Suklothai-Sisatchanalai Kiln Sites as well as the northern kiln sites. Glass beads were produced at Sathing Phra Site, E Province. The most significant sites from this period include Wat Rang Site in Nakorn Sri Thammarat Province, Wat Vieng Site in Surat Thanni Province and Prasat Huang Singha, Kanchanaburi Province.

### 6. Archaeological Sites Dating to between the 13th and 16th Centuries A.D.

New kingdoms emerged in the central part of Southeast Asia. The first independent Thai state of Sukhotai flourished during the 13<sup>th</sup> century and in the late 15<sup>th</sup> century, it gave way to its stronger neighbor to the South – Ayudhaya – which was to dominate most of the sea for the next 417 years. As a part of a new national identity, Thevada Buddhism dominated other sects and religions throughout the region. Therefore, the concept of religious and architecture changed as well as the official language and scripts. The entire region has been relatively homogenous ever since.

There were any industrial sites produced export goods – ceramics in particular. Many northern kilns sites developed but Sangkalok (Thai celadon) ware from the Sukhothai area and ceramics from Supan Buri (Bang Boon Kiln Site) and from Mae Nam Kiln Site, Singhaburi Province were desirable trade goods and highly valued in the junk trade network which accompanied the trade with China. Merchandise was exported from the ports of Ayudhaya and Nakorn Sri Thamaarat and Pattani to China and thee trade continued until the early 16th century when Thailand was in direct contact with Westerners. Ayudhaya then became a famous harbor city of Southeast Asia.

### **B)** Trans-peninsular Routes

On-ground surveys which have been undertaken to find evidence of trans-peninsular routes support the following hypotheses:

- There as communication and cultural exchange between the local people who lived along the east coast of the peninsula. Therefore, the west population who directly received Indian culture transmitted it inland and eastwards via streams and mountain valleys and passes.
- 2. The merchandise was transported from the east to the west coast and vice versa. The author examined many of the possible trans-peninsular routes as indicated by archeological findings and it was bound that the local people still use some of these route today. However, other routes continued over international boarders into areas which did not used to be politically distinct units, thus prohibiting further examination at the present time.

The trans-peninsular routes are proposed in this report:

1. Traders could have come from the Andaman Sea at Mataban Bay (Myanmar) and then negotiated the Salaween River, the Mei River and then crossed the mountainous natural border at Mae Sod Pass, Tak Province into the mountainous

- land in the north of Thailand. Archaeological sites discovered in the northern area of Thailand are mostly burial sites and among the burial goods are imported ceramics from various sources such as from Myanmar, China, Larna and Sukhothai.
- 2. From the Adaman Sera at Mantaban Bay at Maulemean Port, vessels could have entered the Sami River and the goods could have been carried over the Chedi Sam Ong (Three Pagodas) Pass to Kwae Yai Rivers in Kanchanaburi Province. From here traders could have spread across the central plain of Thailand and gone through the provinces of Supan Buri, Ratch Buri and Nakorn Pathom and possibly departed gain via the Gulf of Thailand, to Cambodia, Vietnam and South China. Among these sites in Central Thailand, imported goods were found in their archeological contexts at Phong Tuk Site and Don Ta Fet Site in Kanchanaburi Province and Don Rakang in Supan Buri Province.
- 3. From the Adaman Sea traders might have started from the narrowest part of the peninsula (Kra Buri, Ranong Province or from Victoria Point in Myanmar) and gone up to the Kra Buri River to the Chan Canal, and then across the hilly area to Chumporn Province and along the Tha Ta Pao River to the Chumporn River which leads to the Gulf of Thailand on the east coast. An archeological site providing evidence to this route is Khao Sam Kaeo Site in Chumporn Province.
- 4. From the Adaman Sea through Phra Thong Island, traders had access to the Nang Yon Canal from here they could have made their way across the Kuan Chalie Hill in the Pu Kam Mining Area, the Chon Mining area or the Chongkrong Mining Area and then along the Sang River to the Pumduang River to the Ta Pi River to Bandon Bay. Surat Thani Province. Along this route, there are many archaeological sites: Phukhao Thong Mountain, Kao Kok Mountain, Tung Rak, Chong Krong, Kuan Thong, Ta Pak Nam Rob, Khao Srivijaya Mountain and Kuan Pun Pin, Surat Thani Province.
- 5. From the Andaman Sea through Koh Ko Khao Island, traders could have made their way along the Ta Kua Pa River all across the Sok mountain Pass to the Pumduang River. From here the Ta Pi River could carry them northwest to Ban Dong Bay. Archaeological sites found on the east coast are the same as those provided for the third route (above). On the west coast, sites include Koh Kho Khao, Khuan Pra Neau, Khao Phra Narai Hill and Ta Han, Phangna Province.

