Maritime Archaeological Perspectives on Seaborne Trade in the South China Sea and East China Sea between the Seventh and Thirteenth Centuries*

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Introduction

Inter- and intra-regional interactions by sea propelled the formation and growth of material culture, ideology, and political and socio-economic systems in Asia. The historical role of harbors and port cities in human societies in East Asia and Southeast Asia came to be focused on trading networks in these regions.[1] The importance of water transportation in sustaining the network system has long been acknowledged. Under these circumstances, increasingly numerous discoveries of ship remains and wreck sites underscore the uniqueness of shipwrecks as an archaeological source. Maritime archaeological fieldwork in 2014 assessed wreck sites and ship remains in Vietnam and in Japan. Its result casts light on changes in the voyagers engaged in maritime commercial activities between the seventh and thirteenth centuries. From this perspective, the present article seeks to periodize the growth of the historical seaborne trade into the two different eras. In terms of this division, the seventh/eighth-century shipwreck found in Central Vietnam demonstrates the dominant role of Southeast Asian seafarers in the water transportation of Chinese commodities at that time. The twelfth/thirteenth-century wreck sites in the South and East China Sea indicate the emergence of active voyages by Chinese merchant ships.

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1 Murai Shōsuke 2005; Miksic and Goh 2013.

This new chronological perspective grows out of an archaeological approach to the fragmentary remains of hulls and anchor components.

Seafarers in South China Before the Tenth Century: Archaeological Perspectives from 2014 Fieldwork in Vietnam

The existence of an expansive maritime corridor between the East and West even before the tenth century, stretching from southern China via the South China Sea to the Indian Ocean, has now been advocated. A shipwreck, recently found in Quảng Ngãi 廣刈 (resp. 廣義) Province, Central Vietnam, complements the fragmentary evidence about sea corridors that historical texts provide, and it further illustrates that the hull remains represent one of two major types of ships used in early shipping in the South China Sea.[2] The Châu Tân 珠新 shipwreck, possibly the oldest shipwreck ever found in the South China Sea, was not recovered in a good condition for research. Controversy surrounds the processes of discovery, research, protection, and management of wreck sites in Vietnam, in any case. While Vietnam has a framework of legislation applicable to cultural resources in its waters, little protection of such archaeological sites has been implemented and the emphasis placed on salvaging ceramics. In conjunction with researchers at the Institute of Archaeology in Vietnam, the author has conducted fieldwork there since 2008. The nautical archaeological study carried out so far has revealed greater diversity in the country's maritime heritage than was previously thought.

The recent discoveries of the seventh/eighth-century Châu Tân shipwreck and other fourteenth/fifteenth-century shipwrecks in Quảng Ngãi have presented challenges for systems of safeguarding and researching historical shipwrecks in Vietnam. The first shipwreck exploration in Vietnam dates back to 1990. A team from the Vietnamese governmental salvage company, in cooperation with a foreign salvage group, led the underwater excavation of the Con Dao 昆島 shipwreck, sunk at a depth of 40 m in the waters near the island of the same name in Bà Rịa-Vũng Tàu 巴地頭頓 Province.

Including the Con Dao shipwreck, up to 1999 five shipwrecks were salvaged, and they are considered to be merchant ships assigned to the fifteenth to seventeenth centuries that were engaged in trade focusing on central and southern Vietnam.[3] The South China Sea off the coasts of these areas encompasses many islands that provided anchorage and landmarks for seafarers, including

2 Nishino, Aoyama, Kimura, Nogami, and Le 2014.

3 Kikuchi Seiichi 2010.

Cù lao Chàm 劬勞占 offshore of Hội An 會安市, the islands of Con Dao in the south, and Phú Quốc Dao 富國島.

