

# PAX MONGOLICA – COINS OF THE MONGOL EMPIRE

## COMMENTARIES ON AN ASHMOLEAN EXHIBITION

By Marie Favereau

The formation of the Mongol empire was a huge phenomenon that turned the Old world upside down. Under the banner of Chinggis Khan (c.1165-1227), the nomads of the Eurasian steppes unified and expanded on an unprecedented scale. From their core area, in northern Mongolia, they expanded to China in the East; Central Asia, Anatolia and Eastern Europe in the West; Russia and the Siberian plains in the North, Afghanistan and Iran in the South. At its height, the Great Mongol Empire embraced two thirds of Eurasia.

### 1/ The Mongol Empire

As “the only super-power of the thirteenth century”<sup>1</sup>, the Mongols dictated a new world order politically and economically. They brought down the biggest empires of their time from China to the Middle East, integrating the political and administrative legacies of these former powers to the Mongol imperial regime. They displaced the greatest political centres of the continent, with new establishments, such as Qara-qorum, in the steppes, at the heart of Eurasia.

After two centuries of clashes between Christians and Muslims, the Mongols appeared as the third force that could break the status quo and tilt the balance in favour of Christendom. Therefore, the Great Khans received embassies from the Kings of France, England, the Holy Roman Empire and the Papacy. But the Mongols never launched themselves into this age-old conflict. The Crusades were not their fight. The Mongol empire relied on an engendered diversity; in culture, in religion, in traditions. Even after some Mongol rulers converted to Christianity, others to Islam and Buddhism, they never forced their subjects to follow their choice.

In the 1260s, the empire split into four parts. The Yuan dominated East Asia, the Chagatay khanate in Central Asia, the Ilkhanate Iran and Azerbaijan, and the Golden Horde in Russia and Eastern Europe. These four regional empires, all headed by sons and grandsons of Chinggis Khan, remained connected and maintained the dynamics of expansion. The Chinggisid mandate was still driving the agenda even if it did not impede local independent developments. Several military conflicts occurred between the Yuan and the Chagatayids; and the Ilkhanate and the Golden Horde. In 1304, the Chinggisid notion of imperial unity was reasserted and peace was declared between the four regional empires. The Yuan kept the overarching title of ‘Great Khan’ and enjoyed a nominal primacy over the three other parts. Vassâf (c.1265- c.1323), a Persian historian and administrator of the Ilkhanids witnessed this historical moment and described the trade frenzy it caused on the border between the Ilkhanate and the Golden Horde:

“When Toqta inherited the lands which used to belong to Mengü Timur<sup>2</sup>, envoys were exchanged and diplomatic correspondence re-established, so that the roads were once again open to merchants and licensed traders (*ortâqân*). Provisions (*asbâb*) for the immunity and safety of travellers (*mujtâz*) were made. The region of Arran became replete (*kathrat*) with the constant movement (*tamawwuj*) of carriages, tents, horses and sheep. Rare commodities from those lands became plentiful again after an interruption of some years”<sup>3</sup>.

Indeed, at the dawn of the fourteenth century, the economic exchanges intensified integrating all Eurasia - a global phenomenon, historians call Pax Mongolica (the Mongol Peace) because this was a world-shaping phenomenon on par with Pax Romana.

### 2/Pax Mongolica

The post-conquest stability of the Mongol dominions and peaceful relationships between the descendants of Chinggis Khan allowed

such great exchanges. The nomads in power played a key role in the Pax Mongolica phenomenon. Their liberal and attractive policies led to the densification of the connections from the Mediterranean to the Caspian Sea and beyond as far as India and China. These policies combined state control (treaties, currency issue, taxes, roads supervision) and liberal exchange (fluidity in partnership, alliances based on common interest and not on ethnic or religious affiliation, low taxation regime). Significantly, during the Pax Mongolica, we see no discord between globalization and state building.

