

เส้นทางการค้าทางทะเล ระหว่างไทยและเบงกอล

ดร. ศาห์นาจ ชูสเน จาซัน

ศาสตราจารย์ประจำภาควิชาการศึกษาทั่วไป

มหาวิทยาลัยบังกลาเทศศิลปศาสตร์ ประเทศบังกลาเทศ

บทคัดย่อ

บทความนี้มีวัตถุประสงค์เพื่อแสดงภาพการค้าทางทะเลระหว่างไทยและเบงกอล (ปัจจุบัน คือ ประเทศบังกลาเทศและรัฐเบงกอลตะวันตกของอินเดีย) โดยการศึกษาค้นคว้าจากวัตถุทางวัฒนธรรมนับตั้งแต่ 4 ศตวรรษก่อนคริสตกาลจนถึงคริสต์ศตวรรษที่ 4 ซึ่งค้นพบในแหล่งโบราณคดีในพื้นที่ดังกล่าวและนำมาประกอบให้เห็นภาพเครือข่ายการค้าในมหาสมุทรอินเดียระดับมหัพภาค การสำรวจและการวิเคราะห์โครงกระดูกในงานศึกษานี้แบ่งเป็น 3 ระดับ ประการแรกสุด คือ การแสดงภาพหลักฐานทางโบราณคดีเกี่ยวกับการค้าทางทะเล อาทิ ภาชนะดินเผาสีดำขัดมันแบบทางเหนือ ภาชนะดินเผาแบบมีลายเป็นวงรอบ ภาชนะดินเผาแบบมีปุ่ม ภาชนะดินเผาแบบมีรอยประทับ ลูกปัดหินกึ่งมีค่าและลูกปัดแก้ว และตราประทับที่มีอักษรพราหมี-ขโรสดี ประการที่สอง เป็นการติดตามร่องรอยพัฒนาการของเครือข่ายการค้าทางทะเลระหว่างไทยและเบงกอล และสุดท้ายประการที่สาม แสดงภาพเส้นทางการค้าดังกล่าวโดยเฉพาะเจาะจง

คำสำคัญ: การค้าทางทะเล, โบราณคดี, เบงกอล, ประเทศไทย

Maritime Trade between Thailand and Bengal.

Dr. Shahnaj Husne JAHAN, Professor, Department of General Education
University of Liberal Arts Bangladesh (ULAB) House 56,
Road 4/A (Satmasjid Road), Dhanmondi R/A, Dhaka-1209, Bangladesh.
Email: Shahnaj.jahan@ulab.edu.bd

ABSTRACT

This paper attempts to portray maritime trade between Thailand and Bengal (currently known as Bangladesh and West Bengal, India) by examining cultural materials from the fourth century BCE to the fourth century CE found in archaeological sites of the regions and place them in a macro-level context of the Indian Ocean trade network. Observations and deliberations of this study have been presented in three stages. The first of these illustrates archaeological evidences pertaining to maritime trade such as Northern Black Polished Ware (NBPW), Rouletted Ware, knobbed ware, stamped Ware, glass and semi-precious stone beads, seals and sealings with Kharosti-Brahmi inscription; the second traces the evolution of the maritime trade network between Thailand and Bengal; and the third demonstrates the definite trade route.

Keywords: maritime trade, archaeology, Bengal, Thailand



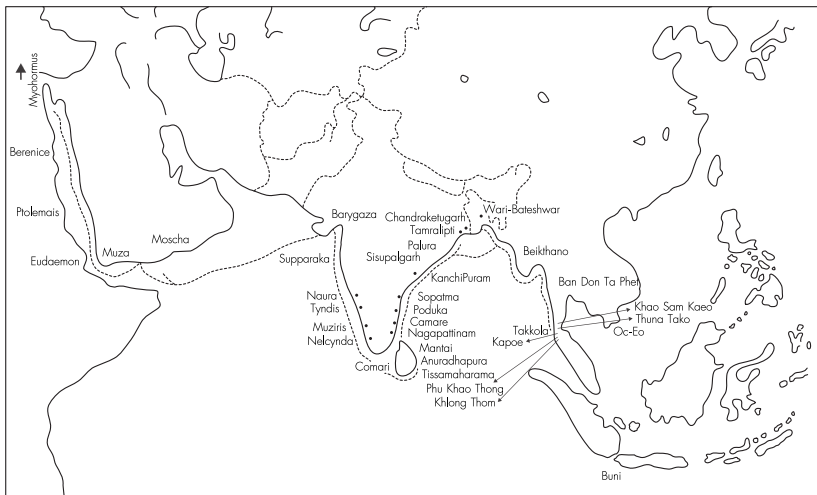
Introduction

As the title of this paper implies, the maritime trade of the geographical regions that examined in it are Thailand and Bengal. Undoubtedly, Bengal is an anomaly because it is politically non-existent today. What exists is an independent country called Bangladesh and a component state of the Union of India, known as West Bengal. The period of study covers from the fourth century BCE to the fourth century CE. It is during this period “the coastal Southeast Asian chiefdoms increasingly participated in the Southern Silk Route, a series of maritime exchange routes linking the empires of Rome and China” (Higham 2002, 231). Consequently, Bengal and Thailand participated in this network due to their strategic position.