New Shipwreck Discoveries in Quảng Ngãi Province

Modern Quảng Ngãi Province is a relatively rural province, compared to adjacent cities and provinces in the north, such as Đà Nẵng 陀濃 and Quảm Nam, later Quảng Nam 廣南, where two major cultural heritage areas are located: the Old Town of Hội An , and the Mỹ Sơn 美山 ruins. On the other hand, the area now called Quảng Ngãi may have been more populated during the Champa (Chăm Pa) 占城 (resp. 占婆) Kingdom period, and the waters off the coasts of its provincial city must have been busy sea routes. The small island of Lỹ Sơn 李山島 was possibly once a landmark for sailors, or even an anchorage for sailing ships (Fig. 1). The sea in the vicinity of this island, however, could be hazardous to navigate due to turbidity and shallows. In the late 2000s, discovery of shipwrecks and recognition of the high probability of additional unidentified sites in the waters off the opposite shore of the island took people by surprise. Numerous ceramics and miscellaneous objects started to be pillaged from the area offshore of Châu Tân village, Bình Sơn 平山縣 District. Dates of the recovered ceramics range from the Tang and the Five Dynasties to the Song, Yuan, Ming, and the early to the mid-Qing Dynasty. At least two hulls likely to be associated with some of these ceramics have been identified: the seventh/eighth-century Châu Tân shipwreck, and the fourteenth/fifteenth-century Bình Sơn No. 2 shipwreck. It is worth noting that after the series of salvage operations at the five shipwrecks in the 1990s, no further historical shipwrecks were found for a time (or at least no information has been formally reported). Also notable is the fact that the estimated dates for the above two ships assign them to older periods than for any other shipwrecks ever found in Vietnam.

Many artifacts were recovered from the Châu Tân shipwreck independently of government involvement. They are currently stored in the house of a private collector. After pillage of the site, a large salvage operation at the Bình Sơn No. 2 shipwreck was initiated by the local governments. However, the appropriate archaeological contexts were unfortunately not recorded at either site. The approach to the shipwrecks has followed the same pattern as was adopted in the 1990s, with the primary focus on the ceramics. Researchers from the Institute of Archaeology and the municipal offices of Quảng Ngãi are tackling the issue of the management of the identified shipwrecks.

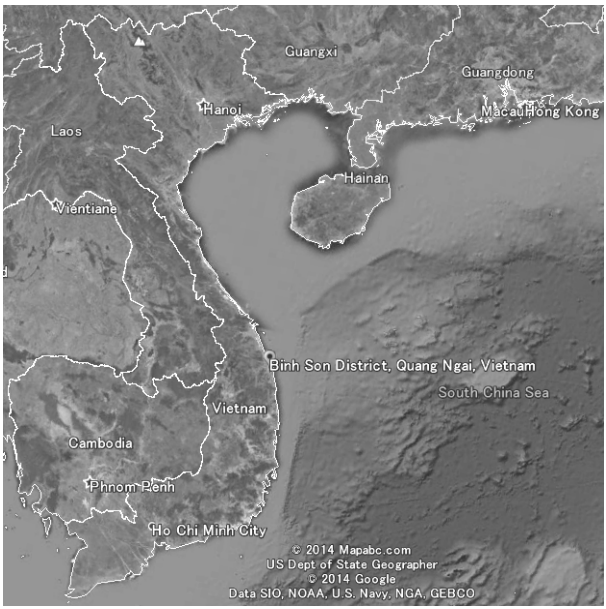

Fig. 1a, b
Bình Sơn District where a wreck site was recently discovered (source: Google Maps)

Early South China Sea Voyagers and Indian Ocean Merchants' Activities off the Coasts of Central Vietnam

In the private collection already mentioned, there is a group of ceramics said to belong to the Châu Tân shipwreck. Most of them are Tang Dynasty Chinese ceramics classified into Yue 越 type, Changsha-Tongguan 長沙銅官 type, and Ding 定 type white porcelain, and "Three-Color Ware" (*sancai* 三彩).[4] Among them, a number of incised Chinese inscriptions appear on the Yue celadon ware and Ding and Xing 邢 ware. Pieces of green-blue glazed jar shards are Islamic ware. There are many unglazed jars, other vessels, and plates (or perhaps lids) with ink Arabic and Indic inscriptions (Fig. 2).

