

Ship's Cargo beyond the sea: New Evidence from Dong Mae Nang Muang, Nakorn Sawan Province, Central Thailand

Pimchanok Pongkasetkan¹

Abstract

This paper mainly focuses on Trade Ceramics and other cargo found from the Dvaravati settlement in Upper Chao Phraya basin, Central Thailand. Specifically, this paper focuses on the case study of the site of Dong Mae Nang Muang, Nakorn Sawan province.

In 2008 an archaeological project was done to gain better knowledge of the site. Four test pits, one test trench and an earthen mound were excavated. These activities expanded the current understanding of the site's characteristics. The excavation revealed imported goods from all over the world such as; ceramics, glass and semi-precious stone beads and glass vessels. This important phenomenon was a strong impact on current knowledge of the inter-relationship between Dvaravati, an ancient settlement in the Upper Chao Phraya basin, and the sea port town via China and Western Asia², this has reconsidered the role of economics in the area especially the details of trade-routes and the merchandise during the Dvaravati period (5th-12th centuries AD).

Characteristic of Dong Mae Nang Muang

Dong Mae Nang Muang is located in present day Banpotpisai district, Nakorn Sawan province. From an inscription (K966) discovered at the site we know that its name in antiquity was Thanya Pura (Coedès 1961; Vallibhotama 1978). Located in the upper reaches of the Chao Phraya Basin, this site represents one of the northernmost settlements of Dvaravati culture in central Thailand. Strategically placed on the tributaries of major river systems; the Ping River and Nan River, the settlement flourished for a period of approximately 400 years between the 8th and 12th centuries Common Era (CE)³. Despite being located over 300 kilometres north of the modern-day coastline, Dong Mae Nang Muang was not an isolated site on the periphery, but participated in and contributed to the vibrant cultural, religious, artistic and economic exchanges that took place within the Dvaravati culture of central Thailand (Murphy and Pongkasetkan 2010).

Dong Mae Nang Muang is a moated site with a surrounding rampart. At some stage during the Dvaravati period it was extended to the west by the addition of an extra moat resulting in the ground plan changing from square-shaped to more oblong in character. The site measures 630 by 650 metres and covers an area of approximately 40 hectares. To date, the research conducted extends from the first surveys and excavations by the Fine Arts Department in 1956 and 1967, to recent projects of Master's degree students of the Faculty of Archaeology, Silpakorn University and most recently

¹Curator of Southeast Asian Ceramics museum, Bangkok University

² Can not be specific because the analysis results indicate that some evidence made in Western Asia, but not clearly specific where.

³ A Georgian Calendar designation that starts at year one, based on the year of the birth of Jesus Christ of Nazareth, with one added to every year after.

excavations by the Fine Arts Department, Lopburi, 2008–2009⁴. The initial surveys by the Fine Arts Department recorded up to thirteen earthen mounds at the site and excavations revealed that they were Buddhist monuments, the majority being stupas. There have also been numerous reports of votive tablets and Buddha image discoveries at the site over the past 60 or so years however, none have been excavated *in situ* (Murphy and Pongkasetkan 2010).

On the basis of relative dating techniques the current proposed dates of occupation arising from the 2009 excavations cover the 8th to 12th centuries CE. For example, the earthenware Dvaravati pottery discovered suggests a date from the 8th century onwards; the stoneware and Sassanid ceramics point towards the 9th and 10th centuries; stucco found during excavations at monument MS1 is late Dvaravati in style, so falls between the 10th and 11th centuries; while Inscription K966 gives a 12th-century date. The excavations also revealed no evidence whatsoever for prehistoric occupation of the site nor did it show any indication that Dong Mae Nang Muang was inhabited after the 12th century.

Excavations at Dong Mae Nang Muang, 2008–2009

Since the Fine Arts Department archaeological excavations in 1967, no further archaeological research has been conducted at Dong Mae Nang Muang. Since those excavations focused entirely on the monuments, no evidence for the length or nature of human occupation was obtained. Hence, the project “Cultural development of the ancient town of Dong Mae Nang Muang,” was initiated by the author in order to explore the cultural and chronological development of the site. Field activity entailed survey work, interviewing of local villagers and excavation from January 2008 to July 2009.

