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# Pottery of so-called "Kaolin Fabric" at Tissamaharama-Citadel (Sri Lanka) in the 4th and 5th century AD.

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### H. Schenk

## Pottery of so-called "Kaolin Fabric" at Tissamaharama-Citadel (Sri Lanka) in the 4<sup>th</sup> and 5<sup>th</sup> century AD

Among the pottery finds in Sri Lanka of usually reddish or rarely blackish-fired clay a group of potsherds is outstanding (fig. 1). They have in common fine levigated clay and its whitish colour of paste for which it is referred to as Kaolin Ware in literature.

By now three main appearances of this distinctive pottery are known in Tissamaharama.

The first group, "Red-slipped white ware", is made of a dense clay texture by plain view but containing very fine grains of sand. Its outer surface was completely covered with an often highly polished red slip. Up to now 77 pieces of this group have been found in Tissamaharama (fig. 1, 8. 9).

The second, of which 27 fragments can be stated, is the most striking. It shows red painted floral or linear decoration on a more or less whitish clay body of different qualities and is here called "Red-onwhite painted ware" (fig. 1, 1–3. 5. 7; 2; 3; 5). Additionally some pieces even show incised decoration accentuated by red paint (fig. 1, 5; 5, 2)<sup>1</sup>. The painted design was applied on polished or streak-burnished surfaces. The latter feature is also common to 26 further fragments of similar clay but bearing no traces of paint (fig. 1, 4). Their only decoration consists of small bands of very thin grooves that can be seen as well with both the above-mentioned groups. All varieties usually have thin walls.

Many fragments show fingerprints or prints of textiles at the inner side (fig. 2, 1). A separately added neck part seems customary<sup>2</sup>. The main representative vessel of both wares is a spouted water jug with bulging shoulder (fig. 2) and probably a footed base (fig. 3). The spouts show a faceted profile (fig. 1, 5. 8; 4). A fragment of a knob testifies the use of lids (fig. 1, 9). Other fragments belong to specialized vessels of yet unknown function (fig. 5). The main vessel form as well as the red covered surface of the "Red-slipped white ware" remind of the "Indian Red Polished Ware" (RPW) in its confined appearance as sprinkler and spouted vessels with similar bulging shoulders<sup>3</sup>.

In the case of "Red-slipped white ware" the colour of the slip belongs to Munsell 10R 4/6. The

paint of "Red-on-white painted ware", in contrary, is to describe as a more or less orange tint (Munsell 2.5YR 5/8). This is similar to the third variety at Tissamaharama, the "Orange-slipped white ware". Here, the fragments are usually thick-walled. The surface is rather coarsely treated but often bearing incised geometrical decoration (fig. 1, 6; 6, 2) or cord-impressed paddle marks (fig. 6, 1). The slip is conspicuously transparent and applied in a coarse manner leaving a speckled appearance. Beside one base fragment with stand-ring the pieces are slipped on both sides, even if the curve of the potsherds indicates a closed vessel form. At some spots the slip is accidentally thicker thus changing the abovementioned average colour into a shade of grey (Munsell 2.5YR 4/2). It seems that the complete vessel was dipped into a very liquid paint that afterwards dripped down. Up to now 39 fragments are known apparently from Tissamaharama only, mostly body sherds but also three bases with stand-rings are evident. The fragmented condition, however, does not yet allow a reconstruction of a certain vessel form.

"Red-on-white painted ware" was published for the first time in 1983 in the first report on the excavations at Abhayagiri Vihara (Anuradhapura, Sri Lanka) as specially painted vessels<sup>4</sup>. Altogether

- Also mentioned by Wijeyapala/Prickett 1986, fig. 10.
- Some thoughts on RPW and its problematic definition and dating are in preparation by the author. For now see Schenk 2001, 73 and 133 fig. 109. – See also Kervran 1996, 38; Gupta 1999, 353 questioning the differing range of proposed dates for this pottery.
- Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1983, 363 as "fragments with white slip and red-painted decoration" without illustration; Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 61 fig. 9,1.2.3.8; Charvát 1985, 247 fig. 10,5–8 and 251; Bouzek/Břeň/ Charvát 1986, 252 fig. 11,15.17; Bouzek 1993, 85 fig. 56,5– 8; 57,1–3. See also Prickett/Wijeyapala 1986, fig. 10; Prickett-Fernando 1990, fig. 5a ("Fine Red-Painted on White Kaolin Fabric").