The Mongols created the best conditions for the market to flourish. The agreements they established with the Mamluks, the Byzantines, the Italians, and others led to the transformation of the mercantile, artistic and intellectual networks. People and caravans could travel safely from Italy to China for the first time. A complex system of currency exchange developed. Multilingual glossaries were produced in Egypt, in Central Asia, in Yemen and in the Golden Horde. Franciscan and Dominican missionaries were requested by their superiors to learn “oriental languages” and worked among the interpreters and secretaries of the khans.

In the early fourteenth century, the nomadic elite of the Golden Horde started to finance the construction of buildings, including facilities for merchants, public baths, mosques, churches and monasteries. The khans valued the merchants, granting them high distinctions, privileges and tax exemptions. The nomads invested in fashionable clothing, travel equipment and weaponry. Furs, leather, and imported luxury fabrics made of silk and cotton were highly appreciated. The steppe had its social markers: riding a horse, carrying expensive weapons and wearing jewels, belts, hats, fine robes and leather boots. High-ranking women had a very distinctive way of dressing and wore conical headdresses (*ku-ku*, *boqta*) as a distinctive symbol of their status. They showed themselves in public spaces, unveiled, displaying their wealth ostensibly. The “Mongol fashion” made an impression on foreign travellers who noted that many people, including Europeans, wanted to look like them.

The Mongols created the largest integrated market in pre-modern history. They used their military infrastructure to shape long-distance commerce. They learnt to exploit natural resources, such as silver, salt, medicinal herbs and wood. They firmly controlled access to grasslands, routes and market places. They enticed people to trade near their headquarters and in their capitals. They diverged pre-existing commercial nexuses, but they also did something more significant: they created an unprecedented continent-wide social and economic order. The coins shown in the Ashmolean exhibition constitute the best examples of the poorly known yet amazing evidence we have at hand for understanding this phenomenon in world history.

### Notes

1 Biran: 534.

2 Toqta (1291-1312) was the son of Mengü Timur (1266-1280). Both were khans of the Golden Horde.

3 Persian text, Hammer-Purgstall: 99 – translated by Marie Favereau and Maya Petrovich.

## ASSESSING COUNTERMARKS ON A CORRODED SILVER *DACHAO TONGBAO*

By Stephanie Ward (Conservator) and  
Lyce Jankowski (Research fellow)

A temporary display devoted to Mongol coinage and entitled "Pax Mongolica (AD 1210-1350)" was recently organised at the Ashmolean Museum<sup>1</sup>. The exhibition was an opportunity to display some rare and lesser known coins from the Islamic and East Asian collections. A rare and historically puzzling silver coin was therefore selected. The coin adopting the shape of Chinese coinage and bears the inscription *dachao tongbao* 大朝通寶 ('Currency of the Great Dynasty') written using Chinese characters. No Chinese

historical source mentions this coin, and archaeological evidence supports an attribution to the beginning of the Mongol Yuan dynasty (AD 1271-1368)<sup>2</sup>. As the exhibition was being prepared, a study of this coinage was meanwhile published by V.A. Belyaev and S.V. Sidorovich<sup>3</sup>. They produced a typology based on the coins inscriptions and reverse countermarks. The corrosion on the Ashmolean coin made it difficult to read the obverse inscription and the presence of countermarks was unclear. The coin was treated during the summer of 2015 by Stephanie Ward to prepare it for display. The following article will detail the treatment chosen with particular reference to the removal of a copper corrosion on this silver coin and the benefit for its study.

The *dachao tongbao* from the Ashmolean collection is a cash coin (round with a square hole in the middle) of 23 mm and weighing 3.3g, see fig. 1. Before any attempt to clean it, it was primordial to assess its metallic content. Different metallic versions of this coinage were discovered: silver, but also bronze and lead<sup>4</sup>. Although the overall appearance of the coin was consistent with that of a corroded bronze coin, closer visual inspection showed patches of silver beneath the green copper corrosion. Examination under a binocular microscope revealed this more clearly. The presence of copper corrosion is not unusual on buried silver coinage. Many 'silver' coins are actually silver alloys, copper commonly being the largest other constituent. When these types of coins are subjected to a corrosive environment (such as through burial), the copper element of the alloy will corrode preferentially to the silver. This is due to the difference in their reactivity (electrode potential) with copper being the more active (electronegative) with a stronger tendency for copper ions to leach out of the coin and react to form corrosion products. As with the Ashmolean specimen, these can then be deposited on the coin's surface and in some instances, can completely obscure the base metal.

