



Published on the occasion of the exhibition

From The Ashes
Reviving Myanmar Celadon Ceramics

Official opening: 8 February 2017

Event co-organised with NUS Department of Southeast Asian Studies on the occasion of its silver jubilee



Published by

NUS MUSEUM

University Cultural Centre 50 Kent Ridge Crescent National University of Singapore Singapore 119279

Γ: (65) 6516 8817

E: museum@nus.edu.sg W: museum.nus.edu.sg

ISBN: 978-981-11-1764-0

© 2017 NUS Museum, National University of Singapore

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without prior permission in writing from the publisher.



CONTENTS

CURATORIAL NOTES Archaeology and Innovation Foo Su Ling	3
TWANTE AND THE STUDY OF SOUTHEAST ASIAN GLAZED POTTERY John Miksic	11
TRADITION AND LIVELIHOOD Afterthoughts of an Intern Chean Hui Tuan	16
ACKNOWLEDGEMENTS	20

From the Ashes Reviving Myanmar Celadon Ceramics

CURATORIAL NOTES Archaeology and Innovation

Foo Su Ling

Foo Su Ling is a curator at the National University of Singapore Museum.

From The Ashes: Reviving Myanmar Celadon Ceramics exhibits a range of greenware from historical kilns in Myanmar alongside pieces from contemporary potters who recently experimented with the use of ash glazes in ceramic production. The contemporary wares are given the name 'celabon', a term derived from a well regarded category of glazed ceramics popularly known as 'celadon'.

Chinese celadon, exported since the Song period, is a popular area of study among ceramics scholars. A body of research on Thai celadon is also available and investigations of the cargo from shipwrecks have shown that Thai kilns were active exporters of celadon ware for about a hundred years from the early 15th century (Brown 2009: 51-68). In comparison, the awareness among scholars of Myanmar as a notable celadon production centre has emerged only in the last 20 years with the discovery of ancient crossdraft kilns.

Celadon is cherished for the thick and lustrous quality of its glaze which gives the piece a jade-like appearance. Celadon wares come in a spectrum of green colours which are derived from the iron and titanium oxides in the glaze when the amount of oxygen is reduced during firing (Wood 1999: 30). Silica is the compound in the glaze that yields the glass like finish. To lower the melting point of silica, wood ash is added as a flux and hence the term 'ash glazed wares'. Pieces from the historical kilns of Lower Myanmar tend to sport an olive green tint and numerous bowl and plate fragments covered with such glazes have been recovered from excavated kilns and from the surface of unexcavated production sites.

While ancient Myanmar potters were acquainted with the use of ash glazes, their contemporaries are no longer familiar with the technique, the exception being a group at the village of Ho-nar on the Shan Plateau.¹ The discovery of historical celadon kilns inspired the Myanmar Ceramic Society, led by its president Dr Myo Thant Tyn, to re-introduce this competency among pottery workshops in the town of Twante, but before going into the pioneering efforts of the project, we shall take a moment to examine the place of Twante in Myanmar's history of ash glazed ceramics production.

TWANTE – A HISTORICAL CELADON PRODUCTION CENTRE

The search for celadon producing areas in Myanmar has its beginning in archaeological projects that were initiated primarily to study historical crossdraft kilns. In 1988, the existence of a crossdraft kiln was confirmed in Lagumbyee, a town to the north east of Yangon (Hein 2003: 5). Kilns built inground as well as those constructed on the surface were later identified in Myaungmya in the Ayeyarwady delta. Archaeological excavations revealed a variety of products at these sites including grinding platforms, earthenware jars, dark brown glazed bowls and a range of celadon bowls, plates and figurines (Hein 2003: 7-20, 52-60).



A jar fragment on the bank of Twante Canal, 2016

Dr Myo Thant Tyn was involved in the projects at Lagumbyee and Myaungmya as an advisor to the Department of Archaeology. The search for kiln sites, which invariably involves the initial work of tracking down areas with massive quantities of sherd deposits, triggered his recollection of the vast fragments of pottery and stoneware carpeting the shores of Twante Canal. He also learnt that a local in the area had been making regular trips to the canal to collect sherds from its banks.²

Twante is situated to the south west of Yangon and the canal which hugs the northern fringe of the town connects with the Yangon River. In the 19th century, the





Greenware collection at the Tradi-Style Ceramic Centre, 2016

British had a courthouse and police station at Twante where the writer George Orwell served a brief posting during his time as a police officer in Burma. The British described Twante as a place "celebrated for its large earthenware jars, supplying the Rangoon market and indeed the greater portion of the delta of the Irrawaddy" (The British Burma Gazetteer 1879: 848-849).

