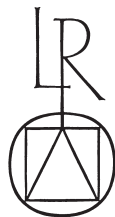


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Brigitte Borell

The Power of Images –
Coin Portraits of Roman Emperors
on Jewellery Pendants in Early Southeast Asia

Keywords: Óc Eo – Khlong Thom/Khuan Lukpad – U Thong – Antoninus Pius – Commodus – Septimius Severus – Klaudios Ptolemaios – Indian clay pendants

Abstract: This contribution presents finds of jewellery pendants with imitations of Roman coins from Southeast Asia. The examples from Óc Eo in southern Vietnam have been known already since the 1940s. The state of our knowledge has now been broadened by the finds from U Thong and Khlong Thom in Thailand. In some cases, the great faithfulness of the imitations permits an exact identification of the original prototype. The find of a mould leads to the conclusion of local production. The custom of wearing Roman coins or their imitations as pendants is documented by numerous finds from southern India. The equivalent phenomenon in Southeast Asia is to be seen in the context of the network of maritime routes. In the early centuries after the turn of the era, their connections extended from the South China Sea to the Mediterranean. Questions arise regarding the reception and meaning of the depictions on these jewellery pendants in their respective Eastern environment.

Zusammenfassung: Der Beitrag »Die Macht der Bilder – Münzporträts römischer Kaiser auf Schmuckanhängern im frühen Südostasien« stellt Funde von Schmuckanhängern mit Nachahmungen römischer Münzen aus Südostasien vor. Die Beispiele aus Óc Eo im südlichen Vietnam sind bereits seit den 1940er Jahren bekannt, dieser Kenntnisstand wird nun durch Funde aus U Thong und Khlong Thom in Thailand erweitert. Die große Wiedergabetreue einiger Stücke erlaubt in einigen Fällen eine exakte Bestimmung des Prototyps. Der Fund einer Gußform läßt auf lokale Herstellung schließen. Der Brauch, römische Münzen oder deren Nachahmungen als Anhänger zu tragen, ist durch zahlreiche Funde aus dem südlichen Indien dokumentiert. Das gleichartige Phänomen in Südostasien ist im Kontext der Vernetzung maritimer Routen zu sehen, deren Netzwerke in den frühen Jahrhunderten nach der Zeitenwende vom Südchinesischen Meer bis zum Mittelmeer reichten. Es erheben sich Fragen nach Rezeption und Bedeutung der Bilder dieser Schmuckanhänger in ihrem jeweiligen östlichen Umfeld.

Introduction

Discoveries and research during the last decades not only demonstrated the intensity of exchange and contacts between South and Southeast Asia in the late centuries B.C.E. and the early centuries C.E., but also heightened awareness

of the interconnectedness of maritime networks in that period. These networks extended from Southeast Asia eastward to the South China Sea and westward to the Indian Ocean and to the Red Sea, and ultimately included the Mediterranean Sea. Geographically, the Thai-Malay Peninsula appears as a huge barrier within

these maritime routes, but its narrowest part, the area of the Isthmus of Kra, seems to have been a “stepping stone” which connected the maritime networks from the Gulf of Bengal and the Gulf of Thailand with transpeninsular land-crossings. The archaeological evidence from sites on the western and eastern coast in the Isthmus region brought to light an astounding array of objects imported from distant regions, dating from the centuries around the turn of the millenia and originating predominantly from South Asia, but also from Han period China and the early Roman Empire. The booming Roman trade between the Red Sea ports and India is well attested in the written sources and by the archaeological finds¹. The recent discoveries of graffiti inscriptions in a cave on the island of Socotra, east of the Horn of Africa, demonstrate the range of cultural diversity among the players in this maritime trade²; the majority of the inscriptions is written in South Asian scripts, but others are in South-Arabian, Ethiopian, Greek, Palmyrene and Bactrian scripts. The annals of the Western Han dynasty (206 B.C.E. to 8 C.E.) describe a sea voyage from the southern Chinese ports in the Gulf of Tonkin to a place called Huangzhi which is usually sought in south-eastern India and is sometimes identified with Kanchipuram in Tamil Nadu. This voyage took place during the reign of Han Wudi (r. 140–87 B.C.E.), probably around 100 B.C.E., after the incorporation of the formerly independent kingdom of Nanyue into the Han Empire. Interestingly, between months of sailing, the text describes a land crossing of ten days, which has long been understood to refer to a crossing of the Isthmus of Kra³. The archaeological evidence now available from sites in the Isthmus region corroborates the existence of such transpeninsular routes and the cross-linking of the maritime networks. Besides the many natural products, which Southeast Asia had to offer and which were sought after by its trading partners in South Asia and in China, this area of the Thai-Malay Peninsula, situated within the Southeast Asian Tin Belt, one of the world’s largest deposit of tin, is rich in

easily available tin which might have become an additional attraction for long-distance trade during this period.

The special type of artefacts, which is the focus of this paper, has to be seen within this framework of active maritime networks. The gold pendants imitating the design of Roman Imperial coins found at sites in Southeast Asia contribute to highlighting certain aspects of contacts, economic as well as cultural exchanges, along these maritime routes. The sites where they were found are all well connected to trade networks of the period: Khlong Thom on the west coast of the Thai-Malay Peninsula facing the Andaman Sea and southern India, U Thong, an inland site north of the Gulf of Thailand, and Óc Eo in southern Vietnam near the eastern coast of the Gulf of Thailand facing the region of the Isthmus of Kra.

The Sites

Óc Eo in Southern Vietnam

Óc Eo is an early urban site in southern Vietnam, west of the Mekong Delta and near the eastern coast of the Gulf of Thailand. It was part of the polity called Funan in Chinese sources. Funan existed in a period from the 1st to 6th century C.E. Louis Malleret, then curator at the Musée Blanchard de la Brosse in Saigon, had begun an archaeological exploration of the Mekong Delta area already in the late 1930s. It was the great number of artifacts found by clandestine gold diggers that had drawn his attention to the site of Óc Eo in 1943. Originally, Óc Eo was the name of one of the small elevations of the peneplain with a particularly rich yield of artefacts, which subsequently lent its name to the entire complex of find spots at the site as well as to the

¹ For recent publications, see Young 2001, Parker 2008, Tomber 2008, McLaughlin 2010.

² Strauch 2012.

³ Wang 1959: 19–20 (from the *Hanshu* chapter 28 B).

Óc Eo culture, as Vietnamese archaeologists have now named the civilisation of this early period in the Mekong Delta. In 1944, Malleret conducted excavations there, but due to the war, they were limited to only two months. In addition to the finds from his excavation, he managed to acquire a large number of objects from the clandestine diggers for the museum in Saigon (present-day Ho Chi Minh City). Between 1959 and 1963, he published in four volumes the results of his investigations in the Mekong Delta, including about 10,000 archaeological artifacts that had been recovered. The ancient site of Óc Eo was surrounded by a rectangular enclosure of four parallel moats enclosing a terrain of about 1.5 km×2.0 km. A principal canal ran along its longitudinal axis, intersected by four small canals. Radiocarbon dates from recent investigations by French and Vietnamese archaeologists suggest that the urban moat and the main canal were in existence, at the latest, in the early 3rd century C.E., but possibly already in the 2nd century C.E.⁴ The axial canal continued towards the coast and connected Óc Eo with the Gulf of Thailand. Óc Eo's participation in maritime trade was indicated also by the finds, among them the pendants imitating Roman coins, which are to be discussed here, furthermore intaglios in Roman style, a glass cameo depicting a Sasanian official, and a Chinese mirror of the Han period (206 B.C.E. to 220 C.E.), which reflect the cosmopolitan character of the place. From the Chinese sources we know that, probably about the turn from the 2nd to the 3rd century C.E., the ruler of Funan launched several offensives first with his army and then with a fleet built for this purpose, and brought a number of neighbouring polities under his control thus expanding the area of his influence along the Gulf of Thailand to the upper part of the Thai-Malay Peninsula, possibly as far south as the Isthmus of Kra⁵.

U Thong in Central Thailand

The ancient site of U Thong, in Suphanburi province in central Thailand, is known as

one of the major urban centres of the later Dvāravatī culture of the 6th to 11th or 12th centuries C.E. It was enclosed by a moat and earthen rampart with a stone wall on it. The enclosed space in the shape of an irregular oval, about 1.7 km in length and 0.8 km in width, covered an area of more than 70 ha. Besides remains of Buddhist architecture and sculpture of the Dvāravatī period, the site also yielded archaeological evidence of earlier phases, which are still poorly understood owing to the lack of systematic large-scale excavations. The finds from these earlier phases parallel in part those from Óc Eo. Although an inland site, U Thong was well connected to the trading networks and appears to have been an important place already in the early historic period⁶.

Khlong Thom in Southern Peninsular Thailand

Khlong Thom in Krabi province is located on the western coast of the Thai-Malay Peninsula about 240 kilometres south of the Isthmus of Kra. It is about 20 kilometres inland from the coast and is connected to the Andaman Sea by the Khlong Thom river. It was an ideal location for an entrepôt engaged both in sea-borne trade and specialised manufacturing activities. The ancient site near Wat Khlong Thom, south of the modern town Khlong Thom, is also known as Khuan Lukpad, which means “bead mound”. Thousands of glass beads have been found there, and for decades, the site has been exploited by looters. Only in the 1980s some small-scale archaeological excavations took place there, which brought to light an abundance of manufacturing refuse, evidence for a production centre specialised in the working of tin,

⁴ Bourdonneau 2003. Bourdonneau 2007: 135–136. Manguin 2009: 109–110.

⁵ Wheatley 1961: 14–21. Vickery 2003–2004: 107, 111–112.

⁶ Boisselier 1965: 144–145, 150 fig.40. Quaritch Wales 1969: 5–11. Loofs 1979: esp. 346. Barram and Glover 2008: 180–181. See also the critical remarks by Vickery 2003–2004: 118–119. Indrawooth 2004. 2009: 35. Borell *et al.* 2014: 100 with note 1.

semi-precious stone, and glass⁷. Some of the objects found there parallel those from Óc Eo and U Thong⁸. The excavator, Mayuree Veraprasert, suggested a chronology with an early phase from the 1st century B.C.E. to the 2nd century C.E. and a later phase from the 3rd to 5th centuries C.E. Besides the coin imitation pendants discussed here, the place also yielded a number of Roman intaglios dating from the 1st to 3rd centuries C.E. For the surprising finds of Roman intaglios, increased evidence is now available also from other Thai peninsular sites in the area of the Isthmus of Kra, the narrowest part of the Thai-Malay Peninsula⁹. These sites, located on both the eastern and western coasts, are thought to have been connected to the ends of transpeninsular routes crossing the Isthmus. They yielded an astounding array of finds, among them Chinese ceramic fragments dating from the Han period (206 B.C.E. to 220 C.E.), large amounts of Indian pottery, as well as other imports from India, indicating their status in the trade networks of the period.

The Pendants Imitating Roman Coins

Clearly, the Southeast Asian finds of pendants with imitations of Roman coins have to be considered in the context of the flourishing trade between the Red Sea and India. In the Roman period, after the annexation of Egypt to the Roman Empire, this pre-existing maritime trade boomed from the last third of the 1st century B.C.E. on. Several thousands of Roman coins as well as their locally made imitations have been found in India¹⁰. Some of these, both the genuine Roman gold and silver coins and their imitations, show unmistakable signs of their use as pendants. Such imitation pendants found in India are made of precious and base metals, sometimes a lead core was coated with gold or silver foil. In addition, clay pendants – sometimes called *bullae* in the archaeological literature – were made, imitating in varying degrees of fidelity the design of Roman coins. They are supposed to have originally been gilded, or at least painted yellow

to simulate gold. In the following discussion of the examples from Southeast Asia, this corpus of Indian finds will frequently be referred to for reasons of comparison to point out similarities as well as differences.

Embossed Pendants Made of Gold Sheet

It was this particular find from Óc Eo (cat. no. 1, fig. 1), which attracted the attention of scholars from the beginning. It is a disc of gold, its diameter of 19 mm corresponds to that of a Roman *aureus*, and its design copies a coin of Antoninus Pius (r. 138–161 C.E.). Ever since a photograph of it was published in 1946 it has been cited as evidence for the far-reaching contacts of Óc Eo's maritime trade. In some publications it has erroneously identified as a Roman coin, but it is made only of thin gold sheet embossed in the manner of bracteates where the design appears on the front in relief and is sunken on the back. Malleret¹¹ even suggested in his detailed description as one possible method of its manufacture that it had been made by hammering directly over the obverse of a coin. However, this is unlikely for several technical reasons. Even though the gold sheet is rather thin, the relief of the head and the letters on the front side stand out so sharply that it was more probably produced by striking it in a negative die. Recent research suggests such a technique also for the early medieval bracteates¹². The die could have been made from bronze by taking a wax mould

⁷ Bronson 1990. Veraprasert 1992. Glover 1996: 135. Srisuchat 1998: 103, 107. Jacq-Hergoualc'h 2002: 84–89. Manguin 2004: 285–286.

⁸ Veraprasert 1992: 155–157.

⁹ Bellina and Glover 2004. Chaisuwan 2011. Borell *et al.* 2014. Bellina *et al.* 2014.

¹⁰ The specialist literature on this topic is vast, here only a selection is given: Turner 1989; Berghaus 1992b; Meyer 2007; Mac Dowall 2008; Johrden and Wolters 2008; Tomber 2008: 35–37.

¹¹ Malleret 1962: 115–116, note 919, pl. 40.

¹² Axboe 1981. Axboe and Arrhenius 1982. Axboe 2004. When pressing a gold sheet over a positive mould the details become clearer with sharper contours on the back, whereas when hammering it into a negative die



Fig. 1. Cat. no. 1. From Óc Eo (southern Vietnam).
© École française d'Extrême-Orient, fonds Vietnam
EFEO-VIE01835.

from the coin, and then casting the bronze die in the lost-wax process. At the top, the gold sheet forms an extension which is partly broken off, but probably served to suspend it for use as a pendant.

The model for the design on this gold sheet from Óc Eo has been correctly identified as a coin type of Antoninus Pius issued in the year 152 C.E. However, as already observed by Malleret, there are certain anomalies – in particular in the legend – which differ from the genuine coin. The beginning of the legend seems clear: ANTONINVS AVG PIVS for *Antoninus Aug(ustus) Pius*, although the second N in the name Antoninus is mirror-inverted. It follows a group of corrupted letters which resemble NVRP or NVAP followed by the Roman numerals XV. The correct legend on coins of the year December 151 to December 152 C.E. reads PP TR P XV for *P(ater) P(atriciae) Tr(ibunicia) P(otestate) XV* indicating that Antoninus Pius held the *tribunicia potestas* for the fifteenth time. The portrait of the emperor turned to the left – as on the Óc

Eo gold sheet – occurs occasionally in the coinage of Antoninus Pius, and indeed appears also on an issue of gold coins from the latter part of the year 152 C.E.¹³ Apart from the legend, the emperor's portrait on the Óc Eo ornament also shows some modifications when compared to the coins. Particularly noteworthy is the manner in which the beard is stylised as a row of embossed dots similar to the beaded circle around the edge of the disc.