The covering of copper corrosion made the examination of the coin inscription difficult. Initial investigation to clarify surface features was carried out using methods that did not require removal of any corrosion. Examination of the coin under raking light and using a binocular microscope was undertaken but did not reveal sufficient detail so it was then photographed using Reflectance Transformation Imaging (RTI), see fig. 2. RTI (also known as polynomial texture mapping) is a photographic method that captures a series of digital images of an object lit from different angles. These images are then processed to allow the viewer to re-light the object virtually and they can be manipulated and enhanced by the user to enable detailed examination of an object's surface on a screen. This method has proved a useful technique in the Ashmolean museum for highlighting surface topography. However, although more detail was revealed, the reverse of the coin was partially decipherable and other methods for retrieving information were explored. Conventional x-radiography and x-ray computed tomography (CT scanning) could have been used to penetrate the corrosion layers without the need to physically remove them, but these techniques were not available in the museum at the time of treatment<sup>5</sup>. Other 3-D scanning and imaging techniques are also available for revealing detailed surface topography but were outside the scope of this project<sup>6</sup>.



Figure 1 The uncleaned coin.



Figure 2 The uncleaned coin using RTI.

The decision was made to remove obscuring copper corrosion products on the coin. As it was to go on public display, it was important to show the silver nature of the coin to make its oddity more striking. Trials were undertaken to remove the corrosion mechanically using simple hand tools such as scalpel and wooden sate stick. In many cases, mechanical cleaning is preferable to chemical intervention as the removal of the corrosion is more easily controlled and a skilled conservator can identify different layers within the corrosion and remove only those unwanted products. Information from a coin's original surface can be held within certain corrosion layers and these need to be retained since the remaining metal core may have lost much of this detail. For the Ashmolean coin however, the tests indicated that mechanical cleaning alone would not be suitable for removing the green malachite corrosion from the coin surface. The hard nature of the corrosion crust overlying the softer silver beneath, together with limitations in the overall strength of the coin core, meant it was vulnerable to damage using this method. The addition of chemicals, to help soften the corrosion products before removal, produced an acceptable method. Formic acid was used as this is a relatively weak acid that does not attack silver. It was applied locally under a microscope allowing slow and controlled removal of the copper corrosion<sup>7</sup>. Care was taken to prevent unnecessary removal of copper from the coin body by limiting the time the acid was in place and using only a low concentration. Formic acid is volatile at room temperature so should not stay on the coin's surface. However, to ensure the time of acid exposure was correctly limited and excess acid was not held anywhere within the coin or corrosion (where it could carry on reacting) the coin was rinsed thoroughly and dried. Fig. 3 shows the cleaned coin. The coin was also lacquered to prevent further tarnishing. Finally, the coin was photographed again using RTI to further enhance the surface details revealed during treatment, see fig. 4.



Figure 3 the cleaned coin



Figure 4 the cleaned coin using RTI

Once cleaned, the obverse inscription became very clear. The calligraphic style of the three characters *da*, *tong* and *bao* is inspired by those of some *Da Ding tongbao* 大定通寶 ('Currency of the Da Ding era'), a coin issued under the Jürchen Jin dynasty between 1178 and 1190. The horizontal stroke of the character *da* is leaning down at the right end similarly to the Jin coinage. But the most interesting feature of this coin is the two countermarks that were revealed on its reverse. These were impossible to see beforehand. One is located next to the central hole at 10.00 o'clock. The other is near the external border placed at 4.00 o'clock.



First countermark

Second countermark<sup>8</sup>

BELYAEV ET.AL. do not give any reading of these countermarks, but understand the first one to be a distorted Arabic word *khan* خان<sup>9</sup>. We can surmise that the second one is a slightly distorted version of the Chinese character *zhai* 債 meaning 'debt, loan, liabilities'. This meaning corresponds to the use of the countermark as an official tax payment proof, as argued in BELYAEV ET ALII.

