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## The Sultan Tepe Site and its Surroundings in the Western Lower Bakırçay Plain. Investigating the Complex Layers of a Rural Residence in the Pergamon Micro- Region

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## ABSTRACT

### **The Sultan Tepe Site and its Surroundings in the Western Lower Bakırçay Plain**

Investigating the Complex Layers of a Rural Residence in the Pergamon Micro-Region

Zeki Mete Aksan – Bernhard Ludwig – Güler Ateş – Annika Skolik – Fabian Becker – Ercan Erkul – Wolfgang Rabbel – Jörn Lang – Sarah Al Jarad – Felix Pirson – Brigitta Schütt

A rural site in the Pergamon Micro-Region, located in the western lower Bakırçay plain, has been discovered and investigated over the past two decades by two interdisciplinary research projects, involving archaeology, ancient history, geography and geophysics. Results of recent geophysical prospections and geographical analysis in combination with archaeological data from intensive and extensive surveys allow several hypotheses on the function of the site to be drafted and interpretations to be developed, even without excavations. The comprehensive analysis of magnetic anomalies, architectural elements, pottery finds and the geographical characteristics of the sites suggests different phases of occupation and use from the late Hellenistic to the Byzantine period. An extensive rural residence with an agricultural character, possibly a Roman villa, formed the key phase of the Sultan Tepe site in the western lower Bakırçay plain.

## KEYWORDS

Pergamon, archaeological survey, geophysics, geography, villa, sanctuary, mansio, tumulus



# The Sultan Tepe Site and its Surroundings in the Western Lower Bakırçay Plain

Investigating the Complex Layers of a Rural  
Residence in the Pergamon Micro-Region

## Introduction

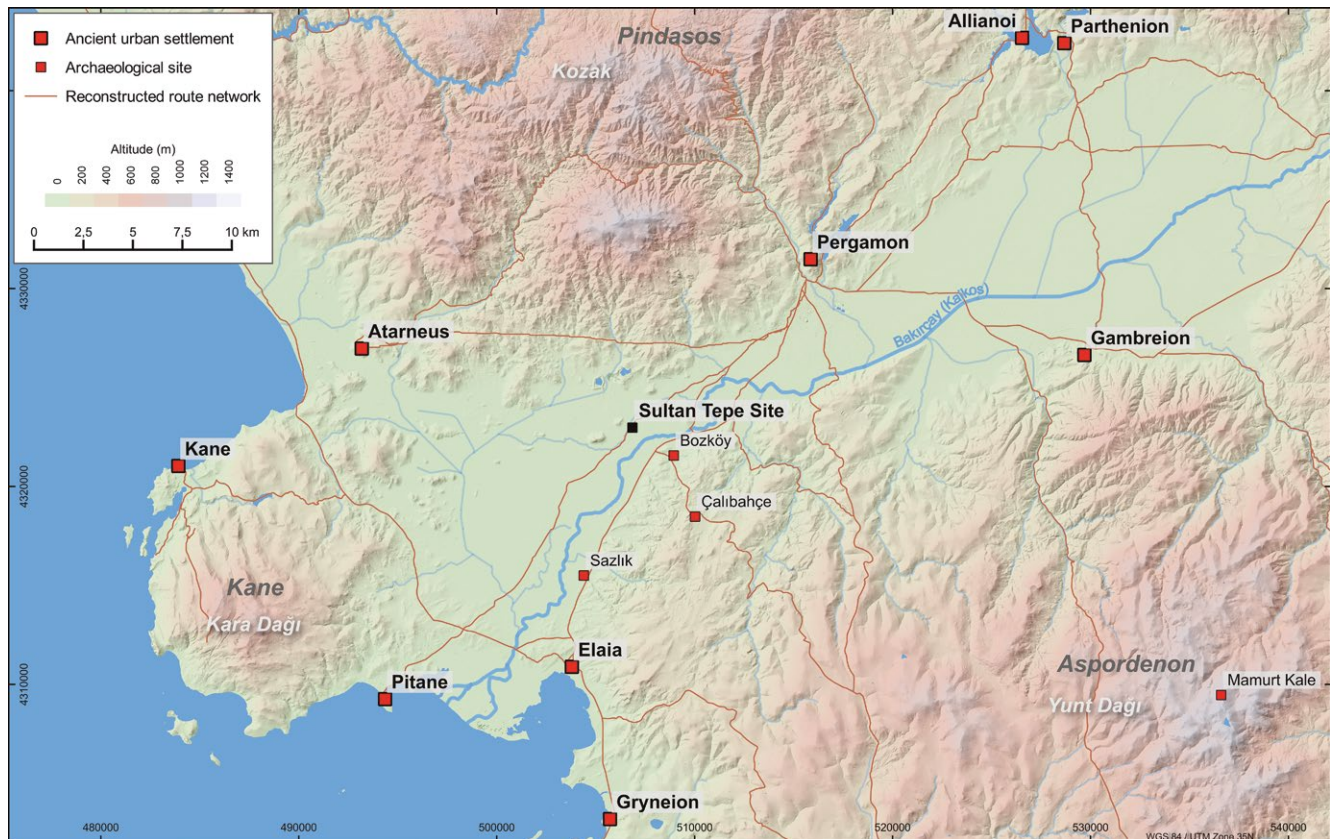
<sup>1</sup> While more than 140 years of systematic archaeological research at Pergamon makes this particular Hellenistic residence city and Roman Imperial metropolis one of the best-known ancient sites in the eastern Mediterranean, the same is hardly valid for its rural hinterland. In view of an increasing interest in rural spaces, in human–environment interactions, as well as in the economic foundations of ancient urban culture, the research project »The Transformation of the Pergamon Micro-Region between the Hellenistic and the Roman Imperial Period« (TransPergMicro) explicitly looks beyond the city and has a strong focus on the countryside<sup>1</sup>. Since fieldwork began in 2019, several previously known sites have been revisited and even more have been newly discovered<sup>2</sup>. Due to the interdisciplinary character of the project and its long duration, which is envisaged for up to twelve years, a publication strategy based primarily on heavyweight monographs is neither appropriate nor timely. Hence multi-authored papers on particularly significant sites will contribute to the hopefully swift presentation of the fieldwork. They do not replace synthetic studies particularly during the project's last phase, but they contribute to avoiding a backlog in the publication of fieldwork results and their discussion.

<sup>2</sup> This article about the Sultan Tepe site and its surroundings is the first example of such an interdisciplinary presentation and evaluation of one particular site. Due to the methodological limitations of the fieldwork, which has to do without excavation because of the survey permit, we cannot present conclusive results here. It is therefore the aim to contribute to a more comprehensive picture of rural settlement in the Pergamon Micro-Region in the future with a specific, but at the same time meaningful example. Another aim of this paper is to draw attention to the problematic issue of labelling sites by seemingly familiar terms such as »villa«, which predetermine the interpretation of com-

Title page: Ionic cornice fragment brought to the surface by a plough on the Sultan Tepe site

<sup>1</sup> For the project, which is generously supported by the German Research Foundation (DFG), see <<https://www.dainst.blog/transpergmikro/>> (26.08.2023).

<sup>2</sup> See the yearly reports by F. Pirson et al. in *Archäologischer Anzeiger*.



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Fig. 1: Map of the Pergamon Micro-Region showing the location of the Sultan Tepe site in the western lower Bakırçay plain

plex archaeological contexts such as the Sultan Tepe site. This is a serious methodological challenge, which the project TransPergMicro is currently addressing by developing a classification system for sites and a related typology independently from each other<sup>3</sup>.

## Research History

<sup>3</sup> The Sultan Tepe site, named after a nearby hill, is located on a parcel of land called »Körçay«<sup>4</sup> northwest of Bozköy village, southeast of Süleymanlı village and west of Bergama (fig. 1). Situated in the western lower Bakırçay (ancient Kaikos) plain and close to Kalarga Tepe (ancient *Teuthrania*) and *Eğrigöl Tepe* (ancient Halisarna?) (fig. 2), the site has been the subject of various investigations over the past two decades.

<sup>4</sup> The site first attracted attention in 2006 when a »collection« of architectural fragments was discovered on private property near *Ovacık* village, which is about 2 km north of Süleymanlı village<sup>5</sup>. According to the reports recorded during the archaeological survey, several local farmers confirmed that the ancient architectural fragments were mainly from the fields in the Sultan Tepe area<sup>6</sup>. In the further course of the archaeological surveys, the place of origin was finally located in 2009 and documented under

<sup>3</sup> Cf. Witcher 2012.

<sup>4</sup> Körçay means »blind stream« in Turkish.

<sup>5</sup> Pirson 2007, 42–47 (M. Zimmermann); Schneider et al. 2015, 62. The »Chora« project under the direction of Martin Zimmermann (LMU Munich) was part of the archaeological surveys of the DAI's Pergamon Excavation with permission of the Ministry of Culture and Tourism of the Republic of Turkey. It was generously funded by the German Research Foundation (DFG).

<sup>6</sup> Similar information was obtained from residents during the survey conducted at the site in 2019. Although the information may be regarded as simple rumour, it was significant to learn that the site still continued to produce new architectural material as the cultivation activities went on in the last decade.

the designation »Teut114«. In addition to geophysical prospections, extensive surveys were carried out between 2009 and 2011<sup>7</sup>. While the initial results of the geophysical prospection were promising<sup>8</sup>, only some pottery sherds dating to the late antiquity and Byzantine periods, a few architectural elements and a fragment of a votive relief were found during the surveys. Based on these findings, an interpretation as a sanctuary or public building was suggested<sup>9</sup>.

5 First detailed publication of the site was undertaken within the scope of an interdisciplinary approach for the investigation of the paleogeography of the central Bakırçay plain, (late) Holocene landscape changes and its interactions with the settlement history<sup>10</sup>. As a result, three scenarios were proposed for the date and function of the site based on geographical, archaeological and geomorphological investigations: A lime kiln dating from the late antiquity to the Byzantine periods, a luxurious estate dating between the 4<sup>th</sup> and the 8<sup>th</sup> century A.D. and a sanctuary built in the 2<sup>nd</sup> century A.D. (for a detailed discussion, see below)<sup>11</sup>.

6 The site was revisited in 2019 for further magnetic investigation and archaeological survey<sup>12</sup>. Magnetic prospections were conducted on the site accordingly, confirming previous geophysical measurements and completing missing parts of the assumed building complex<sup>13</sup>. The data now available show the full extent of the site and provide a sound basis for further interpretation. Moreover, in comparison to the earlier surveys between 2009 and 2011<sup>14</sup>, both intensive and extensive surveys were carried out during the 2019 archaeological survey. The archaeological methodology had to be adapted to the harvest time, the cultivation of the fields and the time frame of the survey campaign. Although the western part was not accessible at all, it was still possible to obtain meaningful information for the interpretation of the site. Extensive survey, on the other hand, was carried out in the vicinity of the site and towards Sultan Tepe hill. Worth mentioning is the discovery of a burial ground and a probable tumulus (»Fundstelle 2019/06«) east of this hill, which is described below<sup>15</sup>.

## Evidence

7 The completion of the magnetic investigation and new finds highlight the importance of the site and form the basis for a comprehensive interdisciplinary analysis. In this regard, this article aims to summarize all evidence from previous investigations of the Sultan Tepe site and its surroundings, and combine it with the new data from 2019. On this basis, further interpretations can be made about its settlement phases, its function and its relation to neighbouring (urban) settlements, such as Pergamon, the harbour towns of Pitane and Elaia (fig. 1), and presumed rural residences in Sazlık, Bozköy and Çalibahçe in the western micro-region.

