

THE EARLY BYZANTINE LAMP FROM PONG TUK

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Abstract

Three different dates spanning more than half a millennium have been suggested for this bronze lamp. The two early datings clearly have to be reconsidered. Here new evidence is brought to clarify the dating of the lamp to the Early Byzantine period. It belongs to a class of bronze lamps common in the Eastern Mediterranean area in this period. In addition, it is compared to some very similar lamps forming a closely related group; the lamps of this group might have been manufactured in Byzantine Egypt. The archaeological importance of the Pong Tuk lamp lies in the fact that an Eastern Mediterranean artefact of the fifth or probably sixth century CE has been found in Thailand. It has to be seen in the context of long-distance trade in that period via the Red Sea to India and beyond which is described in great detail in a written Western source of the sixth century CE.¹

The lamp (Figs. 1-4, 8, and 13) was found at Pong Tuk in Central Thailand, about 30 km west of Nakhon Pathom, at the site of a Buddhist architectural complex of the Dvaravati period. It was found in two parts by local inhabitants in 1927, and shown to G. Coedès on his first visit of the site on 12 August. He recognised it immediately as a Roman lamp and referred to it in the following year in his report on the excavations at Pong Tuk as an imported Roman lamp of the first or second centuries CE.² Since then the lamp has attracted a lot of attention and has been quoted as evidence of early Mediterranean imports into Southeast Asia in many publications. Interest in the lamp increased when in 1955 the classical archaeologist C. Picard³ published an article suggesting an even earlier date for the lamp in the

¹ In February 2007 the opportunity was given to me to study the lamp in detail in the Bangkok National Museum and to take photographs. Kind permission was granted and generous help given by Mr Somchai na Nakhon Phanom and Mr Disapong Netlomwong. Thanks for practical help and advice are also due to Rasmi Shoocongdej, Podjanok Kanjanajuntorn, and Ian Glover. Photo credits: Fig.7 M. Eberlein; Fig.9 H. Reichenwallner. All other photographs B. Borell.

² Coedès 1928: 197–198, 204–205 pl.19. According to the information given the lamp was found in two parts by local inhabitants in 1927, some time between July and August 12, the date of Coedès' first visit. Excavations by the Archaeological Section of the Royal Institute were carried out later in the year 1927.

³ Picard 1955.

Hellenistic period, i.e. sometime in the last three centuries BCE. Such a dating of the lamp is clearly too early as should already have been recognisable at the time of Picard's writing but there was surprisingly little objection to it and many scholars accepted it.⁴ In 1989, in a careful analysis, R. Brown and A. Macdonnell rightly rejected both datings of the lamp as too early and argued convincingly for a date in the early Byzantine period.⁵

Since then several catalogues of important collections containing lamps of the Late Roman and Byzantine period and other relevant studies have been published.⁶ On the basis of the present state of knowledge it seems justified to take the matter up again to establish not only beyond doubt the place of the Pong Tuk lamp in the development of this category of lighting equipment but also to assign it to a group of closely related lamps of the early Byzantine period from the fifth to the mid-seventh centuries CE. While it is still difficult to make a good case for a more precise dating, a suggestion will be made to narrow down the region of its manufacture.

Whereas, previously, due to the early dating of the lamp, the interest in it focused on the long-distance trade of the early Roman or even Hellenistic period, now the lamp has to be considered in the context of later trade networks, here presented mainly on the basis of a written Western source of the sixth century CE.

Description of the lamp

Found in the village of Pong Tuk (Kanchanaburi province, Tha Maka district), situated west of the Maekhlung River, in 1927.

National Museum Bangkok, inv. no. TP. 1.

⁴ To my knowledge, the first published rejection of Picard's early date of the Pong Tuk lamp — only a short note — comes from Heimberg 1981: 104, fig.36.

⁵ Brown and Macdonnell 1989. Karttunen 2000: 935–937.

⁶ It is slightly confusing that in the publications this class of lamps appears under different labels which are partly overlapping:

a. Late Roman (Bailey 1996): This is the generic term applied to artefacts made in the Western as well as in the Eastern Roman Empire, referring to a period roughly from the late third to the seventh century.

b. Early Byzantine: for the Eastern Roman Empire only, referring to the period from 330 CE, when Constantinopolis - replacing the former town Byzantium - was inaugurated as the new capital, until either the seventh/eighth century (the Arab conquest of great parts of the Byzantine Empire) or the eighth/ninth century (the iconoclastic period).

c. Coptic (derived from the Greek word for Egyptian): a term with a wide range of meanings; in this context Coptic is understood as referring to the Late Roman period in Egypt until the coming of Islam 640/41 CE, in Bénazeth's catalogue (Bénazeth 1992: 9 and in particular 12) the period roughly from the fifth to seventh centuries (cf. Bénazeth 2001: 8, where the term Byzantine is used).

L 29.5 cm. H 26.7 cm.

L body of lamp (from rear socket for handle to nozzle) 22 cm.

D of dished area of nozzle 7.4–7.7 cm.

H of handle (from socket to top) 21.4 cm.

H of handle (from lower sepals to top) 17.5 cm.

max. width of handle (between the caudal fins of dolphins) 13.3 cm.

D (inner width) of filling hole 4.6–4.7 cm.

D lid 5.2 cm.

Bronze.⁷

The lamp is complete and very well preserved, except for a hole on the left side of the body. The patina is dark blackish-green with patches of the exposed yellowish metal surface. The lamp is cast in separate pieces, assembled by soldering: body, handle, and plate with a sleeve for the socket underneath and inside the body. The circular lid over the filling hole is fastened with a hinge-pin. When found, the handle and body were apart, and their present assembly is modern.