The person at Twante who has amassed a large sherd collection is U Than Tin. Born in the area, his interest started about forty years ago, long before the extensive deposit attracted the attention of the archaeology circle. The diversity of wares represented by the fragments points to the use of the canal as a major transport artery for the pottery economy, while finds of kiln furniture suggest the existence of production sites in the surrounding area. Dr Myo Thant Tyn and U Than Tin gathered a team of enthusiasts and began their search for kiln sites. Besides talking to the locals, the group also relied on a few fundamental indicators for ancient kiln spotting.3 While potsherds were aplenty at the canal, kilns proved to be elusive and it was almost nine years after the group began its search that a site was identified at an area known as Kangyigone, about two miles south of the Tradi-Style Ceramics Centre.4 A villager had shown the team a piece of kiln waster in the form of two fused bowls and led them to the find site.

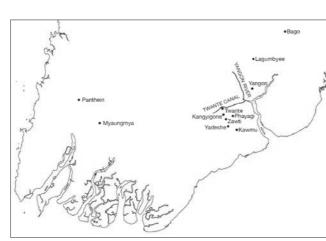




Greenware in the collection of a resident at Phayagyi, 2016

In 1999, the Department of Archaeology excavated the kilns at Kangyigone. Curious locals arrived at the site, excited about being among the first to witness the recovery of what they thought might be rare treasures of gold.⁵ Days went by and the air of anticipation among spectators turned to amusement as they watched the unwavering enthusiasm of the excavation team as piece after piece of broken ceramic was uncovered from the dig site. A few villagers began to describe the sherds that had been lying in their own compounds for as long as anyone could recall. As word of the project spread, more people came forward with information about ceramic fragments turning up from the ground when the land was ploughed. Following up on these leads, many other production sites were discovered including Phayagyi to the south east of Twante and at the villages of Zawti and Paukkone.

The sites are situated off the main vehicular track and exploring them requires a trek into the forest where bamboo is the predominant plant species. The largest category of products associated with these kilns is celadon ware. At unexcavated sites, celadon bowls and plates in different sizes are camouflaged among fallen leaves. Zoomorphic figurines are found in much smaller



Ceramic find sites around Twante



Excavated kiln at Phayagyi with a column support at the centre of the firing chamber, 2016



Glaze deposited on a brick that used to be part of a firing chamber wall, Kangyigone, 2016



Surface finds at an unexcavated kiln site in Paukkone, 2016

quantities. Many tubular supports that were part of the furniture in the firing chamber are scattered among the ceramics. Objects are deposited in clusters a few feet apart from one another, suggesting the likely spots where wares were sorted, and unsuccessful pieces discarded, after unloading the kilns.

A Chinese blue and white plate unearthed at Phayagyi provides a dating of 15th century for the kilns (Nan Kyi Kyi Khiang 2009: 44, quoting Tsuda 1999). Myanmar celadon bowls and plates were uncovered from the excavation of a 15th century site at Julfar in the United Arab Emirates (Sasaki and Sasaki 2002). The form, glaze and decorative style of the greenwares from Julfar put them in the same grouping as those found at kiln sites in the Twante area. Researchers from The University of Kanazawa confirmed a match of the wares from the two sites with petrographic analysis (Sasaki and Sasaki 2002). Myanmar celadon has also been recovered from two shipwrecks - Lena Shoal and Brunei Junk – which are dated between the late 15th to early 16th century (Brown 2009: 62, 65). These discoveries show that Myanmar celadon was a product of commercial interest during the era and the considerable distribution of kilns around Twante associated with this ware locates the area as a historically significant centre for its production.

CELABON AND COMMUNITY CAPACITY BUILDING

The contemporary pottery enterprise at Twante is known for its earthenware. Green glazed wares, when made, use lead as a flux to lower the melting point of the silica which forms the main material of glaze. The usefulness of lead glazed ware in food related applications is limited as the metal is poisonous when consumed. The local pottery workshops are therefore not well poised to take advantage of Myanmar's burgeoning hotel and catering industry which drives the demand for glazed crockery.

The Myanmar Ceramic Society (MCS) works on community capacity building with pottery families in Twante. In this regard, the MCS provides loans to potters for income generating activities, including assisting those without a kiln in building one. In times of need such as hardship caused by natural disasters, it offers financial aid to potters for livelihood recovery. MCS also introduces potters to techniques and materials which may advance the economic viability of their enterprise. The finds of historical production sites specialized in making ash glazed wares was an impetus to explore expanding the skill set of the industry. Besides reconnecting the potters with their heritage, the knowledge of ash glazing would allow potters to widen their product offerings.