Incisions are also mentioned from the Abhayagiri vihara: Charvát 1985, 251.

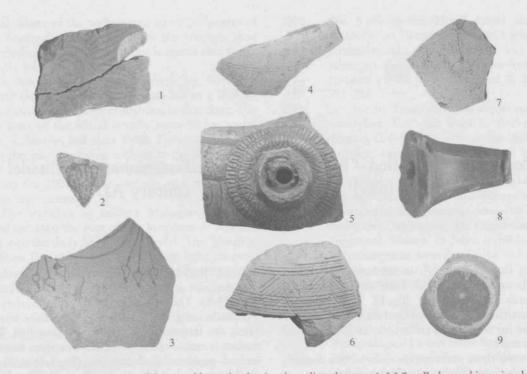


Fig. 1. Tissamaharama-Citadel. Assemblage of red painted or slipped wares: 1-3.5.7. – Red-on-white painted ware; 4. – plain white ware; 6. – Orange-slipped white ware; 8.9. – Red-slipped white ware. Scale 1:2. Photo H. Schenk.

11 pieces seem to be known from this site. Mantai<sup>5</sup>, Kollan Kanatta<sup>6</sup>, Godavaya<sup>7</sup> and supposedly Sigiriya<sup>8</sup> are further find spots in Sri Lanka for this ware. Earlier suggestions on the origin being probably Nabatean pottery or Late Hellenistic Lagynos ware show the good quality of this pottery. Furthermore Late Roman painted wares from the East Mediterranean were mentioned "as a source of inspiration" because parallels for this striking pottery were unknown elsewhere in South Asia<sup>9</sup>. But soon it was realized that "under the white slip it is handmade in the usual South East Asian technique"<sup>10</sup>.

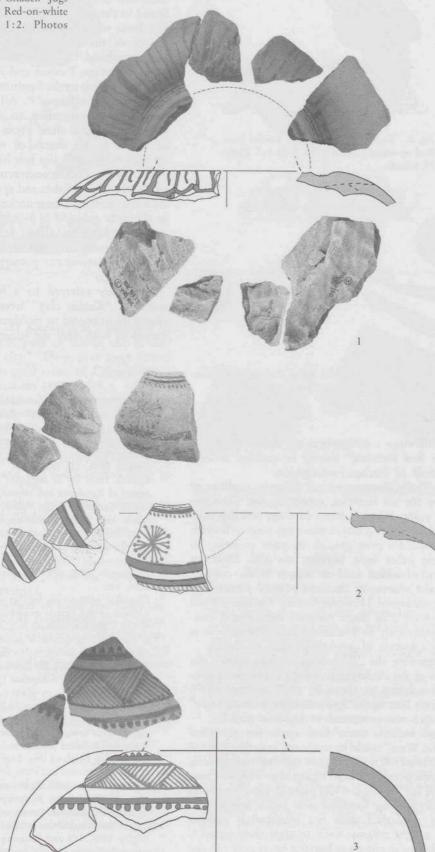
A slightly later dating as Red Polished Ware<sup>11</sup> or tentatively  $4^{th} - 7^{th}$  respectively  $5^{th}$  century AD<sup>12</sup> was proposed.

"Red-slipped white ware" was published for the first time in the second report of Abhayagiri Vihara excavations as "Kaolin red painted" 13 Commonly such a treatment of the surface is called a slip changing the appearance of a vessel completely and voluntarily. In the further course this pottery was also introduced as "Later Red Polished A" and "Later Red Polished B (White Kaolin Fabric)" 14. Those denominations are considered here as misnomers. First of all, it implicates a relationship to RPW especially in terms of dating which is by no means impartial. So if the dating of RPW has to be changed, the term "Later Red Polished Ware" may be misleading 15. Secondly, it suggests an ascertained content of kaolin. Ball clays, however, provide a white colour after firing,

