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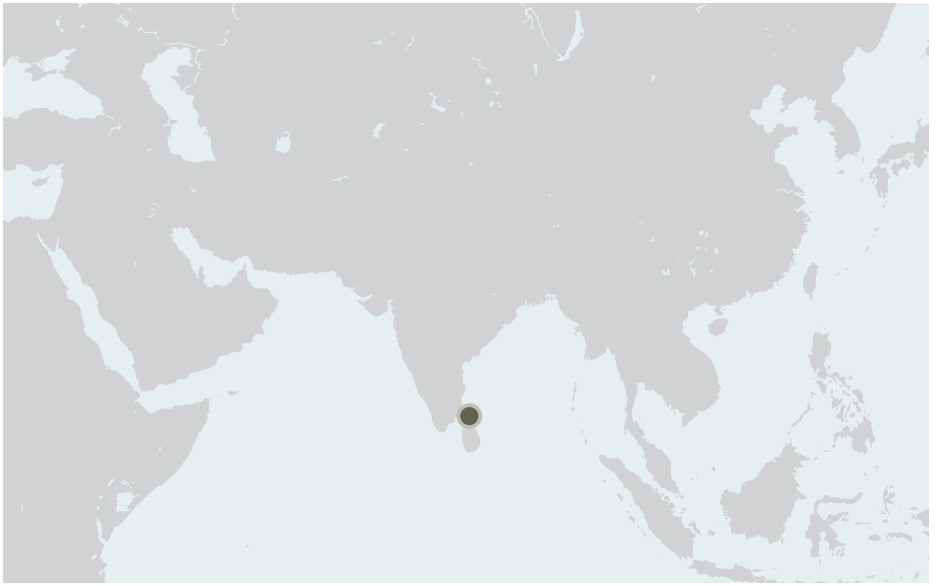

Kantarodai, Sri Lanka

Pottery Analysis: Preliminary Overview of the ›Corpus‹ of Ceramic Sherds

Research Carried Out between July and September 2023

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ABSTRACT

In the summer of 2023, a new excavation was conducted at the Kantarodai site (North Sri Lanka) as part of a collaboration between the Department of Archaeology of Sri Lanka and the German Archaeological Institute (KAAK-Bonn). The research provides a preliminary overview of the ceramic material from the excavation, conducted as part of a larger PhD project aimed at developing a tentative quantification of the pottery that travelled across the Arabian Sea between the 3rd century BCE and the 6th century CE. The excavation revealed a continuous occupation of the site from 750 BCE to 345 CE. The ceramic analysis provided evidence for a rich and varied collection of artifacts, most of which can be directly compared with the well-established ceramic typology from Tissamaharama (South Sri Lanka).

KEYWORDS

Kantarodai, Sri Lanka, pottery, ceramic, trade, Indian Ocean

ZUSAMMENFASSUNG

Im Sommer 2023 wurde im Rahmen einer Zusammenarbeit zwischen dem Department of Archaeology of Sri Lanka und dem Deutschen Archäologischen Institut (KAAK-Bonn) eine neue Ausgrabung an der Fundstätte Kantarodai (im Norden von Sri Lanka) durchgeführt. Die hier vorgestellte Untersuchung ist ein vorläufiger Überblick über das keramische Material der Ausgrabung. Die Untersuchung wurde im Rahmen eines größeren Promotionsprojekts durchgeführt, das darauf abzielt, eine vorläufige Quantifizierung der Keramik zu entwickeln, die zwischen dem 3. Jahrhundert v. Chr. und dem 6. Jahrhundert n. Chr. durch das Arabische Ozean reiste. Die Ausgrabung ergab eine kontinuierliche Besiedlung der Fundstätte von 750 v. Chr. bis 345 n. Chr., was durch die Keramikfunde unterstrichen wird? Zudem zeugt die Keramikanalyse von einer reichen und vielfältigen Sammlung von Artefakten, von denen die meisten direkt mit der gut etablierten Keramiktypologie von Tissamaharama (im Süden von Sri Lanka) verglichen werden können.

