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# **Southeast Asian Ceramics Museum Newsletter**

/olume VI Number 2-3 2013

### Report on the: 2012 International Symposium on Ancient Ceramics Its Scientific and Technological Insights

The International Ancient Ceramics (ISAC) has grown throughout the papers. The topics substantially since its inception in of the papers cited in this report are Shanghai in 1982. Thirty years later, representative, but not comprehensive in October 2012, scientists, experts, and there are necessarily cross-overs. and scholars convened at the Kai Comments are made on papers in MenZi Grand Hotel in Jingdezhen the following categories: scientific, for the tenth tri-annual symposium. The Shanghai Institute of Ceramics, Chinese Academy of Sciences, and Jingdezhen Ceramic Institute sponsored the event which was organized by the reports on: testing variations in Shanghai Research Society of Science and Technology of Ancient Ceramics, the Institute of Ancient Ceramics, and the Jingdezhen Ceramic Institute. The session opened with remarks from eminent Chinese scholars. Forty-three papers were presented and over one hundred Chinese and more than thirty foreigners representing seventeen countries participated in the three-day symposium.

Papers introducing new methods for examining, testing, and analyzing ceramics upheld the reputation of the symposium as a forum at the forefront and of ceramic technological advances. Archaeological updates of work in progress and new discoveries in the field contributed to the breadth of the symposium. Globalization emerged as a strong theme in this year's programme and papers on Chinese export wares reflected the global tone of the symposium. Still other examples of the outward looking theme were reports on ceramics produced in other cultures. Ceramic conservation was a new and interesting topic in the programme. A trend towards disciplines in multiple

Symposium on fields working together was seen archaeological, Chinese export wares, beyond China, and conservation.

> [1] Scientific Papers included heat treatment, composition, and microstructure of Ru fragments from workshops at Qingliangsi and Zhanggongxiang in Henan province in an effort to characterize Ru ware as one of the great imperial wares of the Song dynasty; applying digital image analysis on petrographic thin sections to obtain a wider range of quantitative data; analyzing the microstructure of proto-porcelain from Zhengzhou (early capital of Shang dynasty) using a petrographic microscope to determine whether a relationship exists between the production of proto-porcelain stamped pottery; analyzing Yixing purple sand clay from kilns in Shushan and determining that the microstructure differed between 1573 and 1911 which enabled dating; applying



#### Letter from the editor

Hello to all members. First of all, we apologize for the delay of our newsletter again. In this issue, we have combined both newsletters, No. 2-3 of 2013, because the reports on the international conferences in Dublin, Ireland and in Jingdezhen, the People's Republic of China have very interesting content. Therefore, we did not want to shorten any valuable information in these reports, and we appreciate your understanding. Now we are planning new efforts and improving our staff to increase performance and enhance academic concentration of knowledge. We desire to improve our newsletters and to cater more to the interest of every member of our newsletter distribution list.

## Report on the: 2012 International Symposium on Ancient Ceramics Its Scientific and Technological Insights

instrumental neutron activation analysis (INAA) to shards from four sites of the Middle and Late periods from Diaolongbei in Hubei province to determine provenance.

Analyses of colouring agents in glazes included: testing of the blue and green colours and the effects of iron oxide in Jun ware glazes; testing of the light, opaque, lead-glaze on Qing tiles from Huangwa kilns, in Liaoning province, to determine characteristics of the tin-based opacifiers; testing an iron-rich colourant on decorated Cizhou wares ascertained likenesses with similar types of Korean ceramics.