8 The site was named »Teut114« (due to its proximity to Teuthrania) during the 2009 and 2011 archaeological surveys according to the former documentation system.

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7 Pirson 2010, 178–180 fig. 45 (M. Zimmermann); Pirson 2012, 216 fig. 49 (M. Zimmermann).

8 Schneider et al. 2015, fig. 4.

9 Pirson 2010, 178 (M. Zimmermann).

10 Schneider et al. 2015.

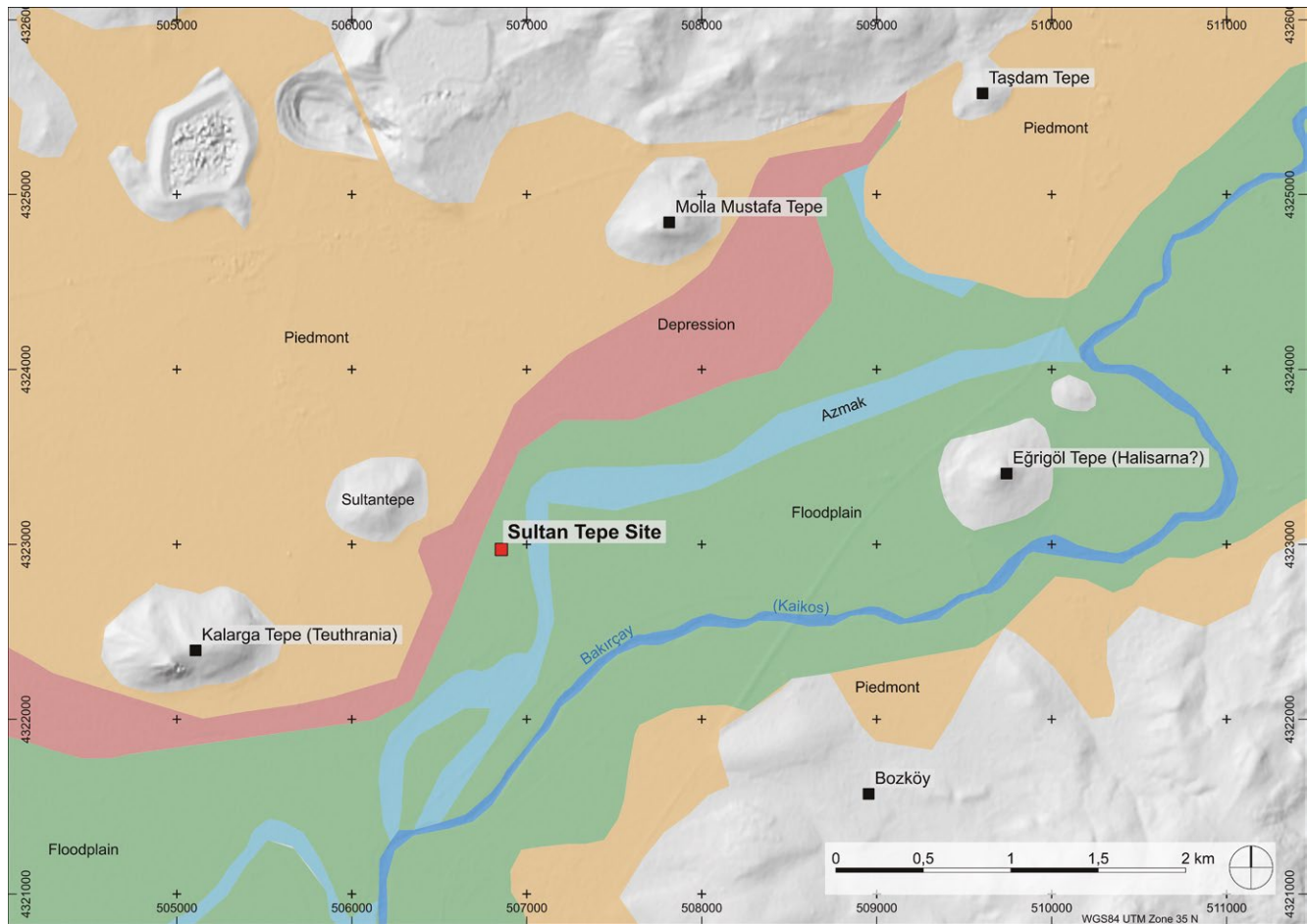
11 Schneider et al. 2015, 65. 74 fig. 3.

12 The investigation of the site in 2019 was part of the archaeological survey within the project »Transformation of Pergamon Micro-Region between the Hellenistic and the Roman Imperial Period«, generously funded by the German Research Foundation (DFG), and was carried under the survey permit of the DAI's Pergamon Excavation.

13 Pirson 2020, 66–69 (B. Ludwig – Z. M. Aksan); Schneider et al. 2015, fig. 4 a. b.

14 Cf. Pirson 2010, 178 (M. Zimmermann); Schneider et al. 2015, 66 f.

15 Pirson 2020, 66–69 (B. Ludwig – Z. M. Aksan); Pirson 2020, 69 f. (Z. M. Aksan).



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Fig. 2: Map showing the paleoenvironmental situation in the vicinity of the Sultan Tepe site

In the 2019 survey, it was given the designation »Fundstelle 2019/05« in line with new naming guidelines.

9 The collected evidence will be presented under four main aspects in the following order: Topography and environment; magnetic mapping and its interpretations, archaeological finds including architectural elements and stone objects, pottery and small finds, and finally »Fundstelle 2019/06«, an adjacent burial ground discovered during the same survey.

### Topography and Environment

10 The Sultan Tepe site lies 600 m southeast of the Sultan Tepe, a natural hill measuring approximately 520 × 500 m with an absolute elevation of 75 m a.s.l. and a prominent height of 61 m. The hill is located north of the Bakırçay river in the eponymous plain (fig. 2) and, according to previous surveys, free of archaeological remains<sup>16</sup>. The nearest archaeological sites are Kalarga Tepe, ancient Teuthrania<sup>17</sup> 1.4 km to the southwest, while Eğrigöl Tepe, possibly ancient Halisarna, is about 3 km to the east and Pergamon approximately 12 km to the northeast (figs. 1. 2. 3).

11 The Sultan Tepe site is situated in a relatively narrow part of the western lower Bakırçay plain<sup>18</sup>. The geoarchaeological investigations of the site, which Schneider et al.

16 It is stated that poor ground visibility due to thick vegetation could be the reason why it was not possible to observe archaeological evidence. See Schneider et al. 2015, 67.

17 Conze 1887; Schneider et al. 2015, 65; Grüner 2016.

18 Schneider et al. 2015, 63; Yang et al. 2021.



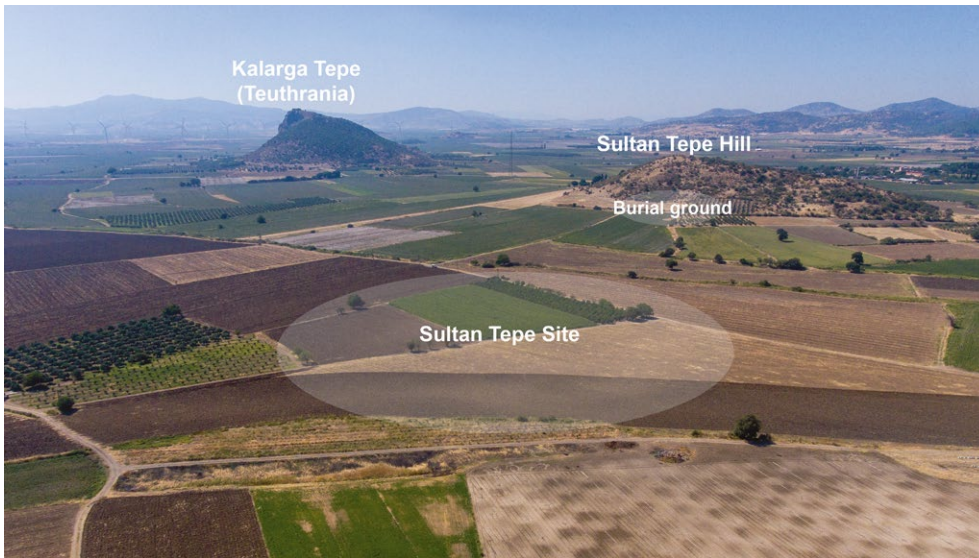


Fig. 3: Aerial view of the Sultan Tepe site from west. In the background: Teuthrania and Sultan Tepe hill

3

conducted alongside the initial surveys, provided important insights into the ancient landscape and settlement history of the site, as well as changes in settlement dynamics, hydrology and landforms in the immediate landscape. Schneider et al. proposed that the Sultan Tepe site was located at the transition between the floodplain of the Bakırçay river and the piedmont of the adjacent Kozak mountains. According to their research, the site was built on the southern edge of the piedmont, several metres above the contemporary flood plain, protecting it from the floods of Bakırçay river<sup>19</sup>. Based on newly available data, mainly a TanDEM-X elevation model and new sediment profiles, and a re-assessment of satellite imagery and tectonic sketches, Becker et al. proposed a revision of Schneider et al.'s paleoenvironmental reconstruction<sup>20</sup>. Now, evidence indicates that the site was located in a geomorphological niche between a secondary channel of the Bakırçay river in the west and a creek draining the Kozak mountains in the east (fig. 2). Primary results of the sediment profiles suggest that this paleoenvironmental situation was relatively stable during the late Holocene. Although this does not importantly challenge the interpretation of the site's location in relation to floods, it even more points to the idea that the characteristics of the Bakırçay plain were well understood by ancient inhabitants. Moreover, its location in the plain, which is often described as very fertile and thus the ›bread basket‹ of Pergamon<sup>21</sup>, and between two episodic-periodic river channels was most likely chosen intentionally as an advantageous place. In general, comparable locations could have been very scarce due to the risk of flooding and the presence of (temporary) wetlands in the plain<sup>22</sup>. A fact that highlights the particular position of the Sultan Tepe site in the central part of the western lower Bakırçay plain.