Similar in its technical aspects as well as in size is a disc-shaped gold sheet found recently in U Thong in central Thailand (cat. no. 4, fig. 2). It is embossed in repoussé technique with a human head and bust in profile to the right, a decoration clearly inspired by the obverse design of a Roman coin. Despite the disfiguring indentations of the sheet metal, details of the head, like the large nose, the ear, and the curly hair, are clearly discernible. Within the beaded circle characteristic of Roman coins, the head is surrounded before and behind it by a row of short vertical strokes and bosses like pseudo-letters imitating a coin legend. On top, the disc of gold sheet has an extension which is bent back to form a simple hook-like loop for suspension¹⁴. We may assume a similar technical feature also for the Antoninus Pius gold sheet from Óc Eo (cat. no. 1, fig. 1).

they appear clearest on the front side with the design in relief as is the case with other repoussé work. Unfortunately, as the piece from Óc Eo is lost and no photograph of the negative relief on the back exists, our judgment relies solely on the photograph of the front with the raised relief. However, for comparison, it is interesting to note the blurred contours and details on the gold foil of the coin pendant in the Römisch-Germanisches Zentralmuseum Mainz (Deppert-Lippitz 1985: 12 no. 8 pl. 7). It is composed of a silver coin of Septimius Severus covered on both sides with thin gold foil, which was probably formed directly over the coin. See also the technically similar coin pendant (Deppert-Lippitz 1985: 13, no. 16, pl. 7).

¹³ RIC Antoninus Pius 206. – BMCRE Antoninus Pius no. 771. This type shows on the reverse the standing figure of the emperor clad with the toga and holding the globe in the extended right hand and a book scroll in the left hand. The reverse legend COS IIII refers to the fourth consulship of the emperor.

¹⁴ Another pendant from Thailand, said to be from Ban Kuttalae, Si Thep, Phetchabun Province, farther inland

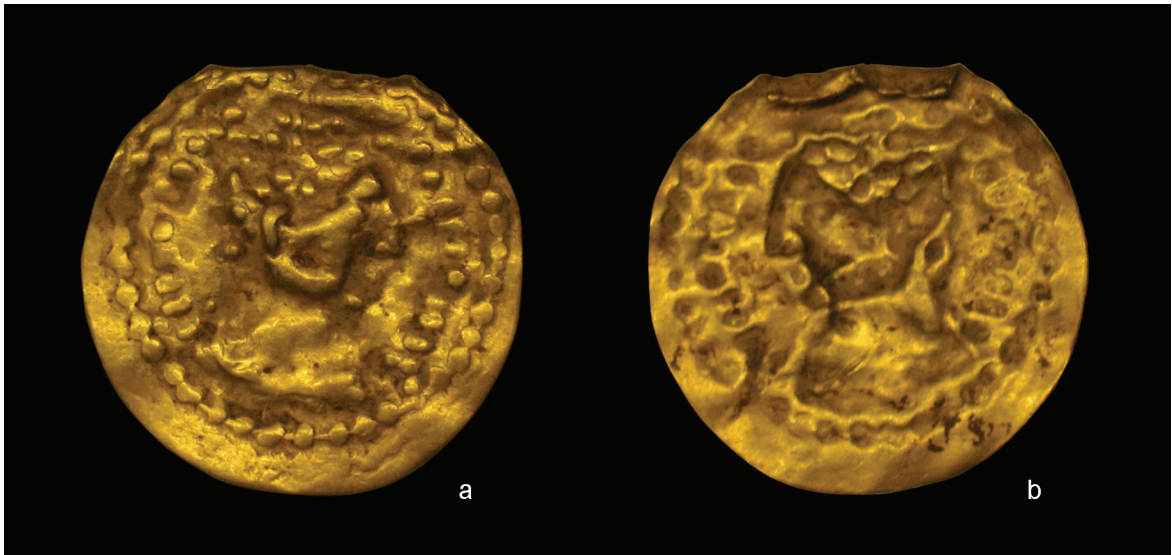


Fig. 2. Cat. no. 4. From U Thong (central Thailand). National Museum U Thong.



Fig. 3.
Cat. no. 3. From
Óc Eo (south-
ern Vietnam).
Reproduced
after Malleret
1962, pl. 40 with
permission of
the 'École fran-
çaise d'Extrême-
Orient.

Such use as a pendant finds further confirmation in another disc of thicker gold sheet from Óc Eo which is preserved complete with its attached suspension loop (cat. no. 3, fig. 3)¹⁵. It has a slightly larger diameter, and has a repoussé decoration vaguely reminiscent of the obverse design of a Roman coin. A coarsely-rendered head to the right is surrounded by a circle of embossed dots recalling the beaded circle of a Roman coin. More dots appear in the field behind the head and in front of it – perhaps meant as substitutes for the letters of a coin legend.

Cast Gold Pendants

Besides the gold sheet with the Antoninus Pius copy (cat. no. 1, fig. 1), another gold disc from Óc Eo attained similar fame (cat. no. 2, fig. 4a.b and 6a). In diameter it also corresponds to a Roman *aureus*. Although thicker than those made of gold sheet, it is likewise a uniface imitation of a Roman coin, its back is flat and plain. In its present condition, it is difficult to decide whether it was made by casting in a single mould or by hammering it into a die. In the latter case, a thicker flan – the weight of this disc from Óc Eo is about 3 g – and the use of a plain but rather rigid stamping-pad could

to the northeast of U Thong, but without dated context is a good comparison for this technical detail (Ramanat 2009: 301). It is likewise made of gold sheet and decorated in repoussé with the purely ornamental motif of a whirl, and slightly larger with a diameter of 26 mm. It is preserved complete with its tube-shaped suspension loop formed from an oblong extension of the gold sheet on top of the disc, in this case bent to the front.

¹⁵ Unfortunately, this pendant has also not been located in the museum after 1975, all information given here is taken from Malleret's publication (1962).



Fig. 4. Cat. no. 2. From Óc Eo (southern Vietnam). Museum of Vietnamese History, Ho Chi Minh City, inv. 2182.

account for the plain reverse¹⁶. However, as already Malleret assumed, it seems more likely that it was cast, as this would better explain the soft and soapy character of the modelling, in particular at the transition between ground and raised relief.

In the middle of the legend on the left, behind the emperor's head, Malleret deciphered the letters AUREL for Aurelius, which indeed seems a plausible reading¹⁷. Hence, he interpreted it as an imitation of a coin of the Roman emperor we are used to call Marcus Aurelius (r. 161–180 C.E.). However, his usual name on coin legends is Marcus Antoninus. The name Marcus Aurelius appears only in few issues of his coins, where it is either placed at the beginning of the legend, or other particulars do not match the letters on the Óc Eo piece. The present author has already argued elsewhere¹⁸ that the design of this second Óc Eo piece is more convincingly derived from a gold coin of Commodus (r. 180–192 C.E.), son of Marcus Aurelius and the last of the Antonine emperors. During the latter part of the year 191 C.E., the names in his title on coins were changed from Marcus Commodus Antoninus to Lucius Aelius Aurelius Commodus, his original name.

The reason for this change is not clear, it has been suggested that it could be connected with the celebration of his thirtieth birthday on 31 August 191 C.E.¹⁹. On the gold coins, two versions appear: L AEL AVR COM AVG P F on the coins issued late in 191 C.E., and L AEL AVREL COM/M AVG P FEL on the coins issued in 192 C.E., the last year of his reign²⁰. It is the latter version of the legend for *L(ucius) Ael(ius) Aurel(ius) Comm(odus) Aug(ustus) P(ius) Fel(ix)* as seen here on an *aureus* in the Kunsthistorisches Museum, Vienna (figs. 5 and 6b) that would match best the recognisable letters and their arrangement on

¹⁶ Axboe 1981: 26–27. Axboe and Arrhenius 1982: 315. Axboe 2004: 15, note 70.

¹⁷ The letter R of AVREL, which now resembles a mirror-inverted N, might just be incomplete with the top of the bow missing.

¹⁸ Borell 2008a.

¹⁹ Szaivert 1986: 37. See also Kaiser-Raiß 1980: 58–59.

²⁰ BMCRE Commodus 327; see also pp. clxvii–clxviii; p. 689. Robertson 1971: 422 no. 59 pl. 115,59. Kaiser-Raiß 1980: 48–50; 57–60; 112; pl. 26,3 and 6. Szaivert 1986: 36–37, nos. 64–67; 167 no. 844 (Emission 65); 323–324; pl. 3: 844–2/37 (cf. p. 282).



Fig. 5. Vienna, Kunsthistorisches Museum inv. 35.207. *Aureus* of Commodus, 192 C.E.



a



b

Fig. 6. a Detail of Cat. no. 2 from Óc Eo; b Detail of *Aureus* of Commodus shown in fig. 5.



Fig. 7. Cat. no. 5. From Khlong Thom (southern Thailand). Suthiratana Foundation, inv. KLP 071.

the gold disc from Óc Eo (Fig. 6a)²¹. Likewise, on these coins of the year 192 C.E., details of the bearded head of Commodus with laurel wreath to the right, the bust cuirassed and draped, appear closely comparable to the Óc Eo piece. Such details are, for instance, the two ends of the ribbon behind the neck parting in two directions, the sharp ridges of the *paludamentum* folds around the neck, and its drapery folds on the chest forming an acute V-shaped angle. Even the general layout and, in particular, the space between the back of the head and the legend seem to correspond (figs. 4a, 5a, 6a,b).

Another interesting detail is of importance in our context. Near to the edge above the emperor's head, a piece of soldered-on gold wire is still preserved (figs. 4a and 6a), apparently the remains of a suspension for using this gold disc as a pendant. We shall return to this point below.

Recently, similar pendants imitating Roman coins have been found at Khlong Thom in southern Thailand. The first of the pieces from Khlong Thom discussed here is a somewhat thicker gold disc decorated on both sides (cat. no. 5, fig. 7). In size, it corresponds to a

Roman gold coin, but its weight, with only just above 4 g, is far below that of a genuine Roman gold coin; a surviving *aureus* of Antoninus Pius would be expected to have an average weight of about 7.2 g. Furthermore, the piece from Khlong Thom was cast not struck. On one side of the gold disc a piece of gold wire is preserved soldered-on along the edge (fig. 7b) in the same manner as on the gold disc from Óc Eo discussed above (fig. 4a).

Obviously, one side (fig. 7a) imitates the obverse of a coin of Antoninus Pius. In general appearance, style and lettering, it resembles coins of this emperor so closely that, presumably, its mould has been formed directly from a genuine coin²². This justifies to search among

²¹ In this context, the raised ends of the horizontal strokes on the E of AVREL on the gold coin in Vienna are noteworthy. In the course of the mould-forming process such raised ends might be responsible for the now rather rectangular appearance of the E on the Óc Eo pendant. – The *aureus* illustrated here in Fig. 5 is struck from the same obverse die as the *aureus* Vienna 13425, which has been compared in Borell 2008a: 171 fig. 9; however, their reverses come from different dies.

²² For this process compare the moulds from a counterfeiter's workshop in Augst active in the mid-3rd century C.E., Peter 2011: 106 ill. 113–115, fig. 4.



Fig. 8. Glasgow, The Hunterian Museum and Art Gallery no. 112. *Denarius* of Antoninus Pius, 158–159 C.E.

the coins of Antoninus Pius for a possible prototype. The major part of the legend can be clearly read. It begins on the left with ANTONINVS, and, leaving an empty space above the head, continues on the right with IVS PP followed by a group of unclear letters. Although the break in the legend above the emperor's head is a feature frequently found on Antoninus Pius' coins, here, most strikingly, an essential part of the regular legend is missing; the letters AVG for the title Augustus and the P of Pius. This could be explained if the prototype had a continuous legend with these four letters placed above the head, where, on the imitation from Khlong Thom, the blank space appears. Such a layout is found on silver coins of Antoninus Pius issued in the years 158–160 C.E.²³ They have a continuous legend, ANTONINVS AVG PIVS P P TR P XXII, respectively TR P XXIII, from left to right, so that the AVG and the P of PIVS appear just above the head, as seen here on a coin of the year 158–159 C.E. in the Hunter Coin Cabinet in Glasgow (fig. 8). In a closely similar manner, the legend on the Khlong Thom piece begins with the A of Antoninus on the left at the back of the neck, the S of Antoninus

just behind the apex of the head, and the I of PIVS above the forehead. After the letters IVS PP follows the group of corrupted letters, which might have already been worn on the model coin and therefore reworked on the mould. The available space would very well allow for an original legend such as TR P XXII, the last two numerals II recognisable on the Khlong Thom piece as still part of the original legend. Even certain details, like the interspace between head and letters, the letters A without a cross line, as well as the stylisation of the curly beard, closely match the coin series of these years. This suggests a coin dating from 158–159 C.E. with the TR P XXII at the end of the obverse legend as prototype for the Khlong Thom piece²⁴.

²³ RIC Antoninus Pius 284–295. – Strack 1937: 206–207 nos. 335–344, pl. 3–4. – BMCRE Antoninus Pius 929 and 939; 970, 972, 981, 989. – Robertson 1971: 201–203 nos. 112–123, pl. 51–52.

²⁴ The observation that the cross line of the T is not fully formed is not necessarily an argument against it, since this phenomenon also occurs elsewhere. – At first glance, the group of letters after IVS PP bear some resemblance to IMP II, which occurs at this place on

In contrast, the other side of the Khlong Thom pendant (fig. 7b) does not match any of the reverses of this issue of 158–159 C.E., but appears to be derived from the coin of another Roman emperor. Such hybrid combinations are not unknown among coin imitations²⁵. The part of the legend still recognisable seems to read: TR P .../COS VIII; the latter, referring to a consulship for the ninth time, is very rare. However, it occurs in a similar manner on the reverse of gold and silver coins of Vespasian (r. 69–79 C.E.) dating from his last year 79 C.E. The full reverse legend of these coins reads TR POT X COS VIII, which would correspond to the Khlong Thom piece. The motif on these reverses of Vespasian's coins is the goddess Ceres, seated on a chair to the left, holding a corn-ear and a poppy in her right hand and a torch in her left²⁶. The remains on the Khlong Thom reverse with the high ground line and the rectangular struts might be traced back to such a design, the diameter of the beaded circle, measuring 17 mm, would correspond quite well. However, due to the pendant's worn state, this is merely to be understood as a suggestion for the possible prototype.

The important finding on this side is the piece of gold wire along the edge, certainly again part of a suspension device attached in a position just above Antoninus Pius' head on the other side. Obviously, when threaded on a cord as a pendant, the side displayed on the front was the one with Antoninus Pius' head in upright position²⁷.

Another gold pendant from Khlong Thom of similar dimensions (cat. no. 6, fig. 9 a, b) is on both sides decorated with free adaptations of the designs of a Roman coin and pseudo-letters imitating a coin legend. The head on the obverse might ultimately be inspired by coins of Antoninus Pius with the head of Faustina, minted after her death in 141 C.E. Even the shapes of the first three letters of the pseudo-legend are faintly reminiscent of the first three letters of the legend DIVA FAVSTINA on those coins²⁸. In our context, however, the most important detail is the at-

tached coil of gold wire which serves as a loop for suspension (fig. 10). It is almost completely preserved, one wire end is soldered on along the edge of the disc in a manner identical to the wire remains on the pendants from Óc Eo (fig. 4a) and from Khlong Thom (fig. 7b), which had presumably been provided with similar coils for suspension. In the case of the Khlong Thom piece, the blank space above the head of Antoninus Pius and the anomaly of the missing part of the legend (fig. 7a), may now be explained as an intentional alteration already made on the mould in consideration of the projected suspension loop.