⁴ For a summary of all research carried out to date on the site of Dong Mae Nang Muang see Murphy and Pongkasetkan (2010). For a detailed discussion of the excavations that took place in 2009 see Pongkasetkan (2010) and The Fine Arts Department (2010).



Figure 1. Aerial Picture of Dong Mae Nang Muang and the test pits location (Adopt from Google Earth).

Excavation of test pits TP1-TP4 and RTP1 Excavations took place between April and July 2009 and consist of four 3 by 3 metre test pits (TP1-4), one test trench through the rampart (RTP1) and the excavation of an earthen mound designated MS1 (Figure 2). Two test pits, TP3 and TP4, were located within the interior of the moat. TP1 was located in the area enclosed by the western moat extension while TP2 was situated outside the moat. All four test pits were excavated in order to clarify the stratigraphy and archaeological record and to provide information on the material culture, dating and past activities that were carried out at the site. The rampart test trench was excavated in the interior moat while MS1 lies just outside the southern moat.

The test pit data yielded new information about population density, habitation and economic activity at the site. The main inhabited and economic areas were located within the moat. The western extension and the area directly outside the moat appear to be much less densely occupied; further survey and excavation work are need to give a complete picture. As would be expected, the moat and rampart are contemporaneous with the rest of the site. Their construction took place within the Dvaravati period.

Excavation of the earthen mound MS1 Dong Mae Nang Muang has numerous earthen mounds inside and outside the moat. They are presumed

to be religious structures of some kind, perhaps *Stupas*⁵, *Viharns*⁶ or *Ubosots*⁷, but it is impossible to say for certain without detailed investigation of each individual structure. The test excavation revealed evidence of Dvaravati pottery, finger-marked bricks consistent with those found at other Dvaravati period sites, Dvaravati-style stucco and a possible terracotta stupa finial. Some of the most surprising discoveries during the course of both excavations, however, were the human burials at the foundation level of the monument. Over 50 inhumations were discovered in total throughout the entire area of the monument; however, they do not appear to extend outside of the site's boundary. Stratigraphically, the burials were found directly under the layer containing the remains of the monument proper. The layer itself is about 1 metre in depth; the burials were placed at different levels within it. The question therefore arises whether the burials predate the construction of the monument. Not only are the burials located in a separate stratigraphic layer, but also no Dvaravati material was found within the layer of the burials themselves. However, since there is no evidence of prehistoric occupation at the site, the working hypothesis continues to be that the burials date to the Dvaravati period.

Imported Good: Ceramics sherds consideration

The evidence from the excavation of TP3 and TP4 yielded some fascinating points-of-view of the relationship within the outer communities especially from the ceramics sherds and glass vessel.

Chinese, Khmer⁸ and Sassanids⁹ ceramics were found together in the same context, as well as glass vessel. The dating of Chinese ceramics are during the 11th – 12th centuries AD, or during Northern Song Dynasty. Around the 11th century the Chinese court had intensely turned the market from the Silk Route into Maritime Silk Route (Qingxin 2009:83) The Song Dynasty (960-1279 AD) was a great empire, with great economic development the

⁵ Stupas is the word from Sanskrit: म., स्तूप, *stūpa*, and Pāli: थुप "thūpa", literally meaning "heap"(from <http://en.wikipedia.org/wiki/Stupa>). It is the monument that establish for both of Buddhism and Jain. It is usually made in half-round or bell shape with the pointed finial.

⁶ Viharn or Vihara is the Sanskrit and Pali term for a Buddhist monastery. It originally meant "a secluded place in which to walk", and referred to "dwellings" or "refuges" used by wandering monks during the rainy season.(from <http://en.wikipedia.org/wiki/Vihara>) It are formed in square or rectangular shape, and placed with the Buddha image.

⁷ Ubosot is derived from the Pali term *uposathagara*, which refers to a hall used for rituals on the *uposatha* days -- the Buddhist Sabbath, which falls four times a month on the full moon, new moon, and eighth day after each. (from <http://en.wikipedia.org/wiki/Ubosot>). The form of ubosot is usually similar to the Viharn, rectangular or square in shape, but there's no need to have the Buddha image inside.