Potters gathered for a meeting at the Community Revolving Fund office, 2016

Front row (from left): Daw San Mya, Daw Khin Win, Daw Than Than Win. Middle row: Ma Dar Li Shwe, U Yone, Daw Hnayr, Daw San San Htay. Back row: U Thein Tun (Chairman of the Community Revolving Fund), Foo Su Ling, Dr Myo Thant Tyn.

Early attempts at making ash glazed wares took place in experimental kilns built on the grounds of the Tradi-Style Ceramics Centre (Myo Thant Tyn 2014 and Miksic 2017: 12, in this volume). Potters attended a workshop and were urged to continue experimenting in their own kilns but the response was not encouraging. They were concerned with the additional cost of firewood to maintain the kiln at the higher temperature that was needed to fire ash glazed wares. For the glass layer to form on the surface of an object coated with ash glaze, the kiln temperature has to be brought up to at least 1300°C. The potters were only comfortable with the typical condition for making earthenware which is 1000°C. It was evident that for the experiments to bear fruit, a way had to be found to reduce the firing temperature of ash glazed wares.

In ceramic production, a compound known as borax can be added instead of lead to lower the melting point of glazes. Tests were carried out with the addition of borax to the original ash and clay mixture. The ratios of the three compounds were varied and the recipe which was found to give the best glaze at 1000°C was one part ash to two parts clay and four parts borax (Ash: Clay: Borax = 1:2:4). The resultant ash glazed, lead free and low temperature fired ware was named celabon, derived from the terms "celadon" and "borax".

The potters who participated in the trials have made celabon objects sporadically since the project began in 2014. They encounter challenges such as collecting the ash from certain species of trees which give better results than others.⁷ For the majority, however, the most crucial setback lies in the absence of demand



U Yone preparing a mix of ash, clay and borax, 2016



Celabon test pieces, 2016

for the product. U Yone, a consultant with the project, discloses that the potters are ready for full scale production but the commercial opportunity has not yet arisen. The firing of celabon ware therefore remains something to be undertaken only when there is spare time after the essential task of fulfilling orders for earthenware has been accomplished. Dr Myo Thant Tyn is unfazed by the paucity of resource that hinders the systematic development of the project. He considers that it will take a few years for celabon to gain favour among potters and in the market. Meanwhile, MCS sustains its efforts in transferring this knowledge to other pottery communities. Besides Twante, potters at Kyaukmyaung in the Sagaing Region and Kyauktaing in the Shan State have been introduced to this low temperature ash glaze formula.

The discovery of historical crossdraft kilns and their greenware products is anticipated to give rise to scholarship that will enlighten us on the social, economic and technological conditions within Myanmar's 15th century pottery communities. It remains to be seen if the modest innovation known as celabon that was ignited by this historical discovery will also offer fruitful scholarship material in the near future.

NOTES

- In the village of Ho-nar in the Southern Shan States, contemporary pottery workshops have retained the knowledge and practice of making ash glazed wares (Myo Thant Tyn 2005).
- 2 Personal communication with Dr Myo Thant Tyn in June 2016.
- 3 Personal communication with Dr Myo Thant Tyn who shared that he had learnt of the indicators for spotting ancient kiln sites from archaeologist Dr Don Hein: (a) presence of sherds in quantities that are not typical for a domestic or commercial site, (b) presence of kiln wasters and kiln furniture, (c) outside the old city wall, so that residents are not impacted by smoke from the kiln fires, (d) close to a waterway to allow for easy movement of finished products, and (e) near rich sources of raw materials namely clay and wood.
- 4 Personal communication with Dr Myo Thant Tyn. Tradi-Style Ceramic Centre is the museum in Twante where the sherd collection of Myanmar Ceramic Society is displayed.
- 5 Personal communication with Dr Myo Thant Tyn.
- 6 Information from document "Background Information of Myanmar Ceramic Society (MCS)"
- 7 Communications with potters and U Yone in June and October 2016 with Dr Khin Cho Htwe interpreting.