Fig. 2 Ceramic shards with Indic and Arabic ink inscriptions (Photo by the author)

The characteristics of the Chinese ceramics as well as the Arabic and Indic inscriptions indicate that the items were seaborne commodities carried by a ship engaged in the seventh/ eighth-century trade between China and Indian Ocean regions. However, ceramics salvaged in an unscientific manner means loss of archaeological information and undermines credibility as to whether all pieces originated from the same source. More than 40 pieces of ship timbers were recovered from the same area and are considered to have composed the hull of the Châu Tân shipwreck. The disarticulated timbers have chamfered rectangular protrusions on the inner surface of the planks (Fig. 3).

4 Nishino, Aoyama, Kimura, Nogami, and Le 2014.

These are so-called lugs to fix frames for transverse strength, and they are characteristic of the hull construction methods endemic to the South China Sea regions.

Fig. 3 Hull planks of the Châu Tân ship (Photo by the author)

Fig. 4 Arabic style anchor (Photo by the author)

Not only ships indigenous to the South China Sea but also Indian Ocean merchant ships visited the coasts around Bình Sơn. In 2014, a local fisherman found two large anchors in the waters of the area concerned and brought them to the collector. One anchor consisted of iron arms and a wooden shank with a length of 2.7 m (Fig. 4).

Notably, a similar anchor was found associated with the ninth-century Belitung shipwreck in the Java Sea.[5] Although this anchor was the only example of an anchor from an Indian Ocean merchant ship, it was left on the seabed after the underwater excavation. An illustration of the medieval dhow known as the *hariri* ship shows the use of the cross-armed anchor. The iconographical resource gives a clue to understanding the provenience of the two anchors, even though archaeological study of these remains has been compromised, as is the case for many artifacts from the area. Considering the loss of the archaeological information, the only valid option for further understanding of these anchors may be elementary analysis, such as lead isotope analysis of the disk structure and radiocarbon dating of the organic component of the anchor.

Rising Maritime Commerce and the Advent of Chinese Merchants Ships in the Twelfth/Thirteenth Century: Insights from Fieldwork in Vietnam and Japan and the Study of the Field Museum Collection

Cù lao Chàm Historical Anchorage

Waters around Cù lao Chàm are a designated protection zone for marine resources under the administration of Hội An town authorities. There is SCUBA diving tourism based in Hội An 會安市 and Chàm Island 占婆島. In 2014, staff of the Department of Maritime Archaeology at the Institute of Archaeology conducted diving training in the waters with an international joint team consisting of members from Monash University (Australia), the Institute of Nautical Archaeology (USA) and the Field Museum of Natural History (USA). This activity also intended to produce a reconnaissance survey to identify the presence of underwater cultural vestiges potentially linked to the long-term history of Chàm Island as an anchorage. The rise of Cù lao Chàm probably dates back to between the seventh and twelfth century, along with Hội An,

5 Flecker 2010, 103, 113.

located in the basin of the Thu Bồn River 秋盤河 and one of the principal ports on the coast of Champa.

Fig. 5 Stone anchor stock, probably from a Chinese merchant ship (Photo by Ian McCann)

The 2014 investigation started based on information obtained through an interview with local fishermen. One fisherman said he had seen a rectangular stone in the waters between the southern tip of Tân Hiệp 新協島 (a main island of Cù lao Chàm) and Hớn Tai (a small island south of Tân Hiệp). At a depth of 10 m the team found a stone anchor stock (Fig. 5). It is 2.3 m long and is carefully chamfered, and both ends are tapered. The center section is 0.2 m thick and it has 50 mm wide recesses on two sides. The stone stock shows the typical features of an anchor stock used for a wooden anchor in a medieval Chinese merchant ship.[6] Due to time limitations, the surrounding seabed could not be searched extensively, and thus it has not yet been determined whether the stone anchor stock is an isolated object or not.