The body of the lamp is pear-shaped with a long flaring nozzle ending in a circular dished area with a small round opening for the wick (Figs. 1 and 2). The horizontal edge of the saucer-shaped dished area is decorated with three moulded concentric rings. The body of the lamp is plain and rests on a high flaring base. The upper part of the base is slightly receding and decorated with four faint grooves. The flaring lower part of the base is plain on the outside but has on the inner side a few concentric grooves. On the underside of the lamp (Fig. 3), flush within the base, is an inserted circular plate with a square socket, a device for placing the lamp on the tetragonal spike of a lampstand;⁸ the tapering sleeve of the socket extends within the oil-chamber of the lamp. On top of the body is the large circular filling hole, into which the oil was poured; it is not directly above the base but set further back towards the rear. The filling hole has a raised rim and is covered with a circular lid operated on a hinge at the rear. The lid still swivels freely. Its convex upper side (Fig. 8) is decorated in relief with a head *en face* of a Silenus, one of the followers of Dionysos, the Greek god of wine. Characteristic for a Silenus in Greek and

⁷ The term 'bronze' is here used in a general sense to indicate a copper-alloy. So far no analysis has been carried out, therefore the precise composition of the metal is not known. However, a number of Late Roman lamps in the British Museum have been analysed. Whereas previously bronze (copper alloyed with tin) was the metal predominately used, from the third century AD onwards the proportion of lamps made of brass (copper alloyed with zinc) was ever increasing. For instance, of the thirteen lamps in Bailey's group (i), the group with the closest comparisons to the Pong Tuk lamp, eleven lamps are made of brass and only one lamp is made of bronze (the other one has not been analysed), Bailey 1996: 74, and *ib.* appendix with a discussion of the analyses by D. Hook and P. Craddock, 148 fig. 5; 150–152. It is therefore quite possible that the lamp from Pong Tuk was made of brass.

⁸ Very similar in this technical detail are the lamps described by Hayes 1984: 142 no. 221, Bailey 1996: 70–71 Q 3802; 72 Q 3808.

Roman iconography is the round face of an old man with moustache and beard, a squat nose and thick lips; his bald forehead is adorned with a wreath of ivy with leaves and berries. The lid has two notches on both sides of the lug to accommodate the hinge. On the convex underside of the lid is a circular ridge fitting neatly the opening of the filling hole (Fig. 2).

The elaborate palmette handle (Figs. 1, 4 and 13) was cast separately, inserted into a rectangular socket at the rear of the lamp body and originally fastened by soldering. Morphologically this palmette handle evolved from the heat shield or reflector usually placed on top of the handle proper – often ring-shaped to carry the lamp conveniently – protecting the hand from the heat and at the same time increasing the brilliance by reflecting the light of the flame. Here the handle consists merely of this ornamental part, and as most of the motifs are in openwork it could only partly function as a reflector. It is composed of several elements: at the base three sprayed sepals with a short five-leaved palmette between them; above a heraldic pair of diving dolphins and several stem-like vegetal elements, reminiscent of a Tree of Life motif, crowned with a large palmette with seven leaves, each leaf ending in a globular bead; each of the three central beads has a round hole on the top. On the back the palmette handle is flat and plain.

The date and origin of the lamp

The closed shape of the portable oil lamp of the Greek and Roman world evolved from earlier open forms over a long period from the fourth century BCE. In contrast to the clay lamps the bronze lamps follow their own line of development with a greater variety of forms. In the Late Roman period they were sometimes designed as hanging lamps suspended on chains or to be placed on a lampstand, as is the case here.

Despite the fact that, among bronze lamps, there is a greater diversity of forms, and irrespective of their development in the course of time, there are some basic characteristics which they have in common. This explains why G. Coedès noticed rightly the general connection to metal lamps of the Roman period. Picard noted correctly the difference in shape and ornamentation to the Roman bronze lamps of the early Imperial period. He compared this lamp with another of very similar shape in the Louvre which had been purchased in Cairo and assigned to the Coptic period.⁹ Picard's argument for rejecting the date in the Late Roman or Cop-

⁹ Picard 1955: 142–145 fig.4–5, Brown and Macdonnell 1989: 10 fig.2; it is now published in the Louvre catalogue, Bénazeth 1992: 129 (E 11685). The lamp in the British Museum, mentioned by Picard 1955: 146, is now published in Bailey 1996: 72 Q 3807 plate 82 and dated to the sixth century.

tic period for the Pong Tuk lamp, as well as for the lamp in the Louvre, is mainly based on the motifs of the decoration, which derive from pagan imagery and - in his view - would not allow such a late dating. Instead, he suggested the lamp should be recognized as a product of Ptolemaic Egypt, made there in the Hellenistic period, i.e. the last three centuries BCE.

Research by several scholars has shown that pagan mythology and imagery survived as part of the classical heritage into the period when Christianity became the dominant religion, and themes of pagan mythology appeared together with explicit Christian symbols. In some cases pagan themes were adapted to a Christian interpretation. In particular, for the dolphin in early Christian art several layers of Christian interpretations have been suggested, but also Dionysiac themes were not excluded from the artistic repertoire in early Christian contexts.¹⁰ However, in the case of the Pong Tuk lamp it might not be necessary to stress the point of a possible ‘Christian reading’ too much, given the absence of any explicit Christian symbol. The dolphin was a very popular motif in the decoration of antique lamps for reasons not fully evident to us, their shape making them suitable to be used as supports: for instance, the arrangement of two symmetrical diving dolphins – tails together in the centre and heads pointing outward – supporting an inscribed tablet appears already on lamp hangers of the Roman Imperial period,¹¹ and on early Byzantine chandeliers the brackets supporting the lights are shaped as dolphins.¹² A simpler version of the motif with two opposed dolphins flanking a palmette above is already found on a type of Roman clay lamp dating from the first century CE; the motif appears there on the flat triangular element of the handle, clearly derived from the reflector of bronze lamp which this particular type of clay lamp imitates.¹³

¹⁰ Brilliant 1979. Buckton 1994: 38–40. Dionysiac motifs: Weitzmann 1979: nos.123 and 127. For the dolphin: Leclercq 1920. Weitzmann 1979: 624 no.560. Bénazeth 1992: 143–147. There are even lamps in the shape of a dolphin: Hayes 1984: 138 no.214 (Late Roman, fifth century, with cross). Bénazeth 1992: 146–150 (Coptic period, E11916 with cross). Bailey 1996: 18–19 pl.17 (Q 3590 and Q 3591 PRB, Roman Imperial period, first or second century CE).