Figure 1 General view of the seminar

Findings on various aspects of celadon included: kilns at Laoshushan, Dequing, Zhejiang produced both province. preliminary celadon and hard pottery based on results of tests on the composition of the body and glaze to determine the firing temperature using X-ray emission (PIXE); a comparison of Longquan celadons with Islamic shards from Fustat, Cairo (CE 1250-1382) revealed similarities in aspects ranging from form, glaze, colour, and decoration testifying that copies of Longquan celadon were produced either in Egypt, or perhaps at kilns in Syria or Iran; characteristics of the glaze, forms, and function of Si Satchanalai celadon, north-central Thailand, of the 15th to early 17th centuries were identified; X-ray fluorescence was used for another celadon comparison between shards of the southern Song dynasty with those of two other celadonproducing kiln sites of the same period in Hangzhou; the firing temperature of celadon from a Yue kiln site was determined using Thermoluescence testing.

Scientific testing on Chinese white porcelain was the subject of other papers. Ceramics retrieved from recent excavations at Baihe kiln in Henan concluded that white porcelain of the Northern Wei dynasty was produced one hundred years earlier previously believed, and that it is the earliest found in China so far. Various tests on samples of white porcelain from the Dehua kilns (Song to Qing dynasties) in Fujian province identified the composition of the body and glaze and provided insight into the development, evolution, and export trade market for the ware. Samples of 'translucent white porcelain' and coarser wares from sites in Hebei province (Sui dynasty) were analyzed to determine the technological evolution of white porcelain from the Xing kiln. An analysis of the raw materials of the body and glaze of Ding ware (Five Dynasties to the Jin dynasty) identified recipes used during the various periods of production.



Figure 2 Pariwat Thammapreechakorn Director of SEACM gives a lecture about Jingdezhen ceramics founded in thailand

[2] Archaeological - Jingdezhen export wares found in archaeological sites in Thailand were identified and provided previously unknown information on trade, distribution, and usage. The discovery of the Torp Chey kilns in northwestern Cambodia was presented and subsequent

excavations of the kiln structure suggest its evolution was a local invention. A study of inscriptions on Guangdong jars retrieved from the 9th century Belitung shipwreck in Indonesia indicates ownership and functions of the jars. Khmer and Sanskrit words for ceramic and metal forms were studied in inscriptions and depictions of the forms on bas-reliefs were noted to identify old names for the ceramics and thus understand production.

[3] Chinese Export Wares provided new insight into both the scope of the early maritime trade network between Europe and China from the sixteenth century onwards and the regional trade in Asia. The Chinese tankard form was followed from production in the Neolithic period to Han and Tang dynasties and to the Ming period when it was influenced by the form in other materials from the Middle East which influenced European ceramics and continued as a Chinese export form, often with European designs, in the 17th to 19th century; Chinese export ware based on records of the Dutch East Indies and ceramics from private and public collections in Europe was discussed; another presented the subject from the Portuguese perspective; late 16th and early 17th century Kraak porcelain from Jingdezhen shipped to Portugal reinforced that country's role in the export trade; archaeological and documentary evidence of 17th century Chinese porcelain found at English settlements Williamsburg, Jamestown, and Yorktown, USA, identified a broader market for export ware; characteristics of Bencharong, a type of enamelled Chinese export ware made exclusively for Thai royalty (18th and 19th centuries) were identified; a vast number of Chinese and Japanese porcelains in the Prussian Palaces and Gardens Foundation collection in Berlin-Brandenburg substantiated the active European market for export

ware. A reassessment of the dating for polychrome Kangxi period famille noire wares in western collections is in progress using stylistic and technical analyses.

[4] Beyond China - Results of tests and analyzes of ceramics from an administrative centre at the New Kingdom site of Amara West in northern Sudan suggest that they were manufactured brilliance locally; the Temmoku shards was revealed through testing the technical aspects; Iranian monochrome glazed mosaic tiles from mid-15th century Caravanserai at East Azerbaija were studied to investigate a possible link with the monochrome Anatolian Seljuk wheel-thrown sulphur earthenware from the medieval period sites of Primorye, Priamurye Transbailaye and revealed the handicraft tradition of pottery of the Far Eastern region; pottery in the 13th century walled town of Ekaterinovskoe, Primorski discussed; region was characterizing of Eurasian pottery microstructures via synchrotron X-ray scattering (a fast and noninvasive method) was presented; archaeological ceramics from four sites in Afghanistan and Uzbekistan dated between the

tenth and early thirteenth centuries were examined by X-ray analysis.