<sup>12</sup> The location appears as a key factor in understanding and interpreting the Sultan Tepe site. Its flood-protected position in the middle of the Bakırçay plain implies that the fertile soils in the surrounding area were used for agricultural activities in ancient times, as they are still used today. In addition, information obtained by the local farmers during the survey in 2019, revealed indications of a historical route that runs directly north of the Sultan Tepe site and connects Bergama with the harbour town of

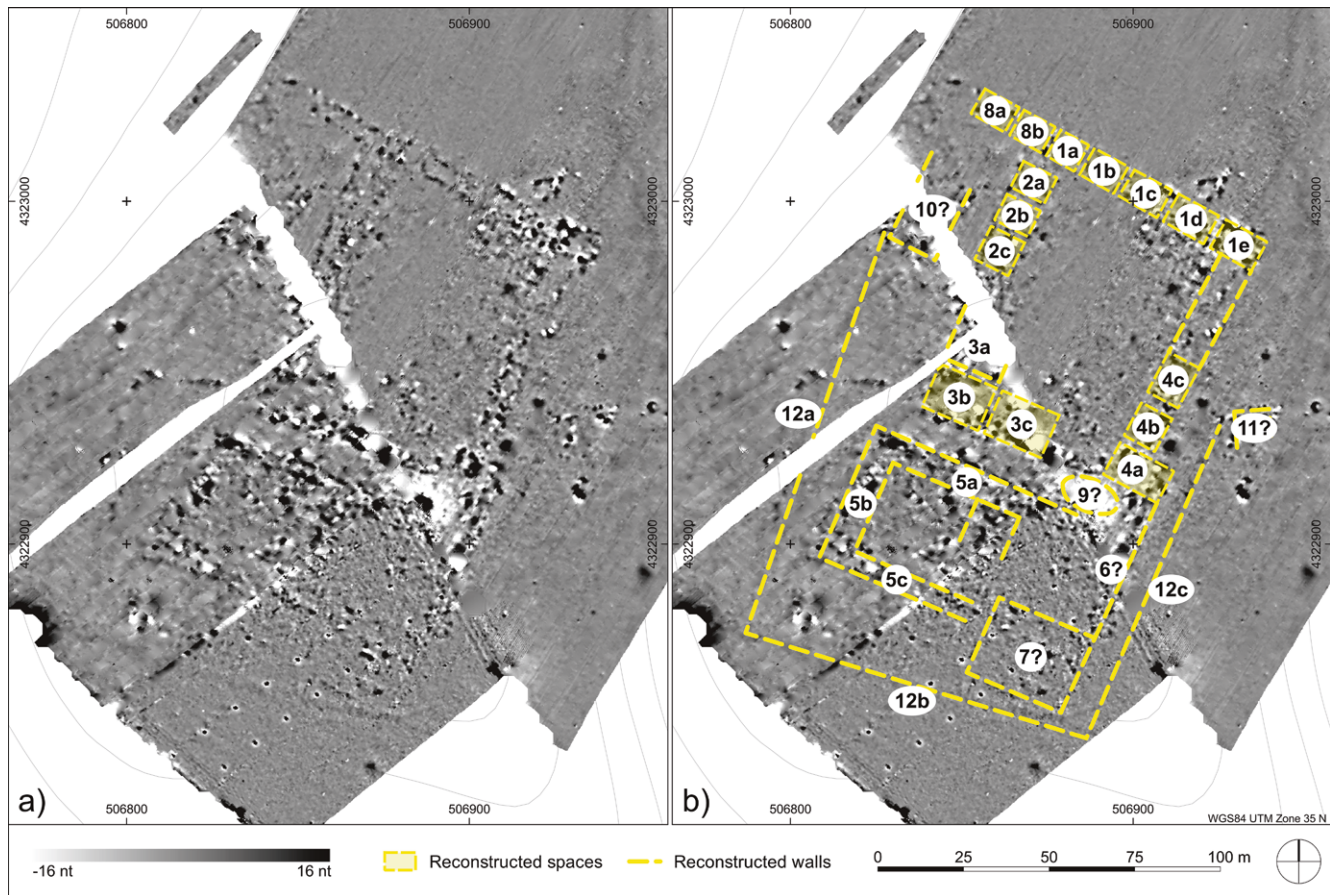
<sup>19</sup> Schneider et al. 2015, 72.

<sup>20</sup> Pirson 2020, 224 f. fig. 77 (F. Becker – D. Knitter – X. Yang – B. Schütt); Pirson 2021, 285–287 (F. Becker – X. Yang – M. Nykamp – M. Doğan – B. Schütt); Pirson 2022, 358 f. (F. Becker – X. Yang – M. Doğan – M. Nykamp – B. Schütt).

<sup>21</sup> Sommerer 2008, 159 f. with reference to the ancient sources.

<sup>22</sup> Becker et al. 2020.





4

Fig. 4: Magnetic map (a) and interpretation of the anomalies (b)

Çandarlı (ancient Pitane)<sup>23</sup>. Even if there are no archaeological finds that allow statements on the exact dating or the simultaneous use of the route and the site, a possibly ancient route should be taken into account in the interpretation.

### Magnetic Mapping: Definition and Interpretation

13 The anomalies resulting from the magnetic survey cover an area of approximately  $175 \times 100$  m. The magnetic map (fig. 4) shows very clear anomalies of up to about 16 nT. The anomalies line up in rectangular patterns, which can be easily identified as remains of walls or foundations of buildings. The whole building complex covers an area of about  $100 \times 120$  m. Its axis has a northeast–southwest orientation (fig. 4). We labelled the magnetic structures with numbers (fig. 4 b), which are used for some basic definitions of the spaces contoured by the magnetic structure(s) and for addressing them in the text below. For this purpose, we used simple geometric shapes (either rectangle or square) and dotted lines plotted directly on the magnetic map (figs. 4. 5). The term »space« has been used for all the enclosed spaces that are either square or rectangular in the plan. Descriptions include shape and approximate size of the spaces, their locations and relation to each other. However, it is not possible to determine the function of each space.

14 No. 1 comprises five distinct anomalies (no. 1a–e), each measuring between  $7 \times 8$  m and  $8 \times 12$  m, parallel to each other and with a northwest–southeast orientation.

15 No. 2 consists of three anomalies (no. 2a–c), each measuring approximately  $7 \times 9$  m in dimensions. They are generally rectangular in plan, adjacent to each other and lie perpendicular to the spaces of no. 1a–e.

23 For further information on a possible route between Pergamon and Pitane that passes by the Sultan Tepe site in antiquity, see Ludwig 2020, 26. 30 f., fig. 24, tab. 4.

16 No. 3 comprises three anomalies (no. 3a–c), each measuring approximately  $10 \times 15$  m, slightly larger than no. 1 and 2. No. 3a and 3b are adjacent to each other and in the same alignment as the spaces of no. 2. The latter, i.e., the spaces on no. 2, have a northeast–southwest orientation, while no. 3b and 3c lie in a northwest–southeast direction. It is impossible to make any interpretations on the gap between no. 2c and no. 3a, because magnetic measurements could not be applied at this part. However, there seem to be similar anomalies immediately southwest of no. 2c and northeast of no. 3a which could belong to a space.

17 No. 4a–c are spaces, each measuring approximately between  $8 \times 8$  m and  $8 \times 15$  m. Immediately northeast of no. 4c, we still find linearly ordered magnetic anomalies, but less in number than in the spaces described up to now. It is possible that there are only very heavily damaged remains of buildings underground. The anomalies may be interpreted tentatively as a wall in a northeast–southwest orientation, which aligns with the corresponding eastern outer wall of no. 1e, thus closing the spacious courtyard to the east.

18 The anomalies at no. 5 may be interpreted as three walls or galleries that form a large rectangular space which measures approximately  $42 \times 64$  m. Compared to no. 1–3 and no. 4a–c, it is not possible to identify smaller rectangular spaces at no. 5. The unclear nature of the anomalies on the south-eastern side may have been caused by the varying cultivation of the fields over the years and a resulting difference in conservation status of the remains. The anomalies on this side are more scattered than in the northern part of the complex. There are anomalies inside the rectangle, especially in the south-eastern part, probably remains from collapsed walls of unidentifiable smaller spaces. The width of no. 5c is about 3–4 m.

19 No. 6 could be merely the continuation of no. 4 in the southwest direction. If it is a wall, the width cannot be determined exactly either, because the anomalies of the interior are rather weak. Due to the sparsity of magnetic anomalies no conclusion can be drawn regarding the relation of no. 6 to no. 7. Therefore, no. 6 is shown with a question mark.

20 No. 7 is located southeast of no. 5. The plan and appearance of this anomaly is not definitive either, therefore it is also shown with a question mark. It may be interpreted as a rectangular space whose northeastern part is in alignment with no. 5c and it may also be linked to no. 6. The dotted lines cover an area of approximately  $25 \times 30$  m.

21 No. 8 consists of two rectangular spaces in the north, each measuring approximately  $7 \times 10$  m. These two spaces seem to have the same orientation as no. 1a–e and thus seem to be the continuation of these spaces in the northwest direction of the building complex no. 1–4. Since no. 8a–b is located outside of the rectangular plan of

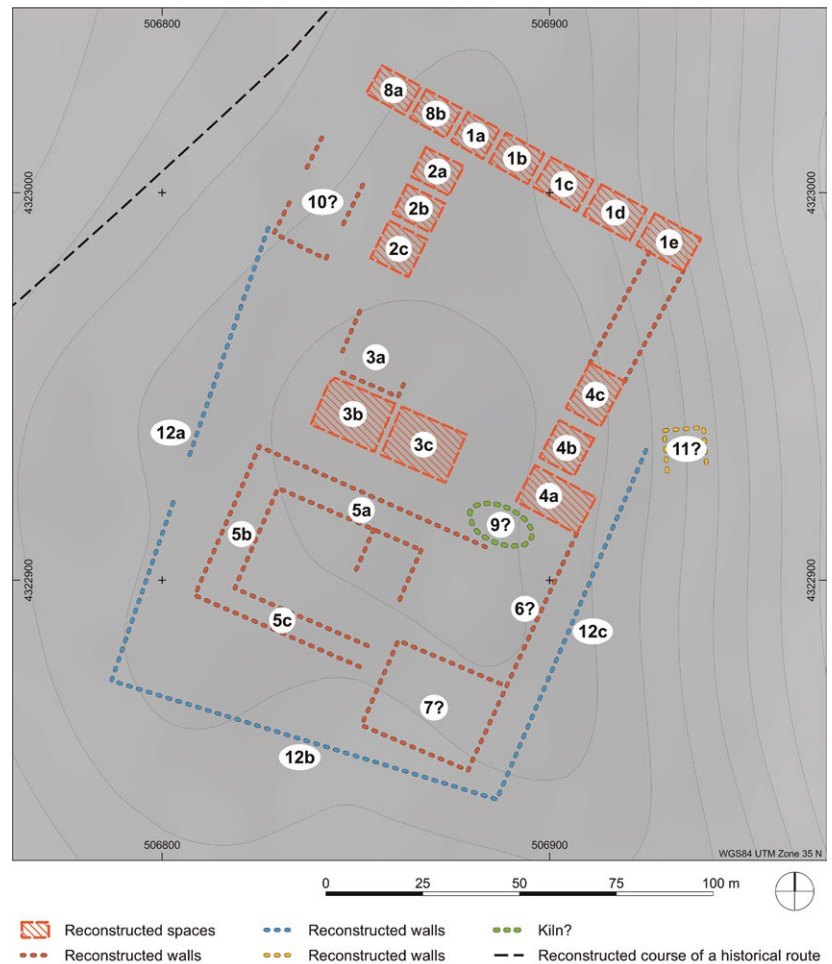
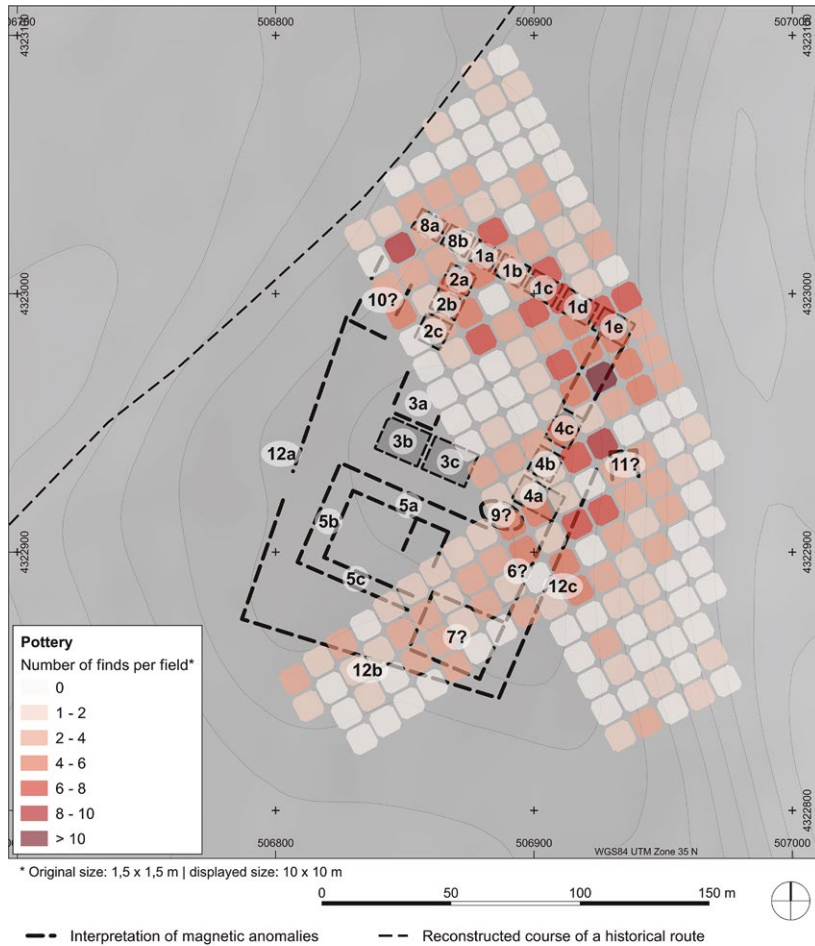