BIBLIOGRAPHY

- Brown, Roxanna M, 1988. Ceramics of South-East Asia: Their Dating and Identification. Second Edition. Singapore: Oxford University Press
- ——, 2009. The Ming Gap and Shipwreck Ceramics in Southeast Asia: Towards a Chronology of Thai Trade Ware. Bangkok: The Siam Society.
- Goddio, Franck, Monique Crick, Peter Lam, Stacey Pierson, Rosemary Scott, 2002. Lost At Sea: The strange route of the Lena Shoal junk. London: Periplus Publishing London Ltd.
- Hein, Don, 2003. Interim Report on Archaeological Fieldwork at Myaung Mya, Bagan, and Other Sites in Myanmar, August–September 1999. [Melbourne]: Deakin University. Unpublished e-copy.
- ——, 2008. Ceramic Kiln Lineages in Mainland Southeast Asia. https://seasianceramics.asia.si.edu/dynamic/essays/resource_ items_url_137.pdf (accessed 4 February 2009).
- Hein, Don and San Win, 2015. *Ceramic Production Sites in Mon and Kayin States, Myanmar*. Unpublished e-copy.
- Lefferts, H. Leedom Jr., 1988. Contemporary Burmese Earthenware, in Crossroads: An Interdisciplinary Journal of Southeast Asian Studies, Vol.4, No.1, Special Burma Studies Issue (Fall 1988). [Illinois]: Northern Illinois University Center for Southeast Asian Studies. Pp. 121-127. http://www.jstor.org/stable/40860262 (accessed 12 September 2013).
- Myo Thant Tyn, 2005. Celadon Kilns of Ho-Nar (Southern Shan States), in *Journal of the Myanmar Academy of Arts and Science*, Vol III, No. 6. Yangon: The Academy. 2005. Pp. 51-65.
- ——, 2007. Potter-marks on Myanmar Glazed Ceramics, in Enchanting Myanmar, Vol.6 (No.2), April – June 2007. Pp 14-19.
- ———, 2014. Development of Low Temperature Ash Glaze Flux for Lead-free from Ancient Tradition. Paper presented at the Myanmar Ceramics Symposium in Yangon, Myanmar. 3-4 March 2014.
- Myo Thant Tyn and Dawn F. Rooney, 2001. Ancient celadon in Myanmar: a new ceramic discovery, in *Orientations* 32, 4: 57-61.
- Nan Kyi Kyi Khiang, 2007. Classification of Myanmar Celadon Bowls, particularly centred on Collected Finds of Twante Kilns, in *Bulletin of Archaeology, The University of Kanazawa*, 57: 19-29.
- ——, 2009. Maritime Trade Ceramics Found in Myanmar, in *Bulletin of Archaeology, The University of Kanazawa*, 64: 31-47.
- Sasaki, Hanae and Tatuso Sasaki, 2002. Myanmar Greenware: The kiln sites and trade to the Indian Ocean in the 15-16th centuries, in *Bulletin of Archaeology, The University of Kanazawa*, 26: 8-15.
- Thaw Kaung, 2003. Lagunbyee Old Town and the Discovery of the First Ceramic Kiln, in Than Tun et al, *Ceramic Traditions in Myanmar*. Yangon: SAMEO Regional Centre for History and Tradition. Pp 116-134.
- The British Burma Gazetteer, Vol. II. Rangoon. 1879.
- Wood, Nigel, 1999. Chinese glazes: Their Origins, Chemistry and Recreation. London: A & C Black. Philadelphia: University of Pennsylvania Press.



TWANTE AND THE STUDY OF SOUTHEAST ASIAN GLAZED POTTERY

John Miksic

Professor John N. Miksic is a faculty member at the Department of Southeast Asian Studies, National University of Singapore



Twante town centre, 2015



Muang Di, a Bagan period pagoda, 2016 Image courtesy of NUS Museum

Scholars have known that Southeast Asia had a tradition of making glazed pottery since the 1880s (Aymonier 1901). The Southeast Asian Ceramic Society (SEACS), based in Singapore, and William Willetts, its founder and curator of the University of Malaya Museum, at the University's first campus at Bukit Timah, Singapore, were instrumental in establishing this subject as a legitimate field of art history. The Society published the first catalogue of an exhibition devoted to Southeast Asian ceramics (Willetts 1971). One of Willetts' students, Roxanna Brown, wrote the first comprehensive survey of Southeast Asian ceramics (Brown 1977, 1988; Rooney 2009). SEACS published the first book devoted to Khmer ceramics in 1981 (Stock 1981). A year later, the Society published another important book, on Vietnamese glazed wares (Young et al. eds. 1982).

POTTERY-MAKING REGIONS IN MYANMAR

Myanmar is the last major Southeast Asian nation with a tradition of glazed pottery production to be studied. It is now clear that pottery kilns were built in many areas of Myanmar: in or near the old capitals of Bagan, Mandalay, and Bago, the Ayeyarwady delta, the Mottama (Martaban) region, and the Shan Plateau.

Production of glazed pottery requires the construction of kilns to enable potters to create a temperature of 1000° C. or higher, control the amount of oxygen in the atmosphere on the surface of the pottery, and to reduce the temperature gradually. Rapid cooling causes pottery to shrink quickly, inducing thermal shock and cracking. Most of the early kilns in Myanmar are termed surface crossdraft kilns. This means that they were built on the surface of the ground and funneled hot air horizontally (rather than allowing it to ascend vertically). It is becoming apparent that pottery kilns in Myanmar were more numerous and more widely distributed than in any other part of Southeast Asia.