The museum of Thaksin University, Songkhla province, keeps another hybrid coin imitation

coins of Antoninus Pius from the years 155–158 C.E. However, here the letters would be broadly stretched and would differ in style. In addition, the IMP II issue of Antoninus Pius from 155–158 C.E. has the legend with the gap above the head (on these, see below cat. no. 5 Fig. 10), hence, on the basis of the considerations discussed here, they have to be dismissed as possible models.

²⁵ Imitations of Roman coins from India are often also hybrids, Turner 1989: 37. Berghaus 1991: 110, pl. III 15, 17–18. Berghaus 1998. Krishnamurthy 1998.

²⁶ RIC² Vespasian 1061–1063. BMCRE Vespasian 243–244. For the nine consulships of Vespasian see also Suetonius, Vespasian 8.1. – The COS VIII legend occurs also on coins of Domitian dated to the year 83 C.E. but here the details of the design in the centre are too different to be a match, BMRCE Domitian 37–38; RIC² Domitian 158–160.

²⁷ In our interpretation as being derived from a coin of Vespasian of 79 C.E., the back would be upside down. Maybe the design for it was already in a worn or obscured condition on the prototype which would explain why when making the mould it was not likewise aligned to be in an upright position in the finished product. This phenomenon has also been observed on looped or pierced pendants made from Roman coins used as objects of prestige within Germanic societies beyond the borders of the Roman Empire. The important side to be displayed face-up was the coin obverse with the imperial portrait, the reverses could be upside-down and are invariably in a very worn state (Bursche 2008: 400 with fig. 5–6).

²⁸ Such coins are also frequently found in India and were also imitated there, Turner 1989: pl. III 229, 160, 157, 166. Sathyamurthy 1992: pl. VII 180–200, pl. X 231, pl. XI 233.



Fig. 9. Cat. no. 7. From Khlong Thom (southern Thailand). Suthiratana Foundation, no number.



Fig. 10. Details of the suspension loop of the gold pendant from Khlong Thom shown in Fig. 9.

from Khlong Thom (cat. no. 7, fig. 11). In diameter, the cast gold disc corresponds to a Roman *aureus*, but, as visible in the break, it is rather thin, and its weight less than 3 g. Presumably, it was also intended as a pendant; the top part of the disc is missing, and might have been broken off, together with the suspension loop.

Obviously, one side copies the obverse of a coin of Antoninus Pius of the years 155–158 C.E. with the legend ANTONINVS AVG PIVS PP IMP II for *Antoninus Aug(ustus) Pius P(ater) P(atriciae) Imp(erator) II*, the IMP II at the end referring to his accepting the title *imperator* for a second time²⁹. The time-span for the prototype for the Thaksin imitation may be further narrowed down. All the details appear in an identical manner on an *aureus* dating from the year 155–156 C.E. as seen

²⁹ BMCRE Antoninus Pius, pp. xxii, xl. In general, the title *imperator* as cognomen with the number to show how often he had accepted the title is rare on coins of Antoninus Pius. The second acclamation was apparently for a victory in Britain and IMP II appears for the first time on the reverse of issues of the year 143 C.E. However, it reappears in the obverse legend on the gold and silver coins of the years 155–158 C.E.

Parthian empire, in 197 C.E. The reverses of coins, dated to these years and attributed to the mint in Rome, show the emperor in military dress with his cloak flying behind him, brandishing in his raised right hand a javelin at the fallen foe below the horse's forelegs. Even the mannerism of the horse's tail flying behind between the letters of the legend is attested on these coins.

However, the usual legend on these reverses of 198–202 C.E. is VI R TVS AVG for *Virtus Aug(usti)*, whereas on the Thaksin piece the letters preserved on both sides of the missing top part read PART and IMVS. This may be amended to PART MAXIMVS for *Part(hicus) Maximus*, the title Septimius Severus accepted in 198 C.E. for his Parthian victory. The title appears in various styles in the legends of his coinage³⁴. The style PART MAXIMVS is attested on *aurei* dated to the years 198–202 C.E. and attributed to an eastern mint localised in Laodicea-ad-Mare in Syria (the present-day Latakia)³⁵.

The field below the ground line on the Thaksin piece has the letters COS II PP for *Co(n)s(ul) II P(ater) P(atriciae)*. Such an exergue legend is well known from other coins of Septimius referring to his being consul for the second time, its use therefore limited to the period 194–201 C.E. as it must antedate the year 202 C.E. of Septimius' third consulship. It is found on some reverses minted in Rome in the years 194 to 195 and in 197 C.E.³⁶ It also occurs on the reverse of an issue dated to the year 198 C.E. and attributed to the mint in Laodicea-ad-Mare³⁷. Its motif – two Parthian captives to the sides of a tropaion – also refers to Septimius' Parthian victory. The letter shapes closely resemble those on the Thaksin piece, in particular the tendency to slight irregularities in the alignment in respect to the ground line of the motif above³⁸.

At present, no prototype for the Thaksin reverse with precisely this combination and arrangement of motif and legend has been found among the coins of Septimius Severus. However, given the general great variety of reverses in his coinage and the rarity of some

of these among the surviving coins, it seems not impossible that such a reverse, celebrating the victory in his second Parthian war, existed. Except for the motif, all the elements of the legend are found in closely comparable style on coins attributed to the mint of Laodicea-ad-Mare. The motif of Septimius Severus on horseback with the fallen foe below the horse's forelegs is so far attested only on coins of the mint in Rome. However, about the mint at Laodicea-ad-Mare it has been said that, in its second period (approx. 196/7–202 C.E.), it used types which are very similar to those of the mint in Rome. The style of the mint has been described as having “an Eastern flavour, though it works on Roman models”³⁹. Interestingly, the fallen foeman on the Thaksin piece differs in several details when compared with the coins from the mint in Rome. He kneels on his left leg, his right leg is stretched behind, his upper body is more upright, and – turning his head back to the emperor – he raises both arms in a gesture of appeal. This might point to a die cutter, who worked on Roman models but converted them with some individual alterations. All these points taken together, Laodicea-ad-Mare seems a likely candidate for the mint where such a coin of

³⁴ Usually it appears as PART MAX in obverse and reverse legends, BMCRE Septimius Severus p. clxiii.

³⁵ RIC Septimius Severus 512; BMCRE Septimius Severus 670* (the motif is a trophy and two captives).

³⁶ RIC Septimius Severus p. 62. Dated to 194 C.E.: RIC Septimius Severus 25. Dated to 194–195 C.E.: BMCRE Septimius Severus 86. Dated to 197 C.E.: RIC Septimius Severus 102. BMCRE Septimius Severus 226.

³⁷ RIC Septimius Severus 494b. BMCRE Septimius Severus 627–628. Robertson 1977: 37 no. 191, pl. 13.

³⁸ Close similarities in the letter shapes for P, A, and R can also be found on a silver denarius minted at Laodicea-ad-Mare, RIC Septimius Severus 505. See example <http://www.forumancientcoins.com/gallery/displayimage.php?album=1473&pos=69>, accessed 25 April 2011.

³⁹ RIC Septimius Severus pp. 58–59; on this mint see also ib. pp. 82–83. See also BMCRE Septimius Severus pp. clxi–clxvii. Robertson 1977: xlv and xvliii–xlix. On the mint of Laodicea-ad-mare see also Carson 1990: 63. 65–66.



Fig. 13. Cat. no. 9. From Khlong Thom (southern Thailand). Suthiratana Foundation, no number.

Septimius Severus with a date-range limited to the years 198–202 C.E. might have been issued. It is here of special numismatic interest that, by way of this imitation, indirectly an otherwise unknown reverse of Septimius Severus has been regained. In a jewellery ornament, which we assume the Thaksin imitation to be, the hybrid combination of obverse and reverse copied from coins of different emperors would be no matter of any consequence.

Cast Tin Pendants

Khlong Thom yielded yet two more pendants, again similar in shape and size, but made of tin⁴⁰ and cast in one piece, together with the tubular loop. One of these might be a waster (cat. no. 9, fig. 13), since it has not been re-worked after casting. The superfluous metal around the suspension loop and along the edge of the disc, where the two halves of the mould joined, has not been trimmed. In addition, the loop-hole for threading is very narrow and

was probably never used; likewise no traces of wear are ascertained. A local production of such tin pendants would be in line with the

⁴⁰ Only cat. no. 9 has been tested. The result of the analysis shows an almost pure tin: approx. Sn 96–97wt%, Fe 2wt%, Pb 1wt%, Mn traces. The non-destructive analysis of the pendant cat. no. 9 by micro-x-ray fluorescence spectrometry was carried out by Susanne Greiff and Sonngard Hartmann at the Römisch-Germanisches Zentralmuseum Mainz, Germany.

Cat. no. 8 was considered to be too brittle and corroded for analysis. In Borell et al 2014: 109 fig. 14, its material was conventionally called bronze. In the light of the analysis of the tin pendant cat. no. 9, which was not yet available at the time, the material of the pendant cat. no. 8, judging from the blackish-greyish colour and general appearance, is in all likelihood also tin. – As already mentioned at the beginning, tin is abundant in the Thai-Malay peninsula whereas it is scarce in India, see also Manguin 2004: 286. Pryce et al. 2006: 306–307. Rajan 2011: 188–190. See also Crow and Khin Zaw 2011: 481 fig. 17. 9. – The amount of metallurgical slag, presumably from smelting tin, and the number of tin objects from the site of Khlong Thom/Khuan Lukpad has been recorded in the past, see Bronson: 216.



Fig. 14. Cat. no. 8. From Khlong Thom (southern Thailand). Suthiratana Foundation, no number.

refuse of tin working found at the site. One side of the pendant shows a head in profile to the left, crudely sketched in raised outline surrounded by a rudimentary beaded circle, a distant recollection of a coin design. The back depicts an indistinct quadruped to the right on a short groundline.

The decoration of the other pendant is more interesting, even though it has been badly affected by corrosion (cat. no. 8, fig. 14 a. b). Again, a gross version of the beaded circle is found on both sides. One side shows a coarsely-rendered head in profile to the right. Behind the head, a stiffly-stylised bow and two ribbon ends are visible, characteristic details of laureate coin portraits of Roman emperors. On the back is the depiction of a seated person to the right, holding with the left hand a branch in front of it, whereas the right arm is slightly raised behind. This is a motif well-known from the reverses of gold and silver coins of Tiberius (r. 14–37 C.E.). This type, called the PONTIF MAXIM type after the reverse legend for *Pontif(ex) Maxim(us)*, is one of the most common Roman coin types,

and was apparently minted during Tiberius' entire reign. The seated female figure on the reverse, holding in the left hand an olive branch in front of her, and in the right hand, raised behind her, a reversed spear, is usually regarded to represent Livia as priestess of the goddess Pax, if not the goddess Pax herself. Hence, this type is frequently also called the Livia type⁴¹. In India, silver coins (*denarii*) of this type have been discovered in huge numbers, which gave rise to diverse speculations which will be briefly discussed below. In addition, imitations of this coin type in various degrees of fidelity and made for use as pendants are known from a number of sites in India⁴². Particularly numerous are the finds from the

⁴¹ RIC² Tiberius 25–30.

⁴² Wheeler 1951: 351–352, pl. 20; 1954: 152–153 pl. 28–29; Gupta 1965: 65–68, pl. XXII–XXIII, 1463–1493; Raschke 1978: 665, 992 note 1388; Turner 1989: 37–41; Berghaus 1992b: 239 pl. 28, 18–19; Cimino 1994: 142, 180, pl. 34, and list in appendix; Devaraj 1997; Berghaus 2000; Gupta 2004: 119; Brancaccio 2005.



Fig. 15. Clay pendants from Kondapur, Andhra Pradesh (southern India). Scale approx. 1:1 (from Wheeler 1954: Plates 28 and 29).

state Andhra Pradesh in south-eastern India. Some of them are rather faithful copies with a legible legend, the majority are more distant imitations, some still with a pseudo-legend, others without any legend at all. The better imitations were made of metal, sometimes lead covered with gold foil, the others are usually made of clay (fig. 15) and are clearly of local Indian manufacture, which is also assumed for the metal imitations. Usually, these Indian imitations, even those made of clay, have the double piercing commonly encountered on Indian coin pendants, but many of the clay pendants were moulded together with their suspension loops of a ribbed tubular shape like that of the Khlong Thom pendant⁴³. The pendant from Khlong Thom is certainly to be seen in the context of the popularity of the Indian pendants imitating this particular coin of Tiberius. Such pendants might have

been imported from India to Southeast Asia. However, the use of tin clearly suggests a local manufacture albeit closely related to the Indian imitation pendants. It may primarily be judged rather as evidence for Indian influence, and only indirectly as evidence for influence from the Mediterranean world.

Stone Mould for Casting

In Khlong Thom, a stone mould for casting such a pendant together with its ribbed tubular loop (cat. no. 10, fig. 16) was also found. The dowel holes for joining show that it is one half of a bivalve mould. Within the beaded circle, it shows a seated person to the left, the hand in front of it with a branch, the other hand raised behind holding a long staff. This design obviously imitates the reverse of a Tiberian coin of the PONTIF MAXIM type discussed above, naturally, on the mould, the design is mirror-inverted. A rectangular stone mould from India, found in Banavasi (Karnataka), was also made for casting a pendant with the same motif. Behind the seated figure, even some letters of a pseudo-legend may be

⁴³ Two coin imitation pendants from Banavasi (Karnataka), one made of lead, the other made of copper have similar ribbed suspension loops. In case of the lead pendant, the loop might have been cast together with the disc in one piece, see Ganesh 2010: 56–57 no. 2, illustration 2 on p.57. The publication of the copper pendant, describes the loop as an attachment, see Krishnamurthy 2010: 40–41 top illustration. A stone mould for an imitation of the reverse of the PONTIF MAXIM type, also from Banavasi, is prepared for a cast together with suspension loop, see Narasimha Murthy *et al.* 1997: 89–93, fig. 21A; Narasimha Murthy 1997: pl. 6, 7. – Another stone mould from India, from Ter (Maharashtra), is likewise prepared for casting a disc-shaped pendant together with the suspension loop, see Cimino 1994: 181 pl. 51, 2. Its design with a head in profile within a beaded circle is clearly derived from the obverse of a Roman coin. See also the stone mould from Besnagar (Madhya Pradesh), Bhandarkar 1920: 83–86 no. 34 pl. 55 (diameter of disc 17.5 mm).



Fig. 16. Cat. no. 10. Stone mould from Khlong Thom (southern Thailand), Wat Khlong Thom Museum.

discerned, which are said to resemble the letters MAXIM of the original coin legend⁴⁴. Judging from the drawings, the motif on the Banavasi mould seems to be rendered in a rather stylised manner, similar to the angular stylisation on the Khlong Thom mould. Comparable are also double pierced clay imitations of the PONTIF MAXIM coins from Bhokardan (Maharashtra)⁴⁵. Like the pendant described above (fig. 14) the stone mould from Khlong Thom is to be seen in the context of the widespread Indian production of such coin imitation pendants. The importance of this find lies in the fact that it is evidence for the local manufacture of such pendants at Khlong Thom.