Before engaging in scripting the analytical narrative, it is necessary to demarcate the parameters of ‘maritime trade’. The notion of ‘trade’ is most commonly explained as a voluntary act of exchange of goods, which may be accomplished by barter or cash. However, Colin Renfrew (1969) views the term in a wider perspective. “Trade”, according to him, is “reciprocal traffic, exchange, or movement of materials or goods through peaceful human agency” (Renfrew 1969, 152). Admitting that the aspect of ‘reciprocity’ cannot always be demonstrated, he shows that ‘trade’ can be better comprehended by showing what it is not: it is not booty, gift, tribute or tax. The most crucial defining feature of trade is that “goods must change hands”. The underlying implication of ‘changing hands’ is ‘exchange’ because any giving of goods involves receiving, excluding of course those “given under duress or as ‘unsolicited gifts’”. There may be numerous variants of ‘changing hands’ of goods, many of which may not be for monetary gain but for gratification of both the parties involved in the transaction. Further, the process of exchange “can be repeated several times for the same commodities” (Renfrew 1969, 152) and thus involve more than two parties. From very early times humans have

carried out trade, either exchanging their surplus commodities or selling them for a price. Often this activity had to be carried out with distant localities, which necessitated transportation overland or overseas. This study focuses on the latter, i.e., transportation overseas, which is often referred to as maritime trade. For the purpose of this study, ‘maritime trade’ will be identified as that involving maritime vessels, regularly transporting commodities to and from various fixed exchange centres or market places (i.e., ports), both on the high seas as well as coastal waters.

Observations and deliberations of this study have been presented in three stages. The first of these illustrates archaeological evidences pertaining to maritime trade; the second traces the evolution of the maritime trade network between Thailand and Bengal; and the third demonstrates the definite trade route.



I. Archaeological Evidences

Pertaining to Maritime Trade

Arduous effort by archaeologists made over the last four decades has revealed a rich collection of artefacts, each pregnant with startling revelations of Thailand and Bengal's past. Quite a few archaeological materials help us to ascertain maritime trade network between Thailand and Bengal from the fourth century BCE to the fourth century CE. Important among these are Northern Black Polished Ware, Rouletted Ware, knobbed ware, stamped Ware, glass and semi-precious stone beads, seals and sealings with Kharosti-Brahmi inscription.



Northern Black Polished Ware

Northern Black Polished Ware (NBPW) is usually made of superfine clay of the Ganga Plain with little tempering material. It is well fired, thin sectioned, and has a strikingly lustrous surface. The cores of such pots vary from blackish to grey to red in colour. The surface colour ranges from jet black, brownish black

to steel blue, pink, silvery, golden, brown, chocolate, violet and deep red. It was a precious deluxe ware and was used by the elite class of the society as a luxury item. The commonest type includes bowls of different shapes and sizes; the other objects include dishes, jars, spouted jars, dishes-on-stands and bowls-on-stands, vases and miniature vessels. The chronology of NBPW in the Middle Ganga Plain ranges from c. 700 BCE to 100 BCE (Lal 1984, 94), whereas in the eastern parts of South Asia the chronology ranges from 300 BCE to 100 BCE (Chakrabarti 1992, 178).

Northern Black Polished Ware (NBPW) has been reported from quite a few archaeological sites in Southern Thailand. These are at Tham Súa in La Un district, Kapoe in Kapoe district and Phu Khao Thong in Suk Samran district in Ranong province and at Khao Sam Kaeo in Muang district and Tham Thuay in Thung Tako district in Chumphon province.

The distribution of NBPW from the period of 300 BCE to 100 BCE in South Asia is certainly widespread. This wide distribution has been ascribed to Mauryan imperialism, the propagation of Buddhism, and to trade routes because most of the South Asian sites that yielded NBPW were centres of Buddhism. The Indo-Aryan settlers in the Middle Ganga plains may have introduced this type of ware as their settlements gradually spread in the Lower Ganga plains along the banks of the Bhagirathi-Hugli during the Maurya rule.

The chronology and distribution pattern of NBPW clearly indicates that these were exported from Ganga Valley to southeast Indian coastal sites, Sri Lanka and Thailand from the maritime port sites of Wari-Bateshwar in Bangladesh and Tamralipti (Tamluk in Medinipur district) and Gangabandar (identified with Chandraketurgarh in 24 Parganas district) in West Bengal, India (Jahan 2006, 9 - 29). The wide distribution of the ware suggests that it was included in a “typical inventory of trading goods”. Since most of the sites were centres of Buddhism, it is possible that Buddhist religious establishments were linked with the traders (who in this case were the Sreshtis). Hence, “religious homogeneity of traders” is a definite possibility.