[5] Conservation - Visual and scientific examinations of the Islamic ceramics in the Nelson-Atkins Museum of Art were undertakentoidentifythecondition of the pieces that revealed aspects such as over-painting, repaired cracks, and differences in surface colours and uneven joints between the original surface and added pieces. The use of menthol, an organic compound, for temporary consolidation of binding pieces together for stabilization was discussed. The use of epoxy putty in ceramic restoration has proven to be an effective and strong bonding agent. The application of nanomaterials to consolidate damaged pottery was explained.

Concluding Points - The announcement of the establishment of a database to study the raw materials of ancient ceramics was an exciting development with long-term potential for researchers. A consortium of institutions in China set up the programme with the aim of providing information to determine the provenance and performance of ancient ceramics.

A book of the proceedings including 115 abstracts published in both Chinese and English was given to each participant and is a valuable reference. The mix of cultures and topics of the presentations reflected a high level of scholarship confirming that ISAC is the preimminent forum in its field.



Figure 3 Trip to Jizhou kiln and provincial museum

The symposium concluded with a visit to the Imperial Kilns and professional visits were organized for the next four days to the Expo Area of the Ancient Kiln and Folk Customs Jingdezhen, and the Yaoli site; and to the Jizhou kiln and provincial museum in Jiangxi province and Yonghe town.

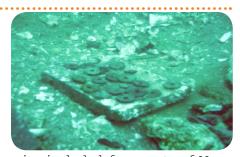
Dawn Rooney

### New in brief...

RE-EXCAVATION OF RANG KWIEN SHIPWRECK BY UNDERWATER ARCHAEOLOGY DIVISION AND NATIONAL MARITIME MUSEUM

A great opportunity was presented to the Southeast Asian Ceramics Museum of Bangkok University to join in the re-excavation the Rang Kwien shipwreck. In fact, the Underwater Archaeology Division (UAD) and National Maritime Museum (NMM) of the Thai Fine Arts Department conducted the re-excavation of 100 square meters covered by this shipwreck during 2012 - 2013. For a better underof the Ayutthaya standing maritime trade it was excavated

below the keel to study the characteristics of the keel and surrounding area on the starboard side of a ship. In general, this shipwreck was first discovered in 1977, located at 22 meters depth under the Gulf of Thailand near Rang Kwien Island off Bang Saray Sub-district, Sattahip District, Chonburi Province, and also had numerous earlier references to it. In the preliminary results of the 2012-2013 excavation, UAD and NMM have found the keel of at least 25 meters in length with a long groove line excised on top of it, the bow faced to the Southeast (150 degrees) and the stern faced to the Northwest (330 degrees), some damaged hull planks, and excavation finds. Excavation recov-



eries included fragments of Yuan celadons, Vietnamese blue and white wares, Vietnamese brown glazed wares, Vietnamese celadons, Thai Si Satchanalai and Ban Bang Pun wares, ivories, Chinese coins, copper ingots and whetstones. The dating of the shipwreck is around 14th century. The nationality and destination of the Rang Kwien are unclear. UAD and NMM are publishing the final report soon.

CERAMIC PAPERS PRESENTED AT THE EUROPEAN ASSOCIATION OF SOUTHEAST ASIAN ARCHAEOLOGISTS 14TH INTERNATIONAL CONFERENCE 18-21 SEPTEMBER 2012 DUBLIN, IRELAND (PAPERS ON CERAMICS)

The fourteenth international conference of the European Association of Southeast Asian Archaeologists was held in Dublin Castle Conference Centre and the Chester Beatty Library. University College Dublin hosted the event. 'Any topic related to Southeast Asian archaeology' was the theme of the conference. The broad subject matter drew papers from a wide variety of disciplines. An additional theme, 'Science, Archaeology, and Heritage in Southeast Asia', coincided with Dublin as the European City of Science, 2012. Three panels focused on narrower subjects within the overall themes. One on epigraphy and manuscripts was suitably matched with the renowned collection in the Chester Beatty Library. Two other panels were dedicated to Southeast Asian Ceramics and Khmer archaeology. This report is only on papers related to ceramics.