¹¹ Bailey 1996: 33–34 Q 3649 pl.35–37. Franken 2002: 369–381 (some of these with a votive inscription to the ‘highest god’), dated to the third century.

¹² Late Roman chandeliers with brackets in the shape of dolphins: Bénazeth 1992: 30, 168–169 (Coptic period), with more examples. Bénazeth 2001: 219–223 nos.194–196. From written sources it has been concluded that the Latin word *delphinus* had a distinct meaning in the context of lighting equipment, probably referring to such a support element of the individual lamp holder. Among the donations made by Constantine to several of his newly founded basilicas in Rome the *Liber pontificalis* lists chandeliers specified by their number of 20, 30, 50, 80, or even 120 “dolphins” = lights or flames (Davis 1989: 16–17; 21–24; 115 s.v. lights).

¹³ Bailey 1988: 72–73 fig. 92 Q 1025 bis; the type of clay lamp with triangular handle-ornament (Broneer Type XXI) was very popular in Egypt, ib. 218–219 pl.34–36. The motif of the palmette flanked by two dolphins is found on such a handle ornament from Berenike in Egypt, Sidebotham and Wendrich 1998: 159 pl.5–9.

Here it will suffice to state that the ‘pagan’ motifs on the lamp cannot be taken as an argument for a pre-Christian dating. The shape of the lamp connects it clearly with the Late Roman or early Byzantine lamps, as R. Brown and A. Macdonnell have pointed out, more than half a millennium later than the dating of the lamp suggested by C. Picard.

As further evidence, two close parallels to the lamp from Pong Tuk are shown here which are in a private collection in Munich.¹⁴ Both lamps represent the same type of bronze lamp, with very similarly shaped bodies. In size they are slightly smaller than the lamp from Pong Tuk, which is remarkable for its unusually large size and heavy weight.¹⁵

The first lamp in the Munich collection (Figs. 5-7) has a handle with an attachment in the shape of the Christian cross and a lid decorated with a Silenus mask in relief, demonstrating the coexistence of a Christian symbol and a motif of the former pagan imagery on the same object.¹⁶

The second lamp (Figs. 9-12) also has a similar pear-shaped body. The filling hole with a simple raised rim is fitted with a two-part lid: below is a round double-hinged sieve, fastened to the lamp at the rear, and above – joined to the hinge-pieces of the sieve at the front – the lid proper, which is of domed shape end-

¹⁴ Wamser and Zahlhaas 1998: 84–85 cat. no.74 (744); Stiegemann 2001: 206–208 cat. nos. II.1 (744) and II.2 (1092). Thanks are due to C. Schmidt for his kind permission to study the two lamps and take photographs.

Measurements of lamp 744: L 21.6 cm, H 18 cm, L body of lamp 15.5 cm, D of dished area of nozzle 4.7–4.8 cm, D (inner width) of filling hole 3.7 cm. D lid 3.9 cm. Weight 1187 g.

Measurements of lamp 1092: L 20.7 cm, H 18.5 cm, L body of lamp 15.2 cm, D of dished area of nozzle 4.8 cm, H of handle (from lower sepals to top) 12.7 cm, max. width of handle (between the caudal fins of dolphins) 8.3 cm, D (inner width) of filling hole 3.1 cm. Weight 956 g.

¹⁵ So far it has not been possible to determine the exact weight of the Pong Tuk lamp; my estimate would be around 2 kg. For comparison, a large and heavy lamp with two nozzles (handle and lid missing) in the Royal Ontario Museum, has a body of similar length (20.6 cm) to that from Pong Tuk, with a weight of about 2465 g, Hayes 1984: 145 no.225; a slightly smaller lamp (handle missing), has a body length of 16.2 cm, and a weight of 1180.9 g, Hayes 1984: 148 no.228. For the weights of the two lamps in Munich, which are of smaller dimension, their bodies being 6–7 cm shorter than the Pong Tuk lamp, see above n.14.

¹⁶ The combination of lamp and lid is without doubt ancient. This is evident from the patina on both parts and the hinge; it might well have been the original mounting in the workshop. However, on account of the diameter of the circular ridge on the underside of the lid it has been suggested that the lid was designed for a smaller filling-hole and is already an antique replacement for a lost lid, Stiegemann 2001: 206 (A.Effenberger). Even then it would be an ancient combination placing a pagan motif and a Christian symbol on the same object, Wamser and Zahlhaas 1998: 85 (C.Schmidt). For other examples of an alien lid, quite obvious from the ill-matching hinge-pieces, but possibly nevertheless an ancient replacement, see Bailey 1996: 75 Q 3818 EA pl.86, Bénazeth 2001: 125 no.107 (both lids with a Silenus head).

ing in a baluster knob.¹⁷ The striking feature of this lamp is the openwork shield of the handle, with palmette and two dolphins almost identical in design and style to that of the Pong Tuk lamp. The lamp and its stand with the Christian cross are thought to have originally belonged together (Fig. 9).

The three lamps have several features in common, such as the shape of the elegant rounded body, the large nozzle, and the high flaring foot. They also appear to be related by their decorative motifs. Each of these elements taken alone would not carry much weight, for instance the Silenus heads (Figs. 7 and 8) are similar in general outline but different in detail and not of the same quality.¹⁸ However, it is hard to imagine that an elaborate design like the palmette handle was created independently in two different workshops (Figs. 12 and 13). Of course, there are some variations in detail – the general dimensions of the Pong Tuk lamp are larger and it is certainly crafted by a different hand – but the whole concept is so alike that one feels inclined to ascribe them to the same workshop. As is befitting for a costly object, which due to its size alone the Pong Tuk lamp must have been in its day, the rendering of all the details on the handle is of a high quality matching the fine relief of the Silenus mask. In addition, there are also some technical details which link these three lamps together, like the moulding of the socket for the handle, the grooves around the foot, the shape of the nozzle and the moulded rim of its dished area.¹⁹ Hence there is good reason to assume that all three lamps might possibly have been made in the same workshop, the Pong Tuk lamp undoubtedly being the masterpiece.