Rouletted Ware

Rouletted Ware is so called because a variety of forms including triangles, diamonds, parallelograms, wedges, and dots are ‘rouletted’ in a series of concentric grooves or incisions on the interior surface of the base. The pattern consists of one to three bands of concentric circles and each band is containing three to ten rows of closely placed indentations. It is characterized by thick incurved rims, a contiguous body and base. It is usually wheel-thrown, well fired, thin sectioned and slipped, with an unusually smooth and strikingly lustrous surface. Its usual colour is grey and has a ring, which sounds almost metallic. The ware has mostly been found in the shape of a flat-based shallow dish. Rouletted Ware was a luxury item and was possibly meant for the use of the elite class of the society.

Recent archaeological explorations and excavations in Southern Thailand have revealed a large number of Rouletted Ware sherds from quite a few archaeological sites. These are at Pak Chan in Kra Buri district, Kapoe in Kapoe district and Phu Khao Thong (Chaisuwan and Naiyawat, 2009) in Suk Samran district in Ranong province and at Khao Sam Kaeo in Muang district (Bouvet 2010, 129) and Tham Thuay in Thung Tako district in Chumphon province. Besides the above-mentioned archaeological sites of Southern Thailand, Rouletted Ware has also been reported from Chansen in Central Thailand (Bronson, 1976).

In South Asia, Rouletted Ware has been reported from Bangladesh, West Bengal, Orissa, Maharashtra, Uttar Pradesh, Bihar, Andhra Pradesh, and Tamil Nadu in India and Sri Lanka. These are dated between 250 BCE and 300 CE.

What is most significant about all the findings of Rouletted Ware noted above is that they are all comparable in form, texture, colour of the slip and general appearance to the earliest examples of the same found at Arikamedu during the 1945 excavation. Since 1945, scholars have tried to solve the problem of

origin of the distinctive rouletted decoration, which was believed to have been made with roulette (Wheeler *et al.* 1946, 46; Begley 1983, 469, 478 and 1988, 439; Ardika & Bellwood 1991, 224; Ford *et al.* 2005, Appendix 2). However, result of the study made by Ardika & Bellwood (1991) and Ford *et al.* (2005) show the common geological origin in India. XRD analysis performed by Vishwas D. Gogte (1997, 69 - 85 and 2001, 197 - 202) show that “Rouletted Ware was produced at multiple production centres in the lower Ganga plain with the epicentre in the Chandraketurgh-Tamluk region of Bengal”. It should be noted here that in West Bengal and Bangladesh, Rouletted Ware has been found along with Northern Black Polished Ware. Similar feature can be seen in case of Southern Thailand as well. In this connection, I mention about another XRD analysis on Northern Black Polished Ware and Rouletted Ware from Mahasthangarh in Bangladesh that has been conducted by Vishwas D. Gogte (2001, 198). The analysis show that “the clays used in the production of all varieties of Northern Black Polished Ware having surface colours of black, red, brown, golden yellow and silver have been found to be exactly identical with those of the Rouletted Ware found at the site.” It has been shown that in the production of Northern Black Polished Ware and Rouletted Ware not only the same technology was employed but also that they were produced from the same type of clays of the Ganga plain. It was also suggested that the lustrous Rouletted Ware might simply be treated as yet another variety of Northern Black Polished Ware with an indented circular decoration.

Hence it may be concluded that NBPW and Rouletted Ware were both produced in the lower Ganga plain within the time frame of the third century BCE to the third century CE. Thus, one can suggest that like NBPW, Rouletted Ware also spreaded from the Ganga Valley into South India as well as across the Bay of Bengal to Thailand from the maritime port sites of Tamralipti (Tamluk) and Gangabandar (identified with Chandraketurgh) in West Bengal, India and Wari-Bateshwar in Bangladesh.

Knobbed Ware

Knobbed wares are so called because at the centre of the inner surface of the base stands a conical knob, which is circumscribed by a series of concentric grooves or incisions. The knobbed ware occurs in various fabrics such as earthen, bronze, high-tin bronze, granite and silver.

Earthen knobbed ware has been found at Tham Sŭa in La Un district (Ranong province) and Khao Sam Kaeo in Muang district (Chumphon province) in Southern Thailand. Similar earthen vessels with knob have been reported from Wari-Bateshwar (Bangladesh), Harinarayanpur (West Bengal, India) and Sisupalgarh (Orissa, India).

More than twenty high-tin bronze knobbed vessels have been found at Ban Don Ta Phet in west-central Thailand (Glover 1996a, 140, 142). High-tin bronze is a copper-tin alloy, which contains 20-30% tin and is easy to cast because its melting point is relatively low (about 900°C) (Bennett and Glover 1992, 198). High-tin bronze knobbed wares have also been reported from quite a few sites such as Kok Khon in Sakorn Nakorn Province, Ban Chiang and Ban Nadi in north-east Thailand, Huai Pan near Chombung, Pak Beung and Khao Kwark Cave in Ratchaburi Province, Ongbah Cave in Kanchanaburi Province in Thailand. Besides, two knobbed vessels made of bronze have recently been reported from Khao Sam Kaeo in Southern Thailand.