Anchor and Chinese Export Ceramics from the Twelfth to the Thirteenth Century in the South China Sea

A stone anchor stock that was a component of a wooden anchor is a unique archaeological resource illustrating a twelfth/thirteenth-century maritime

6 Cf. Kimura, Sasaki and Long 2010.

commercial network enhanced by Chinese traders. The wooden components of an anchor, such as its shank and arms, disappear because of degradation mostly by a marine biological impact on the organic parts, but the stock made of stone lasts on the seabed for a long time. The surviving stock is direct evidence of a voyage to waters in which a sailing ship was likely moored or perhaps wrecked. Configurations of recovered stone anchor stocks vary, as outlined in a few typological studies of the stone stocks conducted by Japanese researchers.[7] Yet, the one found in the 2014 underwater archaeological exploration in Vietnam is of a type identical to other stocks found at twelfth/thirteenth-century wreck sites in East Asia and Southeast Asia. The stone stocks are an important archaeological resource for addressing the expansion of maritime trade during this period with the growth in the exportation of Chinese commodities, such as ceramics from central and southern China.

In East and Southeast Asia, there are several twelfth/thirteenth-century wreck sites (Fig. 6). Chinese ceramics from kilns in modern Fujian 福建 and Zhejiang 浙江 Provinces are associated with most of these sites and are clues for a relative dating. Two shipwrecks assigned to the medieval period have been excavated by Chinese governmental organizations: (1) the Nanhai No. 1 南海 1 號, which is preserved in a massive caisson at the Guangdong Maritime Silk Route Museum in Yangjian 陽江 City, and (2) Huaguang Reef 華光岩礁 1 號 (Discovery Reef) shipwreck, found in the waters off the Paracel Islands. The two ships set sail from ports in southern China and carried a number of seaborne commodities; white porcelains and celadon make up the majority of the excavated artifacts. The ceramic assemblage of the Huaguang Reef shipwreck is similar to that of twelfth/thirteenth-century shipwrecks found in the South China Sea region.

The Jepara shipwreck and the Java Sea wreck are considered to have been twelfth/thirteenth-century merchant ships, and both ships probably voyaged to Chinese coasts but ended their life in the Java Sea. The two shipwrecks were explored by different commercial salvage enterprises, and not all the raised artifacts were secured for academic study. It appears that almost all artifacts from the Jepara wreck were sold at auctions. According to limited information, apart from many Chinese ceramics, including Qingbai 青白 ware and Longquan 龍泉 celadon, stone anchor stocks were also raised from

7 Matsuoka Hitoshi 1981; Ogawa Mitsuhiko 2008.

the site. The shipwreck was dated to the early twelfth century, proposed based mainly on the assemblage of Longquan celadon.[8] While there is no archaeological information available about the hull remains of the Jepara ship, the identification of the Chinese-type anchor stock suggests that the ship probably originated from the central or southern Chinese coast.