The two lamps in the Munich collection and the lamp from Pong Tuk belong to a group of Late Roman metal lamps attributed in general to the Eastern Mediterranean area and therefore also classified as early Byzantine. Sometimes they are labelled Coptic, since many of them – provided that their provenance is known – have been found or at least acquired in Egypt. In particular, a number of the close comparisons in shape for the three lamps under discussion have an Egyptian

¹⁷ Cf. Bénazeth 1992: 128 E 11684bis, and Bailey 1996: 74–75 Q 3815 MLA pl.84 and Q 3816 MLA pl.85 with references to more lamps with double-hinged lids.

¹⁸ A Silenus mask on the lid appears on several early Byzantine lamps in the Coptic Museum in Cairo, Bénazeth 2001: 125 no.107; 132–137 nos.113–114, 116–117. Bailey 1996: 75 Q 3818 EA pl.86 (also from Egypt, ‘from the Great Church at Edfu’). In particular those in the Coptic Museum and the lamp Munich 744 (Fig.7) have a number of details in common: the general layout of moustache and beard, the rounded ears which are always placed too high, the two furrows between the eyebrows; they differ in the sometimes rather coarse execution of the details. Similar in type seems to be also the face on the lid of the lamp Hayes 1984: 147–148 no.228 (purchased in Cairo).

¹⁹ A very close comparison for the shape of body and foot is also the lamp Bailey 1996: 74–75 Q 3816 MLA pl.85 but with a different type of handle (double rod form), with references to other similar lamps from Egypt. Cf. also Bénazeth 2001: 119 no.101.

provenance.²⁰ Taking everything into account, there is good reason to suppose that the Pong Tuk lamp might have been manufactured in Egypt.

So far, a close dating of these lamps is not yet possible, but most scholars have suggested the fifth and sixth centuries. More recently, the sixth and seventh centuries have been put forward as a dating range for those lamps, assuming at the same time that the production of bronze lamps of this type came to an end with the Arab conquest of Egypt and other eastern territories of the Eastern Roman Empire in the mid-seventh century.²¹ However, there seems to have been a more general development of new types of lighting equipment more satisfying to the demand for bright illumination: bronze chandeliers holding several oil lamps made of glass came increasingly into use and, of course, candles, which are easy to handle and provide brighter lighting, in particular when used in multiple holders.²² Ordinary oil lamps in clay practically disappear from the archaeological record after the seventh century. In view of this, one is inclined to date such an elaborate piece as the bronze lamp from Pong Tuk not too late in the proposed time range but at a stage when this traditional type of lighting device was still widely used and was not yet out of fashion. This conclusion seems also to be indicated by the style of the figurative and ornamental motifs, which one would like to consider as not too far removed from the classical repertoire. Therefore, it is here tentatively suggested that the lamp from Pong Tuk was presumably made not later than the sixth century.

Trade in the early Byzantine period

From what we know about the routes along which trade from the Eastern Mediterranean and Egypt to India and beyond was conducted in this period, we might very well imagine that the lamp – on its way to Southeast Asia – travelled through the Red Sea. The Red Sea had figured prominently in long-distance trade

²⁰ Bénazeth 1992: 127–129 (E 11684 bis, E 11702, E 11685): all three purchased in Egypt. Hayes 1984: 145–146 no.225 (with two nozzles): purchased in Jerusalem, 147 no.227 (body shape, rear socket): purchased in Cairo. De' Spagnolis and De Carolis 1986: 73–74 no.33 (compare body shape and rear socket): provenance unknown. Bailey 1996: 74–75 Q 3816 (MLA) pl.85 (openwork rod-handle attached on the sides of the lamps, no rear socket, but body shape and foot similar; double-hinged): provenance unknown. Similar lamps with openwork rod-handle: Hayes 1984: 140–141 no.217 was purchased in Cairo, no.218 provenance unknown. Bénazeth 2001: 119 no.101. A Byzantine gold ring with a miniature oil lamp, representing the same type but with two nozzles, was found in Egypt in the western Nile delta at Canopus, Goddio and Clauss 2006: 285 no.58. For the body shape and handle of this miniature lamp compare Hayes 1984: 141–142 no.219 (only one nozzle) (purchased in Egypt).

²¹ Buckton 1994: 18 (D.Bailey). Bailey 1996: vii. For a general dating to the period from the fifth to seventh centuries: Bénazeth 1992: 9, 12 (Coptic), and Bénazeth 2001: 8 (Byzantine).

²² Theis 2001: 57–63. Olcay 2001: 77–80. Sorochan 2002.

to India during the early Imperial Roman period.²³ After the decline of Roman trade during the third century, trade patterns changed somewhat. In particular, there was now strong competition from the Sassanians, who conducted active trade to India from ports in the Persian Gulf. Nevertheless, trade through the Red Sea, which had probably never ceased completely, recovered after the early fourth century and was active throughout the Byzantine period. Berenike was still an active port in the early fifth century, but of increasing importance now were the two ports in the north, Klysma - with Trajan's canal connecting the Red Sea and the Nile - and Aila.²⁴ Klysma in particular enjoyed a good reputation with the merchants arriving there from India.²⁵

Of great interest in our context is a description of maritime long-distance trade to India and Sri Lanka found in the *Christian Topography* of Kosmas Indikopleustes, written in Greek, probably between 547 and 550 CE. Kosmas, probably a native of Egypt, with the surname meaning 'who sailed the Indian seas', was a merchant during the earlier part of the sixth century and wrote this book after he had withdrawn from his former life and became a monk in Alexandria. During his mercantile activities he travelled extensively; he explicitly mentions his sea voyages in the Mediterranean, the Red Sea and the Persian Gulf, and he apparently went as far as Sri Lanka, called Taprobane by the Greeks. His main interest as a merchant might have been the import of spices, but he sold other things as well.²⁶ In our context his description of the trade carried out in the Indian Ocean, and, in particular, of the trade centred in Sri Lanka, is most important.²⁷

The island of Sri Lanka had by this time become a great centre of trade in the Indian Ocean and – owing to its central position – played an important role as an intermediary between trade from the East, i.e. China and Southeast Asia, and the

²³ From the vast number of studies on the subject, two are selected here: Raschke 1978, and the more recent and very thorough discussion by Young 2001.

