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Reinhold Walburg

Indian silver punch-marked coins in ancient Ceylon – a case study: The Tissamahārāma hoards

Keywords: Śrī Lankā - monetary history - punch-marked coins - coin hoards and single finds

Abstract: The article deals with two small hoards of punch-marked coins unearthed during the course of archaeological excavations in Tissamahārāma, the capital city of the ancient dominion of Rohaṇa, Śrī Laṅkā. The comparison of the coins from the two complexes which belong to the second and third century AD respectively provides insights into the local monetary history of this city. The discovery of these hoards offered the opportunity to look beyond the local coin circulation and to examine the role these coins played in the economic history of Śrī Laṅkā in general; this in turn necessitated a compilation and discussion of all known punch marked coins hitherto unearthed on the island.

A great variety of ancient coins was unearthed during the course of the German – Śrī Laṅkān archaeological excavations at Tissamahārāma, the capital of the ancient principality of Rohana in the south of Śrī Lankā. Apart from the two hoards that are the subject of this condensed study, all the other items discovered were single finds. In the years 2002 and 2007 respectively, the excavators were fortunate enough to uncover two small collective finds of silver punch-marked coins. The first one (Walburg 2008: Cat. no. 185) came from a stratified layer datable to the third century AD and consisted of 18 specimens, supplemented by another five items discovered close to this small hoard; the second hoard, dating to the second century AD, was brought to light in 2007 and consisted of 26 specimens. The present contribution aims to publish the last-mentioned hoard in detail, and to compare it with the collective find of 2002 as well as with the single specimens from this site and with other published material.

Stuck together, the coins were discovered as a lump in the soil. Judging from the position of the individual coins and from the traces of a coarsely meshed canvas it becomes evident that they once had been stored, probably as a 'turret', being wrapped in textile (fig. 1). Through the pressure of the soil the original 'turret' was deformed into a V-shaped pile with three covering specimens. However, unlike in cases of great numbers of coins stored in a preferably inorganic receptacle in a discernible sequence, we can say nothing about a probable hoarding behaviour of the person who buried the treasure.

The coins (see Appendix) – except two cast imitations all originals of the Mauryan $k\bar{a}rs\bar{a}pana$ type – are classified according to Gupta/Hardaker 1985 (hereafter abbreviated as GH). Being fully aware of the problems of absolute dating the punch-marked coins (Cribb 1995; Errington 2003) this system is adopted to show the relative chronology; as in hoards of the second and third centuries AD

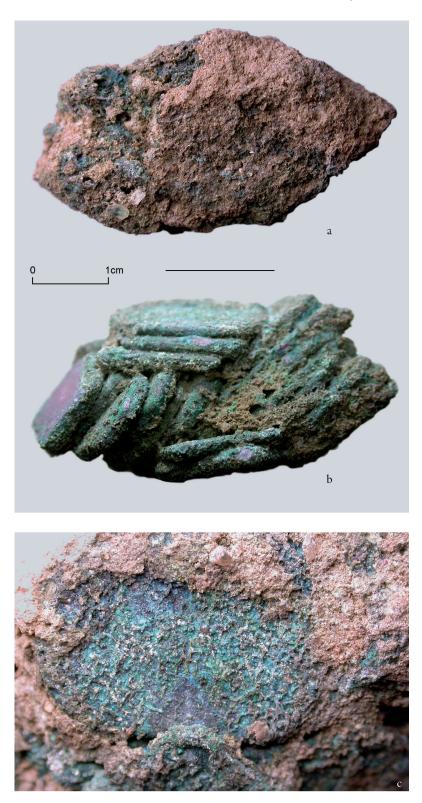


Fig. 1. Hoard from Tissamahārāma found in 2007. a In original condition, b Lateral view, c Traces of textile wrapping (enlarged, not to scale). outside India the absolute chronology of their pre-Christian contents' is of minor importance in answering questions about coin circulation in the periods to which the hoards belong.

It goes without saving that the significance of this hoard (fig. 2) together with the second one of 2002 and the number of single finds from this location cannot be overestimated. However, to outline concisely the most likely role the punch-marked coins played in Śrī Lankan monetary and economic history, much more reliable material like this is needed. As there are, unfortunately, no further exploitable stratified hoards or single finds in considerable numbers¹, we are at the moment confined to the Tissamahārāma data. Hardly of any value are the suspected contents of two alleged money boxes purportedly discovered also at Tissamahārāma (Akurugodella and Niyadella: Bopearachchi/ Wickremesinhe 1999: 80-85; Walburg 2008: 111-112): Statements are contradictory or incomplete so that we have no solid ground to come to a conclusion. In addition, the presence of some specimens belonging to early GH series (II, III, IVb) in the first 'hoard' arouses suspicion; such early pieces are not attested from the local excavations. Furthermore, all specimens of this 'hoard' are - compared with the examples excavated - in a surprisingly good state of preservation. Of the second 'hoard' we are only told that it contained allegedly "32 Imperial Punchmarked coins ... in very worn condition" (Bopearachchi/Wickremesinhe 1999: 97 No. I.2); for whatever reason, only seven of these "AE silver washed" specimens are listed and pictured (Bopearachchi/Wickremesinhe 1999: G.87-93). Beyond these 'hoards' Bopearachchi/ Wickremesinhe mention only a solitary further punch-marked coin; from Mihintalē, 10 km east of the capital city of Anuradhapura. In conclusion, this data is very problematic and deductions can be drawn only from the reliable results of the Tissamahārāma excavations; these deductions apply for this specific place only and must be regarded as only provisory valid for the rest of the island. On the other hand, however, there is good reason to assume that Tissamahārāma is representative for an

ancient Ceylonese capital city with a moderate monetized economy which is certainly not akin to the conditions in rural areas.