⁸ Khmer is word that called Ancient Cambodia culture during 5th-12th centuries AD. In which, it is also called sometimes that Pre-Angkorian (5th-8th centuries AD) and Angkorian (8th-12th centuries AD).

⁹ Sassanids ceramics is the word that author use for describe the ceramics that was produce during the Sassanian Empire. The Sassanid Empire, which succeeded the Parthian Empire, was recognized as one of the two main powers in Western Asia and Europe, alongside the Roman Empire and its successor, the Byzantine Empire, for a period of more than 400 years(from <http://en.wikipedia.org/wiki/Sassanid>)

cities flourished and its science and technology advanced (Qingxin 2009: 81) . It was one of the world's most advanced and wealthy states. Regardless of the outcome, the Song Dynasty was still an era worthy of special attention. It was during this time that the Maritime Silk Road was at the height of its splendor (Qingxin 2009:82) The Song Dynasty was especially focused on Sino¹⁰ - foreign relations and foreign trade. The politico-economics caused for China's north and west over-land passage to basically shut off (Qingxin 2009: 83). This created a natural inclination towards developing ties with nations of Southeast Asia across the sea.

From above, the main factor of economics between Southeast Asia and China were caused from the inclination of the Silk Road. A number of Chinese ceramics sherds found from Dong Mae Nang Maung are good samples to confirm this theory.

The analysis of Chinese ceramics sherds from Dong Mae Nang Muang are identified as follows:

1) Qing Bai, Ding Kiln, Northern Song Dynasty, 10th-11th centuries AD
Qing Bai from Ding kiln. Dating of this type is around 10th century AD, bowl shape, grayish white color in fabric and glazed. This type is hardly found in Thailand except some sites in the Malay Peninsula such as Klong Ta Rua, Nakorn Srithamarat province (Chantawit 1993:184).

2) Jar, green glaze, Xicun Kiln, Northern Song Dynasty, 10th century AD
Sherds of Jar with thick mouth rim, gray color in fabric, yellowish green to brownish green glaze. This type was found all over Thailand during this time in sites such as Koh Ko Khao, Punga, Klong Tha Rua, Nakorn Srithamarat (Chantawit 1993: 182), Sting Pra, Songkhla (Chantawit 1993:16), Umphang, Tak, Vichayen House, Lopburi, Sra Morakot, Prachinburi and etc. (Thammapreechakorn 2010:37) Bowl, cup, ewer and jar were commonly found

3) Bowl, Qing Bai, Jingdezhen kiln, Northern Song Dynasty 10th – 11th centuries AD
A group of Qing Bai from Jingdezhen kiln were commonly found in some Khmer settlements in the northeast and central Thailand. Some types found at Dong Mae Nang Muang include: bowl decorated with lotus petal motif, whitish gray color in fabrique, white clear glaze. The most interesting context of this sherd, when compared with the other similar wares found in other Khmer monuments in Thailand, is it is usually accompanied with the other Qing Bai from other kilns and Khmer ware from kiln sites in Cambodia and Thailand¹¹. For example Ban Klor, Chaipayum(Chantawit 1993: 323), Orapim Mound, Prasat Phnom Wan, Nakorn Ratchasima, Prasat Nang Rum, Nakorn Ratchasima and etc. (Chantawit 1993: 322),

4) Covered Box, Qing Bai, Nan'an kiln, Quanzhou, Fujian region, late Northern Song Dynasty, 11th century AD

¹⁰ a prefix used to refer to China (from <http://en.wikipedia.org/wiki/Sino>)

¹¹ Commented by Louise Allison Cort, Curator of Freer Gallery of Art and Arthur M. Sackler Gallery, Smithsonian Institution, USA, and she gave additional note that this groups are also found at port town and In-Land port town.