- 6. From the Adaman Sea to the southern part of Phangna Province, this manly overland route continues into Krabi Province to the Ta Pi River to Ban Don Bay in Surat Thani. The most significant site is the Kuan Luk Pat Site in Krabi Province.
- 7. From the Adaman Sea to the Sin Pun Canal, the traders could have gone overland to Nakorn Sri Thammarat. Archaeological sites along this route are at Khao Sai, Trang Province, Vieng Sra community, Surat Thani Province, Pannara cave Site in Nakorn Sri Thammarat Province. The Ta Rua River could have carried them to the coast where artifacts were found at Ta Rua Site and Muang Pra Vieng site in Nakorn Sri Thammarat.
- 8. Trading parties might also have gone from the Andaman Sea to Sungai Huda River across the water shed of the Thai-Malaysia border then along the streams of Pattani Province. Archaeological evidence was found at Sungai Mas, Bujang Valley, Kedah, Malaysia.
- 9. Along the border formed by a mountain range between Thailand and Cambodia is a route for transporting ceramic products from industrial sites at Buriram Province as well as other forest products. There are many passes from the northeastern plateau in Thailand to the lower plain of Cambodia via the Bok Pass, the Ta Thao Pass, the Phra Plai Pass, the Chom Pass, the Ta Meun Pass and the Sai Ta Ku Pass and then along the Khong River to the South China Sea in Vietnam. It is possibly along this route that foreign culture was brought into the northeastern part of Thailand.
- 10. Traders could have navigated the Khong River along the border of Thailand to the northern part of Thailand such as at Leoi, Nong Kai, Nakorn Phanom, Mukdahan Ubon Rajathani. There are many centers of so called "civilization" along this river such as at Paktze in Laos, the Angkor area in Cambosia and Oc Ea at the mouth of the river in Vietnam. These sites were contemporaneous with ports found in the Southern part of Thailand.

### Summary of the Hypotheses concerning the Sites which Connected the Maritime Silk Route in Thailand

1. International maritime trade occurred in the Malay Peninsula area. However, before the beginning of the Christian era, there was no special place to moor the ships. After people had come to terms with the monsoon phenomena. Maritime trade flourished and the actual port sites can be spotted along the east and the west coasts of southern Thailand and the actual port sites can be spotted along the east and west coasts of

- southern Thailand (Malay Peninsula). Furthermore, some of these ports had become production sites for some special items of merchandise such as glass beads and ceramics and other accessories.
- 2. Although some of the sites had been serving as port for many centuries, others had not and still other had been shifted within a single area. A site that is believed to have served as a port for eight centuries is named "Takola" or "Kalah" which some scholars hypothesized is actually located at Koh Khao Kho, Phangna Province (mouth of Takuapa River). However, excavation of this site has failed to reveal anything to suggest that its one cultural layer dates anything earlier than the 9th century, rendering a 1st of 2nd century AD date improbable.
- 3. The locations of the ports on both east and west coasts of the peninsula attracted the ships but the management of the trans-peninsular routes and the exchanges between ports and were particularly striking because of the business these routes brought to the communities. Many probable routes were examined and the streams and valleys. Many archaeological sites were found, some of which might have acted as inland trade centers to export markets. Among these sites, local products, especially Sangkalok ware, were found in abundance, not to mention the spice and forest products which were well-known export products at that time.

### Reference

Barraceough, Geoffrey	The time Concise Atlas of World History.
	Time Book Limited, London, 1982.
Gieger, Whilehm	The Mahavamsa, The Ceylon Government
	Information Department, Colombo, 1950.
Gerini, G.E.	Researches on Ptolemy's Geography of
	Eastern Asia (Further India and India-Malay
	Archipelago) Oriental Books Reprints
	Corporation, New Delhi, Second Edition,
	1974.
Francis, Peter, Jr.	A Guide to the Beads from Arikamedu in the
	Pondicherry Museum. Pondicherry: The
	Pondicherry Museum, 1987. (Museum
	Publication, No. 2).
Wheatley, Pual.	The Golden Khersonese, Penerbit University,
	Malaya Kualalumpur, 1980.