²⁴ Young 2001: 74–89.

²⁵ *Itinerarium Egeriae*, Appendix II, 6, reflecting the late fourth or early fifth century. Roth 1980: 320.

²⁶ For instance, in Alexandria he also sold teeth of the hippopotamus from Ethiopia and/or Egypt, McCrindle 1897: book xi 336, p.361–362. Wolska-Conus III 1973: book xi, 9, p. 332–333.

²⁷ In book xi, McCrindle 1897: 358–373. Winstedt 1909. Wolska-Conus 1968–1973, vol.3: 314–357. - Kosmas was not an educated man, and the *Christian Topography* is very much in contrast to the scientific cosmographic literature, for instance, the *Geography* of Klaudios Ptolemaios, the famous mathematician and astronomer of the second century CE. The main objective of the *Christian Topography* was a theory of the universe, containing many rather fantastic and folkloristic elements. However, book xi is different in character, and it has been suggested that it was taken from an earlier work by Kosmas, a book on geography to which he refers in the prologue of his *Christian Topography*, strongly recommending it as further reading. The loss of this geography book has often been lamented, as it probably would have been of great interest for us nowadays. His description of Sri Lanka in book xi was certainly written by a person who had been there: Winstedt 1909: 4–5. Comes 1966. Pigulewskaja 1969: 110–129, esp. 119, 141–149.

West, the Persian Gulf, Arabia, Eastern Africa, the Red Sea and the Mediterranean (Fig. 14). Kosmas mentions ships coming to Sri Lanka from Persia and Ethiopia, and from all the Indian lands, which – in his use of the term – would include ships from anywhere east of the Indus as far away as China and Southeast Asia.²⁸ In addition, he says, the island sent out ships of its own. In this way the island received silk, aloes, cloves, wood of the clove tree, sandalwood, and other products from China and other trading places in the east, clearly including Southeast Asia, as is evident from the products mentioned. These goods were passed on to other markets such as those on the west coast of India, to Persia, south Arabia and Adulis in Ethiopia. From there in turn the island received imports, passing them to the remote places in the east, at the same time exporting its own products in both directions. From this description emerges a picture of Sri Lanka as a great centre for the entrepôt trade, with an exchange of goods from distant regions in all directions; hence it would have been possible in that period for a merchant to obtain a vast array of different commodities there.

Kosmas had some notion about the lands east of India and the products exported from there. Sailing east from the southern part of the east coast of India, one would reach the ‘land of the cloves’ – quite obviously a reference to Southeast Asia and the Spice Islands – and finally Tzinista (China), which produced silk. The ‘land of the silk’ is the remotest, bounded by the ocean on the east. ‘Beyond Tzinista there is neither navigation nor any land to inhabit’.²⁹ Kosmas had knowledge about two different ways to transport silk from China to the west: one by land, the other by sea. He says that the loads of silk transported by land, passing in turn through different peoples, arrived in Persia in a comparatively short time, whereas the distances of the sea route were vastly greater. This was, he explained, why in Persia there was always plenty of silk, because by transport overland the distances were much reduced. Here we must bear in mind that sericulture had at that time already been introduced into the Tarim Basin and possibly beyond. The silk industry had definitely spread westwards to the Fergana Valley and Sogdia. In Sassanian Iran silk fabrics with elaborate patterns were manufactured. Imports into the Byzantine Empire mainly concerned raw silks, which were then spun and woven according to local taste.³⁰

The rivalry between Persian and Byzantine merchants in that period, which to some extent certainly resulted from the silk trade,³¹ is also illustrated in the

²⁸ Comes 1966: 13. Weerakoddy 1997: 134. McCrindle 1897: book ii 137, p.47–48. Wolska-Conus I 1968: book ii, 30, p. 334–335 with n.30,1; book ii, 45, p.352–353.

²⁹ McCrindle 1897: book xi 337, p.367. Wolska-Conus III 1973: book xi, 16, p.346–349. McCrindle 1897: book ii 137–138, p.47–49. Wolska-Conus I 1968: book ii, 45–47, p. 352–355.

³⁰ Pigulewskaja 1969: 80–87, 146, 162–163. Raschke 1978: 622–623.

³¹ For the year 527 Prokopios laments that the Romans have to buy the silk from Persian traders, Prokopios I 20, 9–12.

story of Sopatros, another Byzantine merchant.³² Kosmas relates an incident which happened more than 35 years earlier, that is, some time in the early sixth century. Sopatros had travelled – apparently on an Ethiopian ship from Adulis – to Sri Lanka when a ship from Persia arrived there. During an audience, the king of the island asked the Byzantine merchant Sopatros and a Persian merchant whose king was the greater and more powerful. After listening to the Persian merchant praising his king, Sopatros made the suggestion that the king of the island should form his own opinion and decide the question as their kings were present, referring to coins with the image of each king. Accordingly, the Byzantine gold *nomisma* and the Sassanian silver *drachma* came under scrutiny and were compared by the king. Of course, since the story was related by a Byzantine merchant, the gold *nomisma* and therefore the Byzantine emperor won. Kosmas explains that for trade with Sri Lanka coins of an especially good quality were selected. In another part of the text Kosmas proudly states that it is with Roman coinage that all nations carry on trade from one end of the earth to the other.³³

However, this is not really reflected in the archaeological record. Compared to the large numbers of Roman silver and gold coins of the first and second centuries found in India, finds of Late Roman or early Byzantine gold coins are rare: only a few occasional finds of those gold coins have been documented from southern India and Sri Lanka dating from the late fourth, fifth and sixth centuries and later; in addition, a few Sassanian coins are known from Sri Lanka.³⁴ Looking further east to China, finds of Sassanian silver coins there outnumber by far those of early Byzantine gold coins,³⁵ the bulk of the Sassanian coins being from the fifth to seventh centuries and – as is evident from their predominantly northern distribution – documenting the trade by overland routes. However, there are also three sites in the south, in Guangdong, where several Sassanian coins have been found, dating from the fifth century; these clearly arrived by maritime trade.³⁶ In this context it is interesting to note that the find of a fifth century Sassanian silver coin has been recorded from Yarang in south Thailand;³⁷ and at Oc Eo a Sassanian glass paste was

³² McCrindle 1897: book xi 338, p.368–370. Wolska-Conus III 1973: book xi, 17–19, p.348–351.