When comparing the data of the two Tissamahārāma hoards, similarities as well as differences become apparent. Both hoards terminate with very few specimens of the last (VII) GH series and both show a peak in GH VIb. The earlier hoard of the second century AD, however, contains a larger quantity of older coins and the majority of the hoard's specimens are in a slightly but recognisably better condition than those of the later hoard of the third century AD with its preponderance of younger but generally worse preserved specimens; the single finds from both the second and third centuries support this observation. It is certainly no surprise that coins which circulated about one century longer than others are more worn. The interpretation of this evidence causes some problems. The simplification older hoard = prevalence of older coins, younger hoard = predominance of younger coins would be reasonable if we were speaking of a permanent coin production during the two centuries to which the hoards belong. Needless to say that this is not the case, as the manufacture of punch-marked coins in India ceased sometime in the second half of the second century BC (Cribb 1995: 8). Therefore, one would presume that both hoards were amassed from the same 'mixture' of punch-marked coins that had drifted slowly from North and Central India towards the island or was transferred to it as bulk. The archaeological data gained from the Tissamahārāma excavations enhance the complexity of the problem as they unequivocally show that there is not a single specimen prior to the first century BC and only six single specimens from this period (two in Walburg

The numismatic data of the British-Śrī Laṅkān excavations at Anurādhapura Salgaha Watta 2 (Coningham 2006; see Walburg 2008a) published not so long ago are, regrettably, almost completely worthless; and thus can be of no help in shedding light on the current chronological issue (see further below).

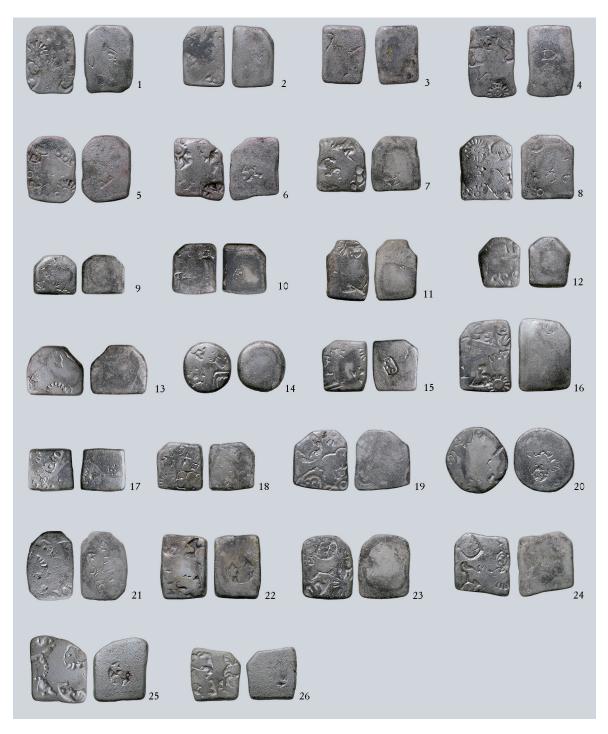


Fig. 2. The 26 punch-marked coins from the 2007 hoard (scale 1:1).

2008: 262, plus four not yet published items; and five \mathcal{R} -plated specimens²). From the first century AD there is likewise no example and punch-marked coins only begin to appear in numbers from the second century AD. Along general lines this is the chronological framework at Tissamahārāma.

To possibly cut the Gordian knot of the 'Indian punch-marked coins at Tissamahārāma and in Śrī Laṅkā in general' we should try to find convincing responses to the some questions. The first answer has to expound

where the pmc came from.

It appears quite logical to presume an Indian provenance of the punch-marked coins unearthed in Śrī Lańkā; less obvious, however, is the region of origin. Hoards of pmc are attested from a large number of places within the boundaries of the Mauryan Empire (Errington 2003: fig. 1). Farther to the south, punch-marked coins mainly appear in recognisable numbers as parts of mixed hoards with Roman aurei and denarii (Turner 1989: map 1 nos. 42, 66, and 24). The largest hoard in the south is known from Māmbalam which is part of Madras City (Turner 1989: 65, map no. 42). It consisted of 770 punch-marked coins together with one denarius of the Roman emperor Augustus (27 BC - AD 14). Further down the east coast, at Tondamanathan (Turner 1989: 78, map no. 66) 27 punch-marked coins and six aurei dating from (Augustus) Tiberius (AD 14-37) to Claudius (AD 41-54) were discovered. Moving to the southern west coast we find the Iyyal hoard (Turner 1989: 55, map no. 24) with 34 pmc, 12 aurei and 71 denarii, the Roman coins ranging from 91 BC to the time of Traianus (AD 98-117). Of the Pe(n)nar hoard in the Coimbatore District we only know that it consisted of a pot full of pmc among which there was a denarius of Augustus (Smith 1906: 135). Within the boundaries of the Mauryan Empire we have the Nasthul(l)apur find (Turner 1989: 70, map no. 53; Errington 2003: fig. 1) with eight punch-marked coins and 39 denarii of Augustus (27 BC - AD 14) and Tiberius

 $(AD 14-37)^3$. With this result we have almost the complete subcontinent at our disposal to mark a specific region as the possible origin for the punch-marked coins discovered in Śrī Laṅkā⁴. To narrow down the options it might be worthwhile to have a closer look at

their physical features.