Fig. 5: Interpretation of the magnetic anomalies with relief in the background





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Fig. 6: Map showing the distribution of the pottery finds

no. 1a–e. The opposite narrow side in the southwest corresponds to no. 5c and includes no. 7. The long side in the northwest corresponds to no. 2a–c, no. 3a–b and no. 5b. The opposite long side on the southeastern consists of no. 4a–c, no. 6 and no. 7. Although it poses some challenges for interpretation, it would be possible to tentatively interpret the northeastern side as walls and spaces<sup>27</sup>. The large open space in the midst of no. 1–4 can be tentatively interpreted as a courtyard, which is rectangular in plan with a northeast–southwest axis. Some anomalies at the southwestern part of the courtyard and immediately northeast of no. 3c and no. 9 (fig. 4 b) cannot be defined exactly. However, depending on the function of the building in general, they could be interpreted as installations of oil and wine presses due to their location, if we assume a mainly agricultural character of the building complex<sup>28</sup>.

24 No. 9 is located between no. 3c, no. 4a and no. 5a, on the east-southeastern part of the structure (no. 1–4). The contour of this space cannot be determined, because the magnetic pattern of the archaeological remains is overprinted by an extremely strong magnetic anomaly probably caused by some modern metallic waste<sup>29</sup>. As many

the structure (no. 1–4), they may be interpreted as later additions to the building complex.

22 The descriptions of the spaces and walls of no. 1–8 stated above clearly indicate a large rectangular structure which is oriented northeast–southwest. This was already suggested before<sup>24</sup>. However, this hypothesis was only limited to one narrow side on the northwestern part and one long side on the southeastern side<sup>25</sup>. As figs. 4. 5 show, further interpretations can be derived on the basis of the new findings from the magnetic prospections in the south. The large structure oriented in northeast–southwest direction, comprises no. 1–8 and measures roughly 150 × 100 m in dimensions. A previous suggestion by Schneider et al.<sup>26</sup> included five linear magnetic anomaly patterns which correspond to no. 1–6 in figs. 4. 5. However, as described above, the results of the new magnetic measurements show a significantly larger structure with more details.

23 In order to discuss this in a comprehensible way, we will start with the outer limits of the complex: Its narrow side, in the northeast, is formed by

24 Schneider et al. 2015, 67.

25 Cf. Schneider et al. 2015, 67 fig. 4 b.

26 Schneider et al. 2015, 67 fig. 4 b.

27 Smith 1997, 7.

28 Hirschfeld – Birger-Calderon 1991, 88.

29 The NE and SW parts of the magnetic survey areas were measured in different years. The object causing the strong disturbing anomaly labelled no. 9 in fig. 4 was present only when the survey of the northeastern partial area was performed. Therefore, the SW part of the anomaly appears to be >cut off.

burnt pieces of marble were documented on the surface at this spot, this anomaly could indicate the remains of a lime kiln.

25 No. 10 is located northwest of no. 2 and consists of perhaps two distinct spaces rectangular in plan. It is difficult to ascertain whether it is aligned with no. 2 and/or no. 8. The dotted lines cover an area measuring approximately 15 × 25 m in dimensions. The magnetic prospection shows only little evidence of this construction or building, so no information about its type, size and orientation can be given at this point. If we assume that it belonged to the large structure (no. 1–8), it could also be a later addition. It is worth mentioning that an Ionic marble cornice (cat. 1.01) was ploughed out of the ground in this area.

26 No. 11 is a cluster of anomalies east of no. 4a–c and measures approximately 7 × 7 m in dimensions. The exact shape and nature of the structure cannot be determined. Its relation to the large main structure (no. 1–8) is unclear and its orientation is different from no. 1–8. It can therefore tentatively be assumed that it predates the large structure (no. 1–8) or was built in a later phase.

27 No. 12 is a set of linear magnetic anomalies that are much weaker in signal strength than the previously discussed ones. It consists of three distinct lines (no. 12a–c) nearly perpendicular to each other, that measure approximately 125 m, 100 m and 80 m in length respectively. They may be interpreted as remains of thin walls or refilled ditches that make up three sides of a rectangular structure oriented in northeast–southwest direction. A northern side is not represented in the magnetic data. The orientations of no. 12a–c are slightly different from that of the major structure. Therefore, no. 12a–c may be interpreted as being built either in an earlier or later phase. In comparison to no. 1–8, the magnetic anomalies of no. 12a–c are thinner and weaker (fig. 4, no. 12).

## Archaeological Finds

28 The analysis of the archaeological find material is divided into two sections. First, the evaluation of the statistical find recording is discussed, especially the pottery and tile finds. They give general information on find distributions and concentrations. This is followed by a detailed study of the architectural elements and stone objects, the datable and diagnostic pottery fragments and the small finds, each in its own section<sup>30</sup>.

29 In order to assess the distribution of finds, a grid of 191 boxes (1.5 × 1.5 m) was set up during the intensive survey in 2019. Within the boxes, all finds were statistically

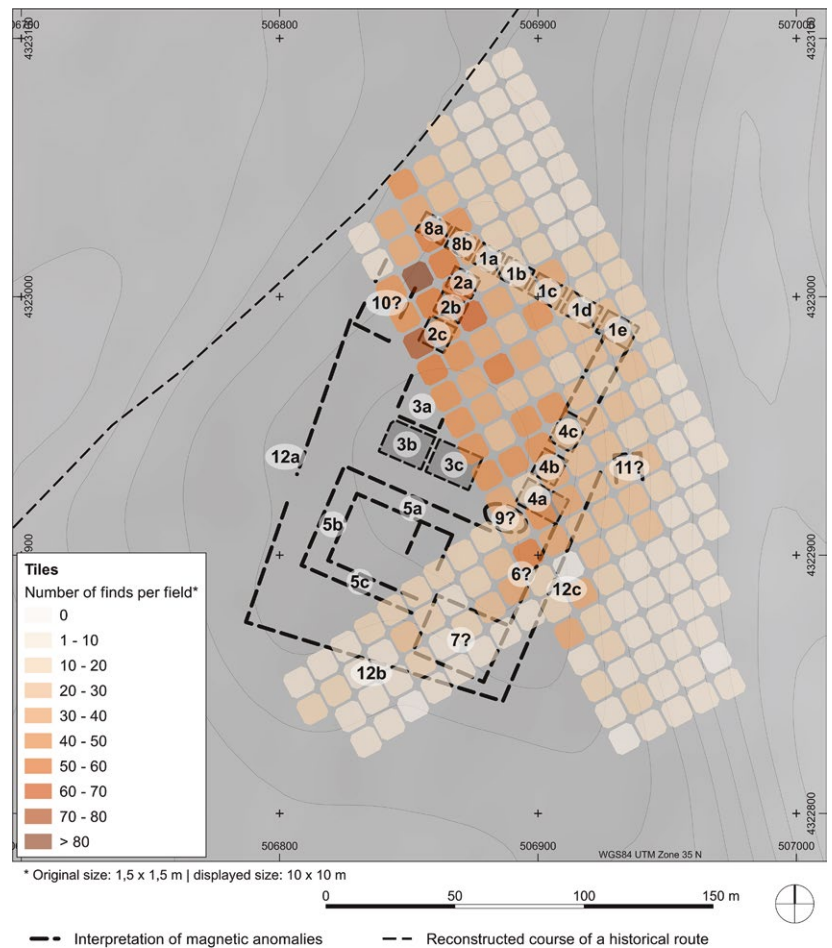


Fig. 7: Map showing the distribution of the tile finds

30 For a catalogue of the studied architectural elements, stone objects and pottery, see end of article. An extended catalogue and survey data have been published in parallel to this article on iDAI.repo (<https://doi.org/10.34780/WNAS-H760>).



recorded and datable or diagnostic pottery was also collected<sup>31</sup>. Unfortunately, the western part of the site was not accessible in 2019 and could therefore not be investigated.

<sup>30</sup> The map of the pottery distribution, however, shows clear concentrations in the northeastern part of the site (fig. 6). The number of finds is particularly high in the area of anomalies no. 1, 2, 4 and 8. In the southern part, around no. 7, the number of pottery fragments is not significantly increased. The low density of pottery within the area of anomalies no. 1–4 is noticeable. This could suggest an open inner courtyard and is discussed in the ›villa scenario‹ below.

<sup>31</sup> The mapping of the tile fragments correlates well with the outer limits of the site, especially in the eastern half (fig. 7). In the southwest, the distribution is not as clear. Within the building structures, however, the mapping of the tile finds is clearly different from that of the pottery. The tile fragments are mainly concentrated in the centre of the site, the presumed inner courtyard, with the highest density in the area of anomalies no. 2, 8 and 10. Without excavations, the tile fragments cannot be assigned to individual parts of the building visible in the magnetic measurements at this stage, and thus allow only limited conclusions to be drawn. However, it may be assumed that at least in the northern and southern areas of the complex, buildings equipped or roofed with tiles existed.

### Architectural Elements and Stone Objects

<sup>32</sup> Archaeological surveys between 2009 and 2011, and in 2019 revealed several architectural fragments made of andesite, marble and limestone, including an Ionic cornice, a Corinthian capital, a column and a column base. In 2019, large tile fragments were also found, many with traces of strong fire or heat exposure. The exact position and function of the related buildings will remain unknown until a large-scale, stratigraphic excavation is conducted at the site. The mentioned stone finds do, however, provide clues to a general idea of the possible affiliation to an architectural order and design or type of the Sultan Tepe building complex.