Discussion of the Pendants from Southeast Asia in relation to comparable finds from India

Dating

Naturally, without a dated context, any attempts to assign a date to a coin imitation are fraught with problems. Identification of the prototype and its date establishes no more than a *terminus post quem* for the imitation, but we do not know how long afterwards it

might have been made. In addition, in the case of local manufacture of the imitations, the question arises when the Roman coins which served as prototypes arrived in such areas far beyond the Roman Empire. These questions have been extensively discussed for the Roman coins found in India. For the gold coins of mid 2nd to early 3rd century C.E. dates, which are often found in India in almost pristine condition, the majority being coins of Antoninus Pius, but coins of Commodus and Septimius Severus are likewise numerous, there is unanimous assent that they began to arrive in

⁴⁴ Narasimha Murthy *et al.* 1997: 89–93 fig. 21A; Narasimha Murthy 1997: pl. 6, 7; 2011: 84–85. – A terracotta mould found in Talkad (Karnataka) is also clearly made for the reverse imitation of the PONTIF MAXIM type including a somewhat unclear version of the legend, see Narasimha Murthy and Devaraj 1995: pl. 19. Devaraj *et al.* 1996: 218–220 pl. 90. The mould is prepared only for casting the disc. If the cast imitation was intended for use as a pendant, it would later have to be pierced in the usual manner like the lead imitations of Tiberius coins with two holes from Kondapur and Peddabankur in Andhra Pradesh, see Gupta 1965: 79 no. 2 pl. 26 (diameter 2.3 cm), and Krishna Sastry 1983: pl. 103b.

⁴⁵ Deo 1974: 75 (i) – (ii) nos. 6513 and 8153 pl. 32,1–2.

India soon after being minted. About the coins from the early period of the Roman Empire, almost exclusively silver coins of two distinct types, opinions are divided. The two types are the *denarii* of Augustus (r. 30 B.C.E.–14 C.E.) with the Caesares Caius and Lucius on the reverse, the CL CAESARES type, minted in the years 2 and 1 B.C.E., and possibly later⁴⁶, and the PONTIF MAXIM *denarii* of Tiberius (14–37 C.E.), probably minted through his entire reign. The phenomenon of their frequent occurrence in Indian finds has been discussed by several scholars. Mainly two different positions emerged. Some interpret the frequency of these coins as peaks in Roman trade activities with India in the early 1st century C.E.⁴⁷. Others assumed an intentional selection of these two types for the trade with India because of the purity of their silver content in reaction to the debasement of silver coins after Nero's reforms of 64 C.E., and suggested that the bulk of these early silver coins began to arrive in India only late in the 1st century C.E.⁴⁸. Certainly, one should hesitate to take the archaeological evidence for coins uncritically at face value, and to interpret the frequency distribution and especially coin hoards as an index for the intensity of trade in certain periods and regions⁴⁹. However, both types are among the commonest in the Roman imperial coinage and survived likewise in coin hoards within the Roman Empire in huge numbers. This rather reflects the quantities in which they were minted⁵⁰. In a recent study, Kathrin Johrden and Reinhard Wolters reconsidered the evidence available, and arrived at a more balanced view⁵¹. The evidence of Augustan *denarii* of the CL CAESARES type with a countermark of Vespasian (r. 69–79 C.E.) in a hoard from Tamil Nadu demonstrates beyond doubt that they were still exported to India at least as late as the Flavian period. However, this does not exclude that the Augustan and Tiberian coins arrived already in sizeable numbers early in the 1st century C.E. as soon as they came into circulation. The written sources, as well as other finds, attest to a fully developed and flourishing trade already for that earlier period.

The question of the Indian manufacture of the imitations and their use as pendants is connected with the date of arrival of Roman coins in India. In several studies, Peter Berghaus has devoted special attention to the Indian gold imitations and argued for a rather late date for them⁵². Based on their occurrence in coin hoards, he suggested dates for the cast Indian gold imitations not earlier than the 3rd century C.E., but rather the 4th and 5th centuries C.E. Similarly, he favoured a late date also for a use as pendants, both for the genuine coins and the imitations with double piercing, not earlier than the 4th, but rather even the 5th and 6th centuries C.E. It seems that within the Roman Empire the use of gold coins mounted as jewellery emerged as late as the 3rd century C.E., when gold was rare and gold coins would be valued like gemstones. Nevertheless, this may have been different in India. In any case, for the gold pendants from Southeast Asia discussed here which imitate coin designs of Antoninus Pius, Commodus, and Septimius Severus, we arrive at *termini ante quos non* ranging from the mid-2nd to the early 3rd century C.E. Of course, without any archaeological context, it is difficult to assess, how much later these pendants may actually have been made. At present, it is only possible to state that they

⁴⁶ Johrden and Wolters 2008.

⁴⁷ Turner 1989. Turner and Cribb 1996.

⁴⁸ Most recently Mac Dowall 2008. Berghaus 1992b. Duncan-Jones 1994. Burnett 1998: 181, 184, 187.

⁴⁹ Burnett 1998: 187, 181, 184, 187. Suresh 2004: 29. Tomber 2008: 35–37.

⁵⁰ RIC² pp. 87–88, 90. Johrdens and Wolters 2008.

⁵¹ Johrden and Wolters 2008.

⁵² Berghaus 1989: 99; 1991: 110; 1992b:238–239; 1994: 35, “Indian cast imitations may hardly have been made before the 5th century”. Accordingly, in an earlier paper, the present writer pointed out that the coin imitation pendants from Óc Eo might possibly belong to the second phase of the site dating from the 4th to the 6th centuries C.E., Borell 2008a: 171–172. However, an earlier date still in the 3rd century C.E. is also to be considered. – Not only cast but also struck imitations and hybrids are known from India, see Krishnamurthy 2000 with more references.

might have been manufactured at the earliest in the second half of the 2nd century, respectively in the early 3rd century C.E. in the case of the Thaksin piece, but presumably somewhat later.

The Indian pendants imitating coins of Tiberius seem to be a different phenomenon. They are made from different materials, the majority made of clay, and they have a widespread distribution in the Deccan, from Madhya Pradesh and Maharashtra in the north to Karnataka, Andhra Pradesh and Orissa in the south and south-east⁵³. At least a few were excavated in stratified layers. At Peddabunkur (Andhra Pradesh), besides five genuine coins of Augustus and Tiberius also double-pierced lead imitations of the PONTIF MAXIM type were found in a layer associated with Sātavāhana coins attributed to rulers of the 1st century C.E.⁵⁴. A fragmentary lead imitation, possibly also a pendant, was recovered in Nevasa, Maharashtra, from the top level of period V (c. 50 B.C.E. to 200 C.E.)⁵⁵. A clay pendant with loop from Sannati, Karnataka, was found in a layer described as post-dating the Mauryan but pre-dating the Sātavāhana layers; therefore the layer was tentatively dated to the 1st century C.E.⁵⁶. A clay mould for a reverse imitation of the MAXIM PONTIF type has been found in Talkad, Karnataka, in the context of a foundry in a layer certainly dating from the early centuries C.E., probably the later 1st to 2nd century C.E.⁵⁷. Although it would be wise to treat the reliability of these dates with some caution, and to be aware that, at least in some cases, we might make the mistake of circular argumentation because the associated coins – or here their imitations – often influenced the dating of the layers⁵⁸. Nevertheless, the archaeological contexts and the pottery found in them point to dates in the early centuries C.E. Accordingly, a date in the early centuries C.E. may be assumed also for the production of the pendants, possibly already in the 1st century C.E. Additional evidence for dating comes from Sisupalgarh, Orissa. This site yielded nine looped clay pendants. In appearance and technique, they are made in a manner very similar to the

looped clay imitations of Tiberius' coins. Three had the designs of human heads in profile, but unrelated to coins of Tiberius, the others show purely Indian motifs like the humped bull and the elephant. One of those with a humped bull comes from a late level of period II A (c. 200 B.C.E. to 100 C.E.) attributed to the second half of the 1st century C.E. Six others were found in a deposit from the late levels of period II B (c. 100 to 200 C.E.), attributed to the later 2nd century C.E.⁵⁹. The

⁵³ On transpeninsular routes, see Ray 1998.

⁵⁴ Krishna Sastry 1983: 204–205, pl. 103b. The four lead imitations are said to be plated with gold (the text is not quite clear whether all are imitations of Tiberius' coins, at least the two illustrated are clearly of the PONTIF MAXIM type). No later Roman coins have been found. – The enigmatic silver coated lead imitation from Veerapuram, Andhra Pradesh, with obverse designs of Roman coins on both sides (one copies the obverse of a coin of Tiberius with legend), was found in the middle layer of period III b (c. 50 B.C.E. to 300 C.E.), Sastri *et al.* 1984: 86–87 no. 4747. It is often called a *bullā*; however, no traces of a suspension device are preserved. Gupta 2004: 116–117 calls it a trial piece (there also further references).

⁵⁵ Sankalia 1960: 200 (i) fig. 83,4 (S. B. Deo). – In level 4 at Nevasa, a level in the middle of the layers of period V (c. 50 B.C.E. to 200 C.E.) was found a gold sheet decorated in repoussé with a head in profile to the right and a pseudo-legend, a distant imitation of a coin design, with double piercing for suspension, *ib.* 200 (iii) fig. 83,2 (S. B. Deo).

⁵⁶ Devaraj 1997.

⁵⁷ Narasimha Murthy and Devaraj 1995. Devaraj *et al.* 1996: 47–49; 53–55; 218–220 pl. 90. Devaraj 1997.

⁵⁸ See, for instance, Sankalia 1960: 201 where the *bullae* found at Nevasa are treated as “an important piece of evidence in dating the associated horizon”; or the trend in the excavation report from Veerapuram to date the layers according to the numismatic evidence, even if it is only a lead imitation of unknown purpose, Sastri *et al.* 1984: 18, 30, 91–93.

⁵⁹ Lal 1949: 101–102 pl. 50 A and B; one more (indistinct and not illustrated) is from the penultimate level of period III, c. 200 to 350 C.E., another one was unstratified. See also, Behera 1999: 165, pl. 18. – For a recent review of the chronology of Sisupalgarh, see Yule (ed.) 2008: 47–51 (45–47). On recent research in Sisupalgarh, see also Yule and Böhler 2004: 23–28. Mohanty and Smith 2009. Ray 1986: 135–136 suggests for the Indian clay *bullae* the general time-bracket of c. 300 B.C.E.–200 C.E.

evidence from Sisupalgarh appears to indicate a production of such looped clay pendants already in the 1st century C.E. It therefore seems conceivable that clay pendants imitating coins of Tiberius were also manufactured from the 1st century C.E. onwards, when the coins of his PONTIF MAXIM type began to arrive in India. Such a date for the production of the clay pendants makes sense in view of the widespread predominance of those with a design derived from the Tiberius' coins, albeit in varying degrees of fidelity and sometimes only distantly related. Furthermore, the parallel occurrence of both types of clay pendants, looped and double-pierced, among the PONTIF MAXIM clay imitations from Kondapur, suggests that double-piercing was also already practised at a similarly early date.

Reviewed in the context of pendants imitating the PONTIF MAXIM coins of Tiberius from India, this permits proposing a similar date for the pendant and mould from Khlong Thom (figs. 14 and 16) from the 1st century onwards, possibly late in the 1st century, or in the 2nd century C.E.

Place of Manufacture

Clearly, the tin pendant as well as the mould from Khlong Thom with designs derived from the coins of Tiberius (figs. 14 and 16) are to be seen in close connection with the Indian parallels. They may represent only indirect Mediterranean influence, but rather appear to be the result of intense contacts between South and Southeast Asia, which are well attested already for the last centuries B.C.E.⁶⁰ They may even result from the presence of immigrant Indian craftsmen, which is assumed also for other Southeast Asian places specialising in the manufacture of stone beads like Khao Sam Kaeo in the region of the Isthmus of Kra⁶¹. The mould (fig. 16) certainly indicates a local production of such pendants at Khlong Thom. The unfinished appearance of the tin pendant with the quadruped (fig. 13) also points to a local manufacture; the piece might have been a waster which was never used. Another decisive

factor for local production is the material itself. The use of an almost pure tin for this pendant has been confirmed by the scientific analysis; presumably, the other pendant (fig. 14) which has not been tested owing to its brittle state of preservation, was also made of this material. Tin is abundant in the Thai-Malay Peninsula but scarce in India. In addition, archaeological evidence for the working of tin has been found at the site of Khlong Thom⁶².

A large number of gold imitations of Roman coins, often with pseudo-legends and sometimes in hybrid combinations of obverse and reverse, has been found in southern India, especially in Andhra Pradesh and Tamil Nadu. They are unanimously considered to be locally produced. Their prototypes are predominantly gold coins of Antoninus Pius and Septimius Severus, which are particularly numerous among the finds of imported Roman coins, mainly in southern India⁶³. For instance, out of a total of 274 Roman gold coins known to be found in Kerala, 138 date to the reign of Antoninus Pius⁶⁴. Three of these are *aurei* of the issue of 152 A.D.⁶⁵ like the prototype for the repoussé pendant from Óc Eo (fig. 1). Likewise, gold coins of Commodus are also well attested among the Indian finds, even examples dating from the year 192 C.E. as the supposed prototype of the other pendant from Óc Eo⁶⁶.

Accordingly, the gold pendants imitating Roman coins from sites in Southeast Asia might

⁶⁰ Glover and Bellina 2011.

⁶¹ Bellina 2007: 52–53; 73. Bellina and Silapanth 2006: 389–390. – The DNA of skeletal remains found in a 1st century C.E. site in northern Bali point also to an immigrant from South Asia, see Lansing *et al.* 2004. Borell 2013: 151 note 4 (with further references).

⁶² See above, notes 7 and 40. Bronson 1990: 216.

⁶³ Berghaus 1991: 110. Berghaus 2000: 499.

⁶⁴ Sathyamurthy 1992: 21 nos. 138–140, pl. 7, 138–140 (“good condition”). For a cast Indian imitation in the hoard from Dharmavaripalem, Andhra Pradesh, see Berghaus 1993: 40, pl. 10 A; 1994: pl. 11, 11.

⁶⁵ Turner 1989. Berghaus 1991: 110.