TWANTE

Twante is a sizeable town on the bank of the Twante Canal southwest of Yangon. The Twante area was inhabited at least a thousand years ago. Terracotta tablets with King Anawrahta's seal (1044-1077) were found during the excavation of a Bagan period stupa

Production of earthenware water filters at a modern village kiln, 2015



Twante canal – a commercial waterway, 2014



Experimental inground kiln at the Tradi-Style Ceramic Centre in Twante, 2014
Image courtesy of NUS Museum

at Maung De nearby (Myo Thant Tyn and Thaw Kaung 2003: 298). Di Crocco (1999) conducted research on 23 unglazed plaques from the Maung Di Pagoda and dated them stylistically to the 13th century.

The first report of kilns there dates from 1873. An article on "Pottery in Burma" written in 1918 mentioned that the Twante potters preferred to use more expensive wood in preference to coal because their kilns were better suited to that fuel (Morris 1918: 213). This may indicate that the people of Twante preserved a very old system of kiln construction.

In 1963 USAID employed an Italian pottery specialist, Sergio Della Strologo, to investigate the idea of fostering the Twante pottery complex. He wrote that "The ability of the Twante potters to throw these shapes on the wheel, glaze them, stack them and fire them, is admirable, and the pieces that come out of their kilns are handsome examples of robust Asian pottery" (Hein 2003: Appendix B). In 1990 there were still 30 pottery workshops in Twante, with an average of 10 workers each (Fraser-Lu 1994: 209-210, figures 191, 192; 214-215). In 2016 the number of potters had declined, but several families still specialized in earthenware production. Dr. Myo Thant Tyn, a chemical engineer by training, has embarked on a series of experiments in an attempt to revive the industry. He has built several experimental kilns and tested new glaze mixes in an attempt to lower the cost of production by enabling the potters to use less fuel. His work has been partly supported by the government of Japan.

Huge quantities of sherds from the 15th and 16th centuries are strewn along a stretch of the bank of the Twante Canal and a tributary of Mulaman Creek at least a kilometer long. Pottery production in the Twante area must have been enormous for a long period. The site's location on a wide branch of the Yangon River provides easy access to riverine transport, so it has always been easy to ship the products of the kilns.

In 1988 Roxanna Brown wrote that "celadon-glazed ceramics were introduced into Upper Burma, but for the moment it is anybody's guess as to when and by whom" (Brown 1988: 111). Discoveries of previously unknown types of glazed ceramics at the Tak and Omkoi sites along the Thai-Myanmar border in 1984 -85 increased the suspicion that Myanmar had once belonged to the group of glazed stoneware-producing cultures of mainland Southeast Asia (Shaw 1987: 98 and 106). This hypothesis was proven in the 1990s when archaeologists identified hundreds of ancient kilns in the Twante area, grouped in approximately 50 clusters (Myo Thant Tyn and Rooney 2001). Other kiln complexes making celadon have been found in several areas of Myanmar, mainly in the Ayeyarwady delta and in the Mawlamyien area. There is now abundant evidence that Twante produced huge quantities of glazed ceramics for several hundred years, both for local consumption and for export to a huge area from the Arabian peninsula to the Philippines. It was probably the biggest and one of most long-lasting ceramic production centers in Southeast Asia.



Sherd deposits on the bank of Twante Canal, 2014

4

At Kangyigone, near the village of Kyauk Phya San, Twante, two kilns were found by Dr. Myo Thant Tyn and excavated by U Min Wai and Daw Baby, Department of Archaeology, in 1999. The kilns were built of brick, columnar supports, and pointed fireboxes. Products found in association with the Twante kilns represented no fewer than 54 types, mainly green glazed plates, U-shaped bowls, animal figurines, and kiln furniture. These kilns still exist; they have been covered by roofs and are well-maintained.

At another site, Yadeshe, Dr. Myo Thant Tyn found nine kilns and many wasters. The samples from Yadeshe display greater variety in form, decoration, and higher quality. The wares included green and brown glazed stoneware, bowls, some with lids, plates, dishes, jarlets, globular iars, double gourd bottles, vases, animal figurines and wall tiles. Incised decoration was very common. Many plates have small concentric circles at the center of the interior base. One green-glazed bottle has an incised pattern, possibly representing a lotus leaf. A bowl with a cord-cut base typical of Myanmar ware bears an incised lotus-like motif and a vine scroll on the interior. Other pieces of note include a cow with green glaze and a lid with lotus bud knob, similar to items from Thailand (Hein 2003: 5 and Appendix E, pp. 67-68).