<sup>33</sup> Seven stone objects and architectural elements of various materials and with different functions were found in situ. Two objects with an agricultural function were found in the immediate vicinity of the site and are included in the analysis. Six architectural elements made of marble are kept in a nearby village today and can only be indirectly assigned to the Sultan Tepe site. They are presented in the catalogue, but are only taken into account to a limited extent in the interpretation of the site.

<sup>34</sup> The majority of the architectural fragments are of marble and indicate middle-size marble architecture. The two Attic marble bases with different dimensions may point to more than one building, while the marble cornice fragment with dentils may as well belong to prestigious architecture. Given the limited possibilities offered by survey material, we can tentatively suggest that the architectural fragments discussed below may belong to a group of buildings that formed a fairly large complex at the Sultan Tepe site. It could also be spoliated material from the surrounding area or even from Pergamon.

<sup>35</sup> A heavily fragmented, Ionic marble cornice<sup>32</sup> (cat. 1.01, figs. 11. 12) was raised to the surface by ploughing a field between the anomalies no. 10 and 2 (figs. 4. 5. 8). Whether the associated original building was located there, whether it was only used for another purpose as a spolia or whether it was brought there in preparation for lime burning cannot be determined without its archaeological context.

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<sup>31</sup> For a detailed account on the survey methodology, see Pirson 2020, 206 (B. Ludwig – Z. M. Aksan).

<sup>32</sup> According to Mattern's typology of cornices of Rome it belongs to type »Hängeplattengeison Typ 1«, see Mattern 2001, 16 f. 24 f.

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36 The bottom bed of the marble cornice consists of an unfinished dentil. Due to fragmentation, the height of the dentils is not completely preserved, while the width measures 6 to 6.5 cm. The dentil at the edge measures 7.5 cm due to the joint closure. The *via*, the gap between the dentils, has no filling<sup>33</sup>. Its width measures 3 to 3.5 cm, while the depth and the dentil correspond to 7.5 cm<sup>34</sup>.

37 The dentil is followed by a plain band and *cyma reversa* towards the *corona*. The following *simā* is preserved in a few centimetres. Based on this, it can be concluded that all parts from the dentil to the *simā* were worked from one stone block<sup>35</sup>, which is more likely for Roman than for Hellenistic architecture. The described structure is a sequence of profiles common in the Ionic region. A strong reference to the plain and ornamentless classical order is typical of either Hellenistic<sup>36</sup> or Roman architecture with some reversions to the local urban architecture.

38 In general, Ionic marble cornices with this structure can be found on prestigious buildings such as temples, hall architecture, tombs, or altars<sup>37</sup>. The approximate dimensions of 10 cm to maximum 15 cm of the *corona* and the dimensions of the dentil, however, suggest a smaller construction rather than a large-scale temple building, perhaps a hall, a small temple or a tomb<sup>38</sup>. But for now, no definite statements are possible. The original building of the Ionic order would have had Ionic capitals as well as fluted columns and Ionic bases.

39 Since there are only three worked out dentils and a drill line for further processing, the cornice appears unfinished. A similar state of unfinishedness is also found in Ionic cornices with dentils from the theatre in the Asklepieion in Pergamon<sup>39</sup>, where four dentils and their *viae* are worked out while the fifth dentil is only indicated. The dentil and *simā* were worked out after the cornice had been moved into its final position.

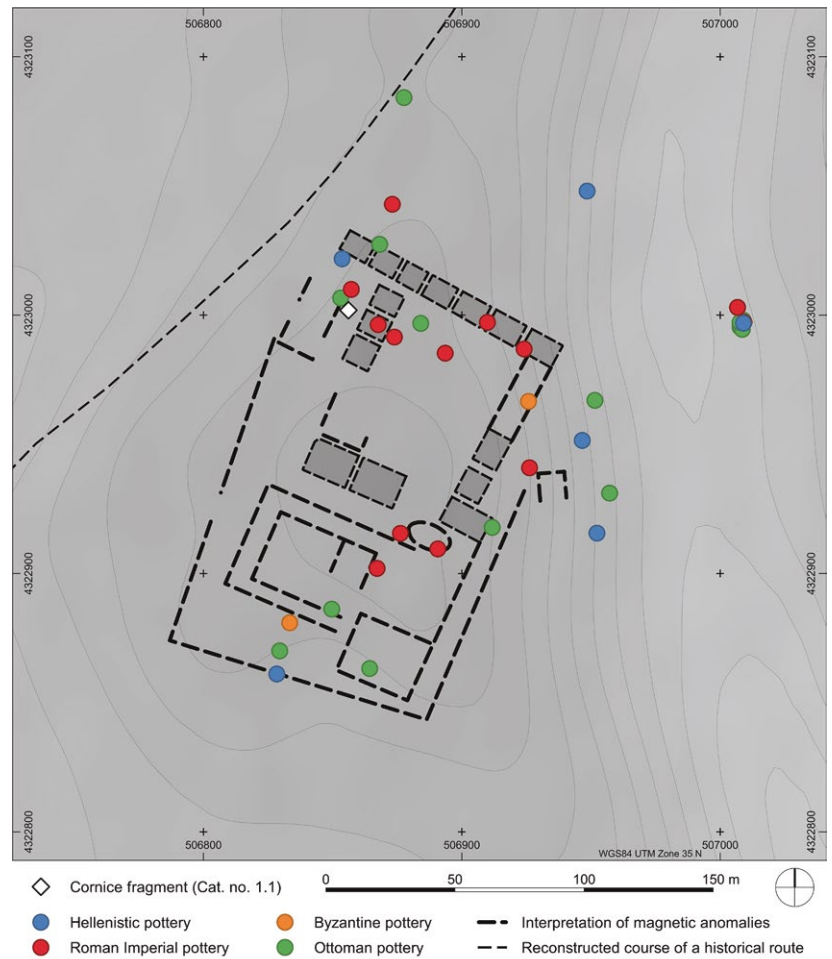


Fig. 8: Map showing the find position of datable pottery fragments and the cornice fragment

33 Cf. Leon 1971, type D, 269 and Mattern 2001, type 1.

34 The ratio of *via* to dentil width is 4 cm : 7 cm = 0.57, approximately 0.6 and is therefore very similar to the ratio of the *via* to the dentil width of the sanctuary of Athena in Pergamon, see Rumscheid 1994, appendix E, X-axis and Rumscheid 1994, cat. 187, 188. However, it should be noted that there is no uniform development in the proportioning of dentil sections, Rumscheid 1994, 317.

35 Possible is an S-shaped *simā*. See also stone-block cutting possibilities, Mattern 2001, 32. Ionic cornices, which are worked from one block, can be found in the middle Imperial theatre of the Asklepieion in Pergamon, see Hoffmann 2011, 176 f.

36 Ziegenaus 1981, 49.

37 The scope cannot be narrowed down further due to the fragmentation of the cornice.

38 Based on measurements of Hellenistic Ionic cornices observed in Asia Minor. They can be compared best with Ionic cornices from Pergamon: the hall of the Asklepieion (Hoffmann 2011, pl. 133) and the north and east hall of the sanctuary of Athena (Rumscheid 1994, cat. 188), the gate of the Gymnasium (Rumscheid 1994, cat. 221). See also Köster 2004, 157 note 1171.

39 Hoffmann 2011, 176, cat. 44.



40 It is possible that the cornice was discarded in the working stage or was intended for reworking. At least the fragmentation of the *simā* and the secondarily applied rough surface on the top bed as well as the later pickings on the already fragmented bottom bed would allow for this interpretation. Afterwards, the building element could have been spoliated or prepared for the lime kiln.

41 In conclusion, the shape and dimensions suggest a dating from Hellenistic to Roman times. However, the fact that the cornice is worked in marble<sup>40</sup> and all parts of the entablature consist of one block, as well as the state of unfinishedness, indicate a date in Roman times.

42 The wide marble base moulding (cat. 1.02, figs. 13. 14) belongs to a prestigious building as well<sup>41</sup>. A dowel hole on the bottom bed indicates a horizontal bond in the original structure<sup>42</sup>. The plain structure and the careful execution of its marble surface could indicate a Hellenistic to Roman date.

43 The moulding fragment with a floral row *cymatium*<sup>43</sup> (cat. 1.03, figs. 15. 16) may be a fragment of a building element from the Roman, maybe middle Imperial period. The fragmentation of this piece could suggest a preparation for the lime kiln.

44 A part of a plain andesite column (cat. 1.04, figs. 17. 18) has remains of a stuccoed covering. Although it is heavily battered, the column part is preserved in its height (0.62 m) and diameter (0.295–0.30 m). It could have belonged to a column of several parts or it could have been a monolithic form that was cut off later. If the column consisted of more compound column pieces, the height could be hypothetically calculated by the presence of the lower diameter (column height = 1 : 8). A diameter of 0.3 m results in a possible column height of 2.4 m<sup>44</sup>. On both sides, dowel holes of different shapes and dimensions are documented, perhaps belonging to different functions or periods. While one square dowel hole measures 7 cm × 6 cm × depth 2 cm, the other has a round shape with the dimensions of a diameter between 5 and 6 cm and a depth of 3 cm.

45 Plain and non-fluted columns are either unfinished or belong to a simplified, reduced (Doric) column order<sup>45</sup>, which can be used in functional spaces such as production rooms and basements<sup>46</sup>. An unfinishedness could theoretically be ruled out due to the installed dowel holes.

46 Smooth column shafts with a stucco covering are also used in sanctuaries. For the Pergamon Micro-Region, this is attested at the temple of Meter at Mamurt Kale (late 3<sup>rd</sup> to 2<sup>nd</sup> century B.C.) and the temple of Athena on the city hill of Pergamon<sup>47</sup>. In summary, this column, which is probably Hellenistic, but possibly also Roman or Late Antique, was most likely used in a functional room of a rural residence or villa.

47 During the survey, a wall fragment consisting of an andesite river stone with a thick mortar layer was also found (cat. 1.05, fig. 19). The white to light grey mortar has been mixed with a lot of sand, which could possibly have been locally extracted from the nearby Bakırçay river. Since it is masonry bonded with mortar, it dates to Roman times<sup>48</sup>.

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40 For the use of marble in Pergamon, see Laufer 2021, 174: In the 3<sup>rd</sup> century B.C. there is still a sparse use of marble, it occurs especially in prestigious buildings. Its use increased in Roman times.

41 This moulding shows similarities to a base moulding of the north hall of the Asklepieion at Pergamon, see Hoffmann 2011, 65 fig. 34 a (3<sup>rd</sup> moulding), even if it has a smaller dimension.

42 Müller-Wiener 1988, 86 und figs. 43, 2–43, 5.

43 This ornament appears according to Mattern at the beginning of the middle Imperial period, see Mattern 2001, 62 f., »Blattstab«, due to fragmentation unknown if schema 3 with a staggering/graduation of two motifs.

44 Müller-Wiener 1988, 122.

45 Laufer 2021, 186–188.

46 Laufer 2021, 188, for further examples in Asia Minor see note 1810.

47 Laufer 2021, 187.

48 Wulf-Rheidt 1999, 6 f.

48 Numerous stones unearthed during ploughing provide further evidence of the masonry techniques used at the Sultan Tepe site. Besides small to medium sized and unworked stones, there are also medium sized rectangular building stones with flat faces and irregular backs (ca. 0.5 × 0.3 × 0.3 m). Somewhat larger, rectangular building stones of reddish and grey andesite were also found, which had to be lifted either by the ancient builders or with the help of technical equipment.