The weights of silver punch-marked coins unearthed at Tissamahārāma are very low, which is a general feature of such specimens found in Śrī Lankā. Not a single Tissamahārāma coin has the presumed standard full-weight of 3.4 g, and only one specimen exceeds 3 g. The 68 silver coins of a hoard and a single specimen discovered in the capital city of Anurādhapura show a comparable feature. Their weights range from 2.8 to 0.9 g (Bopearachchi 2006: 7 [single coin]; Still 1907: 197-198 [hoard]). In both cases the state of preservation of the coins is "extremely worn" (Bopearachchi), and "very much worn" to "worn so smooth as to show no sign whatsoever" (Still). The 45 published specimens from the Mirigama hoard⁵, which are in a worn but comparatively good state of preservation, show weights between 2.51 and 1.15 g; and at least 15 of these should be identified as half-kārsāpaņas because of their

- ² Plated coins seemingly are not forgeries but result from a shortage of silver (Errington 2003: 80–81). Bopearachchi 1998: 154 is "under the impression that most of the punch-marked coins found in Sri Lanka were made according to the method known as 'silver amalgam'". This is definitely not the case.
- ³ Additionally, some less detailed documented hoards are given by Mitchiner 1995: 230: Nedumkandum 128 *R* (Republic to Augustus) + 2 pmc; Pennar 1 *R* (Augustus) + many pmc; Chavadipalayam 1*R* (Augustus) + many pmc.
- ⁴ The merely dotted map in Gupta/Hardaker 1985: 36 gives a cursory overview of the hoards and stray finds discovered all over India but regrettably provides no further details concerning the finds.
- ⁵ Wickramasinghe 2010. All but one of the identifiable specimens are said to belong to GH series IVd (only no. 30 of the catalogue is given as GH IIId). With the provided data the hoard at the present is regrettably of only very limited numismatic value.

very low weights (under 1.7 g). The rest of the 275 coins are allegedly in such a worn state of preservation that their identification was not possible. The same holds true for almost all of the Tissamahārāma specimens so that we may state - at least for the visually to examine specimens and except those of the 'money box hoard'6 - that the punch-marked coins discovered in Śrī Lańkā are a) of low to very low weights and b) for the most part heavily worn. This observation consequently leads to the question whether there is an interdependence between these two physical features, i.e. are the coins lightweight due to long circulation or were their weights originally already low? The answer is not as unequivocal as it should be. It is true that ten specimens from the 'money box hoard' show weights over 3 g, but at the same time there are also two not too badly preserved pieces with weights markedly under 2 g (1.60, 1.75), as well as two slightly above this weight (2.30, 2.36). This seems to indicate that at least in some clearly recognisable cases the low weights do not result from wear and tear and/or corrosion but were originally intended to be of light weight; in case of the specimens of 1.60 and 1.75 g respectively one could think of half-kārsāpaņas.

Well preserved punch-marked coins of remarkably low weight are known from two hoards in Bangladesh, namely those of Mahastan and Baigachha (Errington 2003: 81 and fig. 1); the average weights were 2.5 g and 2.4 g. This is interpreted as "Further evidence of a late, regional evolution". However, these cannot be the specimens that we find in Śrī Lankā as they exceed those weights even in almost totally worn out condition. Thus we have to presume in the majority of cases that the specimens represent full weight original kārsāpaņas, which were heavily reduced in weight due to a long time of circulation. To verify or to reject that assumption we need to take into consideration the weight loss punch-marked coins suffered during circulation. It has been tried to calculate - or rather to estimate - the percentage of this weight loss (Still 1907: 195-196), which has been given as about 0.09–0.11 g per century. Based on the wrong supposition that pmc circulated for fifteen centuries, from 500 BC to AD 1000, a total loss of 1.35–1.65 g was possible; subtracting this from the presumed standard weight of the $k\bar{a}rs\bar{a}pana$, Still came to the result that the majority of the coins from the Anurādhapura hoard fits into the range of the calculated numbers. By way of this calculation almost any result can be obtained, and thus this approach is not entirely helpful. Summing up we may draw the following conclusions:

- lightweight specimens in good condition and over 2 g like those in the 'money-box' might originate from Bangladesh
- comparable pieces markedly under 2 g are most likely to be half-kārsāpaņas
- heavily worn examples under 3 g are original Indian silver kārsāpaņas or their halves, depending on weight

As it is not possible to define the Indian native region of the pmc unearthed in Śrī Laṅkā we are thrown back to a more or less plausible 'very probably South Indian origin' (see for example the distribution map in Turner 1989: 70).

The absence of specimens from two peculiar South Indian classes of pmc on the island does not imply the non-existence of contacts between the two areas. Outside the Mauryan southern border the unpaired small group of pmc from Śingavaram in the Krishna District, Madras Presidency (Allan 1938: 391; Aravamuthan 1938) and the examples, which were attributed to the Pāṇḍyas of Madurai because of a prominent stylised fish symbol on one side of the coin and dated to the second century BC, are isolated short-lived phenomena⁷. This

- ⁶ See Appendix: Bopearachchi/Wickremesinhe 1999 = 'money box hoard'.
- ⁷ Aravamuthan 1944; Mitchiner 1998a: 73–76 and 2004: 1104–1105; first published by Lóventhal in 1888: pl. I.4-6. Mitchiners explanation for their nonexistence in Śrī Lankā is requiring getting used to: From their absence on the island the author deduces that the production in the Pāndyan realm had ceased about 180 BC, "The beginning of major Pandyan influence in Sri Lanka" (Mitchiner 1998a: 76). In 2004: 1103,

class of coins is known almost exclusively from the Bodināyakkanūr hoard, discovered in 1940 about 85 km as the crow flies west of Madurai, Tamil Nādu. It comprised 1,124 of these coins; only some very few stray finds from other places in Tamil Nādu are known; hence, their nonexistence in Śrī Laṅkā is unremarkable.