One gold colored Buddha with brown hair, seated on a green lotus cushion, has been reportedly found at Twante. A tentative date of the 12th century for the statue has been proposed (Khin Maung Tin 1999).

The Twante wares are sturdy and well-made, with colors varying from light to olive green. The skill and devotion to detail of the ancient potters of Twante is exhibited by the neatly formed feet and bases characteristic of the finds at the kiln sites.

The kilns of Twante were medium-sized for Southeast Asian kilns of this period (the 15th century), averaging 12 meters in length and 5 meters wide (Baby 1999). The potters used pontils (tubular supports) on which to place their wares during firing in the kiln. This technique was also used in Ban Ko Noi kilns at Sawankhalok in north-central Thailand around the same period. At Ban Ko Noi, the artifacts were stuck to the pontils with a type of glue which left a black scar on the exteriors of the bases. No such scars are found at Twante, so we can infer that the Twante potters did not imitate those of Sawankhalok in all details. The general form and functioning of the Twante kilns are also similar but not identical to those at Ban Ko Noi.



Pontils and wasters at an excavated crossdraft kiln in Kangyigone, 2014



Greenware bowl fragment, surface find from unexcavated kilnsite in Zawti, 2016 Image courtesy of NUS Museum



Greenware jar sherds at the Tradi-Style Ceramic Centre, 2012

Twante celadons have been found as far west as Julfar, a trading port located on the west coast of the Persian Gulf (Hansman 1985). The stratum in which they were found has been dated to the 15th or 16th century; their provenance as Twante ware has been ascertained by chemical analysis (Sakai and Sakai 2003, 2005; Borell 2014: 285).

On the other side of Asia, the Pandanan shipwreck (which Brown dates to the period 1450–1487) found in the Philippines yielded at least one Burmese celadon plate. Another shipwreck found in the Philippines, the Santa Cruz, was found off the coast of northwest Zambales, Luzon, in 2001. The ship belonged to the hybrid South China Sea tradition, combining Southeast Asian and Chinese traits; ships of this type were built during the 15th and 16th centuries (Manguin 1993). Archaeologists believe that this ship was built in the Philippines due to the types of wood used for its construction The archaeologists recovered ceramics from China (86% of the cargo), Thailand (9%), Vietnam (0.37%), and Myanmar (3%) (Orillaneda 2016). The Santa Cruz is dated to the Hongzhi reign (1488-1505) on the basis of the Chinese porcelain on board). Burmese celadon plates may have replaced Sawankhalok celadon plates in Hongzhi period cargoes (Brown 2004: 86).

The kilns at Twante have not yet been dated directly. There is however strong circumstantial evidence that the Twante area was a major producer of glazed stoneware during the 15th and 16th centuries. The sherds along the Twante Canal suggest that huge quantities of earthenware were also produced, probably at the same time and later.

The exhibition at the NUS Museum is the first to be devoted solely to Myanmar ceramics. The Twante kilns are at this point the most important yet discovered, and the most intensively studied. This is due to the untiring work of Dr. Myo Thant Tyn and his colleagues during the past 30 years.

BIBLIOGRAPHY

Aymonier, Etienne, 1901. *Le Cambodge*. Two Volumes. Paris: Ernest Leroux.

Baby, 1999. Excavation of ancient kilns near Kangyigone village in Twantay township. Paper Presented at the Conference on Glazed Ceramics of Southeast Asia: Their History, Technology, and Traditions, Bagan, Myanmar. 20-22 September 1999.

Brown, Roxanna M., 1977. Ceramics of South-East Asia: Their Dating and Identification. First Edition. Kuala Lumpur: Oxford University Press.