- <sup>5</sup> Carswell/Prickett 1984, pl. 12B; 13A with early medieval dating with e. g. Chinese ceramics such as T'ang Ware see p. 49; Prickett/Wijeyapala 1986, fig. 10.
- Deraniyagala 1972, 7 fig. J3. This is a site situated on the west coast in the Vilpattu area and opposite to Karaitivu Island.
- 7 Personal information by O. Kessler, Bonn.
- <sup>8</sup> Prickett-Fernando 1990, 82, without details. This ware is not mentioned in the original publication of Sigiriya: Bandaranayake 1984.
- <sup>9</sup> Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 62; Bouzek 1993, 84.
- <sup>6</sup> Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 62; Bouzek/Břeň/Charvát 1986, 260. – Prickett-Fernando 1990, 82 points to India as origin; see also p. 63: "the source location for this lost, very uncommon, finely painted ceramic is not known, but it is South Asian in its potting style and very Indian, not western, in painting style".
- <sup>1</sup> Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 62; Bouzek 1993, 84. – It should be mentioned that the early dating of Red Polished Ware into the first three centuries AD due to its supposed Roman affinity is disputable: see footnote 3 above.
- <sup>12</sup> Prickett-Fernando 1990, 82 mentioning an archaeological context date without further specifying it; Prickett/ Wijeyapala 1986: c. 6<sup>th</sup> to 11<sup>th</sup> century AD.
- <sup>3</sup> Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 62, 68 fig. 11; Charvát 1985, 25; Bouzek/Břeň/
- Charvát 1986, 252 fig. 11,8.9; Bouzek 1993, 84 fig. 55,8.9.
  <sup>14</sup> Prickett-Fernando 1990, 81f. and fig. 4 c.3.; see also Prickett/Wijeyapala 1986, fig. 8; no further specification has been made for these two variants; an occurrence of this ware is also stated for Sigiriya, but its find material is not yet published.
- <sup>15</sup> See footnote 3 above.

Pottery of so-called "Kaolin Fabric" at Tissamaharama-Citadel

Fig. 2. Tissamaharama-Citadel. Jugs with bulging shoulder. Red-on-white painted ware. Scale 1:2. Photos H. Schenk.



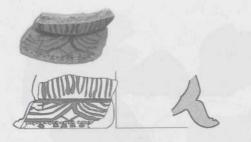


Fig. 3. Tissamaharama-Citadel. Footed base. Red-on-white painted ware. Scale 1:2. Photo H. Schenk.

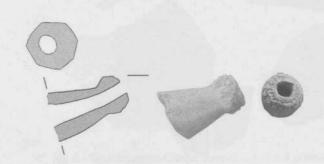


Fig. 4. Tissamaharama-Citadel. Spout. Red-on-white painted ware. Scale 1:2. Photo H. Schenk.

too. Therefore a designation as "Kaolin ware" or "Later Red Polished" should be avoided at least on behalf of further investigation.

At Tissamaharama we see different qualities of texture for all varieties, especially for "Red-onwhite painted ware". Some of them actually contain white burning clay. Others are more yellowish or sometimes even greyish in parts pointing to possible other light burning material. Different content of added sand as temper is also visible. Different sources of clay and potters' places have to be considered. However, beside "Orange-slipped white ware", all those varieties were found contemporaneously in Tissamaharama. Therefore it is rather a matter of workshops than of dating.

Regarding the "Red-slipped white ware", the results at the Abhayagiri Vihara excavations proposed a dating to about 5<sup>th</sup> to 8<sup>th</sup> century AD<sup>16</sup>. And just like with "Red-on-white painted ware" its origin was presumed in India as well<sup>17</sup>.

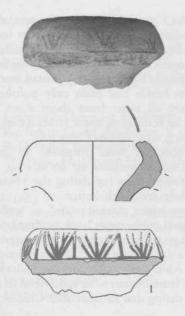
And indeed, some find spots for so-called "Kaolin Ware" could be made out in India. Related to this material it was mainly referred to figurines, but some potsherds were reported as well. The best parallel for "Red-on-white painted ware" seems to be described for Sambhar near Jaipur where potsherds decorated with red geometrical designs upon a light creamy wash or slips were stated<sup>18</sup>. The dating is not clear but the latest coins at the site are Indo-Sasanian coins of copper. As for the origin it is said, "all the ornamental pottery described above is made of from fine white clays found in the Jaipur state itself". At Kondapur and Ter from where mainly figurines are known the source of the clay is claimed to be from the neighbourhood<sup>19</sup>. Besides Kondapur other sites such as Nevasa, Paithan and Nagarjunakonda are cited as parallels to the figurines from Ter "in kind, material and technique"<sup>20</sup>. All those figurines are usually dated according to a supposed Roman association at the sites. From Ter we also know of a few kaolin sherds of which two are also covered with a red slip just like the "Red-slipped white ware". The reconstructed vessel shapes are rimless bowls or dishes and sprinklers<sup>21</sup>. At Devnimori the neck of a long-necked jar has been found as the only example of this ware from the site<sup>22</sup>.