Closely linked with the geographic problem is the question for

the time the kārṣāpaṇas were transferred from South India to the island.

Chronological data from both sides of the Palk Strait will help to illuminate the darkness, if only a little. First, however, it must be stated that we have to elucidate the time of circulation of punch-marked coins and *not* the time of their production which terminated in the second half of the second century BC (see above).

As has been pointed out already, we have precise chronological data from the Tissamahārāma excavations regarding the circulation of punch-marked coins, at least at this place: No specimens prior to the first century BC, only a very few in this century, again no pieces in the first century AD, and then a sudden presence of pmc in countable numbers in and from the second century AD. This is remarkable all the more, as to our present knowledge the founding of the city of Tissamahārāma took place already about 400 BC (Weisshaar 2009: 357-358); it was definitely not founded in the second half of the third century BC by the then vice-regent Mahānāga as it was hitherto usually presumed based on Mhv. XXII.8. For the middle of this century, punch-marked coins allegedly are attested for Anurādhapura (Bopearachchi 2006: 7). Only allegedly, as there is a discrepancy between this statement and the dating of structural phase I8 from where two pmc originated. As structural period I is dated "to between c. 360 and 190 cal. BC" (Coningham 1999: 127) and I8 is its final phase (Coningham 1999: 128), the coins can hardly date from the middle of the third century BC. The final, again allegedly, use of pmc in Anurādhapura is attested at "the turn of the first millennium AD" (Bopearachchi 2006: 7). However, the dating of structural phase B, from which these specimens originated, is absolutely open for debate as its duration is defined "to between the seventh and twelfth centuries AD" (Coningham 1999: 130). Thus, archaeological data from Anurādhapura is not entirely helpful. Regarding the small number of coins discovered, the result of this excavation is in accordance with those of earlier campaigns. UNESCO excavations carried out in Anurādhapura at the find spots of Abhavagiri and Jetavanārāma in the early 1980s also yielded modest numbers of comparable pieces: Only four out of 418 specimens were punch-marked coins from India (Walburg 2008: Cat. nos. 2.1-2 and 13.1-2); and the 1933 as well as the 1991/92 excavations at the citadel vielded not even a single example (Paranavitana 1936: 9; Ueyama/Nozaki 1993: 68). Only one specimen has been unearthed there during the course of the 1994/95 excavations (Momose/ Abe 1996: 52[3]). In our context two hoards from Anurādhapura of considerable size - 70 coins at Vessagiriya and a large find at Nuwarawewa (Walburg 2008: Cat. nos. 16 and 23) - are of no value, as the details of their contents are unknown to us, not to mention the complete lack of archaeological data pertaining to these sites.

From South India we have chronological information as well, gained from the evidence that pmc were found in hoards associated with Roman Iulio-Claudian gold- and silver coins (see above). As they were not found together with Severan coins (Berghaus 1989; Turner 1989) or in hoards with a long formation phase (*hohes Bildungsalter*) (Turner 1989: Nandyal [Augustus – Antoninus Pius], Pakli

the same coins are without giving reasons "best dated to the 1st century BC" and they were probably "in use during the 1st century AD". In total, the only important fact in the present context is the presence of a negligibly small number of these coins in a very confined South Indian region sometime between the second century BC and the first century AD. [Republic – Hadrianus], Pudukottai [Augustus – Vespasianus], Valuvally [Augustus – Marcus Aurelius]) one would prima vista assume that the circulation of punch-marked coins in South India terminated in the first century AD. Consequently this means that the specimens in Śrī Lańkā should have arrived there before the second century AD. This, however, is absolutely contradictory to the archaeological data from Tissamahārāma, which is unequivocal; the Indian data, however, is partly debatable.

The association of Roman coins of the first century AD and punch-marked coins does not necessarily imply that those hoards were buried in the first century. Roman coins could have circulated much longer but in this case it is quite astonishing that later coins are missing in the hoards. The only other possible interpretation is that the early imperial Roman coins came to India at a much later time. Indeed, it is now an established fact that the Iulio-Claudian coins of the early first century only came to India between about AD 70 and 100. For the Roman Republican denarii of the first century BC, like those in the Iyyal hoard mentioned above, an even later transfer to the Subcontinent has been ascertained than for the imperial specimens, i. e. about the beginning of the second century AD; precisely, after 107 AD⁸.