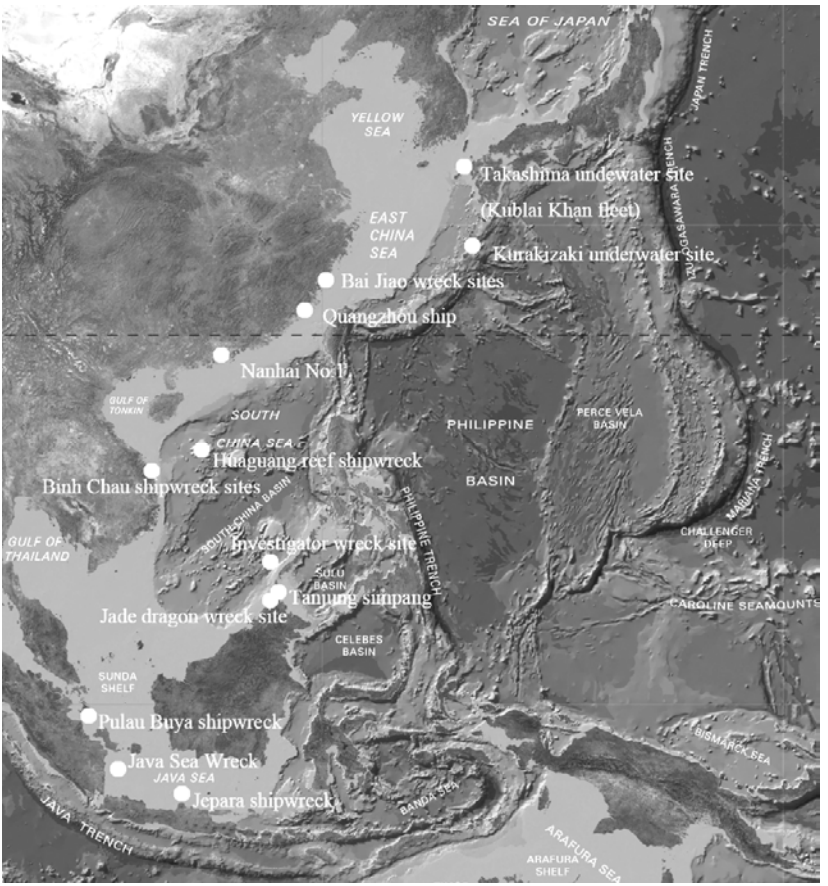

Fig. 6 Twelfth/thirteenth-century wreck sites in East Asia and Southeast Asia

With regard to the Java Sea wreck artifacts, more than half were missing after the salvage operation, but some of the recovered artifacts were donated to the Field Museum of the Natural History and available for research. In 2014, I

8 Cf. Juana and McKinnon 2005.

conducted a provenience study of the Java Sea wreck artifacts. While the Java Sea wreck was dated to the mid- or late thirteenth century in a previous study, I reassigned the ship to the end of the twelfth century or early thirteenth century period. The Java Sea wreck represents a stable time period in maritime trading, encouraged by Song rulers. The hull of the ship did not survive, and a piece of timber with a wooden dowel barely indicates that the original ship could have been an indigenous Southeast Asian trader. The Java Sea wreck artifact collection at the Field Museum is comparable to the artifacts of the Jepara shipwreck. The majority of trading ceramics found at these wreck sites were Fujian and Zhejiang ware, but a major presence of Thai *kendi*, so-called "fine paste ceramics", has also been established. The load of Thai earthenware illustrates the advancement of early Thai ceramic industries for export. The diverse types of the trading ceramics suggest that some items were collected in the course of a voyage from China to Indonesia, implying the growth of maritime commerce along the coasts of mainland Southeast Asia.

Underwater Archaeological Survey in 2014 of the Twelfth/ Thirteenth Century Wreck Site on Amami Island, Japan

The expansion of maritime commerce extended to East Asia in the twelfth to thirteenth centuries. The Kurakizaki underwater site 倉木崎海底遺跡 on Amami 奄美 Island in Kagoshima 鹿児島 Prefecture is an important wreck site, giving a better understanding regarding the use of a sailing route along the Ryūkyū 琉球 Archipelago for trade between Japan and China before the emergence of the Ryūkyū Kingdom (1429–1879). The site is located in shallow water at a depth of 2-3 meters. An archaeological survey in 1995–1998 detected scatterings of ceramic shards on the seabed in the strait between the Edateku 枝手久 Island and the southern coast of Amami Island near Uken 宇検 Bay. During the four seasons of the survey approximately 2,300 ceramic pieces were recovered. Of the recovered ceramics, celadon from the Longquan kilns made up the largest number, some 1,383 pieces. Most of the Longquan celadon pieces were bowls, but no intact bowls were found. The recovered ceramics are considered to have been a part of ship's cargo, and the survey advanced a query as to why such a large number of trading ceramics were present.

In 2014, the Kyūshū National Museum initiated an underwater archaeological project at the Kurakizaki underwater site, and the author led a remote sensing survey. The goal of the survey was to understand the site-formation processes of this potential wreck site and to evaluate whether the present

archaeological remote sensing technologies used are capable of identifying a twelfth to thirteenth century merchant ship. Beyond its large scatterings of trading ceramics, the potential shipwreck site could also show other seaborne commodities from the Song period in China. The survey with remote sensing equipment, including a side scan sonar, marine magnetometer, and metal detector, did not identify any cultural remains.