SCHLAGWÖRTER

Kantarodai, Sri Lanka, Töpferware, Keramik, Handel, Indischer Ozean

Trade Network

1 Between the 3rd century BCE and the 6th century CE, the Indian Ocean was the stage for an international system of long-distance trade connections able to put cultural and political entities from three different continents into contact: Europe, Asia and Africa[1]. Such connections were not limited to occasional courageous traders or travellers. On the contrary, they had an important impact on the involved economies within the western Indian Ocean. In particular, sites such as Berenike[2] or Myos Hormos[3] on the Egyptian coastline are well known archaeologically for the concentration of artefacts coming from different locations across the Western Indian Ocean and as far as the Indian Subcontinent. Furthermore, their foundation and expansion are arguably directly related to the desire of Ptolemaic Egypt, first, and the Roman Empire, afterward, to be directly involved in the trade.

2 Egypt and the Roman Empire were not the only entities directly involved in the trade, nor the most influenced by it. Similar sites to Berenike and Myos Hormos are found in multiple locations along the coasts of the Red Sea, the Arabian Peninsula, the Arabian Sea, the Indian Peninsula, the Horn of Africa and Sri Lanka[4]. The South Arabian kingdoms, in particular, were strongly active and they were importantly affected by the dynamics of the trade. Having developed their commercial power as caravan traders, with the development of the maritime connections, first across the Gulf of Aden, later in the Red Sea and the Arabian Sea, they soon took the role of middlemen between the Indian Ocean and the West, in particular between the Arabian Sea and the Persian Gulf and the Red Sea. Unfortunately, the impact that the trade had in such kingdoms and the quantification of the materials travelling across the ocean outside the Roman Empire have not been recorded by any textual source. Not even the very famous Periplus Maris Erythraei is able to clearly tell the amount of goods that were travelling by boat in this part of the world[5].

3 In this context, the presented research is a small piece of a more complex puzzle that is the PhD research within which it develops. The PhD[6] project aims to the developing of a tentative quantification of the materials that travelled across the Arabian Sea, with the archaeological site of Khor Rori[7] (Oman) functioning as the focal point of the research. Moreover, it also represents a major occasion for the development of a better comprehension of the material found at the site of Kantarodai to establish to which degree the site was directly or indirectly involved in the international trade system. To do so, this short project was dedicated to the study of the ceramic artefacts found in Kantarodai.

1 See Billé et al. 2022.
2 See Sidebotham 2011.
3 See Peacock – Blue 2011.
4 See Seland 2014, 367–402.
5 See Seland 2016, 191–205.
6 The research here presented is part of the doctoral research project with the prelaminar title: »Past perception of time and past economy of long-distance trade: The Indian Ocean and its globalizing network«. The research is conducted by Daniele Zampierin at Freie Universität Berlin within the Berlin Graduate School of Ancient Studies (BerGSAS). The doctoral research is gently supported with a scholarship by the Einstein Center Chronoi ending in December 2024.
7 See Avanzini 2011.

Fig. 1: Northern final section of the trench

Introduction to Kantarodai

4 A new excavation project took place during the summer of 2023 in Jaffna (Sri Lanka), as part of a collaboration between the Department of Archaeology of Sri Lanka and the German Archaeological Institute (KAAK – Bonn). The excavated site is the ancient northern capital of the island, known in the literature and until today as Kantarodai[8]. It is located approximately 10 km northeast of Jaffna city and has been identified as a mound of a major settlement site with about 5–6 m of cultural layers.

5 Investigated for the first time in 1917, its most prominent archaeological feature is a cluster of about 42 miniature Buddhist stupas, dated around the 8th century CE. Limited-scale excavations took place in 1970, 1985, 2011, and 2018–19. They remained unpublished, though. They have revealed the main occupation of the mound, between 500 BCE and 0 CE, but very limited evidence of the protohistoric levels and no information on the early historical layers.

6 One important goal of the 2023 project was to establish the complete stratigraphic sequence (Fig. 1) of the site and to obtain further dating. To reach such an objective, one test pit 3 × 3 m was dug with the objective of having a complete overview of the stratigraphy reaching the verging layers (Fig. 2). The bedrock was reached at a depth of 3,66 m. The results of the investigation of the single test pit excavated showed a continuous cultural sequence from 750 BCE until 345 CE, with nine main phases and, in particular, a very rich early historical material. The finds for that period hinted at long-distance relations, notably in the trade of semi-precious stones such as carnelian, quartz, amethyst and garnet, as well as per the abundance of Late Roman coins. Regional contacts with India also appear in the ceramic assemblage and via the import of the carnelian. Besides, faunal remains are extremely abundant and varied, indicating an important local market (especially in fish), rich in products from faraway places.