This observation is of relevance in our context as it proves that punch-marked coins were available in South India at least at the beginning of the second century AD; and it was obviously already during this century when genuine pmc became scarce in this area. Excavations at Kondapur (Andhra Pradesh) and Kānchipuram (Tamil Nādu) yielded moulds for casting punch-marked coins and are both datable to the second century AD (Mitchiner 1998: II 72 [with literature]). This concurs with the just mentioned observation, viz. that pmc are not found together with Roman coins of the third century9. It is beyond doubt that Indian pmc found their way to Śrī Lańkā during the second century. This leads to the inevitable deduction that the bad state of preservation of coins from the second century

hoard results mainly from a long time of use in India, and not on the island; and that those from the third century hoard which are still worse circulated for a considerable time in Śrī Lańkā. The long-time circulation of punch-marked coins in (South) India is attested by the heavily worn condition of specimens from hoards and single finds discovered in this region (Mitchiner 1998: I 68-69 Mitchiner 1998: I 68-69). Likewise, datable finds from excavations point to a use of pmc during the early Christian centuries (Rajan 1991; Sarma 1996). As far as can be seen, the earliest datable hoard of pmc in South India (Kolhapur, Krishna District, Andhra Pradesh) is probably of the second century BC (Allan 1936: lviii). Their usage as currency in the southern areas, however, has been severely doubted as their function was primarily sought in a religious context. As well, they have been regarded merely as memorabilia from times long past or as accumulated precious metal¹⁰; so for example argued for the Amarāvatī hoard of 7,668 pmc buried supposedly during the second / third century AD. Of the Śingavaram hoard of about 40,000 specimens, we have solely the literary record of its existence (Sarma 1987: 93 for both Amarāvatī and Śingavaram). Concluding it has been argued that "these coins do not qualify to be reckoned as the official currency of the times in the southern regions" (Sarma 1987: 94). A punch-marked coin pierced twice unearthed in the extreme north of Śrī Lańkā, at Kantarōdai (Walburg 2008: Cat. no. 42) as well as another "Large, thin, roughly recta(ngula) r. PIERCED, worn" specimen in the former Biddell collection¹¹, probably point also into

- ⁸ MacDowall 1991, supported by Berghaus in 1998: 126–127 when publishing a *denarius* of Augustus found in India with a Flavian countermark.
- ⁹ These statements yielded from sound hoard evidence eliminate suppositions based on guesswork, allowing pmc, for example, to circulate in South India up to the fourth century AD (Mahalingam 1966: 22).
- ¹⁰ Sarma 1987: passim. See also Elliot 1886: 45 and Smith 1906: 135 for the discovery of partly large numbers of pmc in graves.
- ¹¹ For the history of this collection see Walburg 2008: 19–22.

this direction. The double piercing which is a typical Indian feature indicates a non-monetary use there, presumably in the south of the subcontinent.

Summing up we can state that

- pmc were available in India in the second century AD
- no pmc are present in third century AD Roman hoards in India
- very few pmc were found at Tissamahārāma prior to the second century AD
- pmc start to appear in numbers at Tissamahārāma as from the second century AD

Taking all observations into consideration, we have to come to the conclusion that the coins represent a snapshot of the currency at the time of concealment; they are not the result of a long-lasting accumulation.

While the chronological context seems to be quite clear, an answer to the question

how, why and in which quantity punchmarked coins got to Tissamahārāma

and to the island in general is hardly to find. This inability mainly depends on the relative small number of coins found and of the mostly unknown circumstances of their discovery. Except for the cited hoards we have no further information about the structures of other collective finds or of single specimens in suitable quantity from stratified contexts. Thus we cannot even try to reconstruct wider, or even area-wide, circulation patterns of punch-marked coins in Śrī Laṅkā on this small basis.

For Tissamahārāma only general statements can be made. The workmen's quarter (Walburg 2008: Cat. no. 179) is void of pmc, as coins are generally scarce within this area. All finds listed above originate from obviously more prosperous quarters of the city. Prima facie, the comparatively few single finds seemingly indicate a not too extensive use of this monetary medium. However, this is a premature conclusion. Being of silver the material/nominal value of the specimens must have been considerable; thus, lost pieces were sought for very intensively.

The presence of cast imitations in the hoard indicates a beginning shortage of genuine pmc in India (see above), which in turn resulted in the manufacture of imitations in Śrī Lankā in the third and of ingots as from the fourth century AD; a clear indication of the need for such artefacts due to adaption. However - for what reason? Fundlandschaften in India and Śrī Lańkā are markedly different. On the subcontinent apparently large to extremely large size hoards predominate while coins unearthed during the course of archaeological excavations are few in number; missing are small hoards in a definitively mundane context. On the island the situation is vice versa. Here, we only have two hoards of considerable size: Minuwangōda with 1,048 specimens and Mirigama with 275 (+20) coins (Walburg 2008: Cat. nos. 119 and 117); and comparatively more specimens from excavations. Likewise, there are more collective finds of moderate or medium size. This observation apparently points to an existing money economy mediated by punch-marked coins. Hence, archaeological evidence is much more informative than written evidence which narrates the use of kārsāpaņas (or, more likely, donations worth a certain number of coins) almost exclusively in religious beneficent contexts.

The most conclusive assertion for the presence of foreign coins in a given region that comes to mind is their use in trade between two areas or countries. Trade relations between South India and South Śrī Lankā are attested for the fifth century AD (Walburg 2008: chapter IV.10). May we presume the establishment of economic relations between the two regions in the second century AD, or an increase of already existing trade connections? In fact, punch-marked coins are mentioned regularly in Śrī Lankān sources only from the second century AD onwards (Walburg 2008: 30) archaeological data and testimony of written evidence are in perfect accordance. Mahāvamsa XXXV.26 ff. hands down evidence for close relations between India and Śrī Lańkā at the beginning of the second century AD. The legitimate king, Ilanāga (AD 93-102), had been forced to leave the island "on a ship (that brought him) to the western shore of the sea", i. e. to India. Returning from there after a three years stay to reconquer his throne, he debarked at a harbour named Sakkharasobbha in Rohana (Mhv. XXXV.27 f.), very probably to be located close to Tissamahārāma (Walburg 2008: 293). The three years in exile obviously caused closer relations between the two countries as the consort of Ilanāga's son was named Damilādevī, i. e. "Tamil goddess / queen"; and conceivably also gave rise to trade relations, or intensified already existing commercial intercourse.