Figure 1 Dr Joyce White presenting a talk on 'Changing Paradigms in Southeast Asian Archaeology' during the EurASEAA14 Pleanary Session at Dublin Castle chaired by Dr Helen Lewis. www.facebook.com/EurASEAA14/

The keynote address by Joyce White, University of Pennsylvania, stressed that the 1970s methodologies applied to ceramics are outdated; the need to expand our research beyond the norm; and the value of studying shards for insight into communities and for identifying sub-regions such as those in the Ban Chiang Culture of Thailand.

### EurASEAA Dublin 2012 14th International Conference



EurASEAA 14th International Conference September 18th - 21st 2012

The panel 'Understanding Southeast Asian ceramics: reflections on the past, current research, and future directions', ably organized by Judy Voelker (Northern Kentucky University) and Ally Halliwell (Macquarie University), included twenty-six papers (an unprecedented number) plus six more on ceramics in other panels. So, a total of thirty-two papers directly related to the subject were presented and three posters supported the papers. Related fields such as historical archaeology, new testing technologies, and trade and maritime developments in Southeast Asia were also covered and added to the breadth of knowledge on ceramics.

Three papers covered the distribution and dating of Chinese ceramics found in a Southeast Asian context. Tang period wares retrieved from the Musi River in Palembang, a ninth century Sriwijaya capital, provided a new source of archaeological data for documenting trade in Palembang at an early date. Chinese ceramics dated between the ninth and seventeenth centuries excavated at Angkor were discussed in the context of their relationship to daily life of the Khmers. Chinese ceramics found in twelfth to sixteenth century settlements and burials in the Tangay region of Negros Island were studied for typological and compositional information resulting in preliminary findings on distribution and 'demand' for foreign ceramics in the Philippines.

Specific motifs or forms of excavated ceramics were the subject of several other papers. The human face depicted on Neolithic and Palaeometallic pottery in Indonesia was studied to determine its importance in the Austronesian diaspora. Another paper described a group of 'conical rollers' and their use from Ban Non Wat, a site spanning the Bronze and Iron Ages in northeastern Thailand. Ceramic bivalve casting molds recovered from deposits in three copper production and habitation sites in the Khao Wong Prachan Valley, central Thailand, were studied with the aim of a better understanding the origins of mining and metallurgy in Southeast Asia.

Traditional production of making pots and cooking techniques of the inhabitants in Ban Chompoi, Attapeu Province, southern Laos, were recorded for comparison with wares from pots found in other archaeological sites. Characteristics of the Kok Moh kendis excavated at Ban Pah O in the Satingpra Complex in southern Thailand were identified and the relevance of the kendis to similar types found in cargo retrieved from shipwrecks was pinpointed.

Another area of focus was presenting ceramics in a broad, social context and comparing them with other cultures. Prehistoric ceramics excavated at various sites in Thailand, for example, followed this theme. One included assemblages found in camp sites and burials in upper Peninsular Thailand; and another described ceramics from two subsets of the Ban Chiang

Culture dating from the Middle to the Early Periods. An analysis of decorated, non-anthropomorphic earthenware from the Ayub Cave in Maitum, Sarangani Province, in the Philippines dating to the Iron Age was conducted to determine spatial and temporal relationships of prehistoric people in the southern Philippines. Another paper also presented findings of ceramics in the Philippines from the Ille Cave and other cave sites in the Dewil Valley and determined that most of the vessels were associated with burial rituals. The information contributed to an understanding of the social organization of the inhabitants. Ban Bang Pun ceramics from related settlements in central Thailand dating between the fourteenth and sixteenth centuries, and ceramics retrieved from shipwrecks were studied to determine the economic and social context in which they were produced. Jar burial sites in the Philippines were studied to determine whether the landscape features of where they were found influenced the choice of the sacred space.