³³ McCrindle 1897: book ii 148, p.72–73. Wolska-Conus I 1968: book ii, 77, p. 392–395.

³⁴ Boppearachchi 1993: 79. Boppearachchi 1996: 72.

³⁵ Raschke 1978: 625–627. Thierry 1993: a total of more than 1400 Sassanian silver coins and their derivatives. Thierry and Morrisson 1994, a total of 27 Byzantine gold coins and their imitations are listed, only ten (or perhaps eleven) of which are genuine Byzantine *solidi*. Wang 2004: xiii–xiv, 34–35.

³⁶ Thierry 1993: 124–125 nos. 27, 47, and 52, the finds from Guangdong containing a total of 32 Sassanian coins; the archaeological context of no. 27 with a date of 497 CE.

³⁷ Srisuchat 1996: 246 (referring to several small Persian coins); illustration p. 270 bottom (Valkash 484–488 CE); it would be interesting to know also the reverse of the coin to ascertain the place of the mint.

found, probably of a somewhat earlier date, perhaps the third or fourth century.³⁸ Whereas only a few finds of the valuable gold coins, which one would expect to have been used in the long-distance trade, are documented from Sri Lanka, large quantities of small Late Roman copper coins from the fourth and fifth centuries have been found on the island, as well as locally-made imitations. They are thought to have been used there as a local currency in the fifth century and possibly some time later.³⁹

Kosmas' description of long-distance trade in his time gives a very good picture of the network of trade links eventually connecting both ends of the world as it was then known, involving merchants and carriers from many different regions. Most of the trade goods he mentions are perishable; only in special conditions is it possible that they can be traced in the archaeological record. Finds of botanical remains and other materials, preserved due to the dry climate of the Egyptian desert, have been made at the Red Sea port of Berenike, which was particularly active from the late first century BCE to the first century CE and again in the late fourth and fifth centuries, and to a certain degree until the early sixth century CE. For instance, black pepper, the merchandise mentioned by Kosmas as exported from the Malabar Coast, has been found there in considerable amounts, in contexts of the first to second centuries as well as in those dating from the fourth to early sixth centuries CE. The most spectacular find of the early phase is a large storage jar of probably Indian manufacture still nearly half full with 7.5 kg black pepper. From Europe a few finds of pepper from the Roman period are preserved in waterlogged conditions. The earliest dated find of peppercorns comes from a Roman legionary camp in Germany; the peppercorns must have arrived there between 11 and 8/7 BCE; and pepper has been found as far to the west as the Roman town of Bath in Britain.⁴⁰

³⁸ Manguin 2004: 299 fig.12.14.

³⁹ Walburg 1985: 40–42. Walburg 1991. Walburg 2007 (forthcoming). They have also been found in southern India, in Madurai and Karur. In Sri Lanka the finds are concentrated mainly along the southwest and south coast. The value of the small copper coins in the Roman system was very low: 7,200 of them were worth one gold *solidus*. Their value in trading transactions in Sri Lanka might have been considerably higher, since Sri Lanka has no source of copper.

⁴⁰ Cappers 2006: 111–119 (with further references). A leaden tag inscribed with the details of a delivery of eight Roman pounds of 'fresh pepper' (about 2,620 g) dated to the second century CE has been recovered from the river Moselle in Trier, Germany, Gerlach 2001: 97 fig.117. At Berenike have been found other species originating from India (or beyond): mung bean, rice, coconut, emblic, Job's tear, teak, bamboo, and possibly sandalwood, Vermeeren 2000: 340; Cappers 2006: 164, 167–168. Several of the stone and glass beads are imports, with great certainty from south India and Sri Lanka, Francis 2000: 221–225. At the site were also found shards of Indian pottery which date mainly to the early phase but come also from fifth century deposits. It is beyond the scope of this article to give a list of all the imports in both directions in the earlier periods, however, one of the most prominent examples should be mentioned, the Indian ivory statuette found in Pompei, apparently part of a small table, which must have arrived there before 79 CE, Karttunen 1997.

In Late Roman deposits at Berenike, dating from the late fourth to fifth centuries, several pieces of resist-dyed cotton cloth have been discovered which were most likely imported from India.⁴¹ According to Kosmas, it was from Kalliana, ‘a great emporium’ on the west coast of India, that fabrics for clothing were exported, fairly certainly referring to cotton.⁴² In addition, some of the cotton finds from Berenike have been identified as remains of sails made from Indian cotton, but apparently for a Mediterranean-type sail.⁴³ However, among the remains of wood found at the site, teak imported from India was dominant. Some of the teak has been interpreted as re-used planks derived from dismantled ships, indicating the presence of Indian ships at Berenike.⁴⁴

Among the trade goods Kosmas also mentions less perishable luxury items like precious stones and ivory. African emeralds, probably from Upper Egypt, were exported from Ethiopia to northwest India and from there to Central Asia to the White Huns, and elephant tusks were exported from Ethiopia among other destinations also to India.⁴⁵ Concerning Sri Lanka, he says that on the island the gemstone ‘hyacinth’ was found. The name ‘hyacinth’ means a bluish-reddish stone and it is usually assumed that it designates the blue variety of corundum, i.e. sapphire. However, the huge ‘hyacinth’ mentioned later in the text which adorned one of the temples on the island is thought to have been an amethyst because of its size ‘as large as a large pine-cone’.⁴⁶ Possibly the term was used without a strict mineralogical differentiation for several gemstones of bluish or reddish colour such as amethyst, sapphire, ruby, spinel, and garnet, which are all found in Sri Lanka.⁴⁷ According to Kosmas, the gemstone almandine, a red garnet, was exported from Kaber, a port on the eastern coast of south India, probably to be identified with Kaveripattinam (today Poompuhar) at the mouth of the Kaveri River.