- ——, 1988. Ceramics of South-East Asia: Their Dating and Identification. Second Edition. Singapore: Oxford University Press.
- Di Crocco, Virginia M., 1999. Thirteenth-Century Plaques in the Khabin Area A Source of New Information about Buddhist Art in Southern Myanmar. Paper Presented at the Conference on Glazed Ceramics of Southeast Asia: Their History, Technology, and Traditions, Bagan, Myanmar. 20-22 September 1999.
- Fraser-Lu, Sylvia, 1994. *Burmese Crafts*, Past and Present. Kuala Lumpur: Oxford University Press.
- Hansman, J., 1985. Julfar, an Arabian Port. Its Settlement and Far Eastern Ceramic Trade, 14th-18th Century. London: Royal Asiatic Society, Prize Publication Fund Vol. 22.
- Hein, Don, 2003. Interim Report on Archaeological Fieldwork at Myaung Mya, Bagan, and Other Sites in Myanmar, August-September 1999. [Melbourne]: Deakin University. Unpublished e-copy.
- ——, 2008. Ceramic Kiln Lineages in Mainland Southeast Asia, Ceramics in Mainland Southeast Asia: Collections in the Freer Gallery of Art and Arthur M. Sackler Gallery, http://SEAsianCeramics.asia.si.edu
- Khin Maung Tin, 1999. Keynote Speech. Presented at the Conference on Glazed Ceramics of Southeast Asia: Their History, Technology, and Traditions, Bagan, Myanmar.
- Manguin, P.-Y., 1993. Trading ships of the South China Sea: shipbuilding techniques and their role in the history of the development of Asian trade networks. *Journal of the Economic and Social History of the Orient* 36: 253-280.
- Morris, A.P., 1918. Pottery in Burma, *Journal of the Burma Research Society* 8, 3: 213-222.
- Myo Thant Tyn and Dawn F. Rooney, 2001. Ancient celadon in Myanmar: a new ceramic discovery. *Orientations* 32, 4: 57-61.
- Myo Thant Tyn and Thaw Kaung, 2003. Myanmar Historic Earthenware, in John N. Miksic.,ed., *Earthenware in Southeast Asia*. Singapore: Singapore University Press. Pp. 285-299.
- Orillaneda, B., 2008. The Santa Cruz Shipwreck Ceramics:

 Understanding Southeast Asian Ceramic Trade during the Late

 15th Century CE. Masters Thesis. Archaeological Studies Program,

 UP Diliman.
- ———, 2016. Maritime trade in the Philippines during the 15th century CE, *Moussons* 27: 83-100.
- Rooney, Dawn, 2009. The contribution of Roxanna Brown to the study of Southeast Asian ceramics, in John Miksic, ed., *Southeast Asian Ceramics*. *New Light On Old Pottery*. Singapore: Southeast Asian Ceramic Society. 2009. Pp. 26-33.
- Sasaki Tatsuo and Sasaki Hanae, 2003. Southeast Asian ceramic trade to the Arabian Gulf in the Islamic period, in Daniel T. Potts ed., *Archaeology of the United Arab Emirates*. London: Trident Press. Pp. 254-262.
- ———, 2005. Verification of urbanization at Julfar excavated houses, finds and topography. Bulletin of Archaeology, The University of Kanazawa 48, 1: 26-48.
- Shaw, John C., 1987. *Introducing Thai Ceramics: Also Burmese and Khmer*. Chiang Mai: Duangphorn Kemasingki.
- Willetts, William, 1971. Ceramic Art of Southeast Asia. Introduction and Descriptive Notes. The Southeast Asian Ceramic Society, First Inaugural Exhbiition. Singapore: The Art Museum, The University of Singapore.

TRADITION AND LIVELIHOOD Afterthoughts of an Intern

Chean Hui Tuan

Chean Hui Tuan is doing a Masters in Art Curating at the University of Sydney. She was an intern at NUS Museum.



Unloading a huge potted jar with the help of a wooden plank.

I vividly remember the day when we first arrived in Twante, Myanmar. After a twohour drive from Yangon, the taxi bounced along an unpaved road and pulled up in front of a blue gate with a plague at the side that reads 'Tradi-Style Ceramic Centre'. Past the gate, a single-storey building half-hidden in the midst of lush greenery gradually emerged. It served as both a workplace and home during our five days' stay in Twante. Working and living in such an environment was a tranquil experience. Spending a significant amount of time at the balcony – located at the back of the building – and photographing the ceramic sherds selected for the exhibition, I was constantly accompanied by the gentle

breeze, rustling leaves and swirling smoke from the mosquito coil. The serenity was not only characteristic of the building, but of Twante in general. Traces of the town's former glory as a bustling ceramic-making and trading centre did not transcend through time into the contemporary.

On a drizzling day, while the video crew was shooting an interview with the owner of a pottery shop, I ventured outside and saw a man passing by, rolling a huge Martaban jar on its side along a cement path. Out of curiosity, I walked towards the direction in which the man came from and soon, a river appeared right before me. A group of men were unloading pottery wares of



A wood-fired kiln at the Triple Diamond Pottery Factory in Twante

various sizes from a small boat alongside the dock and a few bystanders watched on. A long and thin wooden plank was used as a bridge to transport the huge jars from the boat to the ground. I held my breath unconsciously as I fixed my eyes on two men who, in a seemingly effortless move, rolled a jar along the slim and unsteady plank. What struck me most was not the sense of ease in their actions, but rather the reliance on a traditional method and manual labour without the interference of modern technology. For a small town that relies on handicraft production to make a living, cost-effective measures are probably much more important than efficiency. I was also surprised to learn that the Martaban jars on sale were in fact not locally made but imported from neighbouring states and the glazed ceramic wares were products from China.