Fragments of two high-tin bronze knobbed vessels have also been found at Wari-Bateshwar in Bangladesh. Singh and Chattopadhyay (2002, 3) have pointed to the find of a knobbed vessel with about 19 wt% tin from Agiabir in the Ganga Valley of the sixth century BCE. Datta *et al.* (2007) have reported to evidence related to high-tin bronze metal processing including an ingot and crucible fragments from Tilpi, West Bengal at least to the second or first centuries BCE. There are few more knobbed wares have been reported from India at Nilgiri Hills, where a number of other kinds of high-tin bronze wares have also been found.

In order to ascertain the origin of high-tin bronze knobbed vessels, one needs to remember that the use of the alloy was known in South Asia since 800

BCE. Strabo's Geography (XV, 67) indicates that the use of the alloy may have been known in South Asia as early as the 4th century BCE. When travelling through this region with the Macedonian army, writes Strabo, Nearchos had observed that the local people used “copper which has been fused but not wrought” with the strange result those “if vessels of this material fall to the ground they break like earthenware” (McCrindle 1979, 73). The metal that Nearchos refers to, Glover (1996a, 140 - 142) believes, was actually a high-tin bronze alloy. Presence of a large number of high-tin bronze vessels in central Thailand led Surapol Natapintu to suggest that Central Thailand might have produced high-tin bronze vessels during late prehistoric period (personal communication on 22 February 2011). Glover too agrees with Natapintu, but he believes that the technology might have imported from South Asia (personal communication on 27 February 2011). On the other hand, Srisuchat (2005: 38) believes that the technology has evolved in Southeast Asia and later on adopted in South Asia. However, Sharada Srinivasan's (2010) study shows that the manufacture of high-tin bronzes is both ancient and widespread in India and she is of the opinion that “the technology of high-tin bronze production could well have travelled from South Asia to Southeast Asia.”

Glover (1996b, 79) interprets the motif of the base knob and concentric circles as a mandala, “a schematic cosmological symbol representing perhaps Mount Meru and the surrounding oceans”. He further points out that the vessels “are witnesses to the adoption in Thailand, by some groups of Indian moral, philosophical and political concepts” (Glover 1996b, 79).

Regarding the function of knobbed vessels, Surapol Natapintu informed that knobbed bowls were definitely used for making sacred water by lighting a candle on the knob in Thailand by the Buddhist community (personal communication on 22 February 2011).

The concept of knobbed wares possibly spread through Buddhism from Ganga Valley to Thailand via the maritime port sites of Tamralipti (Tamluk) and Gangabandar (identified with Chandraketurgarh) in West Bengal, India and Wari-Bateshwar in Bangladesh. The ware also demonstrates close proximity of Buddhism and trade guilds.

Stamped Ware

Stamped Wares, shaped as bowls or cups with wide mouth, tapering sides and flat base, are so called because of motifs (birds, fish and stylised palmettes) stamped below their rims. The earliest specimen of these wares was found at Taxila. The excavator identified it as Hellenistic in origin (Marshall 1951, 434). Stamped Wares with figural designs have been found at Sanghol (Gupta 1987, 100), Hastinapura Period IV (Lal 1954 - 1955, 63) and Sonkh near Mathura. The Hastinapura wares have been dated second century BCE to third century CE. Sherds with similar stamp design have been found at several sites in the Ganga Valley including lower Bengal. At Chandraketugarh in West Bengal, NBPW sherds have been found with stamped rosette designs. However, more distinctive is a black-and-red stamped ware sherd found at the same site. The decoration on it is seen on the interior just below the rim and is quite similar to Wheeler's Type 10 at Arikamedu (Wheeler *et al.* 1946, pl. LXXII, 6). It consists of a row of stamped medallions with a bird motif within a square panel (*Indian Archaeology-A Review* 1957 - 1958, 52). Stamped sherds of fine slipped grey ware have also been found at Alagankulam at the mouth of the River Vaigai in Tamil Nadu. Another stamped bowl has been reported from the Gedige site at Anuradhapura (Deraniyagala 1986, 45). Further specimen of the ware in Sri Lanka is several fragments found at Kantarodai. Sherds with stamped floral design similar to Arikamedu Type 10 have also been reported from Phu Kao Thong in Suk Samran district, Ranong Province, Southern Thailand (Chaisuwan, 2007).

There is no doubt that the concept of stamped ware is Hellenistic in origin. The ware spread to various sites of Ganga Valley in South Asia by land route. Its presence at Chandraketugarh, Arikamedu, Alagankulam, Kantarodai and Phu Khao Thong clearly indicate maritime contact since all of these were exchange centres. Definitely, the ware was included in a "typical inventory of trading goods".