49 A basin made of andesite (cat. 1.06, figs. 20. 21) was found near the Sultan Tepe site and can therefore not be associated with the site with certainty. While it can also be debated whether it is actually ancient, it nevertheless provides indications of the agricultural use of the plain. The inside of the basin, the bottom as well as the walls are covered with a white fine, but compact plaster. In the rear part a three-part area was formed out of plaster in different measurements, the lateral sections have similar width, while the middle part is larger than the margins. It is unclear whether this white fine plaster was added in ancient times, post-antique or in modern times. At the narrow front, a round opening was initially carved into the stone. Later, it was scaled down with a plaster pack (fig. 21). The same kind of plaster also covers the inner part of the basin (width 80 cm). The outer surfaces are finished with a point and a mason's chisel. Only the side with the opening and the inner part of the basin have a smooth surface, which has been worked with a point or claw chisel. The basin was generally used for agricultural production, e.g., food production, with the opening indicating liquids. The capacity was between 203 and 238 litres<sup>49</sup>. Perhaps the basin is related to an andesite mortar (cat. 1.08) found nearby.

50 Several burnt and crushed, small to medium sized white marble pieces were unearthed by intensive ploughing (cat. 1.07, fig. 22). These were found near anomaly no. 9, suggesting that a lime kiln may have been located there.

51 The fragmented andesite mortar (cat. 1.08, figs. 23. 24) has a high base followed by a massive and bulbous shape. The inner smoothed surface runs steeply. It was used to crush substances with a ram and is to be seen in an economic context and could be related to basin cat. 1.06. While its agricultural function is clear, dating remains imprecise; it could date to ancient or post-ancient times.

52 In summary, the stone objects and architectural elements found at the Sultan Tepe site, described and analysed above, point to various functions and building styles of the site. The Ionic marble cornice (cat. 1.01) and the base moulding (cat. 1.02) indicate prestigious architecture. The moulding fragment with floral *cymatium* (cat. 1.03) also points to a prestigious decoration. However, parts of simpler, reduced architecture, as expected in rural villas, production sites or basements, were also found on the Sultan Tepe site (limestone column, cat. 1.04). The basin and the mortar (cat. 1.06, 1.08) furthermore indicate agricultural production activities. The above-mentioned marble fragments (cat. 1.01. 1.02. 1.03) could also be displaced spoliation material, which, like cat. 1.07, was intended for use in a lime kiln. Chronologically, the finds correspond to a settlement phase from the Hellenistic period to late antiquity.

## Pottery

53 Pottery fragments were collected both during the survey in 2009 and 2019. In the first survey, very few profiled or diagnostic sherds were found. Since the fields were not ploughed, the pottery density was less than two pieces per square metre. Only seven sherds could be identified as utilitarian pottery dating from late antiquity to Byzantine times<sup>50</sup>.

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49 See also catalogue description of cat. 1.06.

50 Schneider et al. 2015, 67.



54 The site was re-examined in the 2019 campaign, when an intensive survey was carried out (figs. 6. 7)<sup>51</sup>. Since the fields were freshly ploughed, especially in the northern area, there were more fragments of pottery and tiles on the surface than in 2009, which could be statistically recorded. Even if the fragments are heavily fragmented, because of the intensive agriculture, they can be determined and dated by their parallels from other sites in the region. During the 2019 investigations, about 25 diagnostic fragments were collected on the surface, so 32 pottery fragments in total were taken to the excavation house for detailed study (fig. 8). Of these, the datable or diagnostic rim and base fragments are taken into consideration here, dating from the late Hellenistic to the Byzantine period, with the Roman Imperial period *sigillata* fragments predominating.

55 The earliest pottery fragments are from the late Hellenistic period, belonging to the usual simpler forms and are more frequent both in Pergamon and in other sites. They are two bowl fragments with black slip. The rim fragment of a bowl (cat. 2.01, figs. 33. 34. 35) belongs to the group of bowls with a curved rim, whose period of use already begins in the late Classical period<sup>52</sup>. Bowls with curved rim were then further produced with red coating or as *sigillata*, which run into the Roman Imperial period<sup>53</sup>. The rim fragment from the Sultan Tepe site has a black slip, its rim is not strongly incurved, but stands somewhat straight. Therefore, it can be dated to the late Hellenistic period. Simple bowls with a strongly or slightly curved rim and with both black and red slip are the most common type of vessels found in Pergamon in the pre-Imperial period<sup>54</sup>. By an exactly corresponding parallel from Pergamon, the bowl from the Sultan Tepe site may be dated to the end of the 2<sup>nd</sup> century B.C.<sup>55</sup>. A fragment of the base of a small bowl (cat. 2.02, figs. 36. 37) with black slip also belongs to the group of simple bowls. The surface is strongly washed off, so that it is only recognizable in a few places that it is a black slip. The fragment itself is also heavily abraded and it is difficult to reconstruct the details of the profile. Nevertheless, it can be seen that it is a delicate foot and belongs to a bowl with a curving rim of late Hellenistic date<sup>56</sup>.

56 A foot fragment of a jug/amphora (cat. 2.03, figs. 38. 39) forms the only datable piece of transport pottery for the site. The comparative examples are most likely to be found in amphorae with similar foot profiles at Ephesus, which were recovered from Terrace House 2 as multiple specimens. The amphora foot at Ephesus date to the late Hellenistic or early Imperial period<sup>57</sup>.

57 Among the Imperial fine pottery fragments, mostly consisting of *sigillata*, only the specimens of Eastern Sigillata C (ESC) are found. Since the ESC was produced in the Pergamon Micro-Region, it is the most common find material for the Imperial period both at Pergamon and at other sites in the micro-region<sup>58</sup>. On the fields of the Sultan Tepe site, including body sherds, a total of seven specimens of the ESC were recorded, of which three pieces are presented here. One bowl fragment (cat. 2.04, figs. 40. 41) with outturned rim belongs to the ESC, whose surface, however, has been rubbed off or dulled by the cultivation of the field. The parallels of the bowl from the Sultan Tepe site are known in Pergamon and are dated from the second half of the 1<sup>st</sup> century B.C. to the

51 For the method of the intensive survey, see Pirson 2020, 216–218 figs. 70. 71 (B. Ludwig – Z. M. Aksan).

52 For type development and dating, see Rotroff 1997, 161–164 echinus bowl no. 965–1036.

53 Meyer-Schlichtmann 1988, 89 f.

54 Schäfer 1968, 37 f. Einfache Näpfe.

55 Schäfer 1968, 38 C20 pl. 4.

56 Rotroff 1997, 162 f. echinus small bowl no. 1030–1033.

57 Bezczky 2013, 20. 66. 69. 256. 263. Typ 6 no. 548–549 pl. 41.

58 For a recent definition of *sigillata* in the Pergamon Micro-Region, see Pirson 2012, 251–255 (S. Japp – A. Keweloh-Kaletta – B. Engels).

end of the 1<sup>st</sup> century A.D.<sup>59</sup>. The second ESC fragment from the site is a base fragment (cat. 2.05, figs. 42. 43) belonging to a bowl with a hemispherical vessel body. The cup shape occurs more often in Pergamon and is generally dated to the 1<sup>st</sup> century B.C. and 1<sup>st</sup> century A.D.<sup>60</sup>. A rim fragment of a flat plate (cat. 2.06, figs. 44. 45) also belongs to the ESC. The plate from the Sultan Tepe site is marked with a thickened rim and thus forms one of the younger forms of the ESC. Flat plates with thickened rims of the ESC often occur in Pergamon and are dated to the middle/second half of the 2<sup>nd</sup> century A.D.<sup>61</sup>.

58 A well-preserved rim fragment (cat. 2.07, figs. 46. 47. 48) from the site has been registered as kitchen pottery, belonging to a kitchen vessel. The rim fragment of a large bowl with a protruding wall and with a wide overhanging lip. On the inside, the transition from the wall to the rim is marked by an inward bend, which probably served for lids. This kitchen bowl form is well known at several sites in western Asia Minor, but is dated to a broad phase from the Hellenistic to the middle/late Imperial periods. While somewhat finer parallels with a matte coating at *Didyma* date to the late Hellenistic period<sup>62</sup>, they occur more frequently at other sites as cooking pottery from the Imperial period<sup>63</sup>. In *Miletus* the form is known as a cooking pot and is dated from the 1<sup>st</sup> to the 3<sup>rd</sup> century A.D.<sup>64</sup>.

59 A fragment of a rim (cat. 2.08, figs. 49. 50. 51) belonging to a vessel with a straight neck and a beaded rim was registered as utility pottery from the site. It is not possible to say for sure whether it is an amphora or a kitchen vessel. Because the form is known at different sites in Asia Minor both as an amphora<sup>65</sup> and as a kitchen bowl<sup>66</sup>. Due to the parallels from other sites, the kitchen vessel from the Sultan Tepe site can be dated to the first half of the 5<sup>th</sup> to the middle of the 7<sup>th</sup> century A.D.

60 Two glazed rim fragments belonging to flat plates constitute the most recent find material from the site, dating to late Byzantine and early Ottoman periods, respectively. The first fragment is the rim of a plate (cat. 2.09, figs. 52. 53. 54) with a slightly notched rim lip, glazed in monochrome medium green. The second fragment is also a rim of a plate (cat. 2.10, figs. 55. 56. 57) with notched wall and stepped rim, glazed in yellow and brown. Both plates have a light beige tone and may belong to the group of white wares. While on the first plate (cat. 2.09) the glaze is thick and completely applied, on the second plate (cat. 2.10) the glaze is applied very sparingly or thinly, so that only the inner side is partially covered. The parallel for the plate form is known especially in *Miletus*. Some comparative examples for cat. 2.09 are dated in *Miletus* to the Byzantine/Emirate period<sup>67</sup>, while parallels for cat. 2.10 are again dated in *Miletus* to the late Byzantine period<sup>68</sup>.

61 In conclusion, the pottery finds from the Sultan Tepe site date from the 2<sup>nd</sup> century B.C. to the late Byzantine or Emirate period. Due to the limited availability of find material, it is not surprising to encounter some chronological gaps that need to be considered. However, it is noteworthy, when examining Late Antique material, that no significant amount of fine ware was found. This is in contrast to other sites within the Pergamon Micro-Region, where late Roman C ceramics typically emerge as the predominant material from the late antiquity period. Therefore, it must be emphasized

59 Meyer-Schlichtmann 1988, 119–121 Schalen Gruppe 2: Typ Sa 11 pl. 14.

60 Meyer-Schlichtmann 1988, 99–107 Typ N2 pl. 38.

61 Meyer-Schlichtmann 1988, 203 f. Typ Sa 29 pl. 16.

62 Wintermeyer 2004, 102, S6.3 no. 119 fig. 73.

63 Lüdorf 2006, 62 f. Schüsseltypus S II pl. 20.

64 Berndt 2003, Kochtopf Form 24 pl. 114 (KG 313); Lüdorf 2006.

65 Lüdorf 2006, 57 f. Amphorentypus A XII pl. 16 A 103.

66 Korkut 2007, 1–22 Schüssel no. 47 fig. 8.

67 Böhlendorf-Arslan 2008, no. 64. 65 pl. 16; a plate from Magnesia at the Meander also compares well with the plate from the Sultan Tepe site: Böhlendorf-Arslan 2004, 247–250. 467 cat. 592, R75 pl. 26. 128.