At Brahmapuri (Kolhapur) sherds of "soft whitish creamy clay are reported in connection with Late Satavahana pottery (4<sup>th</sup> century – 9<sup>th</sup> century AD)"<sup>23</sup>.

V. Begley referred to a few rare exceptions made of "Kaolin clay" from Sonkh and Kanchipuram in regard to moldmade bowls<sup>24</sup>. For the vessels of both sites she suggests a Deccan origin

- <sup>16</sup> Wickramagamage/Hettiarachchi/Bouzek/Břeň/Charvát 1984, 62 and 68 fig. 11; Bouzek/Břeň/Charvát 1986, 260: occurring with SA and SI styles. Bouzek 1993, 84f. – For the chronology at Abhayagiri cf. Wickramagamage/ Hettiarachchi/Bouzek/Břeň/Charvát 1984, 68 fig. 11 and Bouzek 1993, 121 fig. 70.
- <sup>17</sup> Bouzek 1993, 83 in reference to R. Allchin: e. g. the region of Kondapur and mentioning also places such as Taxila, Cambay, Ganges Valley, Deccan, and Amaravati where such "class" would appear.
- <sup>18</sup> Sahni 1999, 71; unfortunately no illustration is available, but the description reminds of "Red-on-white painted ware".
- <sup>19</sup> Deshpande 1999, 479 footnote 2; see also Deshpande 1994, 176.
- <sup>20</sup> Chapekar 1969, vi-vii, for Ter the North Arcot district is given as the nearest available source for kaolin clay at Ter. – Nevasa: Sankalia et al 1960, 378 fig. 5–7, found at layer 2–3 of period V associated with Islamic and Glazed pottery according to fig. 84.
- <sup>1</sup> Chapekar 1969, 23 f.; the figurines and sherds have been found in period II: Chapekar 1969, 66; no illustrations are available.
- <sup>2</sup> Mehta/Chowdari 1966, fig. 32,73 and p. 82: "yellowish white Kaolin-like Ware...showing finely levigated clay and uniform firing...it is a common shape, that is seen in the Red Polished Ware as well as in the plain red ware; but the fine finish of this sherd is much nearer to that of RPW".
- <sup>23</sup> Sankalia/Dikshit 1952, 59, but no illustration is available. The use of kaolin at Brahmapuri is else restricted to figurines. Parallels are given to similar objects at Kondapur: Sankalia/Dikshit 1952, 141.
- <sup>4</sup> Begley 1992, 175 and footnote 47; on a possible clay source for kaolin in India see also 189, footnote 6. – For Sonkh see: Härtel 1993, 331 and 348 nos. 137.138 from Period V (Kushana-Period).

#### Pottery of so-called "Kaolin Fabric" at Tissamaharama-Citadel



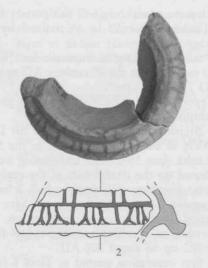


Fig. 5. Tissamaharama-Citadel. Red-on-white painted ware. Scale 1:2. Photos H. Schenk.

(Begley 1992, 175). At Kudavelli it is reported of three moldmade twin pots of which one is fabricated of "Kaolin clay". They have been found associated with two gold coins of Constantius II (337–361) and Anastasius (491–518)<sup>25</sup>.

Pottery of "Kaolin clay" is reported from Jagajjivanpur as well. The shallow dishes and bowls are described as wheel-turned, with very thin walls and sophisticated <sup>26</sup>. The Buddhist monastery is dated to the 9<sup>th</sup>/10<sup>th</sup> century AD belonging to the Pala Period and was not occupied prior to this (Roy 2002, 562. 577).