Glass Beads

Of the two important types of beads belonging to the North Indian tradition, the one which is oblate and spherical in shape, opaque back in colour and inlaid with white stripes is important for this study because it has been found at Chandraketurgh and Harinarayanpur in West Bengal and Mahasthan in Bangladesh (Rahman 1999, 213). Chandraketurgh and Harinarayanpur beads have spiral grooves while Mahasthan beads show chevron design. Black beads with white spiral design have also been found in surface collections from Kausambi, and excavations at Narhan (north India, dated in Gupta period), Kodumanal (in Tamil Nadu, dated from c. 100 BCE to 200 CE) and Brahmapuri (late Satavahana layers) (Basa 1992, 93, 97). This type of beads is



rare in Southeast Asia. However, Basa reports the discovery of opaque black round beads with inlaid spiral grooves at Prasat Muang Sing in Thailand. Although white stripes are missing, it is possible that the filling in the grooves was originally white but has come off with passage of time. A similar bead was also found at Ban Chi Nam Lai, in Singhburi province, Thailand, this time from surface collection (Basa 1999, 32). Similar types of beads have also been found in various sites of Southern Thailand including Phu Khao Thong, Khao Sam Kaeo, and Khlong Thom. These findings make it possible to believe that beads belonging to the North Indian tradition were possibly transported from their production sites in Ahichchatra and Kausambi by land or river to Chandraketurgh for shipment to Thailand.

(ii) Beads belonging to the South Indian tradition, also known as Indo-Pacific beads, are usually monochromatic, drawn and less than 6 mm in diameter.



Of different colours in which they have been found, opaque brownish-red and opaque orange-red are seen in greatest number. Peter Francis (1996) has dated Indo-Pacific beads from 3rd - 2nd century BCE to c. 1200 CE. His research has shown that Tamils originally produced these beads in south India at Arikamedu, between c. 3rd century BCE to 2nd century CE. Later, they migrated to various parts of South and Southeast Asia to set up production centres. In Sri Lanka, Indo-Pacific beads have been reported from Mantai, dated between c. 1st to 10th centuries CE. The beads have also been reported from Phu Khao Thong, Khao Sam Kaeo, Khuan Luk Pat (dated between c. 2nd and 6/7th century CE), all in Southern Thailand, Oc-Eo in Vietnam (dated from c. 2nd to 6th century AD) and Kuala Selinsing in Malaysia (dated from 6th to 10th century). All these sites were production centres of Indo-Pacific beads. It should be noted here that Indo-Pacific beads have wide distribution in Thailand. Analysing data drawn from above sources, Francis (1996, 140 - 141) has shown that the original Tamil manufacturers migrated from Arikamedu to Mantai and then to Thailand, Malaysia and Vietnam.

Opaque orange-red beads, a variety belonging to the Indo-Pacific tradition, have also been found in Mahasthan region of Bangladesh and Chandraketugarh in West Bengal, India. Hence, it is certain that Mahasthan and Chandraketugarh were also connected to the trade network of these beads. The discovery of Indo-Pacific beads at Mahasthan and Chandraketugarh is important, for they show that the network of beads evolved over considerable period of time that the Tamils of south India were possibly involved in bead-making in Bengal as well as in Thailand and that beads featured in the inventory of trading goods of Bengal and Thailand.

There is no material evidence discovered so far regarding glass manufacture in Bengal and Thailand during the period under consideration. Pliny (*Nat. Hist.*, XXXVI, lxvi) confirms "in India glass is made also of broken rock-crystal and that for this reason no glass can compare with that of India" (Pliny 1962, 153). Since Kopia near Maidaval in the Basti district, Uttar Pradesh, Nevasa and Kolhapur in Maharashtra and Arikamedu in Tamil Nadu (Dikshit 1969,



39; Chaudhuri 1990, 217 - 225) were well-known glass manufacturing centres in the early historic South Asia, one may suggest that glass was imported to 'Bengal' by land route from the above-mentioned areas for local use and may have been exported as well. Of these, Kopia stands a better chance because the easiest route for exporting glass manufactured there would have been down the Ganga to Tamralipti and then to Thailand and other bead manufacturing centres in Southeast Asia.

Semi-precious Stone Beads

Beads made of various semi-precious stones such as agate, carnelian, onyx, amethyst, jasper, quartz, amber and crystal have been used as ornaments and amulets since pre-historic times. Etched beads, a special type of agate and carnelian beads with a white design etched on their polished surfaces, is an important indicator of trade between South and Southeast Asia since the fourth century BCE.

Applying a paste of natural soda and crushed shoots of *kirar* (*Capparis aphylla*) on polished agate and carnelian beads, and then baking them on fire creates etching on the beads. The technique has been known only in South Asia since the Harappan Civilisation (3rd - 2nd millennium BCE). However, it fell into disuse, to be revived again in the Ganga Valley between c. 600 BCE and 200 CE. Relevant for trade in South and Southeast Asia is the period between 300 BCE and 200 CE.

Two sites in Bangladesh and four sites in West Bengal, India have yielded etched beads. These are Mahasthan, Wari-Bateshwar, Bangarh, Chandraketugarh,



Harinarayanpur and Deulpota. It should be noted that over a dozen etched beads have been found at Wari-Bateshwar. A large number of etched beads found in archaeological sites of Central and Southern Thailand. It should be noted here that quantity of etched beads found in Thailand is much more than any sites in South Asia.