7 Kantarodai thus stands out as a major settlement, connected to the rest of the island, the neighbouring country and more distant places. It is, therefore, particularly interesting to study its ceramic typology in the mirror with assemblages on

8 See de Saxcé – Perera 2024 (unpubl.).

Fig. 2: View of the trench at the end of the excavation (view from East)

the other shores of the Indian Ocean. The present article shows the methodology and major outcome of this comparative perspective.

Objective

8 The objective of the pottery analysis project, which took place in September 2023 in Sri Lanka, was to have a first overview of the ceramic material excavated in Kantarodai. The selection of the artefacts was functional to both the general understanding of the site of Kantarodai and the collection of new data to be used within the context of the PhD research project. In the first case, the archaeological site still could not count on a complete overview of the shapes and fabrics of the pottery fragments excavated so far. The study presented here was aimed at conducting a first survey of the shapes and fabrics found at the site.

9 In the context of the PhD research, the aim was to collect data and examples regarding the fabrics and shapes available in Kantarodai to use as comparison with the ceramic artefacts from Khor Rori. By enlarging the dataset of materials for comparison, the aim is to widen the scope of the quantification of the materials travelling across the ocean.

Methodology

10 The approach to the study of ceramics was straightforward, with the aim of collecting basic data. After a careful selection of the most representative shapes and fabrics in collaboration with the local ceramic specialist Nadeera Harshajith, the ceramics were carefully analyzed. Specifically, the artefacts were analysed by recording morphological features as well as fabric characteristics and decorations and, when possible, were compared to the Tissamaharama typology[9]. At the moment of recording the fabric characteristics of the samples, the researcher observed the fragments by means of a portable optical microscope[10], which allowed the

9 Schenk 2001, 59–138.
10 DinoLite Universal[tm].

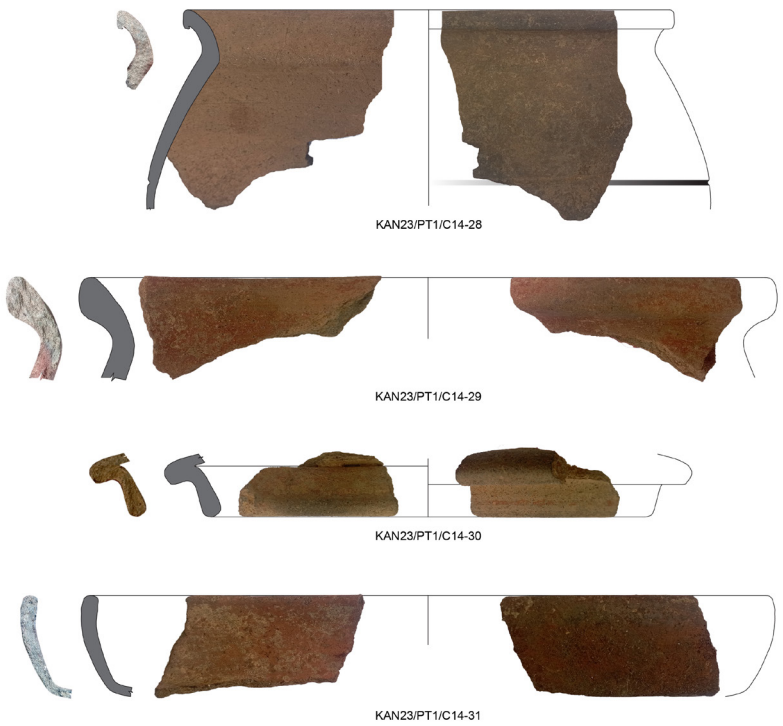

Fig. 3: Example of ceramic sherds drawn (KAN23/PT1/C14-28; KAN23/PY1/C14-29; KAN23/PT1/C14-30; KAN23/PT1/C14-31)

observation of the microscopic inclusions as well as the collection of pictures of such inclusions and the fabric in general. Despite the fact that the archaeologist conducting the analysis was not an expert in mineralogy, the possibility of taking good quality close-ups of the fabrics allows the analysis of the same to be repeated, when needed, at a secondary moment.