It has long been assumed that red garnets from India were imported into early mediaeval Europe, where almandine was the favoured gemstone, lavishly used for adornment on jewellery, fibulae, clasps and weapons.⁴⁸ The demand for almandine must have been enormous – an individual piece, a fibula of the late

⁴¹ Wild and Wild 1996: 251 Fig.13-3 (from fourth or fifth centuries deposit). Wild and Wild 2000: 272. Ray 2003: 218.

⁴² Pigulewskaja 1969: 143.

⁴³ Wild and Wild 2000: 266–269. Wild and Wild 2001.

⁴⁴ Vermeeren 2000: 340–341.

⁴⁵ McCrindle 1897: book xi 339, p.371–372. Wolska-Conus III 1973: book xi, 21 and 23, p. 352–355.

⁴⁶ Pigulewskaja 1969: 147. McCrindle 1897: book xi 336-7, p.364–5. Wolska-Conus III 1973: book xi, 13–14, p. 342–345. Weerakoddy 1997: 136–138.

⁴⁷ The imprecise use of the names for precious stones was quite common in the past. A well-known example is the ‘Black Prince’s ruby’ in the British state crown, which in fact is a spinel.

⁴⁸ Roth 1980.

sixth century, could boast more than 200 almandines. Recent mineralogical studies proved that the garnets used in Merovingian cloisonné work of the fifth and sixth centuries are in very good agreement with reference samples from India and Sri Lanka.⁴⁹ Only during the seventh century was there a shift to garnets from deposits in Bohemia, which were exploited from about the middle of the seventh century and then supplied most of the garnets. Almandines from India and Sri Lanka might have arrived in Europe by land routes via Persia and Armenia, but certainly also by the maritime route via the Red Sea and Alexandria to the Mediterranean, and then further. In Carthage a find contained more than a hundred almandines, representing the remains of a gem-cutters workshop which has been dated to the fifth and early sixth century.⁵⁰

Seen in the context of such active trade networks and mutual exchange of goods as described by Kosmas, an elaborate bronze lamp was certainly not one of the usual commodities. It might have been a prestigious gift presented by a Byzantine merchant to his counterpart in the foreign port, or it might have been acquired directly in Egypt by one of the merchants coming from India, and successively have been passed on further. In a similar way the Roman coin of the third century found at U Thong might have reached Thailand as a curio or souvenir. It is an *antoninianus* of Victorinus, one of the usurper emperors of the Gallic Empire, minted at Cologne in 269/270 CE. The distribution of the debased billon coins of the Gallic Empire is in general limited to the western provinces, where they were in circulation until the end of the third century. They were not used in bulk in the long-distance trade with India.⁵¹

⁴⁹ Greiff 1998. Quast and Schüssler 2000. Cf also Lennartz 2001: 268–270. At Berenike have been found four almandine beads, possibly from south India, Francis 2000: 221–222.

⁵⁰ Roth 1980: 324–328.

⁵¹ Brown and Macdonnell 1989: 15, 42 colour plate. Chantawit 2002: 60 (illustration of obverse and reverse).

Obverse: IMP C VICTORINVS P F AVG

for: *Imp(erator) C(aesar) Victorinus P(ius) F(elix) Aug(ustus)*

Head of the emperor to the right, wearing the radiated crown and the cuirass.

Reverse: SALVS AVG

for: *Salus Aug(usti)* (“Health of the emperor”)

The Roman goddess Salus, the personification of well-being and health, stands to the right feeding from a bowl (*patera*) in her left hand a snake which she holds with her right hand and arm.

It is an issue of mint II, situated in Cologne; this issue was minted in large numbers and has been dated to 269/270 CE, Schulzki 1996: 43–44, 76–86, esp. 83 no.21c pl.20. At the time of Victorinus (269–271) the silver content in the copper alloy of the *antoninianus*, also called a radiate by numismatists, was down to between 2% and 0.5% silver.

The lamp in its context in Thailand

Contacts and exchange in a western direction to India and beyond are well established from archaeological finds at several sites in southern and central Thailand from the last few centuries BCE onwards.⁵² The lamp from Pong Tuk provides evidence for the continuation of these long-distance trade links connecting Southeast Asia with regions as far away as Egypt and the Mediterranean well after the heyday of the so-called Indo-Roman trade. The Pong Tuk lamp is of particular interest because it is an object of a different category compared to small items like coins or intaglios, which are the usual western exotica in Southeast Asia.

It is assumed that during the Dvaravati period the shoreline was more inland, and Pong Tuk would have been more accessible from the sea. The nearest urban centres were Nakhon Pathom, about 30 km to the east, and Ku Bua in a similar distance to the south in a coastal location.⁵³ Pong Tuk was in a good position to receive goods arriving by maritime trade and then upstream from the mouth of the Maekhlung. Furthermore, it is situated on a very old trade route, attested since pre-historic times, leading northwest along the Maekhlung valley to the Three Pagodas Pass and from there into Burma.

The architectural remains excavated at Pong Tuk belong to the Dvaravati period, but there is not much archaeological evidence for a more precise chronology of the place. G.Coedès' excavations at Pong Tuk in 1927 revealed at the site, where the lamp was found, the laterite foundations of a square building, the sides measuring roughly 8 m x 8 m, and a few remains of its brick superstructure. Some laterite blocks, on the side of the building facing northeast, are probably the remains of a small antechamber. A road, 1.10 m wide, paved with bricks, has been observed over a length of about 20 m running in a northeastern direction along the central axis of the entrance side. The laterite blocks of the antechamber partly overlap a small square brick structure, apparently of an earlier phase. These sparse architectural remains are very plain and it is not possible to attach a more precise date to them.⁵⁴

Scholarly interest concentrated on five Buddha statuettes found at Pong Tuk previous to the excavations, two of them from the site of the lamp. Initially, Coedès proposed the second century for one of those two statuettes, maybe under the im-

⁵² Bellina and Glover 2004.