The archaeological sites of Thailand that yielded etched beads are at Ban Chiang, Ban Tung Ketchet, Kok Samrong, Lopburi, U Thong, Ban Don Ta Phet, and Khao Sam Kao. Because the technique of etching on stone beads was known only in South Asia, there can be little doubt that the Thai beads were imported from the above region. Bengal's maritime contact with Thailand becomes a proven fact when Glover (1989, 17) points out that long and barrel-shaped agate beads with two rows of white zigzags in marginal bands have been found both at Chandraketugarh and Ban Don Phet. Hence, one can confidently include etched beads in a typical inventory of goods, which were traded between Bengal and Thailand.

Kharoshti-Brahmi Records

During the first half of the first millenium AD, a mixed script consisting of Kharosti and Brahmi letters was in use in parts of Bengal. As ascertained by B. N. Mukherjee (1990), Kushana merchants from Gandhara and Oxus regions, whose script was Kharosti (north-western Prakrit), migrated to lower Ganga Valley in Bengal and settled in Chandraketugarh and Tamruk region. Gradually they synthesized their Kharosti and local Brahmi (another form of Prakrit) letters to give rise to a mixed script known as Kharosti-Brahmi.

More than 135 inscriptions, either stamped or incised with Kharosti or Brahmi letters or mixed Kharosti-Brahmi letters, have so far been found on vessels (pots and jars), plaques and seals during excavations and explorations, mainly from Chandraketugarh, Bangarh, Hadipur, Ataghara, and Deulpota and Tamruk region in West Bengal, India. Seal inscriptions in the Kharosti and Kharosti-Brahmi scripts have also been discovered from Lopburi province in

Central Thailand and Krabi province in Southern Thailand. Besides, similar seals have been reported from Sembiran in Bali, Indonesia and Oc-Eo in Vietnam. Hence, findings of these seals indicate maritime trade between Bengal, Thailand, Indonesia and Vietnam.

II. Evolution of the Maritime Trade Network

Archaeological evidences discussed above do not indicate volume of trade in terms of quantity or monetary value. Nor have I included coins as one of the artefacts. However, there is clear indication in terms of commodities and partner countries. The trading network between Thailand and Bengal began to expand during the Maurya era (c. 324 to 187 BCE). Clearly, the peak period of production and trade was between the first century BCE and first century CE, which corresponds with post-Shunga and early Kushana periods. There is a drastic fall after the second century CE. Was it because of the declining fortune of the Roman Empire? We cannot say definitely because, in order to do that, other materials and sources need to be examined.

III. Trade Routes

Trade routes connect ‘market places’, which can be conceived as “nodal points” (Polanyi 1957, 259) within the network. The matter of geographical distance or national boundary between nodal points does not need to be a determining factor because networks can be extends over long distances or span only a short hop. This aspect of network brings up the matter of Wallerstein’s (1974, 11) ‘world systems’ and Evers’ (1991, 145) ‘local systems’. The nodal points or market places of trade routes connecting Bengal and Thailand within the time frame of this study were Tāmralipti (Tamluk) and Gangabandar (Chandraketugarh) in West Bengal, India, Wari-Bateshwar in Bangladesh and Phu Khao Thong, Khlong Thom, and Khao Sam Kaeo in Southern Thailand.



The distribution pattern of the above mentioned cultural materials is implying in turn that the transshipment possibly took place along a coastal trade route (Sri Lanka-South India-Orissa-Bengal-Thailand). 'Bengal' lay mid-point between the western arm of the route (to south India and Sri Lanka) and the eastern arm (to Thailand and other regions of Southeast Asia). Primitive navigation and sailing schedule determined by monsoon winds, land and sea breeze would make sailing in this route feasible. It was single route two-ways, necessitating the use of the inter-monsoon period of August-September (for voyages to Bengal from Sri Lanka and South India) and the following inter-monsoon period from November to April (for voyages from 'Bengal' to Thailand).

Conclusion

Archaeological evidence alone cannot give a complete picture of trade network. However, what it does give us is concrete picture. Distribution pattern of the archaeological materials shows that Thailand had established a well-organised maritime trade network across the Bay of Bengal via Bengal. Furthermore, one learns about a completely new inventory of trading commodities. The peak period of trade was possibly between 100 BCE and 100 CE.

I have no pretension of claiming that the deliberation presented in this research is a definitive reading and a 'closed' text. Like all research findings, I am aware of loose ends and hope this research will serve more as the initiation of a dialogue that will eventually get us closer to resolving the puzzle of maritime trade network between Thailand and Bengal from the fourth century BCE to the fourth century CE.