Covered Box in the form of melon shape is regularly found from Dvaravati, Khmer, and Lanna ancient settlements (Thammapreechakorn 2010:35)



Figure 2. TOP FOUR - Chinese Ceramics, Northern Song Dynasty, 10th-11th centuries AD. found at Dong Mae Nang Muang, from above left-right: Ding Kiln(CCHD1-7), Xicun kiln(CCHX 1-2) and lower left-right: Jingdezhen kiln(CCHJ 1), Nan'an kiln(CCHN 2) (Now under examination by author). BOTTOM TWO - Sassanid Ceramics from Dong Mae Nang Muang (From Left: SF309, SF313, SF322, SF323, Right: SF329)

Apart from Chinese ceramics, there are also around forty percent of Khmer ceramics accompanied too. The green glaze Angkorian ware, or Phnom Kulen ware, were also found together with the Northern Song ceramics in the same context. The association of green glaze Angkorian or Phnom Kulen ware is very interesting. It has not been recognized as a maritime-merchant commodity but its appearance exists all over Khmer monuments in both Cambodia and Thailand (Pongkasetkan 2010:135).

The most known waster¹², the Phnom kulen, corresponds to types of green glaze ceramics found in Bernard Groslier archaeologically excavated sites, which date prior to 1050 AD. Green glazed covered urns also found there, however, do not appear in excavation until after 1050 AD. The characteristics of the Phnom Kulen ware are generally yellowish to brownish green glaze and also show a broad range of mottled¹³ shade between brown, black and olive, obtained by heavier concentrations of iron oxides in their glazes (Brown 1988:43).

The production sites of Phnom Kulen ware were located in the area of Phnom Kulen plateau. Several kiln sites were discovered along the way from Angkor region in Siem Reap province, which is situated between the Plateau of Kulen and city of Rolous (Rooney, *et al.* 2010:172). From several archaeological projects that were done during the last 20 years, some have unearthed charcoal samples dated by the AMS¹⁴ technique and provide a date of 970(±30) – 905 (±30) BP (Miksic, *et al.* 2010) or the beginning of the 11th century AD. Generally forms of Phnom Kulen ware are covered box in the form of flat or tall shape, fruit-shaped, plain zoomorphic, plain cylindrical jar, covered cylindrical jar, bottle, and architectural ornaments (Rooney, *et al.* 2010:172). The Phnom Kulen ware were commonly found in Khmer monuments such as Prasat Ban Phluang in Surin province, Chau Say Tevoda, Srah Srang, Bantay Kdei and etc.(Rooney, *et al.* 2010:12).

A number of Phnom Kulen ware were also discovered at the site of Dong Mae Nang Muang. Covered jars, jars and covered boxes were found in large numbers both in the habitation and in monument contexts.



Figure 3. Covered boxes, Phnom Kulen ware, Dong Mae Nang Muang (From left above CKMP10, left lower CKMP11, covered box in the right side is now kept at the site)

¹² Wasted product from the kiln

¹³ Dark brown spot from Iron Oxide that appear on the pottery fabric

¹⁴ Accelerator Mass Spectrometry

Sassanid ceramics are yet another kind of ceramic found at Dong Mae Nang Muang. Blue turquoise glaze on earthenware is their main characteristic. It was commonly found in the Dvaravati settlement in Thailand., for example, U-thong in Supanburi province(FAD 2002: 65) or Dong Lakorn in Nakorn Nayok province (FAD 1997: 23) It is usually dated to the 3rd – 7th centuries AD but it was thought that technical production was still carried on until the Early Islamic Period(Pongkasetkan 2010: 134). During the time of the Sassanian Empire, the Iranian highlands had an important role in the history of East-West contact, both on the Overland Silk Road and Maritime Silk Road. Some Sassanian treasure were left all over Asia and Europe (Fukai 1981:35).

It is extremely difficult at this time to distinguish ceramics from Late Parthian (249 B.C. – 226 AD) and Early Sassanian periods(226-642 AD); just as in other fields it is difficult to define the works of the late Sassanid Period and the Early Islamic Period (Harper 1978:160). The basic typology that was defined by Shinji Fukai (1981:36-46) composed of two glaze colours of green and blue-turquoise and in the forms of jar and cup.