68 Böhlendorf-Arslan 2004, 255–258. 497 cat. 728, R81 pl. 27. 145.

that no Late Roman C specimens were recorded at the Sultan Tepe site. It is striking, especially when we think that the LRC was produced in neighbouring places such as Phokaia, Çandarlı (Pitane) and Elaia<sup>69</sup>. The absence of LRC fragments among the find material from the Sultan Tepe site cannot be explained by coincidence, so it remains open as a topic of discussion. In addition, analysis of the pottery sherds according to their function indicate a homogeneous distribution, so there is not a density that points to any functional group. The pottery sherds recovered from the site indicate examples of tableware, storage vessels, vessels used for transport and cooking vessels. Consequently, they may be interpreted as ceramic finds recovered from households.

### Small Finds

62 There is a single small find discovered during the 2009 survey<sup>70</sup>. It is a relief of white marble (fig. 9) measuring 15.7 cm in height, 23.2 cm in width and 5.7 cm in depth (UM09 S 0209a)<sup>71</sup>. Preserved is a fragment, which is irregularly broken at the

bottom and on both sides in a large area. The background of the relief, in front of which a figural representation rises, has been preserved on the upper left in the form of a rounded corner<sup>72</sup>. The protruding moulding is completely broken away on the left and in large parts on the top. At the bottom and on the right side, irregular breaks run diagonally into the field with the image. The surface shows numerous bumps and chips. Despite this severe deterioration, an oblique contour can be discerned next to the central figure at the upper right edge. To the right of this, a small area of relief ground appears to have been preserved. This suggests a square or transverse rectangular form of the relief<sup>73</sup>.

63 In frontal view, the upper and part of the lower body of a female figure are preserved, which allows the reconstruction of a frontally seated posture. Hardly anything of the garment is still recognizable. Due to the different volumes of the surface, however, it can be assumed that the upper body was clothed with a chiton. A cloak of thicker fabric lay

over the knees and was led in a wide bulge laterally over the hips.

64 On both sides of the head, which is oriented frontally, sloping contours are preserved which, with the characteristic distances between the oval of the head outline, suggest that these are parts of the robe<sup>74</sup>. This must have been folded over the back of the head and fell down over the shoulders onto the upper arm and back. The left arm has been brought to the side of the body and merges there at the level of the elbow into an object whose exact form can no longer be determined. The right arm is almost completely lost, but it can be read from the fractures that it extended down along the upper body.

65 Due to the fragmentary state of preservation and the partly unrecognizable surface an iconographic classification is not possible with absolute certainty. The closest representations are those of seated female deities<sup>75</sup>. Of these, Tyche/Fortuna is ruled out,



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Fig. 9: Fragment of a white marble relief. Scale bar: 5 cm

69 The fact that Çandarlı and Elaia are considered to be other production sites of the LRC besides Phokaia was proven by the archaeometric investigations: Japp 2009, 200. 202. 249 f. 259 f. figs. 24. 34.

70 Schneider et al. 2015, 65 fig. 3.

71 For logistical reasons, the following classification could not be based on the original fragment but had to rely on the photographic documentation. However, this only shows the front of the relief.

72 The upper end of the image field seems to have been slightly curved. Cf. the reliefs in Izmir, now lost: Vermaseren 1987, 197 no. 661 and no. 662.

73 Cf. on the form of the relief: Vermaseren 1987, 168 no. 577 (from Smyrna); 189 no. 632 (from Ephesus); 190 no. 634 (from Ephesus); 203 no. 687 (from Magnesia).

74 Compare this to a similarly fragmentary head from a relief in the Musei Vaticani, Museo Gregoriano Profano inv. 3378: [arachne.dainst.org/entity/1110834](http://arachne.dainst.org/entity/1110834).

75 The right angle on the left side of the figure initially gives the impression of a posed figure, but the posture of



since the remains to the right of the figure cannot be reconciled with a cornucopia held in the crook of the arm or hand<sup>76</sup>. Although clear indications of characteristic attributes such as the tympanon to be expected in the left hand are missing<sup>77</sup>, a classification as Meter-Cybele has higher plausibility due to formal similarities with regard to the posture<sup>78</sup>. Thus, the sitting posture of the figure corresponds motivically to a form of representation of this goddess already developed in Archaic times, for which a fixed iconography developed in Classical times in Pergamon<sup>79</sup> and which was to remain characteristic until the Roman Imperial period<sup>80</sup>.

<sup>66</sup> The curved structure of the right corner of the fragment remains unclear. It could either represent a convexly curved rock-like environment<sup>81</sup> or another element of a landscape like a tree<sup>82</sup>, or it could transmit the remains of another figure. G. Günther has categorized within the Attic dedications to Cybele three frame and finally also relief forms. Among them ›cave frames‹ occur rarely<sup>83</sup>. Within the finds from Asia Minor such representations are not provable so far. Furthermore, the majority of the cave and grotto representations that have survived in relief are laid out in such a way that the rock-like formations begin at the bottom of the relief, run upwards along the edges and span the picture field in a partly curved form. The relief ground is mostly worked flat. Since the fragment from the survey on the right still has a part of the relief ground preserved, the rock-like accumulation would run through the picture field<sup>84</sup>. Thus, it is more probable that it is the rest of another, possibly standing figure, which was depicted next to the seated Meter-Cybele<sup>85</sup>.

<sup>67</sup> Due to the size of the relief as well as the figure and the lack of similarities with other relief types, the fragment can be considered as part of a votive relief. A reliable dating is hardly possible due to the loss of the original surface and the absence of any traces of processing. However, the size in connection with the still recognizable relationship of the figure volume to the relief ground speaks for a dating not before the Hellenistic period. The significance of the relief, which has come to light without context, remains limited regarding its functional integration. Although votive reliefs occur naturally in the surroundings of sanctuaries, they were also found in domestic contexts, where they could be reused as components of a household decoration<sup>86</sup>.

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the other arm cannot be reconciled with this motif. This arm would have been bent, for example, in the case of a river deity. Cf. in summary Klementa 1993.

<sup>76</sup> Cf. a fragment in Istanbul, Archaeological Museum inv. 2271 from Aphrodisias: LIMC VIII Suppl. (1997) 123 no. 86b s. v. Tyche (L. Villard).

<sup>77</sup> Cf., for example, reliefs from the Aiolis or Ionia: Vermaseren 1987, 192 no. 641; 193 no. 646; 198 no. 666; 207 no. 700. 701.

<sup>78</sup> For a summary of the iconography, see LIMC VIII Suppl. (1997) 744–766 s. v. Kybele (E. Simon); Naumann 1983. It remains unclear in the case of the present fragment to what extent the shading above the head could be interpreted as the remains of a small polos or have to be attributed to a layer of calcareous sinter.

<sup>79</sup> Cf. Kruip 2018, 282 no. 16. On the changes in cult in Hellenistic times in Asia Minor: Roller 1999, 189–216.

<sup>80</sup> Kruip 2018, 161 f. Cf. on the expansion in Asia Minor RE XI, 2 (1922) 2250–2298, esp. 2250–2256 s. v. Kybele I (F. Schwenn). About the Cult: Roller 1999; Kerschner 2020.

<sup>81</sup> Cf. summarizing grottoes in reliefs: Neumann 2016, 142–147.

<sup>82</sup> Similarly, a nymph relief from Tralleis in Berlin: Grassinger et al. 2008, 272. For the combination of Meter-Cybele with a tree, see a relief from the Imperial period in Bursa with a significantly greater relief depth: Vermaseren 1987, 90 no. 276.

<sup>83</sup> Cf. Günther 1994, 26 f.

<sup>84</sup> Compare the votive reliefs from the Pan Grotto of Vari: Schörner – Goette 2004, 60–67 no. R1, R2, R3. 69–74 No. R5, R6 as well as the consecration relief of Philokratides: Muthmann 1968.

<sup>85</sup> Cf. as an example of Meter-Cybele with accompanying figures Vermaseren 1987, 194 no. 649 (probably from Ephesus).

<sup>86</sup> Cf. the in situ finding of a Hellenistic ›Heroenrelief‹ in Ephesus: Krinzinger 2010, 665 f. no. B-S 1 pl. 246. 280 or an Archaistic relief in the ›Maison du Lac‹ on Delos: Kreeb 1988, 165 no. S 9.5.

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## An Adjacent Burial Ground

<sup>68</sup> Situated about 500 m northwest of the Sultan Tepe site, an artificial mound measuring approximately 60 × 50 m in dimensions and 2 m in height (»Fundstelle 2019/06«) was encountered during the 2019 survey<sup>87</sup>. The mound is located on the sloping eastern side of the Sultan Tepe hill (fig. 3). Although damaged and flattened due to irrigation activities, the soil formation on the mound containing a great amount of river pebbles, which was observed to be quite different from the adjacent fields around it, indicated that it was artificially piled up. Similar formations of soil that comprise river pebbles in different sizes were also observed at the tumulus *Yığma Tepe* at Pergamon<sup>88</sup>. According to the geoelectric measurement conducted on the mound during the survey in 2019, an anomaly at the centre was detected, which can be interpreted as either a small burial chamber or a sarcophagus<sup>89</sup>. Preliminary results of the geoelectric measurements are significant, but further prospections would be needed to reach a firm conclusion.

<sup>69</sup> However, there are further indications that point to a burial ground. According to local residents, for example, several gravestones were uncovered in recent years during irrigation work. These statements can be supported by the discovery of a fragment of a sarcophagus lid on the eastern edge of the mound during the 2019 survey (cat. 1.09, figs. 25. 26). The triangular sarcophagus lid of andesite resembles the plain and ornamentless andesite sarcophagus lids of the tumuli on the *Ilyas Tepe* at Pergamon as well as Tumuli II and III at Elaia<sup>90</sup>. The lid could be of Hellenistic date as well. Considering the preserved dimensions of the sarcophagi mentioned<sup>91</sup>, which could certainly have roughly corresponded to the dimensions of the deceased, the sarcophagus at Sultan Tepe could approximately and hypothetically have had the following dimensions: length 1.80–2.10 m, width 0.50 m<sup>92</sup>, depth ca. 0.5 m<sup>93</sup>.

<sup>70</sup> Furthermore, it is worth mentioning that the modern cemetery of the nearest village Süleymanlı is not located on the outskirts of the village, but also close to the mound on the southwestern fringe of Sultan Tepe hill. This evidence indicates that the hill and its surroundings – away from fertile agricultural land and protected from flooding – is a preferred burial ground in use today and most likely in ancient times. It can therefore be assumed that inhabitants of the Sultan Tepe site may have been buried at this site.

## Discussion

<sup>71</sup> The interpretation of the building complex and its surroundings will be discussed on the basis of the results of the investigations, which comprise extensive and intensive archaeological surveys, magnetic prospections, geoarchaeological investigations and the analysis of architectural elements and stone objects, pottery and small finds. Quantities of pottery, tiles and small finds in general are low, while architectural fragments and stone objects, although few, provide some evidence for the interpre-

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<sup>87</sup> Pirson 2020, 219 figs. 73. 74 (Z. M. Aksan).

<sup>88</sup> Pirson 2016, 161–164; Mecking et al. 2020.

<sup>89</sup> For further information on the research method used for the mound, see Pirson 2020, 219 figs. 73. 74 (Z. M. Aksan).