⁶⁶ Thurston 1889: 328 (in the Madras Museum) (cf. BMCRE Commodus 307). Narasimha Murthy 1992: 57 (cf. RIC Commodus 254) from Mysore.

represent an offshoot of the Indian production. But in comparison with coins or coin imitations known from India, they differ in some technical aspects. For instance, at least three of the Southeast Asian gold pendants, one from Óc Eo and two from Khlong Thom (figs. 4, 7, and 9), have a special technical detail in common, namely the suspension loop made of a coil of gold wire attached to the disc with the straight end of the wire. This is different from the Indian method of converting coins or coin imitations into pendants. In India, the usual technique was to punch two holes near the upper edge of the obverse, as has been generally presumed, for direct threading on a cord. However, a foundation deposit in period III levels in Sisupalgarh, attributed to the mid-3rd century C.E., yielded a hybrid coin imitation, one side imitating a Kushan coin, the other the obverse of a Roman coin with the head of the emperor to the right and a pseudo-legend⁶⁷. It has the familiar two holes above the head of the emperor, but is preserved together with a suspension loop made of a coil of gold wire. According to the description “it was used as a pendant by perforating at its top two holes through which it was attached to an oblong wire for suspension”. It is not impossible that, among the numerous Indian coin imitation pendants with two holes, others also had a loop of coiled wire which did not survive. Still, this is different from the attachment method observed on the Southeast Asian pendants. Additional evidence comes from a coin hoard from Tirukoilur, Tamil Nadu⁶⁸. The part recovered by the police consisted of 15 genuine Roman coins and 177 gold imitations. The latest coin among them was a *denarius* of Caracalla (r. 211–217 C.E.) dating from 213 C.E. which provides a provisional *terminus post quem* for the hoard. Many of the imitations are hybrids, all presumably cast in India. Several of the coins and of the imitations have two holes, signs of their previous use as pendants before they ended up in the hoard. In our context one of the genuine coins is of particular interest. It is an *aureus* of Claudius (41–54 C.E.) dating

from about 41–45 C.E.⁶⁹. In an earlier phase of its use, it had the characteristic two holes for use as a pendant. At a later stage, these holes were refilled. However, in its preserved state in the hoard, it was again converted into a pendant by attaching a tubular loop. Judging from the photographs this loop consists of a coil of wire fastened along the edge by the wire’s straight ends. In this technical aspect, it strongly resembles the means of suspension made of wire coils which we ascertained on at least three of the finds from Southeast Asia. Obviously, this particular coin of Claudius had a long history of use as a pendant, and its reverse is in fact very worn. The wire coil as an attachment loop is connected with the later phase, its date is possibly similar to the gold pendant from Sisupalgarh and the Southeast Asian finds, which seem to point to the 3rd century C.E.

For the Southeast Asian gold pendants with wire coil it is therefore difficult to give an answer to the question of their place of manufacture. Two possibilities are to be considered: they might be imported from southern India as products of a manufacturing centre not yet well attested (except for the singular pendant in the Tirukoilur hoard); or they might be products of a local Southeast Asian manufacture – though possibly strongly influenced by the coin pendants in vogue in India. Both Khlong Thom and Óc Eo are sites which produced evidence for manufacturing activities. At Óc Eo remains of goldworking workshops have been recorded⁷⁰. So far, a Southeast Asian manufacture of the cast gold pendants remains a strong alternative.

Similarly, on the repoussé coin imitation pendants, the suspension loop as an extension of the gold sheet does not seem to be a characteristic of the few examples known

⁶⁷ Lal 1949: 95, 97 pl. 48A; 100–101 (A. S. Altekar).

⁶⁸ Berghaus 2000; 2004. On the hoard, see also Krishnamurthy 1998: esp. 146, note 3.

⁶⁹ Berghaus 2000: 499, fig. 1.

⁷⁰ Malleret 1951: 78; Malleret 1962: 37–44.

from India. They either have the familiar two holes like the one from Nevasa, found in a middle level of period V (c. 50 B.C.E. to 200 C.E.)⁷¹ and two from a reliquary deposit of stupa 6 at Nagarjunakonda to which a date in the second quarter of the 3rd century C.E. was given⁷²; or, alternatively, they have a tubular loop made of gold sheet attached, as on the pendant from the deposit below the Enlightenment Throne at Bodh Gaya (Bihar). This pendant was made of two repoussé gold sheets, both imitating the obverse of a coin of the Kushan king Huviska which provides them with a *terminus post quem* in the 2nd century C.E.⁷³.

While the tin pendant and the mould from Khlong Thom, imitating the PONTIF MAXIM type coins of Tiberius, might be predominantly attributed to contacts with India and regarded only as an indirect adaptation of a Roman prototype without any need for a genuine coin of Tiberius having arrived in southern Thailand, the presumably later production of gold pendants imitating coins of the 2nd and early 3rd century C.E. might be an indigenous Southeast Asian development. In case the gold pendants, both cast and repoussé, were in fact produced in Southeast Asia, the closeness of the imitations to their prototypes points to a process that would have involved genuine Roman coins, which might have been brought by traders from southern India where they frequently occur, or possibly also by other traders including those from the Roman Empire.

At present, no finds of such coins have been recorded from Southeast Asia, although in recent years a large number of Roman intaglios and other Roman objects, including fragments of glass vessels, have been discovered at Khlong Thom as well as at sites in the region of the Isthmus of Kra farther north⁷⁴. The only Roman coin known from Thailand so far is a third-century coin of Victorinus (269–271 C.E.) found at U Thong. It dates from 269/270 C.E. and is to be attributed to the mint at Cologne⁷⁵. These debased coins of the Romano-Gallic Empire with a minimal silver content were in circulation in the west-

ern provinces of the Roman Empire until the end of the third century C.E. They were not used in bulk in the long-distance trade with India, although occasional finds of such coins are known from India⁷⁶. In 1864, the find of a bronze coin of Maximinus Thrax (r. 235–238 C.E.), which is now lost, has been reported from near My Tho in southern Vietnam. Judging from the details related in the report, it was probably a *sestertius* from the coin series of the years 235 or 236 C.E.⁷⁷.

Meaning and Use

At present, we can only speculate about possible meanings and uses of these pendants in Southeast Asia, since information from significant find contexts or written sources is lacking. Therefore, many questions will still remain open. The practice of wearing such pendants may have been ‘imported’ from southern India, either encountered there by Southeast Asians in the course of trade activities, or brought

⁷¹ Sankalia 1960: 194 fig. 83, 2; 200–201 no. 1890. – On later repoussé coin-like gold sheets, see Gupta 1993.

⁷² Longhurst 1938: 21–22 pl. 16 c–d (the diameter is said to be about that of a sixpence, that would be about 19 mm). Gupta 1959: 189. Rosen Stone 1994: 29–30, fig. 45. Subrahmanyam 1998: 109–110, pl. 56a.b.

⁷³ Cunningham 1892: 20–21 pl. 22, 11. Zwalf 1985: cat. no. 14. For good photographs, see also British Museum website: http://www.britishmuseum.org/research/collection_online/collection_object_details/collection_image_gallery.aspx?partid=1&assetid=1341969&objectid=250459 (accessed Sept. 2013).

⁷⁴ Borell *et al.* 2014.

⁷⁵ Borell 2008b: 14, note 51. Borell *et al.* 2014: 111 fig. 16a–b. Vgl. Schulzki 1996: 43–44, 76–86, esp. 83 no. 21c pl. 20.

⁷⁶ Mitchiner 2004: 22; Suresh 2004: 167–176.

⁷⁷ Longpérier 1864. Malleret 1962: 112; 380–381; 385. Judging from the short description by Adrien de Longpérier, the coin can be identified as one of Maximinus first issues of the years 235 and 236 C.E., see BMCRE Maximinus 2 or 63. – Finds of several Roman coins of the third and fourth centuries from Angkor Borei in southern Cambodia are mentioned by Thierry and Morrisson (1994: 136, note 34), but at present no more details of these coins are known.

eastwards by South Indians. Wearing such gold pendants with the design of a Roman coin as an ornament of personal jewellery was certainly intended as a display of wealth and status. The pendants may be regarded as prestige objects and status symbols of the elite⁷⁸.

An interesting point is the fact that the relevant part of their decoration was clearly the profile head characteristic for the obverse of Roman coins. This is evident from the one-sided imitation pendants from Óc Eo and U Thong, and from the placement of the suspension loop always above the head, regardless of the direction of the design on the other side. This has frequently been observed also on the coin pendants found in India, both genuine coins and the imitations. The head in profile was the side to be displayed when worn. It must have had a special importance which was certainly not confined to the aesthetic appeal of the coin portraits. Initially, in the transactions with the Roman traders, the portrait of the Roman emperor on coins may have transported some notion of guarantee for the quality and purity of the gold and silver coins. The well-known anecdotes related by Pliny and Cosmas Indicopleustes come to mind⁷⁹. The emperor's portrait had a recognition value which linked the imitation pendants with the minted coins and their inherent worth. Aspects of the meaning of the Indian pendants imitating Roman coins have already been discussed by Pia Brancaccio who points out the notions of "good luck with clear references to prosperity and money"⁸⁰.

The precious and auspicious character of pendants imitating coins is also illustrated by the few contexts from India, where they have been found in foundation deposits like the hybrid from Sisupalgarh with an imitation of a Kushan coin on one side and of a Roman coin on the other (see above). The two deposits in Buddhist contexts have also been briefly mentioned: the reliquary deposit under a stupa in Nagarjunakonda contained two thin gold discs with double piercing, each depicting a head in profile to the left within a beaded circle, and the deposit in Bodh Gaya which

contained a gold pendant with imitations of a Kushan coin.

In addition to connotations of wealth and prosperity, the obverse coin design probably also transported the notion of a potent being with special powers. Such an amuletic and protective character of the pendants would explain best the crude versions of the head on the cheap substitutes made of base metals or clay, here also seen on some of the gold pendants. The importance for the wearer of the pendant lay in the profile head and the power embedded in this image. The foreignness of the design may have contributed to the magic power of the amulet⁸¹.

Indirect and direct contacts with the Mediterranean World

The interpretation of archaeological finds of exotic imported objects as evidence for direct contacts is always fraught with problems. This study emphasised seeing the Southeast Asian pendants imitating Roman coins in the context of the similar phenomenon known from southern India and understanding it as its eastern extension. This would explain the Southeast Asian finds in the context of the intensive contacts and exchange between South and Southeast Asia which are well documented

⁷⁸ In general, the imitation of Roman coins outside the empire, in particular, of Roman gold and silver coins, is a widespread phenomenon, Peter 2008.

⁷⁹ Pliny, *Natural History*, book vi, 85. Cosmas Indicopleustes, *Christian Topography*, book xi. On Cosmas, see also Borell 2008b: 11.

⁸⁰ Brancaccio 2005: 401–402. On the popularity of coin necklaces in early India, see also Rosen Stone 1994: 30 with note 139. – In the later Dvāravatī period of central Thailand, the practice of wearing protective amulets with images of Indian deities is well attested, Indrawooth 1992; 2004: 140. – In this context, it is also worth to look at the modern cult of amulets in Thailand, although this is in its present form a recent phenomenon in particular among Thai men, see Tambiah 1984: esp. 196–199, 219–229. Stengs 2009: 173–174.

⁸¹ For general observations on coin-shaped charms of later periods in Southeast Asia, see also Cribb 1999: 65–66. Brancaccio 2005: note 9.

on several levels. Even if we assume a local production in Southeast Asia, not only for the tin pendants and the distant imitation produced from a mould like that found at Khlong Thom but also for the rather faithful imitations cast in gold, the Roman coins which would have served as prototypes in the process of manufacturing the moulds for the imitations might have been imported via India in the scope of more regional networks across the eastern Indian Ocean. However, direct contacts of enterprising traders from the Roman Empire cannot be completely excluded, although they may not have been of a regular nature, like those to the ports on India's western coast. In the light of the increasing number of imports from the Mediterranean world discovered at Khlong Thom and at sites in the region of the Isthmus of Kra, it is worthwhile to review the written sources briefly.

As already mentioned at the beginning, a land crossing presumably of the Isthmus of Kra has been described in the Chinese annals of the Western Han (206 B.C.E.–8 C.E.) for the period around 100 B.C.E. embedded between lengthy sea voyages. Knowledge of the Malay Peninsula and of the possibility of crossing it by a land route can be traced also in the western sources, though for a later date. The anonymous author of the *Periplus Maris Erythraei*, the famous mid-first century C.E. account of maritime trade from the Red Sea to India, still has only very little to say about the regions east of India⁸². This state of knowledge seems to have changed about fifty years later. Claudius Ptolemy, writing in the second century C.E., gives a much more detailed description of the areas east of India in his *Geography* (1.13–14), in particular of the Thai-Malay Peninsula, which he calls the Chryse Chersonesos, i.e. the Golden Peninsula. He relied on an account, which is now lost, written by a certain Alexandros, a sea captain or navigator. This first hand account is thought to date from the late first or early second century C.E., as it had also been used by another scholar, Marinus, a geographer and cartographer also writing in the second cen-

tury C.E. but somewhat earlier than Ptolemy. Marinus' geographical treatise is likewise lost and known to us mainly through Ptolemy who relies on it although he heavily criticises it. It seems that detailed knowledge of the Thai-Malay Peninsula and the land route across it can be traced to Alexandros' account⁸³. According to our knowledge, Alexandros was the first western person to have been to regions beyond the Thai-Malay Peninsula, and to have returned home safely to be able to bequeath his report. We cannot exclude that before him other traders from the Roman Empire had ventured as far east from time to time, but no trace of this exists in the extant written records. However, the presence of individuals from the Roman Empire in Southeast Asia is witnessed in Chinese sources for October 166 C.E., when an embassy of Andun is recorded as the first official contact with the Roman Empire (Da Qin). The entry in the annals of the Eastern or Later Han dynasty (25–220 C.E.) (*Hou Han shu*, chapter 88) says:

“The king of this country always wanted to enter into diplomatic relations with the Han. But the Parthians (Anxi) wanted to trade with them in Chinese silk and so put obstacles in their way, so that they could never have direct relations (with China) until the reign of Emperor Huan, in the ninth year of Yanxi (166 C.E.), when Andun, king of Da Qin, sent an envoy from beyond the frontier of Rinan who offered elephant tusk, rhinoceros horn, and tortoise shell. It was only then that for the first time communication was established (between the two countries). The document listing their tribute had nothing at all precious or rare. Thus one suspects that those who have written about it have erred”⁸⁴.

⁸² Casson 1989: 223, 235–236.

⁸³ Dihle 1984: 90; 147. Berggren and Jones 2000: 75 with note 51; Stückelberger and Graßhoff 2006: 16, 92–95. McLaughlin 2010: 57–59, 133–134. Critically, Seland 2007: esp. 74.

⁸⁴ After Leslie and Gardiner 1996: 51.

This text has been discussed by many scholars, and there is general agreement that it was probably not an official embassy sent by the Roman emperor, but a group of merchants from the Roman Empire somehow assuming this role in the eyes of their counterparts⁸⁵. The items listed which they offer as “tribute” might have been acquired on their way along the maritime routes, some of it possibly not far from the frontiers of Rinan in present-day Vietnam, and the derogatory comment in the Chinese source makes it clear that something was out of proportion. The emperor’s name Andun is certainly a rendering of Antoninus, however, it is not clear whether it refers to Marcus Aurelius Antoninus (r. 161–180 C.E.), who ruled together with Lucius Verus (r. 161–169), or rather to their predecessor Antoninus Pius (r. 138–161 C.E.). These enterprising merchants who ventured beyond India might very well have stayed for some years in the East without knowledge of Antoninus Pius’ death in March 161 C.E. In our context, the interesting point is that the “embassy” arrived by the sea route along the Vietnamese coast from beyond Rinan, the southernmost commandery of the Han empire, extending south probably as far as central Vietnam. They might have travelled on board foreign ships from the eastern coast of India, thus reaching the western coast of the Thai-Malay Peninsula, which they most likely crossed overland in the Kra Isthmus region.