A final question not directly connected with the topic of this article to answer is

how long the punch-marked coins were in use at Tissamahārāma.

Data from this place point to a use of genuine Indian pmc and locally cast imitative ingots up to at least the seventh century AD (Walburg 2008: 262); a solitary specimen dates from the eighth / ninth century. This observation is confirmed by admittedly only two not yet published pmc from the coastal hamlet of Goḍavāya¹² that both originated from archaeological contexts datable not prior to the seventh century AD (personal communication with the chief excavator, H.-J. Weisshaar). Perhaps inspired by Still's conclusion (Still 1907: 195 and 1907a: 213), the use of punch-marked coins in Anurādhapura is assumed up to about AD 1000; however, regrettably this cannot be verified archaeologically (see above).

However, the evidence gained from Tissamahārāma is selective and relevant only for this $\mu\eta\tau\rho\delta\pi\sigma\lambda\iota\varsigma$, as the city is characterised by the Greek geographer Ptolemaios in the second century AD; and it must be emphasised again that reliable data concerning the punchmarked coins both from India and Śrī Laṅkā currently provides evidence for some perhaps acceptable suggestions but no conclusive evidence concerning the exact role these artefacts played in the monetary and economic history of the island in general.

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¹² About 30 km as the crow flies southwest of Tissamahārāma; one *R*-specimen (GH 559, ser. VIb; almost totally worn) and one *R*-plated *Æ*-piece (punches unidentifiable).

Appendix

Hoard of 2007, datin	g from the sec	ond century AD;	arranged	according to	the p	position o	of the	coins	in
the lump (fig. 2, 1-26))								

no	GH no	GH series	g	mm	Commentary
1	497	Va	2.59	18 × 13	heavily worn; banker's marks
2	-	-	2.35	16 × 11	cast imitation of GH 543 (VI b)
3	-	-	2.31	15 × 11	cast imitation/ingot
1	418	IVd	2.56	20 × 13	heavily worn; banker's mark
5	480	Va	2.53	18.5 × 13.5	heavily worn; banker's mark
)	573	VIb	2.47	17 × 13.5	heavily worn
7	573-575	VIb	2.51	15.5 × 14	heavily worn
}	416	IVd	2.97	17 × 14	worn, but quite good; banker's marks
)	530/535	VIa	2.66	12.5×11.5	almost totally worn
0	590 f.	VII	2.57	13.5×11.5	almost totally worn
1	486	Va	2.98	16.5×11.5	almost totally worn; banker's mark
2	477-484	Va	2.83	16.5×11.5	almost totally worn; banker's mark
3	484	Va	2.50	15 × 13	almost totally worn
.4	571 f.	VIb	2.82	13.5	heavily worn; no reverse punch observabl
5	566	VIb	2.51	14 × 12.5	heavily worn
.6	454	IVd	2.63	19.5 × 14	worn, but quite good; banker's mark
7	;	Vb/VIb	2.74	12 × 12	heavily worn; reverse punch GH 14 and sun as banker's mark
8	509	Va	2.60	13 × 12.5	heavily worn; banker's marks
9	467	IVd	2.74	16.5×15	worn, but quite good; banker's marks
20	398-438	IVd	2.41	18 × 17	almost totally worn; banker's marks
21	398-461	IVd	2.46	18 × 12.5	heavily worn; at least 6 banker's marks
2	542	VIb	2.60	16.5×12	heavily worn
23	479	Va	2.60	17.5 × 14	worn; banker's marks
24	398/406/416/438	IVd	2.53	16 × 15	worn; banker's marks
25	574	VIb	2.31	16.5×13.5	worn
26	586	VII	2.62	14.5×13.5	worn
a	rranged according t	to GH series			
24	398/406/416/438	IVd	2.53	16 × 15	worn; banker's marks
0	308 138	IVA	2 4 1	10×17	almost totally worne bankar's marks

398/406/416/438	IVd	2.53	16 × 15	worn; banker's marks
398-438	IVd	2.41	18 × 17	almost totally worn; banker's marks
398-461	IVd	2.46	18 × 12.5	heavily worn; at least 6 banker's marks
416	IVd	2.97	17 × 14	worn, but quite good; banker's marks
418	IVd	2.56	20 × 13	heavily worn; banker's mark
454	IVd	2.63	19.5 × 14	worn, but quite good; banker's mark
467	IVd	2.74	16.5×15	worn, but quite good; banker's marks
477-484	Va	2.83	16.5×11.5	almost totally worn; banker's mark
479	Va	2.60	17.5 × 14	worn; banker's marks
480	Va	2.53	18.5×13.5	heavily worn; banker's mark
484	Va	2.50	15 × 13	almost totally worn
486	Va	2.98	16.5×11.5	almost totally worn; banker's mark
497	Va	2.59	18 × 13	heavily worn; banker's marks
	398/406/416/438 398-438 398-461 416 418 454 467 477-484 479 480 484 486	398/406/416/438 IVd 398-438 IVd 398-461 IVd 416 IVd 418 IVd 454 IVd 467 IVd 477-484 Va 480 Va 484 Va 486 Va	398/406/416/438 IVd 2.53 398-438 IVd 2.41 398-438 IVd 2.41 398-461 IVd 2.46 416 IVd 2.97 418 IVd 2.56 454 IVd 2.63 467 IVd 2.74 477-484 Va 2.83 479 Va 2.60 480 Va 2.53 484 Va 2.50 486 Va 2.98	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