⁵³ Tanabe et al. 2003, Indrawooth 2004.

⁵⁴ The square building has been addressed as 'a stupa erected on a square basis, or a chapel, or some kind of shrine,' Coedès 1928: 200–201, or a sanctuary containing the lost principal image and some donations, Dupont 1959: 107.

pression of his early dating of the lamp, and the sixth century for the others. Later the dating of the bronze statuettes was revised to the eighth and ninth centuries.⁵⁵

The remains of a more elaborate building at a distance to the northeast, the direction of the road, also seem to belong to such a later period.⁵⁶ Based on stylistic grounds, the recessed ground-plan and the profiles of its laterite facing, Dupont considered this building to be chronologically a little later than the second state of Pra Paton and Wat Pra Meru in Nakhon Pathom.⁵⁷ Since there were apparently no defensive ramparts, H.G. Quaritch Wales even felt that the settlement of Pong Tuk could have been established only at a relatively late date when ‘there was thought to be no possible danger of its ever having to defend itself’ and consequently suggested a date as late as the ninth century for it.⁵⁸

However, one might ask whether it is justified to arrive at such general conclusions on the basis of only a few examples allowing a stylistical dating. Without a doubt, they provide very good evidence for the eighth and ninth century, but possible earlier phases are not to be ruled out. It is hoped that future investigations might allow a more precise chronology of the site.

⁵⁵ Coedès 1928: the two from the site pl.16 right; pl.17, the others pl.15 right. Brown and Macdonnell 1989: 14.

⁵⁶ Coedès 1928: 200–201 pl.9–13; he regarded this building near the San Chao as ‘the most important of the whole group’ and termed it a vihara. Later excavations about 450 m southeast of the San Chao revealed more Buddhist structures, Quaritch Wales 1936; unfortunately, several areas at Pong Tuk had been ransacked by treasure seekers after 1927.

⁵⁷ Dupont 1959: 107.

⁵⁸ Quaritch Wales 1969: 63–65, 117.



Fig. 1. National Museum Bangkok, inv TP 1. From Pong Tuk. Length 29.5 cm, height 26.7 cm.



Fig. 2. Same as Fig. 1, seen from above, the lid swung back.



Fig. 3. Same as Fig. 1, bottom with the opening of the square socket.



Fig. 4. Same as Fig. 1, seen from the side.



Fig. 5. Early Byzantine lamp. Munich, private collection, inv.744. Length 21.6 cm, height 18 cm.



Fig. 6. Same as Fig. 5, the lid swung back. Inside is visible the sleeve of the socket.



Fig. 7. Munich, private collection, inv.744. Lid with face of Silenus. Diameter of lid 3.9 cm.



Fig. 8. National Museum Bangkok, inv TP 1. From Pong Tuk. Lid with face of Silenus. Diameter of lid 5.2 cm.



Fig. 9. Early Byzantine lamp and stand, thought to be the original set. Munich, private collection, inv.1092. Height 50.6 cm. Stand height 35.7 cm. Lamp: length 20.7 cm, height 18.5 cm.



Fig. 10. Munich, private collection, inv.1092. Lamp with double-hinged lid with sieve and a high baluster-shaped top.



Fig. 11. Same as Fig. 10. Seen from above, the lid swung back. Inside is visible the sleeve of the socket.



Fig. 12. Munich, private collection, inv.1092. Openwork handle with palmette and dolphins. Handle: Height 12.7 cm, width 8.3 cm.



Fig. 13. National Museum Bangkok, inv TP 1. From Pong Tuk. Openwork handle with palmette and dolphins. Handle: Height 17.5 cm, width 13.3 cm.

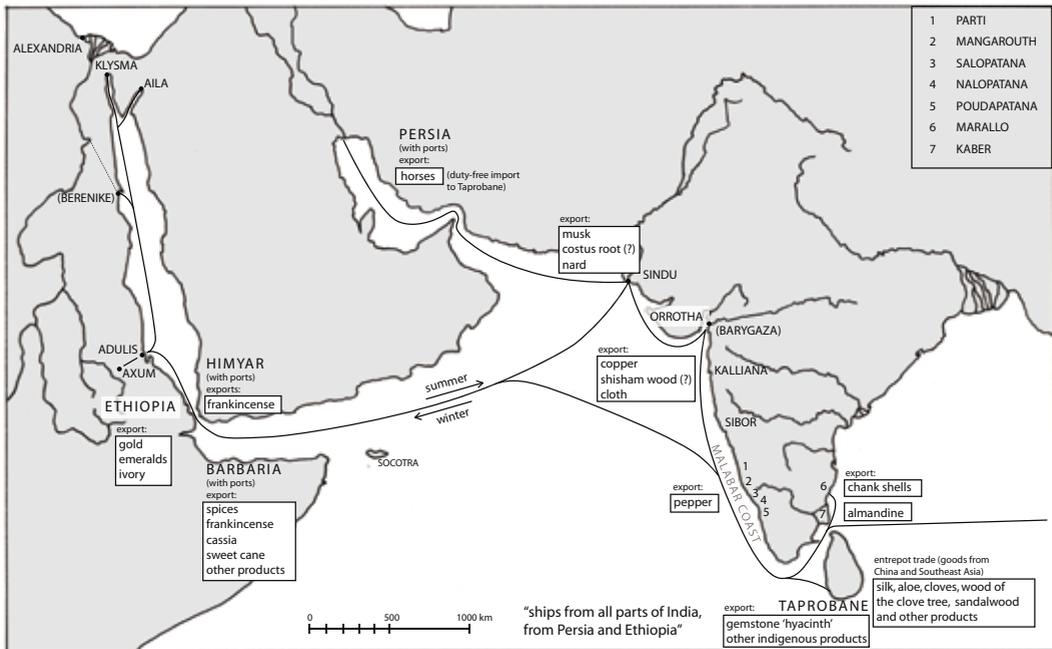


Fig. 14. Ports and trade goods according to Kosmas Indikopleustes, first half of the 6th century CE. Drawing by B.Borell and A.Seidel, based on Roth 1980: 319 fig.4, with amendments.

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