I wish to express my sincere gratitude to National Research Council of Thailand (NRCT) for their kind permission and Asian Scholarship Foundation under the Royal Patronage of H.R.H Princess Maha Chakri Sirindhorn (ASF) for granting the fellowship to conduct research in Thailand. I am grateful to Faculty of Archaeology, Silpakorn University especially Professors Surapol Natapintu and Sayan Praicharnjhit for their guidance and support. Many thanks to the Office of Archaeology and Office of National Museums of the Fine Arts Department, Ministry of Culture, Thailand. I am thankful to the authorities and staff of the libraries of the Silpakorn University, the SEAMEO-SPAFA Regional Centre for Archaeology and Fine Arts, ICOMOS, and National Museum Volunteers in Bangkok, Thailand. I offer my heartfelt gratitude to the authorities and staff of the following museums for granting permission to study their collection and take photographs especially National Museum Bangkok, Phra Pathom Chedi National Museum (Nakhon Pathom), U Thong National Museum (Suphan Buri), Ban Kao National Museum (Kanchanaburi), Nakhon Ratchasima National Museum, King Narai National Museum (Lop Buri), Phimai National Museum, Haripunjaya National Museum (Lamphun), National Museum (Chiang Mai), National Museum (Chumphon), Chaiya National Museum (Surat Thani), Nakhon Si Thammarat National Museum, National Museum Songkhla, Matchimawat National Museum (Songkhla), Ko Yo Folk Museum (Songkhla), Thalang National Museum (Phuket) and Wat Khlong Thom Museum (Krabi) in Thailand. I would also like to record my gratefulness to Pongdhan Sampaongern, Captain Boonyarit Chaisuwan, Assit. Prof. ML. Surasawasdi Sooksawasdi, Wilasinee Chamsaard, Dr. Amara Srisuchat, Dr. Tharapong Srisuchat, Dr. Ian Glover, Dr. Gautam Sengupta and Dr. Pranab K. Chattopadhyaya for their invaluable help.



References

- Ardika, I. Wayan and Peter Bellwood. 1991. "Sembiran: the Beginnings of Indian Contact with Bali." *Antiquity* 65, 247: 221 - 232.
- Basa, Kishor K. 1992. "Early Glass beads in India." *South Asian Studies* 8: 91 - 104.
- _____. 1999. "Early Trade in the Indian: Perspectives on Indo-South-east Asian Maritime Contacts (c. 400 BC - AD 500)." In *Maritime Heritage of India*. edited by K. S. Behera. pp. 29 - 71. New Delhi: Aryan Books International.
- Begley, Vimala. 1983. "Arikamedu Reconsidered." *American Journal of Archaeology* 87, 4: 461 - 481.
- _____. 1988. "Rouletted Ware at Arikamedu: A New Approach." *American Journal of Archaeology* 92, 3: 427 - 440.
- Bennett, Anna and Ian Glover. 1992. "Decorated High-Tin Bronze Bowls from Thailand's Pre-history." In *Southeast Asian Archaeology 1990*. edited by Ian Glover. pp. 187 - 208. University of Hull: Centre for Southeast Asian Studies.
- Bronson, Bennett. 1976. *Excavations at Chansen: The Cultural Chronology of Prehistoric Central Thailand*. Ph.D thesis, UMI Dissertation Services.

- Bouvet, P. 2010. “Study of the Indian and Indian Style Wares from Khao Sam Kaeo.” In *Thai-French Archaeological Mission in Upper Peninsular Thailand: An Unpublished Report of the 2005 - 2009 Campaigns at Khao Sam Kaeo (Chumphon)*, edited by Berenice Bellina, pp. 120 - 152, CNRS UMR 7528 “Mondes iranien et indien.”
- Chaisuwan, Boonyarit. 2007. “Early Contacts between India and the Andaman Coast in Thailand from the Second Century BCE to Eleventh Century CE.” In *A Seminal Paper Presented in the Conference On Early Indian Influences in Southeast Asian*. Singapore: Institute of Southeast Asian Studies.
- Chaisuwan, Boonyarit and Rarai Naiyawat. 2009. *Thung Tuk: A Settlement Linking Together the Maritime Silk Route*. Songkhla: Trio Creation.
- Chakrabarti, Dilip K. 1992. *Ancient Bangladesh: A Study of the Archaeological Sources*. Dhaka: University Press Ltd.
- Chaudhuri, Mamata. 1990. “Glass - An Archaeological Specimen of Some Sites of Southern India (circa 2560 BC - 1600 AD).” In *Historical Archaeology of India: A Dialogue between Archaeologists and Historians*. edited by Amita Ray and Samir Mukherjee. pp. 217 - 225. New Delhi: Books and Books.
- Datta, P., P. Chattopadhyay and A. Ray. 2007. “New Evidence for High-tin Bronze in Ancient Bengal”, *SAS Bulletin*, Summer 2007: 13.