Additional information about the presence of traders from the Roman Empire is found in the *Liang shu*, which is ostensibly the history of the Southern Liang dynasty (502–556 C.E.), compiled by Yao Silian early in the seventh century C.E., but it also includes earlier material. It continues with more information about Da Qin:

“Their people are traders and often visit Funan and Rinan and Jiaozhi, but people of (these) various countries beyond our southern border rarely reach Da Qin. [...] In the fifth year of Huangwu of the reign of Sun Quan (226 C.E.), a merchant of Da Qin named Qin Lun came to Jiaozhi.

The prefect of Jiaozhi named Wu Miao sent him to visit (Sun) Quan, who asked him about the land and its customs. (Qin) Lun gave a detailed reply”⁸⁶.

From this information, we may deduce that, in the later second and early third centuries C.E., merchants from the Roman Empire came more frequently to Southeast Asia clearly along maritime routes and were not uncommon in the regions along the Vietnamese coast, from Funan in the south to Jiaozhi in the north. After the collapse of the Han Empire, one Roman merchant was sent in the year 226 C.E. to the court of the Wu dynasty (222–280) in the area of present-day Nanjing⁸⁷. To arrive in southern Vietnam these groups of Roman traders must have either bypassed the Thai-Malay Peninsula or more likely must have crossed it one way or another.

At present, the surprisingly rich archaeological evidence of objects of Mediterranean origin found at sites in Southeast Asia raises more questions than it answers. Some of the objects may be assigned to early dates such as the first century B.C.E. and the first century C.E., but it is doubtful whether they indicate direct trade. It seems more likely, at the present state of research, that they would have reached southern Thailand by intermediary trade along the maritime routes via India.

This seems a plausible explanation for the finds of earlier date, and in particular for the pendant and mould imitating coins of Tiberius. Intaglios could have been brought to southern Thailand by their own owners and been lost from or taken out of their ring settings. They could have been traded by intermediaries to Southeast Asia as luxury goods, or used in trade as gifts of high prestige to the local rulers. In the later second and in the third century C.E., traders from the Roman Empire, probably from its eastern provinces, may have

⁸⁵ Crespigny 1990: 42–43; Graf 1996; Leslie and Gardiner 1996: 153–157.

⁸⁶ After Leslie and Gardiner 1996: 100–101, 158–159.

⁸⁷ Crespigny 1990: 479–480, note 38; Graf 1996: 201–202; McLaughlin 2010: 136–137.

arrived more frequently, as indicated not only by the finds of the pendants imitating coins of later emperors but also in written sources.

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CATALOGUE

Óc Eo, Vietnam

1. Gold ornament imitating the design of a Roman coin with the portrait of the emperor Antoninus Pius (r. 138–161 C.E.).

Formerly in the Musée Blanchard de la Brosse, Saigon, inv. no. MBB 3460 (according to information received in 2006 from the present Museum of Vietnamese History in Ho Chi Minh City the piece could not be located after 1975). From Óc Eo, 1944. Diameter: 19 mm. Thickness of the gold sheet 0.3 mm. Weight 1.4135 g. Gold, fineness: 916 (22 carat).

Bibl. (selected): Lévy 1946: 227 illustration on the left. – Coedès 1947: 198–199 pl. E 2. – Malleret 1951: 86–87. – Wheeler 1951: 359 with note 34. – Wheeler 1954: 174. – Malleret 3, 1962: 115–116 no. 919 pl. XL. – Raunig 1971: fig. 133. – Raschke 1978: 674; 1048, note 1641. – Thierry 1993: 125, note 51. – Thierry and Morisson 1994: 136, note 34. – Higham 2002: 236 ill. (not actual size as stated in the caption but enlarged about 3:2). – Higham 2003: 27. – Schottenhammer 2006: 612 (with some confusion about the emperor). – Jao Tsung-I and Vandermersch 2006: 220. – Ptak 2007: 90. – Borell 2008a: 170, fig. 7.

Made of thin sheet gold, embossed. Head of Antoninus Pius (r. 138–161 C.E.), laureate, to the left. Slightly corrupted legend ANTONINVS AVG PIVS NVRP (or NVAP) XV; in addition, the second N in Antoninus is mirror-inverted. On the reverse the design appeared in the negative. On top, the gold sheet has an extension, partly broken off, apparently to suspend it for use as a pendant.

Cf. for the prototype (obverse only) the issue of the year 152 C.E.: RIC Antoninus Pius 206. BMCRE Antoninus Pius 771. Cf. also Strack 1937: 8; 143; 149; 196 no. 245.

2. Gold ornament imitating the design of a Roman coin with the portrait of an emperor of the reign of the Antonines (138–192 C.E.).

Museum of Vietnamese History in Ho Chi Minh City, BTLS 2182 (formerly Musée Blanchard de la Brosse, Saigon, inv. no. MBB 4585). From Óc Eo.

Diameter: 19 mm. Thickness (variable): 0.7 mm. Weight 3.0235 g. Length of gold wire soldered onto the top of the obverse 8 mm. Gold, fineness: 750 (18 carat).

Bibl. (selected): Coedès 1947: 199. – Malleret 1951: 86–87. – Wheeler 1951: 359 with note 34. – Wheeler 1954: 174. – Malleret 3, 1962: 116, no. 920, pl. XL; 459. – Raschke 1978: 674; 1048, note 1641. – Thierry 1993: 125, note 51. – Higham 2002: 236. – Higham 2003: 27. – Jao Tsung-I and Vandermersch 2006: 220. – Ptak 2007: 90. – Borell 2008a: 170 fig. 8 and 10. – Reinecke and Nguyen 2009: 63, fig. 13. Reinecke and Nguyen 2010: 77, fig. 4.

Obv.: Head of a Roman emperor, laureate, bust draped with *paludamentum*, to the right. Discernible letters of the legend: L AEL AVREL C[...].

Rev.: plain.

Probably cast. On the top of the obverse, a piece of gold wire is still attached (8 mm in length and about 1 mm thick), apparently the remains of a suspension for use of the disc as a pendant.

Cf. for the prototype (obverse only): RIC Commodus 254. BMCRE Commodus 327. Cf. also: Robertson 1971: 422, no. 59, pl. 115, 59. Kaiser-Raiß 1980: pl. 26, 3 and 6. Szaivert 1986: pl. 3, 844–2/37.

3. Gold pendant with a design vaguely recalling a Roman coin

Formerly in the Musée Blanchard de la Brosse, Saigon, inv. no. MBB 3253 (according to information received in 2006 from the present Museum of Vietnamese History in Ho Chi Minh City the piece could not be located after 1975). From Óc Eo.

Diameter 23 mm. Weight 6.423 g. Thickness of gold sheet 0.8 mm. Diameter of suspension loop 5 mm. Gold, fineness of disc: 916 (22 carat), fineness of suspension loop: 833 (20 carat).

Bibl.: Lévy 1946: 227 illustration on the right. – Malleret 3, 1962: 116–117, no. 921, pl. XL; 459. Thierry 1993: 125, note 51

(breloque vaguement monétiforme). Thierry and Morrison 1994: 136, note 34.

Thick gold sheet embossed in repoussé with a crude rendering of a head in profile to the right. The disc has a fine fillet in relief along its edge, followed toward interior by a circular row of raised dots. More raised dots in the field around the head. Attached suspension loop with traced decoration on its exterior.

U Thong, Thailand

4. Gold pendant with a design vaguely recalling that of a Roman coin

U-Thong National Museum, inv. 2/2549, U Thong. Found in U-Thong, brought to the museum in 2006.

Diameter 19–20 mm. Gold sheet.

Bibl.: Borell *et al.* 2014: 109, fig. 13a–b.

Gold sheet embossed in repoussé, on the back the design appears in the negative. Within a beaded circle, a head and bust in profile to the right. In the field behind the head and in front of it, short lines and dots arranged in a row parallel to the beaded circle. On top, the circular sheet has an extension, in the present state folded back and broken off, which in all likelihood originally served to suspend the gold disc as a pendant.

Khlong Thom (site of Khuan Lukpad), Krabi Province, Thailand

5. Gold ornament imitating the design of a Roman coin with the portrait of the emperor Antoninus Pius (r. 138–161 C.E.).

Suthiratana Foundation Inv. KLP 071, Nakhon Si Thammarat and Bangkok. From Khlong Thom (Khuan Lukpad).

Diameter 19–20 mm. Weight 4.16 g. D of beaded circle on reverse 17–18 mm.

Length of gold wire on the reverse 8 mm. Gold.

Bibl.: Pongpanich 2009: 226 and 227. – Borell *et al.* 2014: 108, fig. 11a,b.

Obv.: Antoninus Pius, head, laureate, in profile to the right. Legend left up ANTONINVS, break, right down IVS PP

followed by several unclear letters.

Rev.: very worn, unclear representation. Preserved letters of legend: TR POT (??) ... COS VIII.

Cast. On top of the reverse, a piece of gold wire is still attached (8 mm in length and about 1 mm thick).

Cf. for the prototype of the obverse: RIC Antoninus Pius 284–295 (TR P XXII). BMCRE Antoninus Pius 929 and 939 (TR P XXII, 158–159 C.E.); 970, 972, 981, 989 (TR P XXIII, 159–160 C.E.). Cf. also Strack 1937: 206–207, nos. 335–344, pl. 3–4 (TR P XXII). Robertson 1971: 201–203, nos. 112–123, pl. 51–52, esp. no. 112 and 122 (TR P XXII, 158–159 C.E.).

6. Gold ornament imitating the design of a Roman coin with the portrait of the emperor Antoninus Pius (r. 138–161 C.E.).

The Thaksin Folklore Museum of the Institute for Southern Thai Studies, Inv. 43110423. Thaksin University, Koh Yo, Songkhla Province. Said to be from Khlong Thom. Diameter 19 mm. Weight 2.88 g. Small segment on top edge missing. Gold.

Unpublished.

Obverse: Antoninus Pius, head, laureate, in profile to the right.

Legend left up ANTONINVS AVG, break, right down PIVS PP IMP II.

Reverse: Emperor on horseback, galloping to the right, brandishing a javelin at fallen enemy.

Legend left up PART, missing segment, right down IMVS. In exergue: COS II PP. Cast.

Cf. for the prototype of the obverse: RIC Antoninus Pius 256a. BMCRE Antoninus Pius 864. Cf. also Robertson 1971: no. 103, pl. 51. Ex Museum of Fine Arts, Boston, Freeman and Sears, Gemini I, auction Jan.11–12, 2005 lot 616 = http://www.wildwinds.com/coins/ric/antoninus_pius/RIC_0256a.jpg [accessed 24 March 2011].

7. Gold pendant with a free adaptation of the design of a Roman coin.

Suthiratana Foundation KLP (no number), Nakhon Si Thammarat and Bangkok. From Khlong Thom.

Diameter 18.5–19 mm. Weight 4.86 g. Preserved width of suspension loop 6.5 mm. Gold.

Bibl.: Borell *et al.* 2014: 108, fig. 12a.b.

Obverse: Female head to right. Legend of pseudo-letters.

Reverse: Standing figure, frontal, clad in a long garment, the right arm lowered, the slightly raised left hand seems to hold something indicated by a row of dots. Legend of pseudo-letters.

Cast. The attached suspension device is made of a coil of gold wire, broken at the ends. Horizontal strip of gold wire along the edge of the obverse, appears originally to have been part of the wire coil, soldered onto the disc to fasten the coil loop.

8. Tin pendant with a free adaptation of the design of a coin of Tiberius (r.14–37 C.E.)

Suthiratana Foundation KLP (no number), Nakhon Si Thammarat and Bangkok. From Khlong Thom.

Diameter 18 mm. Weight 2.31 g. Preserved width of suspension loop 6 mm. Probably tin. Bibl.: Borell *et al.* 2014: 109, fig. 14a.b.

Obverse: Head to right in a beaded circle. Reverse: In a beaded circle a seated figure to the right, the chest turned to front. The figure is dressed as indicated by lines across the body. The left hand is in front of it and holds a branch, the right hand is raised behind.

Cast. The tubular suspension loop with seven ribs was cast together with the disc; it is now very fragile owing to a crack across it, but the loop seems never to have been completely detached. Small bits missing along the edge of the disc and on one end of the loop.

9. Tin pendant vaguely recalling the design of a Roman coin

Suthiratana Foundation KLP (no number), Nakhon Si Thammarat and Bangkok. From Khlong Thom.

Diameter 21 mm. Weight 5.64 g. Width of suspension loop 13 mm. Tin (for the chemical analysis, see note 40).

Unpublished.

Obverse: Head to left, some raised dots, raised fillet along the edge.

Reverse: Quadruped to right, raised fillet along the edge.

Cast. The cast-on suspension loop is rather long, apparently it was designed to have six or seven ribs. The pendant has not been reworked after casting, the superfluous metal around the suspension loop and along the joint of the two halves of the casting mould has not been trimmed.

10. Mould for casting jewellery

Wat Khlong Thom Museum (no number), Khlong Thom. From Khlong Thom.

Length approx. 4.8 cm. Height approx. 4 cm. Stone.

Bibl.: Vallibhotama 1988: 41 ill. top left. – Nunsuk 2007: 28, ill. 3 top. – Borell *et al.* 2014: 109, fig. 15.

Rectangular mould, damaged on three corners. Both sides prepared for casting jewellery ornaments in the way of bivalve moulds, remains of two dowel holes are found on each side. The corresponding halves for each side are now missing. Since the inlet-channels open to opposite sides of the mould, even combined with the missing halves no simultaneous casting in a tripartite mould would have been possible.

Side A is prepared for casting a disc-shaped pendant together with tubular suspension loop. The disc has a diameter of approx. 2.0 cm. In a beaded circle, a figure seated on a chair, to the left, one hand in front holding a branch, the other hand raised back holding a long staff. A cavity attached to the top of the disc provides for a suspension loop (width approx. 0.7 cm) with five ribs. On both sides of the loop is a horizontal groove, semicircular in cross section but less deeply incised than the loop; a rod, introduced in the guideway of this groove before casting, would pass through the intended suspension loop, and in this way keep the hole through the suspension loop open during casting.

Side B of the stone mould is prepared for casting two large beads in the shape of flat collared discs. A horizontal groove of semicircular cross section, less deeply incised

than the bead discs, runs across the middle of them for the whole length of the stone allowing for the insertion of a rod to keep the hole open during casting for a later use of the ornaments as beads.