The excavation at Dong Mae Nang Muang revealed some pieces of Sassanids ceramics, both of green and blue glaze, probably jar, associated with Chinese Northern Song and Khmer ceramics. The stratigraphy dates these finds to the 10th-11th centuries AD, according from the Northern Song and Phnom Kulen ware, therefore, it could be implied about that there're the usage of imported ceramics from Western Asia, Chinese and Khmer in the Dvaravati settlement in the upper Chao Phraya basin during 10th-11th centuries AD.

Glass Vessel

Glass vessels were also found. From the analysis of glass vessel sherds¹⁵, with LA-ICP-MS technique¹⁶ (Lankton and Gratuze 2010:4). James Lankton suggested that they might be made in Western Asia rather than locally made.



Figure 5. Glass sherds from Dong Mae Nang Muang (SF336).

¹⁵ These glass sherds were analyzed by James W Lankton, Honorary Senior Research Fellow, UCL Institute of Archaeology, London, UK and Bernard Gratuze, IRAMAT, Institut de Recherches sur les Archéomatériaux, Centre Ernest-Babelon, C.N.R.S, Orleans, France in 2010.

¹⁶ Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry

Dong Mae Nang Muang as a Regional Centre

The evidence presented here shows clearly that Dong Mae Nang Muang was an important regional centre in the Upper Chao Phraya Basin. Its location on the Ping and Nan tributaries opened it to communication with other sites in the area such as Khaogralone, Chansen, Thap Chumpon, U-Trapao and Kok Mai Den (Pongkasetkan 2010: 200). Khaogralone, for instance, was also located on a tributary of the Ping River thus facilitating access with Dong Mae Nang Muang. The Ping and Nan rivers join to create the Chao Phraya River with the confluence located at Pak Nam Po, Muang district, Nakorn Sawan. Dong Mae Nang Muang, with its direct access to those major waterways should therefore be considered a regional centre within the Upper Chao Phraya Basin.

From an economic and commercial point-of-view this site can be considered a trade centre. Excavations have revealed Chinese Northern Song ceramics, green-glazed Angkor-period ceramics¹⁷, Sassanid Ceramics, glass and semiprecious stone beads. None of those products were manufactured locally. All were obtained through trade connections with sites along the coast or directly through the maritime network. The excavations in 2009 unearthed Sassanid Ceramics in the Upper Chao Phraya Basin for the first time. Before then, Sassanid Ceramics had only ever been discovered at Dvaravati settlements in the Lower Chao Phraya Basin close to the coast. The discovery of Sassanid Ceramics along with the other imported goods further emphasises the active role Dong Mae Nang Muang played in trade and commerce during the Dvaravati period. The earthenware pottery record also shows close connections with sites in the Chi and Mun river systems of northeast Thailand.

Even though Phnom Kulen ware can not be considered ship's cargo since it has never been found in context on a sunken ship site it is regardless a very interesting artefact to consider in the overall economic system of the Upper Chao Phraya Basin. The trade items from both the sea and inland ports were unearthed associated with each other at this one site, this fact infers that the goods distribution from both sea ports and inland-ports are similar. It appears therefore that Dong Mae Nang Muang was interacting with both the northeast and Lower Chao Phraya Basin.

Bibliography

Barram, A., and Glover, I., 2008	"Re-thinking Dvaravati", in (eds.) Jean-Pierre Pautreau, et al. <i>From Homo Erectus to the living traditions; choice of papers from the 11th International Conference of the European Association of Southeast Asian Archaeologists</i> , Siam Ratana Ltd, Chiang Mai, pp. 175-82.
Boisselier, J., 1975	<i>The Heritage of Thai Sculpture</i> , Asia Books, Bangkok.
Brown, R., 1988	<i>The Ceramics of South-East Asia: Their Dating and Identification</i> , Oxford Press, Singapore.