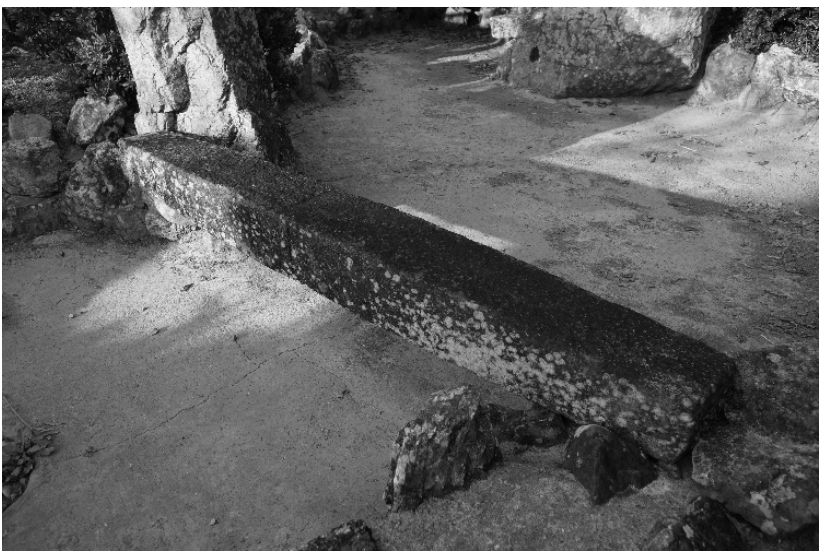

Fig. 7 Stone anchor stock in the garden of a private house (Photo by Ian McCann)

The result of the remote sensing survey supports a hypothesis that the ceramics were deliberately or accidentally abandoned on the seabed, in which case hull remains and other cargo were unlikely to be associated with the ceramics found. The concentration of broken ceramics was centred upon a large rock outcrop around the mouth of the strait. This outcrop is exposed at very low tides and is a dangerous obstruction to passing through the strait even at the best of times. It was hypothesized that a trading vessel struck the outcrop. However, the ship did not sink so that much of the wrecked hull could be salvaged, with most items remaining intact after the wrecking event.

Interestingly, two stone anchor stocks have been preserved at a home located in the village of Uken. They have been used as garden rocks (Fig. 7). It is obvious that the two stocks are identical in type to the anchor stocks from the twelfth/thirteenth-century wreck sites that have been addressed above. The detailed background of these anchor components, however, is not known at

all. A typological perspective suggests that both the stocks and the ceramics at Kurakizaki are from a similar time period, but whether they originated from the same wreck event is unclear. The stocks, on the other hand, show that Amami Island could have been an anchorage around the twelfth/thirteenth century for ships that voyaged from the central and southern Chinese coasts to Hakata 博多, in northern Kyūshū, Japan. It is known that the sailing route along the Ryūkyū Archipelago became an active distribution channel for the importation of Southeast Asian ceramics to the Kyūshū region in the late fourteenth and early fifteenth century.[9] The Kurakizaki underwater site and anchor stocks are testimony to the integration of the Ryūkyū route into the East Asian maritime trading network in earlier periods, which constituted a basis for the emergence of this sea-lane as such in the following periods.

Conclusion

The 2014 fieldwork and museum collection study sought for nautical archaeological evidence for the voyage of merchant ships in the seventh to thirteenth century in Southeast Asian and East Asian waters. In the past, the approach to water transportation has been highly focused on hull remains and evidence of ship rigging, such as anchor stocks. A recent increase in the finding of shipwreck sites has even provided an example of a seventh/eighth-century Southeast Asian indigenous trader. The author's ongoing study of ship remains aims to create a better understanding of the structural types of ships employed for trade in the South China Sea before the tenth century. Ahead of the advent of Chinese merchant ships, these vessels dominated shipping in the region. The twelfth and thirteenth centuries saw a growing number of voyages by Chinese ships going together with the growth of ceramics' export industries based in Fujian and Zhejiang. Shipwrecks and wreck sites from this period in Southeast Asia and East Asia show a complex assemblage of seaborne commodities from multiple regions, and provide insight into the traders' engagement in the supply business, associated with a general demand in overseas markets. Hull remains are not associated with all these sites, but the stone anchor stocks left by ships that actually sailed to those places survive, and they are clues for hypothesizing regarding the active involvement of the ships that must have sustained the market networks.

9 Cf. Nishino Noriko 2011.

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