Figure 2 Burial jars discovered in Cambodia

Further research on ceramics in Cambodia was well represented. A study of Khmer ceramics from kilns in Northeastern Thailand and the Kulen area of Cambodia presented a new interpretation of their development. Results of chemical analyses and petrographic studies of Khmer wares from five Angkorian kiln sites dating

between the ninth and fourteenth centuries were used for comparison of materials and types. Recent excavations yielding brown-glazed ceramics in a large kiln (the largest in Southeast Asia found so far) at Torp Chey, along the ancient road leading from Angkor to the temple of Preah Khan of Kompong Svay, enabled a study of the development of kiln technology during the Khmer Empire. Test excavations and surface finds of Khmer (glazed and unglazed), Chinese, Thai, and Vietnamese ceramics dating between the tenth and seventeenth centuries at Kok Phnov, Siem Reap Province, were analyzed and then used to compare finds from other occupation sites. Preliminary chronologies for Khmer ceramics proposed in the 1980s onwards were re-examined, and in light of new findings and recent excavations presented new dating for the ending date of production. Excavations at the Krang Kor site in Kompong Chhang Province, Cambodia, yielded the discovery of burials with celadons (both Chinese and Thai), Khmer earthenware, and objects of other materials dated between the fourteenth and sixteenth centuries. Ancient inscriptions written mainly in Khmer were studied, along with depictions on the reliefs and modern ceramic terminology, to determine words related to ceramic and metal types or shapes. Investigations in the environs of Preah Khan of Kompong Svay and specifically iron-production sites have shed light on the nature of the temple as a regional Khmer centre and its importance as a resource for metal in the Angkorian and post-Angkorian periods.

Ceramics, glass beads, and other materials from ten Cambodian sites were examined to try to reconstruct internal exchange between the Iron Age sites in Cambodia and Southeast Asia.

Papers on various aspects of Myanmar (formerly Burma) art and archaeology, which are little



Figure 3 Radiocarbon Dates from Jar and Coffin Burials of the Cardamom Mountains Reveal a Previously Unrecorded Mortuary Ritual in Combodia's Late - to- Post-Angkor Period (15th-17th Centuries AD)

known abroad, were welcome additions to the programme. Earthenware shards found at three archaeological sites (Sriksetra, Tagaung, Bagan) were analyzed to draw up a preliminary classification and propose an initial chronology for the wares. Martaban jars retrieved from nine cemeteries in the southern Kelabit Highlands in Sarawak that were classified by type enabled a study of their connection with other regions of Southeast Asia.

Without the dedication and perseverance of the organizers to bring together such a large number of papers on a common subject this panel would not have been so successful. Thank you Judy and Ally!

Dawn Rooney

## PRELIMINARY REPORT QUANG NGAI SHIPWRECK, VIETNAM

Quang Ngai (Binh Chau ) - Yuan Shipwreck was discovered by local fishermen on 7 September 2012 near Binh Chau Village, Binh Son District, Quang Ngai Province, approximately twenty kilometers east of Quang Ngai City in central Vietnam. The shipwreck is located fifty meters offshore at an extremely shallow depth under about three meters of sand. The discovery resulted in rather violent confrontations between the fishermen and the police. There is some speculation that the Chinese vessel, which reportedly measures approximately 20 meters in length and 4 to 5 meters in width, may be relatively intact. If so this would provide archeologists with an excellent opportunity for study and analysis of the construction materials and shipbuilding techniques. The wrecksite area is now under heavy guard by the Vietnamese government authorities. A contract to salvage the wreck has already been awarded to a Saigon firm and excavation is expected to be completed this year.