References

- Axboe, Morten
1981 The Scandinavian Gold Bracteates. Studies on their Manufacture and Regional Variations. In: *Acta Archaeologica* 52: 1–100. Kopenhagen.
- Axboe, Morten
2004 Die Goldbrakteaten der Völkerwanderungszeit – Herstellungsprobleme und Chronologie. *Reallexikon der Germanischen Altertumskunde* Ergänzungsband 38. Berlin/New York.
- Axboe, Morten/Arrhenius, Birgit
1982 On the Manufacture of the Gold Bracteates – Zur Herstellung von Goldbrakteaten. In: *Frühmittelalterliche Studien* 16: 302–318. Berlin/New York.
- Barram, Andrew/Glover, Ian
2008 Re-thinking Dvaravati. In: Pautreau, J./Coupey, A.-S./Zeitoun, V./Rambault, E. (eds.), *Archaeology in Southeast Asia. From Homo Erectus to the Living Traditions. Choice of Papers from the 11th International Conference of the European Association of South-east Asian Archaeologists, Bougon, 25th–29th September 2006*, pp. 175–182. Chiang-Mai.
- Behera, Karuna Sagar
1999 Maritime Activities of Orissa. In: Behera, K. S. (ed.), *Maritime Heritage of India*, pp. 162–171. New Delhi.
- Bellina, Bérénice
2007 Cultural Exchange between India and Southeast Asia: Production and Distribution of Hard Stone Ornaments (VI c. B.C. – VI c. A.D.). Paris.
- Bellina, Bérénice/Glover, Ian
2004 The Archaeology of Early Contact with India and the Mediterranean World, from the fourth century B.C. to the fourth century A.D. In: Glover, I./Bellwood, P. (eds.), *Southeast Asia from Prehistory to History*, pp. 68–88. London.
- Bellina-Pryce, Bérénice/Silapanth, Praon
2006 Weaving Cultural Identities on Trans-Asiatic Networks: Upper Thai-Malay Peninsula – an Early Socio-political Landscape. In: *Bulletin de l'École Française d'Extrême-Orient* 93: 257–293. Paris.
- Bellina, Bérénice/Silapanth, Praon/Chaisuwan, Boonyarit/Thongcharoenchaikit, Cholawit/Allen, Jane/Bernard, Vincent/Borell, Brigitte/Bouvet, Phaedra/Castillo, Cristina/Dussubieux, Laure/Malakie, Julie/Peronnet, Sophie/Pryce, Thomas Oliver
2014 The Development of Coastal Polities in the Upper Thai-Malay Peninsula in the Late First Millennium B.C.E. In: Revire, N./Murphy, St. A. (eds.), *Before Siam: Essays in Art and Archaeology*, pp. 68–89. Bangkok.
- Berggren, J. Lennart/Jones, Alexander
2000 Ptolemy's *Geography*. An annotated translation of the theoretical chapters. Princeton.
- Berghaus, Peter
1989 Funde severischer Goldmünzen in Indien. In: Drexhage, H.-J./Sünkes, J. (eds.), *Migratio et commutatio: Studien zur Alten Geschichte und deren Nachleben. Thomas Pekáry zum 60. Geburtstag am 13. September 1989*, pp. 93–101. St. Katharinen.
- 1991 Roman Coins from India and Their Imitations. In: Jha, A. K. (ed.), *Coinage, Trade and Economy, January 8th–11th, 1991, 3rd International Colloquium*, pp. 108–121. Anjaneri.
- 1992a Three Denarii of Tiberius from Arikamedu. In: Mac Dowall, D. W./Sharma, S./Garg, S. (eds.), *Indian Numismatics, History, Art, and Culture. Essays in Honour of Dr. P. L. Gupta, Vol. I: 95–98*. Delhi.
- 1992b Zu den römischen Fundmünzen aus Indien. In: *Schweizerische Numismatische Rundschau* 71: 226–247. Bern.
- 1993 Roman Aurei from Kumbalam, Ernakulam District, Kerala. In: *Studies in South Indian Coins* 3: 29–42. Madras.
- 1994 Two Imitations out of the Valluvaly Hoard of Roman *Aurei* (Kerala) 1983. In: *Studies in South Indian Coins* 4: 33–42. Madras.
- 1998 Republican and Early Roman Imperial Denarii from India. In: Jha, A. K./Garg, S. (eds.), *Ex Moneta: Essays on Numismatics, History and Archaeology in honour of Dr. David W. MacDowall, Vol. 1*, 119–127. New Delhi.
- 2000 Gestopfte Löcher auf römischen Goldmünzen aus indischen Funden. In: Kluge, B./Weisser, B. (eds.), *Akten-Proceedings-Actes, XII. Internationaler Numismatischer Kongress, Berlin 1997*, pp. 499–502. Berlin.

- Bhandarkar, Devadatta Ramakrishna
1920 Excavations at Besnagar (near Bhilsa in Gwalior State) 1913–14. In: Archaeological Survey of India Annual Report 1914–1915: 66–88. Calcutta.
- Bjørkelo, A./Meyer, J. C./Seland, Eivind Heldaas
2007 Definite Places, Translocal Exchange. In: Seland, E. H. (ed.), *The Indian Ocean in the Ancient Period*, pp. 3–8. Oxford.
- BMCRE
1923–50 *Coins of the Roman Empire in the British Museum*. (Mattingly, Harold *et al.*, eds.). London 1923–1950; 21975.
- Boisselier, Jean
1965 Récentes recherches archéologiques en Thaïlande. Rapport préliminaire de Mission (25 juillet–28 novembre 1964). In: *Arts Asiatiques* 12: 125–174. Paris.
- Borell, Brigitte
2008a Some Western Imports Assigned to the Oc Eo Period Reconsidered. In: Pautreau, J.-P./Coupey, A.-S./Zeitoun, V./Rambault, E. (eds.), *From homo erectus to the Living Traditions*. Choice of Papers from the International Conference of the European Association of Southeast Asian Archaeologists, Bougon, 25th–29th September 2006, pp. 167–174. Chiang Mai.
2008b The Early Byzantine Lamp from Pong Tuk. In: *The Journal of the Siam Society* 96: 1–26. Bangkok.
2012 Roman Coins and Derivatives. Pendants Imitating the Design of a Roman Coin from Sites in Southeast Asia. Paper presented at the 14th International Conference of the European Association of Southeast Asian Archaeologists, Dublin, September 2012.
2013 The Glass Vessels from Guangxi and the Maritime Silk Road in the Han Period (206 B.C.E. to 220 C.E.). In: Klokke, Marijke J./Degroot, Veronique (eds), *Unearthing Southeast Asia's Past*, vol. 1. Proceedings of the 12th International Conference of the European Association of Southeast Asian Archaeologists, Leiden September 2008, pp. 142–154. Singapore.
- Borell, Brigitte/Bellina, Bérénice/Chaisuwan, Boonyarit
2014 Contacts between the Upper Thai-Malay Peninsula and the Mediterranean World. In: Revire, N./Murphy, St. A. (eds.), *Before Siam: Essays in Art and Archaeology*, pp. 98–117. Bangkok.
- Bourdonneau, Eric
2003 The Ancient Canal System of the Mekong Delta. Preliminary Report. In: Karlström, A./Källén, A. (eds.), *Fishbone and Glittering Emblems*. Southeast Asian Archaeology 2002, pp. 257–270. Stockholm.
2007 Réhabiliter le Funan. Óc Eo ou la première Angkor. In: *Bulletin de l'École Française d'Extrême-Orient* 94: 111–158. Paris.
- Brancaccio, Pia
2005 Perceptions of “Westerners” in Sātavāhana Times: The Archaeological Evidence. In: Jarrige, C./Lefèvre, V. (eds.), *South Asian Archaeology 2001*. Proceedings of the Sixteenth International Conference of the European Association of South Asian Archaeologists, held in Collège de France, Paris, 2–6 July 2001, pp. 401–406. Paris.
- Bronson, Bennet
1990 Glass and Beads at Khuan Lukpad, Southern Thailand. In: Glover, I./Glover E. (eds.), *Southeast Asian Archaeology 1986*. Proceedings of the First Conference of the Association of Southeast Asian Archaeologists in Western Europe. (=BAR International Series 561), pp. 213–230. Oxford.
- Burnett, Andrew
1998 Roman Coins from India and Sri Lanka. In: Bopearachchi, O./Weerakoddy, D. P. M. (eds.), *Origin, Evolution and Circulation of Foreign Coins in the Indian Ocean* (Proceedings of the Numismatic Workshop “Origin and Evolution of Coins” and the International Seminar “Circulation of Foreign Coins in Sri Lanka and Ancient Sea Routes in the Indian Ocean”, Colombo 8–10 September, 1994), pp. 179–189. New Delhi.
- Bursche, Aleksander
2008 Function of Roman Coins in Barbaricum of Later Antiquity. An Anthropological Essay. In: Bursche, A./Ciołek, R./Wolters, R. (eds.), *Roman Coins Outside the Empire. Ways and Phases, Contexts and Functions*. Proceedings of the ESF/SCH Exploratory Workshop, Radziwiłł Palace, Nieborów (Poland), 3–6 September 2005. (Collection Moneta 82), pp. 395–416. Wetteren.
- Carson, Robert Andrew Glindinning
1990 *Coins of the Roman Empire*. London/Nex York.
- Casson, Lionel
1989 *The Periplus Maris Erythraei: Text with Introduction, Translation, and Commentary*. Princeton.
- Chaisuwan, Boonyarit
2011 Early Contacts between India and the Andaman Coast in Thailand from the Second

- Century B.C.E. to Eleventh Century C.E. In: Manguin, P.-Y./Mani, A./Wade, G. (eds.), *Early Interactions between South and Southeast Asia. Reflections on Cross-Cultural Exchange*, pp. 83–111. Singapore.
- Cimino, Rosa Maria (ed.)
1994 *Ancient Rome and India. Commercial and Cultural Contacts Between the Roman World and India*. New Delhi.
- Coedès, George
1947 *Fouilles en Cochinchine. Le site de Go Oc Eo, ancien port du royaume de Fou-Nan*. In: *Artibus Asiae* 10(3): 193–199. Lugano.
- Crespigny, Rafe de
1990 *Generals of the South: the Foundation and Early History of the Three Kingdom State of Wu*. Canberra.
- Cribb, Joe
1999 *Magic Coins of Java, Bali and the Malay Peninsula, Thirteenth to Twentieth Centuries*. London.
- Crow, Michael J./Khin Zaw
2011 *Metalliferous Metals*. In: M. F. Ridd/A. J. Barber/M. J. Crow (eds.), *The Geology of Thailand*, pp. 459–492. London.
- Cunningham, Alexander
1892 *Mahâbodhi or the Great Buddhist Temple under the Bodhi Tree at Buddha Gaya*. London.
- Demougeot, Emilienne.
1984 *L'image officielle du barbare dans l'empire romain d'Auguste à Théodose*. In: *Ktema* 9: 123–143. Strasbourg.
- Deo, Shantaram Bhalchandra/Gupte, Ramash Shankar
1974 *Excavations at Bhokardan (Bhogavardhana) 1973*. Nagpur: Nagpur University; Aurangabade. Marathwada University.
- Deppert-Lippitz, Barbara
1985 *Goldschmuck der Römerzeit im Römisch-Germanischen Zentralmuseum. Kataloge vor- und frühgeschichtlicher Altertümer, Band 23*. Bonn.
- Devaraj, D. V.
1997 *A Roman Terracotta Pendant from Sannati in Karnataka*. In: *Studies in South Indian Coins* 7: 45–48. Madras.
- Dihle, Albrecht
1984 *Antike und Orient. Gesammelte Aufsätze*, Pöschl, V./Petersmann, H. (eds.), *Supplement zu den Sitzungsberichten der Heidelberger Akademie der Wissenschaften, Philosophisch-historische Klasse, Band 2, Jahrgang 1983*. Heidelberg.
- Duncan-Jones, Richard
1994 *Money and Government in the Roman Empire*. Cambridge.
- Ganesh, Krishnamurthy
2010 *Some More Coins from Banavasi Region*. In: *Studies in South Indian Coins* 20: 57–65. Madras.
- Glover, Ian C.
1996 *The Archaeological Evidence for Early Trade between India and Southeast Asia*. In: Reade, J. (ed.), *The Indian Ocean in Antiquity*, pp. 365–400. London & New York.
- Glover, Ian C./Bellina, Bérénice
2011 *Ban Don Ta Phet and Khao Sam Kaeo: The Earliest Indian Contacts Re-assessed*. In: Manguin, P.-Y./Mani, A./Wade, G. (eds.), *Early Interactions between South and Southeast Asia: Reflections on Cross-Cultural Exchange*, pp. 17–45. Singapore.
- Graf, D. F.
1996 *The Roman East from the Chinese perspective*. In: *International Colloquium on Palmyra and the Silk Road, Annales archéologiques Arabes Syriennes* 42: 199–216. Damascus.
- Gupta, Chandrashekar
1993 *Repoussé Technique of Minting Coins*. In: *Numismatic Studies* 2: 71–84. London.
- 2004 *Foreign Coins and Imitations Used for Ornamentation*. In: MacDowall, D.W./Jha, A. (eds.), *Foreign Coins found in the Indian sub-continent. 4th International Colloquium (8–10 January, 1995)*, Indian Institute of Research in Numismatic Studies, pp. 116–120. Anjaneri.
- Gupta, Parmeshwari Lal
1959 *Gold Amulets and the Kushana History*. In: *Journal of the Numismatic Society of India* 21: 188–190. Bombay.
- 1965 *Roman Coins from Andhra Pradesh*. Andhra Pradesh Government Museum Series 10. Hyderabad.
- Higham, Charles F. W.
2002 *Early Cultures of Mainland Southeast Asia*. Bangkok.
- 2003 *The Civilization of Angkor*. London.
- Indrawooth, Phasook
1992 *Amulets for Merchants*. In: Glover, Ian/Suchittha, Pornchai/Villiers, John (eds.), *Early Metallurgy, Trade and Urban Centres in Thailand and Southeast Asia*, pp. 163–173. Bangkok.