The limited historical understanding of this coinage gives this coin a real importance. The careful cleaning of the coin done at the Ashmolean Museum removed any corrosion and made visible the distinctive features of the coin, enabling us to compare it to coins of the Jin dynasty, but also opening new possibility to compare it to others *dachao tongbao*. Most of the coins of this type available today are heavily corrode<sup>10</sup>. It is to be hoped that these coins may be cleaned to help further scholarly researches, and we hope that our case may be inspirational in limiting temptations of aggressive cleaning. The unveiling of the two countermarks was particularly rewarding and we are looking to publish more extensively on this subject in the near future.

#### Notes

<sup>1</sup> The exhibition was curated by Lyce Jankowski and Jerome Mairat with the assistance of Marie Favereau.

<sup>2</sup> LEI *et alii* 1989, p. 28-31 et NINGXIA WENHUAJU 1991.

<sup>3</sup> BELYAEV *et alii* 2015. This article became known to the authors only late in the restoration process.

<sup>4</sup> NIU 1999, p 17.

<sup>5</sup> For more details see SCHREINER 2004 and MILES 2011.

<sup>6</sup> This is a rapidly developing field and detailed discussion of these methods is not possible in this document; some general information can be found in PAYNE 2013.

<sup>7</sup> Diluted formic acid (15% volume/volume acid in distilled water) was applied locally on a cotton wool swab and gently rubbed over areas of copper corrosion. After approximately three minutes, the same areas were swabbed with distilled water to stop further reactions whilst hand tools were used to dislodge parts of the corrosion. This process was repeated until most of the corrosion was removed. The coin was rinsed under running tap water for half an hour before being immersed in distilled water and dried on a clean paper towel. It was air-dried for 24 hours before being lacquered with three layers of 5% (weight/volume) Paraloid B72™ (methyl methacrylate/ ethyl acrylate co-polymer) in an approximate 70/30 ratio of acetone/IMS solvent applied with a brush.

<sup>8</sup> These are the countermarks images published in BELYAEV *et alii* 2015, p. 90.

<sup>9</sup> BELYAEV *et alii* 2015. p. 91.

<sup>10</sup> See for example the coins illustrated on the Zeno website (60 coins available on April 6th) - <http://www.zeno.ru/showgallery.php?cat=4428>

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## REVIEW OF SIRĀJ AL-DĪN SIKANDAR (?) SHĀH AND HIS COIN

By Md. Shariful Islam

### Introduction

The coin which is the subject of this paper was published previously by Nasir and Islam in JONS 220 (2014) where the identification of a previously unrecorded ruler of Bengal was discussed. In that paper, the ruler was identified as Sirāj al-Dīn Sikandar (?) Shāh (henceforth in this article referred to as Sirāj al-Dīn Sikandar Shāh), though the reading of the ruler's *ism* as Sikandar was tentative as only the initial part of it was fairly well struck up. Because the coin does not bear any date and mint, the time of proclamation of the said sultan was placed some time during the period AH 790 to 837, with the identification of the ruler being the subject of some plausible conjecture. The present article is an effort to analyse the features of the coin again to add more possibilities that might help us to know about Sirāj al-Dīn Sikandar Shāh.



Fig. 1: The coin of Sirāj al-Dīn Sikandar Shāh

**Obv.:** *al-musta 'in billah  
al-musta'an sirāj al-dunyā  
wa'l dīn abū'l muẓaffar  
sikandar shāh al-sulṭān.*

**Rev.:** *al-musta'sim billah  
nāṣir amīr al-mū'minīn  
khallada mulkahu*

### The Coin of Sirāj al-Dīn Sikandar Shāh

The coin is illustrated below in Fig. 1. The *laqab* (the first name) of the ruler is very clear and can undoubtedly be read as *Sirāj al-Dīn* while the *ism* (last name) cannot be seen clearly as at least half of it has not been clearly struck up. Only the initial letter *Sin* and *Kaf* are clearly visible. The last two letters of the name are visible but not clear enough to read the *ism* conclusively.