Some of the further sites with objects or potsherds made of "Kaolin clay" are Adam<sup>27</sup>, Nasik<sup>28</sup>, Karur<sup>29</sup>, Tripuri<sup>30</sup>, Mangolkot<sup>31</sup>, Dwarka<sup>32</sup>, Bhokardan<sup>33</sup>, Kaveripattinam<sup>34</sup>, Benagutti (Sannati)<sup>35</sup> and Ambari<sup>36</sup>. At least for Devnimori, Jagajjivanpur, Kudavelli and Tripuri the function as sacred sites is ascertained.

Nevertheless, nowhere in India this really distinctive pottery has left remarkable traces in literature. Especially the occurrence of the "Red-onwhite painted ware" is mainly confined to Sri Lanka beside those possible pieces from Sambhar mentioned above.

However, we can trace easily accessible deposits of Kaolin and just as white burning ball clays in Sri Lanka as well<sup>37</sup>. Therefore it is reasonable

- <sup>25</sup> Both were used as pendants and have cancellation marks on the obverse: Indian Archaeology – a Review 1978–79, 37.
- <sup>26</sup> Roy 2002, 575, unfortunately without being illustrated.
   <sup>27</sup> Nath 1995, 160 in association with moldmade "Megarian" ware.
- <sup>28</sup> Sankalia/Deo 1955, 84 pl. XX,6 (per. IIB) with description: Kaolin with white paint and painted dark red light orange.

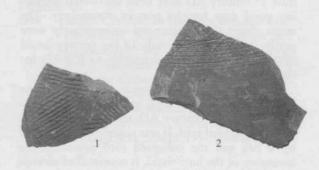


Fig. 6. Tissamaharama-Citadel. Orange-slipped white ware. Scale 1:2. Photo H. Schenk.

- <sup>29</sup> Mahadevan 1996, 289 but both references to further literature are not available to me.
- <sup>30</sup> According to Mehta/Patel 1967, 7.
- <sup>31</sup> Indian Archaeology a Review 1989–90, 108–110: Per. V (400–600) cream ware with slip and wash besides Red ware with thin fabric.
- <sup>32</sup> Singh 1977/78, 160: found together with RPW, Amphorae, Celadon and glazed pottery.
- <sup>33</sup> Deo 1973, 102 and 153: sherds and figurines.
- <sup>44</sup> Rajan/Raman 1994, 62 at the excavation of Vellayan Iruppu II, a site dated about 800 to 1200 AD.
- <sup>35</sup> Indian Archaeology-a Review 1997–98, 80 and 83, fig. 64– 65: terracotta figurines and dated to "Late Satavahana period".
- <sup>36</sup> Indian Archaeology a Review 1997–98, 9 potsherds datable to about 9<sup>th</sup> to 10<sup>th</sup> century AD. – Singh 1977/78, 157 mentions also Arikamedu in association with Brahmapuri and Nasik. But Begley 1996, 132 only knows of a white or light gray slip being diagnostic for this site. This slip contains Kaolin according to Wheeler/Gosh/ Krishna Deva 1946, 51.
- <sup>37</sup> Herath 1964, 27; Cooray 1984, 222f. Charvát 1985, 251 according to Dr. S. Deraniyagala that "Kaolin clays are found in great quantities in Sri Lanka".

first to assume a local origin of this pottery found in Sri Lanka that could be ascertained by clay analysis.

The range of dating in literature for "Kaolin ware" is mainly from the 4<sup>th</sup> century AD to about 1200 AD as seen above<sup>38</sup>.

The excavations at Tissamaharama now provide some additional dates.

The Archaeological Department of Sri Lanka and KAVA in Bonn are excavating in the South of Sri Lanka since 1992. The undergoing work is concentrated on the citadel area of the capital of the ancient kingdom of Ruhuna, which is known as Mahagama. Meanwhile three areas have been investigated or still are under investigation. They reveal settlement activities from the end of the 4<sup>th</sup> century BC up to about 800 AD.

The first excavation started at Tissa 1 (1992– 99) situated in the east of the citadel. Bedrock has been reached by now. Undisturbed features and strata from the up to now oldest periods until at least 1<sup>st</sup> century AD have been uncovered providing good data for the pottery chronology. The strata above those structures unfortunately were partly disturbed. The study of the pottery could nevertheless point to a dating up to 800 AD for the youngest stratum.