- 2004 The Archaeology of the Early Buddhist Kingdoms of Thailand. In: Glover, Ian/Bellwood, P. (eds.), *Southeast Asia from Prehistory to History*, pp. 120–148. London & New York.
- 2009 Un antique royaume urbanisé de Thaïlande. In: Baptiste, Pierre/Zéphir, Thierry (eds.), *Dvāravatī. Aux sources du bouddhisme en Thaïlande*, pp. 30–45. Paris.
- Jacq-Hergoualc'h, Michel
2002 The Malay Peninsula. Crossroads of the Maritime Silk Road (100 B.C. – 1300 A.D.). In: *Handbook of Oriental Studies Sect.3 vol. 13*. Leiden/Boston/Cologne.
- JaoTsung-I/Vandermeersch, Léon
2006 Les relations entre la Chine et le monde iranien dans l'Antiquité historiquement revisitée à la lumière des découvertes archéologiques du dernier quart de siècle. In: *Bulletin de l'École Française d'Extrême-Orient* 93: 207–245. Paris.
- Johrden, Kathrin/Wolters, Reinhard
2008 Die römischen Fundmünzen in Indien. In: Bursche, A./Ciołek, R./Wolters, R. (eds.), *Roman Coins Outside the Empire. Ways and Phases, Contexts and Functions. Proceedings of the ESF/SCG Exploratory Workshop, Radziwiłł Palace, Nieborów (Poland), 3–6 September 2005 (Collection Moneta 82)*, pp. 341–354. Institute of Archaeology, University of Warsaw. Wetteren.
- Kaiser-Raiß, Maria Regina
1980 Die stadtrömische Münzprägung während der Alleinherrschaft des Commodus. Untersuchungen zur Selbstdarstellung eines römischen Kaisers. Frankfurt a. M.
- Krishnamurthy, R.
1998 Imitation Roman Gold Coins from Tirukoilur hoard, Tamilnadu. In: Jha, A. K./Garg, S. (eds.), *Ex Moneta: Essays on Numismatics. History and Archaeology in Honour of Dr. David W. MacDowall, Vol. 1: 145–149*. New Delhi.
2000 A Roman Coin Bronze Die from Karur, Tamilnadu, India. In: Kluge, B./Weisser, B. (eds.), *XII. Internationaler Numismatischer Kongress Berlin 1997 – Akten-Proceedings-Actes, vol. I*, pp. 552–553. Berlin.
2010 An Imitation Coin Pendant from Banavasi. In: *Studies in South Indian Coins* 20: 40–43. Madras.
- Krishna Sastry, V. V.
1983 The Proto and Early Historical Cultures of Andhra Pradesh. Hyderabad.
- Lal, B. B.
1949 Sisupalgarh 1948: an Early Historical Fort in Eastern India. In: *Ancient India. Bulletin of the Archaeological Survey of India* 5: 62–105. Nex Delhi.
- Lansing, J. S./Redd, A. J./Karafet, T. M./Watkins, J./Ardika, J. W./Surata, S. P. K./Schoenfelder, J. S./Campbell, M./Merriwether, A. M./Hammer, M. F.
2004 An Indian Trader in Ancient Bali? In: *Antiquity* 78 (300): 287–293. Durham.
2006 Reply. In: *Antiquity* 80 (305) (<http://antiquity.ac.uk/projgall/lansing/#response>)
- Leslie, Donald D./K. H. J. Gardiner
1996 The Roman Empire in Chinese Sources. *Studi Orientali* XV. Rome.
- Lévy, Paul
1946 Fouilles d'époque romaine faites aux Indes françaises et en Indochine à Virapatnam et à Oc-Eo. In: *Séance du 14 juin. Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 1946 (2): 227–228. Paris.
- Longhurst, Albert Henry
1938 The Buddhist Antiquities of Nāgārjunakonda, Madras Presidency. In: *Memoirs of the Archaeological Survey of India No. 54*. New Delhi, reprint 1999.
- Longpérier, Andrien de
1864 *Revue numismatique, Nouvelle serie*, 2 IX: 481. Paris.
- Loofs, Helmut H.E.
1979 Problems of Continuity between the pre-Buddhist and Buddhist Periods in Central Thailand, with special reference to U-Thong. In: R.B.Smith/W.Watson (eds.), *Early South East Asia*. Oxford.
- Mac Dowall, David William
2008 The context and function of the Roman coins found in India. In: Bursche, A./Ciołek, R./Wolters, R. (eds.), *Roman Coins Outside the Empire. Ways and Phases, Contexts and Functions. Proceedings of the ESF/SCG Exploratory Workshop, Radziwiłł Palace, Nieborów (Poland), 3–6 September 2005 (Collection Moneta 82)*, pp. 331–340. Institute of Archaeology, University of Warsaw. Wetteren.
- Mac Dowall, David William/Jha, Amal Kumar
1992 Three Indian Copies of the PONTIF MAXIM denarius of Tiberius. In: *Numismatic Digest* 16: 52–57. Nashik.

- Malleret, Louis
 1951 Les fouilles d'Oc-èo (1944). Rapport préliminaire. In: Bulletin de l'École Française d'Extrême-Orient 45(1): 75–88. Paris.
- 1962 L'Archéologie du Delta du Mékong. Tome Troisième. La Culture du Fou-Nan. Publications de L'École Française d'Extrême-Orient, Volume 43. Paris.
- Manguin, Pierre-Yves
 2004 The Archaeology of Early Maritime Polities of Southeast Asia. In: Glover, Ian/Bellwood, Peter (eds.), Southeast Asia: From Prehistory to History, pp.282–313. London & New York.
- 2009 The Archaeology of Fu Nan in the Mekong River Delta: The Oc Eo Culture of Viet Nam. In: Tingley, Nancy (ed.), Arts of Ancient Viet Nam. From River Plain to Open Sea, pp.100–118. New York & Houston.
- McLaughlin, Raoul
 2010 Rome and the Distant East. Trade Routes to the Ancient Lands of Arabia, India and China. London & New York.
- Meyer, J. C.
 2007 Roman Coins as a Source for Roman Trading Activities in the Indian Ocean. In: Seland, E. H. (ed.), The Indian Ocean in the Ancient Period: Definite Places, Translocal Exchange (British Archaeological Reports British Series), pp. 59–67. Oxford.
- Mitchiner, Michael
 2004 The Interpretation of Foreign Coins Found in Southernmost India. In: MacDowall, D. W./Jha, A. (eds.), Foreign Coins found in the Indian sub-continent. 4th International Colloquium (8–10 January, 1995), Indian Institute of Research in Numismatic Studies, pp. 15–24. Anjaneri.
- Mohanty, Rabindra Kumar/Smith, Monica L.
 2009 Excavations at Sisupalgarh, 2008. In: Man and Environment (Journal of the Indian Society for Prehistoric and Quaternary Studies) 34(1): 47–56.
- Narasimha Murthy, A. V.
 1992 Roman Coins from Karnataka. In: Studies in South Indian Coins 2: 51–59. Madras.
- 1997 A Roman Coin Mould from Banavasi. In: Journal of the Numismatic Society of India 46: 45–46, Pl. VI, 7. Bombay.
- Narasimha Murthy, A. V./Devaraja, D. V.
 1995 A Roman Coin Mould from Talkad Excavations. In: Studies in South Indian Coins 5: 59–62. Madras.
- Narasimha Murthy, A. V./Devaraj, D. V./Krishnappa, M. V./Krishna Murthy, M. S./Mahadevaiah, M. P./Havalaiah, N./Rangaraju, N. S./Dayananda Patel, T./Prabhu, K.
 1997 Excavations at Banavasi. Mysore.
- Nunsuk, Wannasan
 2007 Sayam prathet: Kantittolok phainok lae phatthanakan khong banmuang [History of Siam and the Cultural, Social, and Political Development in Southeast Asia]. Bangkok (in Thai).
- Parker, Grant
 2008 The Making of Roman India. Cambridge.
- Peter, Markus
 2008 Imitations of Roman Coins in Non-Roman Contexts: Some Remarks. In: Bursche, A./Ciolek, R./Wolters, R. (eds.), Roman Coins Outside the Empire. Ways and Phases, Contexts and Functions. Proceedings of the ESF/SCG Exploratory Workshop, Radziwiłł Palace, Nieborów (Poland), 3–6 September 2005, pp. 389–394. (Collection Moneta 82) Institute of Archaeology, University of Warsaw. Wetteren.
- 2011 Von Betrug bis Ersatzkleingeld – Falschmünzerei in römischer Zeit. In: Reuter, M./Schivone, R. (eds.), Gefährliches Pflaster. Kriminalität im römischen Reich, Xantener Berichte 21, pp. 107–120. Mainz.
- Pongpanich, Bunchar
 2009 Roi lukpat/Beyond Beads. (In Thai and English). Bangkok.
- Pryce, Thomas Oliver/Bellina-Pryce, Bérénice/Bennett, Anna T.N.
 2006 The Development of Metal Technologies in the Upper Thai-Malay Peninsula: Initial Interpretation of the Archaeometallurgical Evidence from Khao Sam Kaeo. In: Bulletin de l'École Française d'Extrême-Orient 93: 295–316. Paris.
- Ptak, Roderich
 2007 Die maritime Seidenstrasse. Küstenräume, Seefahrt und Handel in vorkolonialer Zeit. München.
- Quaritch Wales, Horace G.
 1969 Dvāravatī. The Earliest Kingdom of Siam (6th to 11th century A.D.). London.
- Rammanat, Thawatchai
 2009 Pre-History Ornament & Beads in Thailand. Vol.1: Pasark River Basin. Bangkok (In Thai).

- Raschke, Manfred G.
1978 New studies in Roman commerce with the East. In: Temporini, Hildegard (ed.), *Aufstieg und Niedergang der Römischen Welt II.9.2*, pp. 604–1361. Berlin/New York.
- Raunig, Walter
1971 Bernstein, Weihrauch, Seide. Waren und Wege der antiken Welt. Wien.
- Ray, Himanshu Prabha
1986 Monastery and Guild. Commerce under the Sātavāhanas. Delhi.
1998 Ter: An Early Centre on the Trans-Peninsular Route. In: Jha, A. K./Garg, S. (eds.), *Ex Moneta: Essays on Numismatics, History and Archaeology in honour of Dr. David W. MacDowall*, Vol. 2, pp. 501–510. New Delhi.
- Reinecke, Andreas/Nguyen Thi Thanh Luyen
2009 Recent Discoveries in Vietnam. Gold Masks and Other Precious Items. In: *Arts of Asia* 39(5): 58–67. Hongkong.
2010 „...was man dort am meisten schätzt, ist chinesisches Gold und Silber“. In: *Antike Welt* 2010(3): 74–83. Darmstadt.
- RIC
1923- The Roman Imperial Coinage. (Mattingly, H./Sydenham, E. A./Sutherland, C. H. V. *et al.*, eds.). London.
- Robertson, Anne S.
1971 Roman Imperial Coins in the Hunter Coin Cabinet. University of Glasgow. Vol.II: Trajan to Commodus. Oxford.
1977 Roman Imperial Coins in the Hunter Coin Cabinet. University of Glasgow. Vol.III: Pertinax to Aemilian. Oxford.
- Sankalia, Hashmuk Dhirajlal/Deo, Shantaram Bhalchandra /Ansari, Zainuddin Dawood/Ehrhardt, Sophie
1960 From History to Pre-History at Nevasa (1954–56). Poona.
- Sastri, Tutupalli V. G./Kasturi Bai, M./Rao, J. Vara Prasada
1984 Veerapuram, a Type Site for Cultural Study in the Krishna Valley. Hyderabad.
- Sathyamurthy, T.
1992 Catalogue of Roman Gold Coins (in the Collections of Department of Archaeology, Kerala). Thiruvananthapuram.
- Schulzki, Heinz-Joachim
1996 Die Antoninianprägung der gallischen Kaiser von Postumus bis Tetricus (AGK). Typenkatalog der regulären und nachgeprägten Münzen. Bonn.
- Seland, Eivind H.
2007 Ports, Ptolemy, Periplus and Poetry – Romans in Tamil South India and on the Bay of Bengal. In: Seland, E. H. (ed.), *The Indian Ocean in the Ancient Period. Definite Places, Translocal Exchange*, pp. 69–82. Oxford.
- Srisuchat, Amara
1998 A Proposed Outline of the Chronology of Early History in Thailand: Dating and Re-analysis of Data from Recently Excavated Sites in Thailand. In: M. J. Klokke, M. J./de Bruijn, T., (eds.), *Southeast Asian Archaeology 1986. Proceedings of the 6th International Conference of the European Association of Southeast Asian Archaeologists Leiden*, 2–6 September 1996, pp. 99–115. Hull.
- Stengs, Irene
2009 Worshipping the Great Moderniser: King Chulalongkorn, Patron Saint of the Thai Middle Class. Singapore.
- Stone, Elizabeth Rosen
1994 The Buddhist Art of Nagarjunakonda. *Buddhist Tradition Series*, Vol. 25. Delhi.
- Strack, Paul L.
1937 Untersuchungen zur römischen Reichsprägung des zweiten Jahrhunderts III: Die Reichsprägung zur Zeit des Antoninus Pius. Stuttgart.
- Strauch, Ingo (ed.).
2012 Foreign Sailors on Socotra. The Inscriptions and Drawings from the Cave Hoq. Vergleichende Studien zu Antike und Orient, Band 3. Bremen.
- Stückelberger, Alfred/Graßhoff, Gerd (eds.)
2006 *Klaudios Ptolemaios Handbuch der Geographie*. 1. Teil. Basel.
- Subrahmanyam, Bandaru
1998 *Buddhist Relic Caskets in South India*. Delhi.
- Suresh, S.
2004 *Symbols of Trade. Roman and Pseudo-Roman Objects Found in India*. New Delhi.
- Szaivert, Wolfgang
1986 Die Münzprägung der Kaiser Marcus Aurelius, Lucius Verus und Commodus (161–192). *Moneta Imperii Romani* 18. Wien.
- Tambiah, Stanley Jeyaraja
1984 *The Buddhist Saints of the Forest and the Cult of Amulets: A Study in Charisma, Hagiography, Sectarianism, and Millennial Buddhism*. Cambridge (reprint 1993).

- Thierry, François
1993 Sur les monnaies sassanides trouvées en Chine. In: Gyselen, R. (ed.), *Circulation des monnaies, des marchandises et des biens*, Res Orientales V, pp. 89–139 Bures-sur-Yvette.
- Thierry, François/Morrisson, Cécile
1994 Sur les monnaies byzantines trouvées en Chine. In: *Revue Numismatique*, sér.6, 36: 109–145. Paris.
- Thurston, Edgar
1889 On a Recent Discovery of Roman Coins in Southern India. In: *Numismatic Chronicle*, 3rd series, vol. IX: 325–328. London
- Tomber, Roberta
2008 *Indo-Roman Trade. From Pots to Pepper*. London.
- Turner, Paula J.
1989 Roman Coins from India. Institute of Archaeology, Occasional Publication No. 12 (= Royal Numismatic Society, Special Publication No. 22). London.
- Turner, Paula J./Cribb, Joe
1996 Numismatic Evidence for the Roman Trade with Ancient India. In: Reade, J. (ed.), *The Indian Ocean in Antiquity*, pp. 309–319. London & New York.
- Vallibhotama, Srisakra
1988 Development of Archaeology in the South: A Comprehensive Evaluation. In: *Muang Boran Journal* 14(3): 39–50. Bangkok.
- Veraprasert, Mayuree
1992 Khlong Thom: An Ancient Bead-manufacturing Location and an Ancient Entrepot. In: Glover, Ian/Suchitta, Pornchai/Villiers, John (eds.), *Early Metallurgy, Trade and Urban Centres in Thailand and Southeast Asia*. 13 archaeological essays, pp. 149–161. Bangkok.
- Vickery, Michael
2003–2004. Funan Reviewed: Deconstructing the Ancients. In: *Bulletin de l'École Française d'Extrême-Orient* 90–91: 101–143. Paris.
- Wang Gungwu
1959 The Nanhai Trade. A Study of the Early History of Chinese Trade in the South China Sea. In: *Journal of the Malaysian Branch of the Royal Asiatic Society* 31(2): 1–135. Kuala Lumpur.
- Wheatley, Paul
1961 *The Golden Khersonese. Studies in the Historical Geography of the Malay Peninsula before A.D. 1500*. Kuala Lumpur.
- Wheeler, Mortimer E.
1951 Roman Contact with India, Pakistan and Afghanistan. In: Grimes, W. F. (ed.), *Aspects of Archaeology in Britain and Beyond*, pp. 345–381. London.
- 1954 *Rome Beyond the Imperial Frontiers*. London.
- Young, Gary K.
2001 *Rome's Eastern Trade. International Commerce and Imperial Policy*, 31 B.C. – A.D. 305. London and New York.
- Yule, Paul/Böhler, Wolfgang
2004 Sisupalgarh: An Early Historic Fortress in Coastal Orissa and its Cousins. In: *Beiträge zur Allgemeinen und Vergleichenden Archäologie* 24: 15–29. Mainz
- Yule, P. *et al.*
2008 Early Historic Sites in Orissa. In: <http://archiv.ub.uni-heidelberg.de/savifadok/volltexte/2008/147> (accessed Sept. 2013).
- Zwalf, Wladimir (ed.)
1985 *Buddhism. Art and Faith*. London.