The potters of Twante were historically capable of producing beautiful glazed ceramics – as evident in this exhibition – but for some reason, their contemporary

successors no longer do so. The loss of traditional glazing techniques makes the efforts of Dr. Myo Thant Tyn, president of Myanmar Ceramic Society, to rediscover the tradition all the more crucial. The experimentation of ash glaze is conducted in the hope of finding an alternative to lead glaze – known for its poisonous content and health risk – and also to revive the local industry through the production of marketable glazed ceramic wares. While I look forward to the day when the experiment would eventually transform into an established practice within the community, I wonder about its sustainability. For one thing, there must be incentives to convince local potters that it is a worthy project for them to invest their time and effort. The production of pottery wares with low-firing temperature requirements has been ongoing for decades, and is the main source of income for the workshops. It is a challenging task to encourage workshop owners to upgrade their facilities and train the current workforce to support the production of glazed ceramics. Also, it

17



Making cups on a hand-powered potter's wheel.

would be beneficial if such individual efforts could be raised to an institutional platform where more resources could be deployed.

During our visit to the Triple Diamond pottery workshop, I noticed that the majority of the workers were females, except for the male potter who was responsible for making larger wares. An assistant held onto a rope and used her feet to move the wheel in steady motion, while the potter hunched over in deep concentration to transform a thick slab of clay into a pot within moments. In another corner of the workshop, a lady was busy making cups from a coneshaped pile of clay, using her arm strength to turn the wheel in full force. Her swift and decisive movements suggest years of experience working with the craft. However, it seems like the potters were of a certain age group, and a younger generation was nowhere to be seen. In considering

the future of Twante's handmade ceramic industry, the greatest challenge would be to encourage the younger generation to pick up the trade – an issue often encountered in the traditional handicraft industry.

Strolling along the shore of Twante Canal as we end the day of site visits, I was keenly aware of the crunching sounds beneath my feet as I stepped onto the ceramic sherds that were washed up by the water. As an archaeological intern, I was deeply conflicted. On one hand, we are trying our best to preserve the past for the future; on the other hand, we have to enforce a certain kind of selection in our preservation of the past through the objects that we choose. There is a limited capacity to what we are able to do and hopefully through this exhibition, the beauty of Myanmar ceramics could be appreciated by a wider group of audience.



Professor John N. Miksic. Department of Southeast Asian Studies. National University of Singapore, who is advisor for this project, and whose introduction to NUS Museum of the Myanmar Ceramic Society's collection led to the development of this exhibition.

Dr Myo Thant Tyn, President of Myanmar Ceramic Society, for granting continued access to the society's collection for study, and sharing his knowledge of the archaeological projects and the low temperature ash glaze initiative. The team is also grateful to Dr Myo Thant Tyn for introducing key contact persons in Yangon and Twante who made the fieldwork activities and collection of research data possible.

Associate Professor Goh Geok Yian, School of Humanities and Social Sciences, Nanyang Technological University, for her inputs during the conceptualization of this project and advice on cataloguing of the artefacts.

Professor San Shwe, Head of Department of Archaeology, University of Yangon, who facilitated the discussions in preparation for the fieldtrips to Twante.

Dr Khin Cho Htwe, Assistant Lecturer at the Department of Archaeology, University of Yangon, who assisted with interpretation during the fieldwork in Twante.

U Than Tin, Manager of Tradi-Style Ceramic Centre, for sharing his knowledge of the Myanmar Ceramic Society's collection, and managing the logistical arrangements for the fieldwork in Twante.

The potters at Twante, who were patient with our inquisitive queries about their trade.

Dr Don Hein, Research Fellow, Freer-Sackler Galleries, Smithsonian Institution, Washington D.C., for generously sharing his research on the kilns of Myanmar.

Benjamin Hu, Research Assistant, Department of Economics, National University of Singapore, for the sketch map of sites around Twante.

Chean Hui Tuan and Ignatius Albert Wijaya, who were research assistants on this project.

Bowl base with potter's mark (alphabet), greenware, 11.2 × 12.7 × 4.1 cm Bowl base with potter's mark (herringbone), greenware, $7.8 \times 10.7 \times 3.8$ cm Bowl base with potter's mark (dots), greenware, $9.8 \times 9.7 \times 5.7$ cm Bowl base with potter's mark (alphabet?), greenware, 10.2 × 11 × 5.1 cm

Collection of Myanmar Ceramic Society

Back Cover (Top to bottom, from left to right):