¹⁷ Usually called Phnom Kulen ceramics

Chandawij, N., 1994	<i>Chinese Ceramics from Archaeological Sited in Thailand</i> , Fine Art Department, Thailand. in Thai language
Coedès, G., 1961	"Les expressions vrah kamraten an et kamraten jagat en vieux khmer", in <i>The Adyar Library Bulletin</i> 25, 1-4, Jubilee Vol, pp. 447-60.
Dupont, P., 2006	<i>The Archaeology of the Mons of Dvāravatī</i> , translated with updates, additional figures and plans by Joyanto K. Sen, two volumes, White Lotus, Bangkok.
Fine Art Department. 1993	<i>Report on the Excavation of Dong La Korn, Muang district, Nakornnayok province</i> , Fine Art Department in Thai language
Fine Art Department. 2002	<i>Archaeology of U-Thong</i> , Fine Art Department. in Thai language
Fine Art Department. 2010	<i>Report on the Excavation at Dong Mae Nang Muang, Jerinpon subdistrict, Banpotpisai District, Nakorn Sawan Province</i> , Fine Art Department, Lopburi, in Thai language.
Fukai, S., 1981	<i>Ceramics of Ancient Persia</i> , Weatherhill, Tokyo.
Glover, I. C., 1990	Ban Don Ta Phet: the 1984-85 excavation. In (eds.) Ian C. Glover and Emily A. Glover, <i>Southeast Asian Archaeology 1986</i> , British Archaeological Reports S-521, British Archaeological Reports, Oxford pp.139-83.
Harper, P.O., 1978	<i>The Royal Hunter: Art of the Sasanian Empire</i> , Asia Society, New York.
Krairiksh, P., 1974	"Semas with Scenes from the Mahanipata-Jatakas in the National Museum at Khon Kaen", in <i>Art and Archaeology in Thailand</i> , Fine Art Department, Bangkok, pp.35-100.
Miksic, J., Rachna, C., Piphal, H., and Visoth, C.	<i>Regarding the Assessment at the Thanal Mrech kiln site TMK 02, Angkor Thom, Phnom Kulen, Cambodia.</i> , Archaeological report, PDF file. www.ari.nus.edu.sg/docs/wps/wps09_126.pdf
Moore, E., 2007	<i>Early Landscapes of Myanmar</i> , River Books, Bangkok.
Murphy, A., Pongkasetkan P., 2010	"Fifty Years of Archaeological Research at Dong Mae Nang Muang: An Ancient Gateway to the Upper Chao Phraya Basin", in <i>Journal of the Siam Society</i> , 98, pp. 49-74.
Indrawooth, P., 1999	<i>Dvaravati, A Critical Study Based on the Archaeological Evidence</i> , Silpakorn University, Bangkok, in Thai language.
Indrawooth, P., 2001	<i>Report on the Excavation at Muang Fa Daed Song Yang, Kamalasai District, Kalasin Province</i> , Silpakorn University, Bangkok, in Thai language.
Indrawooth P. Krabuansaeng S., and Nakwek, P., 1991	"Muang Fa Daed Song Yang: new archaeological discoveries", In (ed.) Université Silpakorn, <i>Récentes Recherches en Archéologie en Thaïlande: Deuxième Symposium Franco-Thai</i> , Silpakorn University, Bangkok, pp. 98-111.

Pongkasetkan, P., 2010	<i>Cultural development of the ancient town of Dong. Mae Nang Muang, Banpotpisai district, Nakornsawan province, Masters Thesis, Faculty of Archaeology, Silpakorn University, in Thai language</i>
Qingxin, L., 2009	<i>Maritime Silk Road, China International Press</i>
Rooney, D., Pinsri, K., and Thammapreechakorn, P., 2010	<i>Khmer Ceramics Beauty and Meaning, River Books, Bangkok.</i>
Skilling, P., 2003	“Dvaravati: Recent Revelations and Research”, in (ed.) Chris Baker, <i>Dedications to Her Royal Highness Princess Galyani Vadhana Krom Luang Naradhiwas Rajanagarindra on her 80th birthday</i> , The Siam Society, Bangkok, pp. 87-112.
Thammapreechakorn, P., 2010	<i>New Dating and Identification of Chinese Ceramics found in Thailand</i> , unpublished document, Southeast Asian Ceramics Museum, Bangkok University.
Wales, H. G. Q., 1936	“Further excavations at P’ong Tuk (Siam)”, in <i>Indian Arts and Letters</i> , 10, 1, pp. 42-8.
Woodward, H., 1997	<i>The Sacred Sculpture of Thailand, River Books, Bangkok.</i>