no	GH no	GH series	g	mm	Commentary
18	509	Va	2.60	13 × 12.5	heavily worn; banker's marks
9	530/535	VIa	2.66	12.5×11.5	almost totally worn
22	542	VIb	2.60	16.5×12	heavily worn
15	566	VIb	2.51	14 × 12.5	heavily worn
14	571 f.	VIb	2.82	13.5	heavily worn; no reverse punch observable
6	573	VIb	2.47	17 × 13.5	heavily worn
7	573–575	VIb	2.51	15.5×14	heavily worn
25	574	VIb	2.31	16.5×13.5	worn
26	586	VII	2.62	14.5×13.5	worn
10	590 f.	VII	2.57	13.5×11.5	almost totally worn
17	?	Vb/VIb	2.74	12 × 12	heavily worn; reverse punch GH 14 and
					sun as banker's mark
2	_	-	2.35	16 × 11	cast imitation of GH 543 (VI b)
3	-	-	2.31	15 × 11	cast imitation/ingot

Single finds at Tissamahārāma from layers datable to the second century

Single	illius at lissaillall	aranna monn i	ayers datable to the sec	ond century
	416	IVd	2.23	worn / Walburg 2008: Cat. no. 187.1
	477–484	Va	2.36	heavily worn / Walburg 2008: Cat.
				no. 187.3
	477–484	Va	2.30	almost completely worn / Walburg 2008:
				Cat. no. 187.4
	510-517	Vb	2.75	heavily worn / Walburg 2008: Cat.
				no. 186.1
	535	VIa	2.27	almost completely worn / Walburg 2008:
				Cat. no. 187.5
	;	VIa	2.69	almost completely worn / Walburg 2008:
				Cat. no. 186.5
	?	VIa	2.52	almost completely worn / Walburg 2008:
				Cat. no. 187.6
	558	VIb	2.72	heavily worn / Walburg 2008: Cat.
				no. 186.2
	?	Va–VII	2.85	worn / Walburg 2008: Cat. no. 188.4

T.T	Hoard of 2002, dating from the third century AD; arranged according to GH series							
Hoarc	l of 2002, dating f	rom the thir	d century	AD; arranged	according to GH series			
	402	IVd	2.58	19 × 14.5	almost totally worn / Walburg 2008: Cat.			
					no. 185.2			
	539	VIa	2.66	15 × 12	almost totally worn / Walburg 2008: Cat.			
					no. 185.16			
	?	VIa	2.73	12.5 × 12	almost totally worn / Walburg 2008: Cat.			
					no. 185.17			
	542 f.	VIb	2.88	12.5×11	heavily worn / Walburg 2008: Cat.			
					no. 185.8			
	542 ff.	VIb	2.96	15 × 12.5	almost totally worn / Walburg 2008: Cat.			
					no. 185.13			
	543	VIb	2.58	15.5 × 13	almost totally worn / Walburg 2008: Cat.			
					no. 185.3			

no	GH no	GH series	g	mm	Commentary
	543	VIb	2.78	14.5	heavily worn / Walburg 2008: Cat. no. 185.15
	560	VIb	2.97	14.5 × 14.5	heavily worn / Walburg 2008: Cat. no. 185.1
	573–75	VIb	3.13	11.5 × 11	almost totally worn / Walburg 2008: Cat. no. 185.7
	;	VIb	2.94	15 × 13	almost totally worn / Walburg 2008: Cat. no. 185.12
	595	VII	2.86	15 × 12.5	almost totally worn / Walburg 2008: Cat. no. 185.5
	;	IVb–Va	2.61	19 × 13	almost totally worn / Walburg 2008: Cat. no. 185.14
	;	Vb–VIb	2.69	13.5 × 9.5	almost totally worn / Walburg 2008: Cat. no. 185.10
	;	Vb–VIb	2.73	16 × 13.5	almost totally worn / Walburg 2008: Cat. no. 185.18
	;	Vb–VII	2.90	14.5 × 10	almost totally worn / Walburg 2008: Cat. no. 185.9
	;	Vb–VII	2.75	12.5 × 9	almost totally worn / Walburg 2008: Cat. no. 185.11
	;	VIb–VII	2.92	11.5 × 11.5	almost totally worn / Walburg 2008: Cat. no. 185.4
	;	VIb–VII	2.81	12.5 × 11	almost totally worn / Walburg 2008: Cat. no. 185.6
	-	-	0.69	13 × 11.5	piece of iron / Walburg 2008: Cat. no. 185.19

Single	Single finds at Tissamahārāma from layers datable to the third century					
	503	Va	2.30		almost completely worn / Walburg 2008:	
					Cat. no. 187.4a	
	?	VIb	2.63		heavily worn / Walburg 2008: Cat.	
					no. 185.21	
	?	VIb	2.59		almost completely worn / Walburg 2008:	
					Cat. no. 185.22	
	?	IVb–Va	2.66		almost completely worn / Walburg 2008:	
					Cat. no. 185.20	
	?	Vb–VIb	2.56		almost completely worn / Walburg 2008:	
					Cat. no. 185.23	
	?	Va–VII	2.66		completely worn / Walburg 2008: Cat.	
					no. 187.9	