Only Chinese ceramics, dated to the early 14th century of the Yuan Dynasty (1271 to 1368), were recovered and amounted to a few thousand items, which includes intact as well as broken wares. The ceramics consisted primarily of celadon wares from both Longquan and the southern China kilns such as those in Fujian and Guangdong. Also recovered were a limited number of small Jingdezhen jarlets with two loop handles and faceted sides, as well as plain sides, and with various décor: spotted iron decoration, blue and white of rather poor quality, and underglaze red in extremely small amounts. A large blue and white plate (broken in half) was also reportedly recovered, but this could not be verified.

Longquan celadons included small censers or incense burners as shown in Photo QN-1, large plates (approximately 33 to 36 centimeters in diameter) with foliated rim, fluted cavetto, and with floral décor, fish, deer, or dragon;



Photo QN-1 Censers or Incense Burners

smaller plates, about 26 centimeters in diameter some with twin phoenix, some with pie crust rim; medium bowls with the motif in the central medallion consisting of a lightly molded floral spray, twin fish, or a pair of people



Photo QN-2 Celadon Bowl

(for an example refer to Photo QN-2). Other celadons (some similar to the Karang Cina finds in Indonesia dated to the early Yuan dynasty), included small shallow bowls with unglazed interior, medium size conical shape deep dishes with unglazed center (see Photo QN-3), jarlets with two loop handles and



Photo QN-3 Deep Dish

molded floral décor (see Photo QN-4), and small dishes with unglazed mouthrim and very lightly molded twin fish motif. Brown glazed wares were also recovered, consisting



Photo QN-4 Jarlet

only of basins with foliated rim as illustrated in Photo QN - 5 below.

The authorities confiscated large



Photo QN-5 Brown Glazed Wares

quantities of the wares recovered by the fishermen. However, very limited numbers of the Quang Ngai ceramics were available in a few of the antique shops in Saigon. There is considerable speculation about the remainder of the cargo, much of which centers upon the possibility of significant quantities of Yuan blue and white material possibly being recovered. We will have to wait and see!

Walter Kassela

# SEACM CERAMICS ON DISPLAY IN SINGAPORE

The Asian Civilizations Museum (ACM) in Singapore special exhibition, "Enlightened Ways - The many streams of Buddhist art in Thailand," explores the many forms of Thai Buddhist art. The exhibition demonstrates the wide range and diverse influences of this artistic tradition. The majority of the exhibits are from 11 Thai museums and include sculpture, paintings, textiles and furniture, as well as ceramics. The exhibition includes 5 ceramics from the collection of the Southeast

Asian Ceramics Museum: a Wang Nua celadon cylindrical box with lotus-shaped cover, along with 4 Si Satchanalai ceramics - a celadon bowl or plate with intricately carved lotus design, a lotus shaped covered jar with underglaze black and molded accents, a dish with underglaze painted lotus design, and an exceptional reliquary in chedi form with elephants at the base (see photos below). Participation in this important exhibition is part of our continuing efforts to encourage the study and appreciation of Thai arts and culture. The exhibition was held from 30 November 2012 to 17 April 2003.

For further information and details on the lavishly illustrated exhibition catalogue visit ACM's website at www.acm.org.sg.



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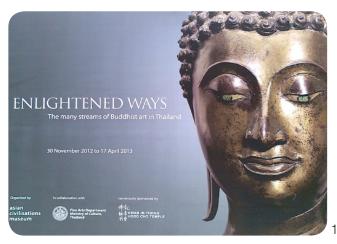






Figure 1 Exhibition Entrance

Figure 2 Display of SEACM ceramics

Figure 3 A lotus shaped covered jar with underglaze black

Figure 4 Reliquary in the form of a chedi with elephants

The Southeast Asian Ceramics Museum Newsletter is inviting all members to submit articles for the Newsletter.

Please send your articles or comments and suggestions to the Newsletter Editor at museumnewsletter@gmail.com.

Please take note that there will be no honoraria for articles published.

The Southeast Asian Ceramics Museum is still closed for repairs due to last year's floods.