- Deraniyagala, S.U. 1986. "Excavations in the Citadel of Anuradhapura: Gedige 1984, A Preliminary Report." *Ancient Ceylon* 6: 39 - 48.
- Dikshit, Moreshwar Gangadhar. 1969. *History of Indian Glass*. Bombay: University of Bombay.
- Evers, Hans-Dieter. 1991. "Traditional Trading Networks of Southeast Asia." In *Asian Trade Routes*, edited by Karl Reinhold Haellquist, pp. 142 - 152. London: Curzon Press Ltd.
- Ford, L.A., A.M. Pollard, R.A.E. Coningham, B. Stern. 2005. "A Geochemical Investigation of the Origin of Rouletted and Other Related South Asian Fine Wares." *Antiquity* 79, 306 (December): 909 - 920, <http://antiquity.ac.uk/ant/079/ant0790909.htm>. (accessed January 19, 2011).
- Francis, Peter Jr. 1996. "Bead, the Bead Trade and State Development in Southeast Asia." In *Ancient Trades and Cultural Contacts in Southeast Asia*, edited by Amara Srisuchat. pp. 139 - 152. Bangkok: The Office of the National Culture Commission.
- Gogte, Vishwas D. 1997. "The Chandraketurah-Tamluk Region of Bengal: Source of the Early Historic Rouletted Ware from India and Southeast Asia." *Man and Environment* 22, 1: 70 - 85.
- _____. 2001. "XRD Analysis of the Rouletted Ware and Other Fine Grey Ware from Tissamaharama." In *Ancient Ruhuna: Sri Lankan-German Archaeological Project in the Southern Province*, Vol. 1, edited by Hans-Joachim Weisshaar, Helmut Roth and W. Wijeyapala. pp. 197 - 202. Mainz Am Rhein: Verlag Philipp Von Zabern.

Glover, Ian C. 1989. *Early Trade between India and Southeast Asia: A Link in the Development of a World Trading System*. Occasional Papers no. 16, University of Hull: Centre for South-East Asian Studies.

_____. 1996a. “Recent Archaeological Evidence for Early Maritime Contacts between India and Southeast Asia.” In *Tradition and Archaeology: Early Maritime Contacts in the Indian Ocean*. edited by Himanshu Prabha Ray and Jean-Francois Salles. pp. 129 - 158. New Delhi: Manohar Publishers.

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

Gupta, S. P. 1987. “Sanghol: The Meeting Place of Works of Art of Gandhara and Mathura Schools.” In *Investigating Indian Art*. edited by Yaldiz. M. and W. Lobo, pp. 89 - 104. Berlin: Museum für Indische Kunst.

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

Indian Archaeology. 1957 - 58. *A Review*. New Delhi: The Department of Archaeology.

Jahan, Shahnaj Husne. 2006. *Excavating Waves and Winds of (Ex)change: A Study of Maritime Trade in Early Bengal*. Oxford: British Archaeological Reports International Series 1533.



- Lal, Makkhan. 1984. *Settlement History and Rise of Civilization in Ganga-Yamuna Doab (from 1500 BC to 300 AD)*. Delhi: B.R. Publishing Corporation.
- Lal, B.B. 1954 - 55. "Excavation at Hastinapura and Other Explorations in the Upper Ganga and Sutlej Basins 1950-52." *Ancient India* 10 - 11: 5 - 151.
- Marshall, John. 1951. *Taxila*. Vol. II. Cambridge: Cambridge University Press.
- McCrintle, John W. 1979. *Ancient India as Described in Classical Literature*. Reprinted from *estminister* 1901. New Delhi: Oriental Books Reprint Corporation.
- Mukherjee, B.N. 1990. *Kharoshthī and Kharoshthī-Brāhmī Inscriptions in West Bengal (India)*. Published as the *Indian Museum Bulletin*. Vol. XXV. Calcutta: Indian Museum.
- Pliny (Plinius Secundus C.). 1962. *Natural History with an English*. Translation in Ten Volumes by D.E. Eichholz. Vol. 10. London: William Heinemann Ltd.
- Polanyi, Karl. 1957. "The Economy as Instituted Process." In *Trade and market in the early Empires: Economies in History and Theory*, edited by Karl Polanyi, Conrad M. Arensberg and Harry W. Pearson. pp. 243 - 270. Glencoe (Illinois): The Free Press and the Falcon's Wing Press.
- Rahman, S. S. M. 1999. *Archaeological Investigation in Bogra District, Bangladesh (from Early Historic to Early Medieval Period)*. Ph.D.

Dissertation, Department of Archaeology, Deccan College Post Graduate and Research Institute, Pune.

Renfrew, Colin. 1969. “Trade and Culture Process in European Prehistory.” *Current Anthropology* 10, 2 - 3; 151 - 169.

Singh, A. K. and P. K. Chattopadhyay. 2002 - 2003. “In Search of High Tin Bronze.” *Puratattva* 32: 101 - 106.

Srinivasan, Sharada. 2010. “Megalithic High-tin Bronzes and Peninsular India’s ‘Living Prehistory.’” In *50 Years of Archaeology in Southeast Asia: Essays in Honour of Ian Glover*. Bangkok: River Books.

Srisuchat, Amara. 2005. “Overview of Southern Thai Malay Peninsula.” In *Proceedings of the Seminar on Thailand Malaysia: Malay Peninsula Archaeology Program* at the 13th Regional Office of Fine Arts Department, Songkhla. Bangkok: Samaphan Publishing Co. Ltd.

Wallerstein, Immanuel. 1974. *The Modern World System: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York: Academic Press.

Wheeler, R.E.M., A. Ghosh and Krishna Deva. 1946. “Arikamedu: an Indo-Roman Trading-station on the East Coast of India.” *Ancient India* 2: 17 - 124.