At Tissa 2 (1997–98), near the lake in the western part of the citadel, we discovered a house area of the  $2^{nd}$  century AD made of wattle and daub with a tiled roof. It was completely destroyed by a fire and the collapsed roof preserved the inventory of the household. It consisted of storage pots and other household items<sup>39</sup>. These features in situ supported the pottery chronology already achieved at Tissa 1 especially for the  $2^{nd}$  century AD.

Since 1999 the ongoing work is focused on a site in the neighbourhood of Tissa 2 where an area of about 650 m<sup>2</sup> is now under investigation<sup>40</sup>. In contrary to the sites of Tissa 1 and 2, Tissa 3 now provides mostly undisturbed structures and strata from at least the 5th/6th century AD downwards. In 2003 we reached the strata of the 1st century AD. The features of the 1st and 2nd century resemble strongly those of Tissa 2. For the 3rd century we could verify a furnace and some settlement structures. Houses with brick foundations were built in the 4th century and in the course renewed at several times. They were destroyed by the construction of a pillared monastic building reusing its bricks. According to the pottery chronology and supported by the finds of about 50 coins this must have happened after 450 AD, in the 2nd half of the 5th century. Sometime in the 8th century this last building has been destroyed as well. One of the pillars fell into a pit whose filling contained typical pottery of phase h according to the Tissamaharama pottery chronology. Generally, however, the uppermost layers at Tissa 2 and 3 are dated not later than the 6th century due to erosion.

In Tissa 1 we had found only one sherd of "Orange-slipped white ware" and eight fragments of "Red-slipped white ware". At Tissa 2 we obtained two pieces of the latter and for the first time we recognized "Red-on-white painted ware" with two pieces beside one plain only polished fragment. They all came from those more or less disturbed or featureless upper strata dating at least into phase g after 450 AD onwards.

The more we were surprised to find 156 fragments of all variants up to now at Tissa 3. Here, the conditions for dating the younger periods luckily are much better.

"Red-on-white painted ware" as well as the "Red-slipped white ware" are confined to those strata and pits contemporary to the monastic pillar site<sup>41</sup>. This dating after 450 AD is supported by the results at Abhayagiri excavations at Anuradhapura. The finds from Mantai were subscribed to an early medieval dating due to associated Chinese ceramics<sup>42</sup>.

"Orange-slipped ware", on the contrary, we noticed mainly in connection with those brick houses constructed in the 4<sup>th</sup> century. A beginning in the 3<sup>rd</sup> century yet cannot be excluded. One fragment of the plain white ware was observed in layers of the 3<sup>rd</sup> century.

The end of manufacture of these potteries is not yet known. Regarding the function of "Redslipped white ware" and "Red-on-white painted ware" a suggested ceremonial use may be underlined by its significant occurrence related to the supposedly sacred building<sup>43</sup>. Pillar constructions seem to be restricted to monastery compounds as chapter or image houses<sup>44</sup>.

The structures at Tissa 1 and 2 as well as the settlement below the pillar site are considered as secular. Whether this is the reason that both groups of pottery have not been found in older contexts will have to be supported by further finds. The use of "Orange-slipped ware" apparently was not restricted to sacred sites. Its thick-walled fragments indicate a storage function. Nevertheless, its ornamental decoration and paint suggests that its vessels too were openly displayed and not confined to a kitchen area.

- <sup>38</sup> According to Begley 1992, 157–196, moldmade vessels usually have an earlier dating.
- <sup>39</sup> For Tissa 1 and 2 see Weisshaar/Schenk/Wijeyapala 2001 and Steinbring 2001.
- <sup>40</sup> See Weisshaar/Wijeyapala in this volume.
- <sup>41</sup> Schenk 2001, 73 refers to an earlier dating into the 4<sup>th</sup> century AD in connection to the brick houses. We had just started the excavation at Tissa 3 and those brick robbery pits were not yet recognized.
- <sup>42</sup> Carswell/Prickett 1984, 49. The specimen from Kollan Kanatta is not from a stratified context.
- <sup>43</sup> Begley 1992, 189 footnote 5 with further references.
- <sup>44</sup> For this particular building see Weisshaar/Wijeyapala in this volume.

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