11 Once the fragments selected had been described one by one and coded, the sherds were also subject to a careful drawing (Fig. 3). In particular, the responsible for the analysis, once managed to process all the selected fragments and had extra time, dedicated some time in drawing part of the samples, while the majority has been drawn by Nadeera Harshajith. Such drawings are fundamental for the excavation project to be able to start developing a complete catalogue and sequence of the ceramics at Kantarodai. At the same time, in the context of the PhD project, the drawings function as first-hand analysed samples for the PhD candidate to test the machine learning program for ceramic comparison developed in the context of the PhD research.

Results

12 The sample size on which the analysis was conducted is 182 ceramic fragments selected in collaboration with the local specialist. Of these 182 samples, 14 are not rim fragments, while the remaining 168 sherds include part of the rim. The reason for such selection is connected to the future use of the data in the context of the PhD project[11].

13 The fragments selected and studied are representative of nearly the whole sequence of stratigraphic loci, with some locus being more represented than others.

14 The objective of the selection of the fragments was to have both a general understanding of the typological ceramic assemblage per locus and to have an overall understanding of what shapes and fabrics are to be found so far, in the locus of the Kantarodai archaeological site. The overview of the results is here

11 The PhD project is mainly focused on the comparison of rim sherds.

Loci	Fabric Types (The fabric types refer to the fabric types identified in Tissamaharama by Schenk 2001, 68–74)	Sherds recorded
1	Red Ware	4
	Group of fine grey ware	2
4	Red Ware	4
5	Red Ware	37
	Group of fine grey ware	18
	Black and Red Ware	3
8	Red Ware	1
	Group of fine grey ware	2
	Black and Red Ware	9
10	Red Ware	3
	Black and Red Ware	1
11	Red Ware	8
	Group of fine grey ware	5
	Black and Red Ware	5
13	Red Ware	7
	Group of fine grey ware	1
	Black and Red Ware	5
14	Red Ware	21
	Group of fine grey ware	4
	Black and Red Ware	12
18	Black and Red Ware	1
	Red Polished Ware	2
18 up	Red Ware	2
	Red Polished Ware	1
	Black Ware	1
18 mid	Black and Red Ware	1
19	Red Polished Ware	1
20	Black and Red Ware	6
	Fine Red Ware	1
25 up	Fine Red Ware	2
	Glaze Ware	1
39	Black and Red Ware	1

Fig. 4: Overview of the Fabric Types identified per locus and of the number of sherds recorded

presented in Fig. 4 where the recorded fabric types are ordered according to the relative locus with the number of sherds representative of the fabric type that were studied[12].

15 From the preliminary study of the material from Kantarodai, it was possible to find multiple parallels with the ceramics from Tissamaharama. Drawing parallels with the artefacts from Tissamaharama allows a direct comparison of the classifications of the artefacts from Kantarodai. Furthermore, from the point of view of the PhD project, the parallels between Tissamaharama and Kantarodai make it possible for the researcher to use Kantarodai materials as a proxy for the study of the ceramics from Tissamaharama. Consequently, working in first person with the materials from Kantarodai allows the researcher to experience first-person ceramics, which can be compared with those of Tissamaharama, improving the experience regarding fabric types and shapes also in the locus of Tissamaharama materials. Such first-person experience is fundamental when comparing ceramics from Khor Rori (Oman) with those from Tissamaharama and assessing the comparability of the materials.

Conclusions

16 Despite being a preliminary work and despite it being limited to a very small number of artefacts, this research represents a fundamental step paving the way towards a better understanding of the ceramic assemblage of Kantarodai, on the one hand, and a better understanding of the transported materials within the context of the Indian Ocean of the other side. The location and the importance of Kantarodai, the clear comparability of the materials with those from Tissamaharama and the possibility of having a closer look at the fabric composition together with an accurate profile drawing make this research a turning point for the

12 The number of sherds studied per fabric type is not to be understood as representative of the total corpus of ceramic sherds per fabric type per locus analysed. Consequently, the differences in quantity of sherds recorded per fabric type in each locus are not representative of the relative concentration of each fabric type per locus. Eight fragments are not included in the table here presented being of undefined fabric type.

understanding of the archaeological context in Sri Lanka and for the understanding of the dynamics of the international trade connections within the western Indian Ocean. Furthermore, the presented research was conducted in relation to the finds resulting from only one test pit of 3 × 3 m reaching 3.66 m of depth. The quantity of material found in such a limited excavation area and the diverse nature of the materials excavated are indicative of the potential of Kantarodai as an archaeological site within the context of the intra- and inter-regional trade system in which it was involved.

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