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GH no	GH series		. with letters are lat chi/Wickremesinhe 1			
		Tissa 2 nd c. hoard	Tissa 3 rd c. hoard	Tissa single	B/W	Total
266	II				G.57	
305	III				G.59	
305	III				G.60	1
330	III				G.61	1
355	IVb				G.62	
374	IVb				G.63	1
398/406/416/438	IVd	189D.24				
398-438	IVd	189D.20				1
398-461	IVd	189D.21				1
402	IVd		185.2			1
415	IVd				G.65	1
415/427/458	IVd				G.64	1
416	IVd			187.1 (2 nd)		1
416	IVd	189D.8				1
416	IVd				G.66	1
416	IVd				G.67	1
418	IVd	189D.4				1
422	IVd				G.68	1
424	IVd				G.69	1
425	IVd				G.70	1
442	IVd				G.71	1
442	IVd				G.72	1
443	IVd				G.73	1
450	IVd				G.74	1
450-461	IVd				G.75	1
454	IVd	189D.16				1
463	IVd				G.76	1
467	IVd	189D.19				9
471	IVd				G.77	1 1
477–484	Va			187.3 (2 nd)		
477–484	Va			187.4 (2 nd)		1
477–484	Va	189D.12				1
479	Va	189D.23				1
480	Va			187.2 (4 th)		1
480	Va	189D.5				1
484	Va	189D.13				1
486	Va	189D.11				1
488	Va			189A.1 (2 nd)		1
497	Va	189D.1		, ´´		1
503	Va			187.4a (3 rd)		1
506	Va	1		, , , , , , , , , , , , , , , , , , ,	G.78	12
509	Va	189D.18				1 -

List of all pmc unearthed at Tissamahārāma; arranged according to GH series

GH no	GH series		. with letters are lat hi/Wickremesinhe 1			
		Tissa 2 nd c. hoard	Tissa 3 rd c. hoard	Tissa single	B/W	Total
510–517	Vb			186.1 (2 nd)		
516–517	Vb			189A.2 (1 st BC)		2
530/535	VIa	189D.9				
535	VIa			187.5 (2 nd)		
539	VIa		185.16			
?	VIa			186.5 (2 nd)		1
?	VIa			187.6 (2 nd)		
?	VIa		185.17			6
542	VIb	189D.22				
542 f.	VIb		185.8			
542 ff.	VIb		185.13			
543	VIb		185.3			1
543	VIb		185.15			1
543/482	VIb				G.79	1
544–546	VIb			188.1 (8 th -9 th)		1
547–567	VIb			189.2 (1 st BC)		1
550	VIb			189A.3 (1 st BC)		1
552	VIb				G.80	1
558	VIb			186.2 (2 nd)		1
560	VIb		185.1			1
566	VIb	189D.15				1
566	VIb				G.81	
567	VIb				G.82	1
570	VIb				G.83	
571	VIb				G.84	
571 f.	VIb	189D.14		184.4 (5 th -9 th)		
572	VIb			186.3 (5 th -7 th)		
573	VIb			186.4 (5 th -7 th)		
573	VIb	189D.6				
573-575	VIb			187.8 (4 th)		
573-575	VIb	189D.7				
573–75	VIb		185.7			
574	VIb			187.7 (4 th -5 th)		
574	VIb	189D.25				26
?	VIb			188.2 (5 th -7 th)]
?	VIb			188.3 (4 th)]
?	VIb		185.12			1
?	VIb			185.21 (3 rd)]
?	VIb			185.22 (3 rd)		

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GH no	GH series	B/W = Bopearachchi/Wickremesinhe 1999: I.1 (unconsidered)					
		Tissa 2nd c. hoard	Tissa 3 rd c. hoard	Tissa single	B/W	Total	
586	VII	189D.26					
586	VII				G.85		
590 f.	VII	189D.10					
593	VII				G.86		
593-595	VII			189A.4 (1 st BC)			
595	VII		185.5			4	
?	IVb–Va		185.14				
?	IVb–Va			185.20 (3 rd)			
?	Va–VII			187.9 (3 rd)			
?	Va–VII			188.4 (2 nd)			
?	Va–VII			184.2 (4 th -5 th)			
?	Va–VII			180.1 (5 th -7 th)			
?	Va–VII			184.3 (5 th -7 th)			
?	Va–VII			188.4 (2 nd)			
?	Vb–VIb		185.10				
?	Vb–VIb		185.18				
?	Vb–VIb			185.23 (3 rd)			
?	Vb–VII		185.9				
?	Vb–VII		185.11				
?	Vb/VIb			189A.5 (1 st BC)			
?	Vb/VIb	189D.17					
?	VIb–VII		185.4				
?	VIb–VII		185.6				
?	V–VI			189.1 (1 st BC)			
?	3			184.5 (4 th)			
?	5			183.2 (5 th -7 th)			

Archaeological phases at Tissamahārāma and numbers of specimens discovered

2 nd century BC	-
1st century BC	6
1 st century	-
2 nd century	24 in hoard, 11 single
3 rd century	18 in hoard, 6 single
4 th century	4
4 th -5 th century	2
5 th –7 th century	6
5 th -9 th century	1
8 th -9 th century	1

Comparison of the collective and single finds of the second and third centuries AD

GH series	Tissa 2007 (2 nd c.)	single 2 nd c.	Tissa 2002 (3	rd c.)
II	-		-	
III	-		-	
IVb	-		-	
IVd	7	1	1	
Va	7	2	-	
Vb		1		
VIa	1	3	2	
VIb	6	1	9	
Vb–VIb	1		3	
Vb–VII	-		2	
VIb–VII	-		2	
VII	2		1	Ī
IVb–Va	-		2	1
Va–VII		1		I

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