<sup>90</sup> Jacobsthal 1908, 428 f.; Radt 1999, 270 f.; Pirson et al. 2011, 136. 182 f.

<sup>91</sup> Sarcophagus on Ilyas Tepe: length 1.90 m, width 0.60 m, depth 0.63 m, wall thickness 8 m and 10 m. Tumulus II: length 2.14 m, width 0.84 m, depth 0.75 m, wall thickness 0.19 m. Tumulus III: length 1.87 m, width 0.59 m, depth 0.56 m.

<sup>92</sup> Theoretically calculable from the preserved width towards the middle height, which measures approx. 25 cm; therefore, the total width of the sarcophagus should correspond to approx. 50 cm.

<sup>93</sup> The height of the sarcophagus could roughly correspond to the width.

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tation of the building's function. However, the main evidence comes from magnetic prospections, which provide a ground plan open to interpretation.

72 The potential function of the building complex has already been discussed by Schneider et al., who proposed three scenarios<sup>94</sup>. The first scenario sees the site as a lime kiln dating from late antiquity to the Byzantine period, while the second scenario perceives it as a luxurious estate dating between the 4<sup>th</sup> and the 8<sup>th</sup> century A.D. The third scenario proposes a sanctuary built in the 2<sup>nd</sup> century A.D. based on architectural finds and a single votive relief<sup>95</sup>. Based on the new information obtained in 2019, these three scenarios can be reassessed and an additional interpretation is proposed as well.

## Sanctuary Scenario

73 The ›sanctuary scenario‹ proposed by Schneider et al.<sup>96</sup> was mainly based on marble finds indicating an exceptionally elaborate architecture of the building and a single votive relief. The magnetic prospections were not completed on the whole site during the surveys between 2009 and 2011 (see above ›Research History‹, §§ 3–6). Therefore, any interpretation on the probable plan and layout of the structure was hard to comprehend<sup>97</sup>. The completion of the magnetic prospections in the 2019 survey enables us to have a better idea of the site and discuss the ›sanctuary scenario‹ further.

74 A possible rural and architecturally designed sanctuary could be expected on a slightly elevated position in the generally flat western lower Bakırçay plain. This applies particularly to anomalies no. 3 or no. 5 in the centre of the site (fig. 5). No. 5 consists of parallel walls, with a spacing between 6 and 8 m, a length of 42 m by at least 64 m, and oriented in a northwest-southeast direction. This could indeed be interpreted as the ground plan of a sanctuary. The outline of no. 5 corresponds to the basic plan of an antae temple or a *prostyloi*. Similar ground plans can be found at the sanctuary of Demeter, the Temple of Zeus, the ›Temple R‹, and the Hera Basileia in Pergamon<sup>98</sup>.

75 Other adjacent, but unclear anomalies (no. 3 and 7) may possibly be the result of poorly preserved remains or foundations of a possible altar. They have the same orientation as anomaly no. 5. Surrounding and partly parallel anomalies, e.g., no. 12a–c, no. 6 or parts of no. 3a–c, could also be interpreted as an enclosure (*peribolos*) of the *temenos*. A similar layout can be found, for example, at the sanctuary of Hekate at Lagina (Caria). The sanctuary comprises a temple and an altar in a *temenos* surrounded by *stoa*i on all four sides<sup>99</sup>.

76 When discussing a ›sanctuary scenario‹, the aforementioned orientation of the complex must also be taken into account. At first it seems arbitrary and, for example, is neither aligned towards Pergamon nor along the assumed road to Pitane (fig. 1). The complex, however, is oriented to the northwest exactly towards the highest point of the nearby Sultan Tepe hill and to the southeast exactly towards the sanctuary of Meter at Mamurt Kale (figs. 1. 2). This sanctuary, whose architecture was greatly expanded under Philetairos in the 3<sup>rd</sup> century B.C., has a very similar ground plan to the assumed sanctuary of the Sultan Tepe site, although it would be somewhat larger at ca. 67 × 67 m<sup>100</sup>. It may, however, have been an important reference point for the construction of a rural sanctuary in the western lower Bakırçay plain in the further course of Attalid rule. The

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94 Schneider et al. 2015, 74.

95 Schneider et al. 2015, 65 fig. 3.

96 Schneider et al. 2015, 74.

97 Schneider et al. 2015, 74.

98 *Antae* temple: Cf. sanctuary of Demeter in Pergamon, e.g., in: Bohtz 1981; Rheidt 1996, 171–174 fig. 11.

*Prostyloi*: Cf. Temple of Zeus, ›Temple R‹, and Hera Basileia in Pergamon, e.g., in: Ohlemutz 1968; Rumscheid 1994; Rheidt 1996; Laufer 2021.

99 Tırpan et al. 2012, 181–183 figs. 1. 2; Williamson 2021, 241. 268, figs. 5. 8.

100 Conze – Schazmann 1911; Laufer 2021.



location of the Sultan Tepe site would admittedly be very unusual for a Meter sanctuary in the Pergamon Micro-Region, where sanctuaries of the goddess have so far been found exclusively on rocky and exposed places<sup>101</sup>. Due to the scenic position in relation to the Bakırçay plain, the sanctuary of a river god appears more plausible.

<sup>77</sup> The architectural elements presented above do not provide clear evidence for the sanctuary scenario. On the basis of the pottery fragments found, it is difficult as well to deduce the exact period of use or even the function as a sanctuary. Pottery analysis from the Grotto sanctuary at Pergamon revealed that pottery for banqueting purposes such as bowls, drinking vessels and plates were dominant among the fine ware<sup>102</sup>. Furthermore, comparisons with pottery ensembles from other grotto and rock sanctuaries demonstrate that the predominance of fine ware is characteristic for this kind of sanctuaries. Minor differences existed between different sanctuaries, especially in the distribution of functional groups among the fine wares<sup>103</sup>. The dominance of unguentaria besides drinking vessels, bowls and plates in Kapıkaya for example indicates that liquid donations might have played a major role there besides banqueting practices<sup>104</sup>. In the architecturally embellished sanctuary of Mamurt Kale, on the other hand, mainly utilitarian pottery and little fine ware was found<sup>105</sup>. Analysis on the pottery at the Sultan Tepe site reveals a homogeneous distribution of the sherds in terms of function (see above »Pottery«, §§ 53–61), which neither excludes nor suggests a »sanctuary scenario«. However, it is noticeable that the concentration of ceramics and tiles (figs. 6. 7) in the area of anomalies 5 and 7 is rather in the medium to low range, which argues against residential architecture or use for domestic purposes.

### Villa Scenario

<sup>78</sup> The term »villa« has been debated since antiquity without resulting in a clear-cut definition. In a recent account on this topic, Ursula Rothe highlights the combination of production and consumption of wealth as well as of urban and rural elements as characteristics of a »villa« compared to an ordinary farmstead<sup>106</sup>. Michael Feige has argued for a more generic definition of the term »villa« as an extra-urban domestic building<sup>107</sup>. However, such a definition could be applied to almost every site surveyed in the countryside. It hides the economic, social, and cultural aspects of the phenomenon »villa« which have to be considered in the interpretation of the settlement structure of the rural sphere. No universally applicable villa-prototype existed, but the layout of the structures labelled as »villa« is characterized by regional variations. While the evidence for Italy, the western provinces, and for northern Africa is abundant, parts of the eastern Mediterranean and in particular Anatolia are still white spots on the map<sup>108</sup>. This results in a lack of regionally approved typological comparisons, which makes the identification of survey data including geophysical prospection a challenging task.

<sup>79</sup> The new data from the Pergamon Micro-Region can therefore not be integrated in already existing patterns of interpretation, but will hopefully contribute to their establishment in the future – which remains difficult without excavated contexts as references. Against this background, the definition of »villa« as applied in the following refers to the size, the layout and the features that go beyond the average rural sites known from the survey in the Pergamon Micro-Region. In order to push the bounda-

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<sup>101</sup> Pirson – Ateş in press.

<sup>102</sup> Engels 2022, 114–116.

<sup>103</sup> Engels 2022, 179 tab. 49.

<sup>104</sup> Engels 2022, 180.

<sup>105</sup> Conze – Schazmann 1911, 41.

<sup>106</sup> Rothe 2018.

<sup>107</sup> Feige 2022, 1–3.

<sup>108</sup> Cf. Marzano – Métraux 2018, which does not have a chapter on Anatolia.

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ries of interpretation forward, it is inevitable to draw comparisons with better known sites all over the Roman world. The regional tradition of rural residences, on the other hand, is still largely unknown but deserves more attention in the future on the basis of a hopefully more comprehensive data set<sup>109</sup>. However, the fact that all potentially villa-like structures in the Pergamon Micro-Region go back to the 1<sup>st</sup> century B.C. at the most indicates a relation of their appearance with the establishment of Roman rule<sup>110</sup>. This would be in accordance with the understanding of the ›villa‹ as a »Roman architectural category«, albeit referring to Hellenistic (and earlier) predecessors<sup>111</sup>. These introductory remarks aim to emphasize that our understanding of the various forms of rural architecture in the Pergamon Micro-Region is still at an early stage. Therefore, the use of the term ›villa‹ should not be misunderstood as a classification or even as a culturally and socio-economically defined label put on the Sultan Tepe site, but rather as a first interpretative approach to large rural residences from the Roman period in the countryside of Pergamon.

80 The ›villa scenario‹ takes into account the pottery attesting to a settlement in the Roman Imperial period, the marble fragments found, as well as the magnetic anomalies. The interpretation as a possible villa includes anomalies no. 1–8 (excluding no. 9–12), which have been identified as spaces and walls that appear to be well aligned with each other, forming a large structure of approximately 150 × 100 m in size (figs. 4. 5). According to the magnetic prospections, the general plan of the structure is rectangular and oriented in northeast–southwest direction. No. 9 cannot be identified definitely, so it is not included in the ›villa scenario‹, while the relation of no. 10 to no. 1–8 cannot be determined clearly. No. 11 and no. 12 are not aligned with no. 1–8, which have to be explained separately. No. 11 covers an area of 7 × 7 m and could be the probable remains of a kiln, as suggested before<sup>112</sup>. No. 12a–c, on the other hand, have been identified as possibly belonging to an earlier or later date due to the results of magnetic prospections (see above »Magnetic Mapping: Definition and Interpretation«, §§ 13–27). Although its north-eastern part is missing in the magnetic prospections, the fact that no. 12a–c covers the greater part of no. 1–8 raises the possibility of it being an earlier phase of the villa structure in question.

81 Considering the large structure comprising no. 1–8 (figs. 4. 5), comparisons can be made with buildings identified as villas, which have a similar ground plan and layout (fig. 10). It is important to point out certain limitations here in advance. The analogy provided below is based on the general plan and layout of villa buildings primarily throughout the Mediterranean, but also beyond. These villas from the Roman and early Byzantine periods were researched through excavations. The plan and layout of the building at Sultan Tepe site, in contrast, rest solely on the interpretation of magnetic prospections. It should therefore be borne in mind that comparing the excavated buildings with the survey data and thus interpreting the probable function of the building at Sultan Tepe has its limitations.

82 Based on the current research on Roman villas it would be possible to identify the building at Sultan Tepe site as a courtyard type of villa, which is described as consisting of a large courtyard surrounded by galleries or porticoes on three or four sides<sup>113</sup>. The plan of a courtyard type villa corresponds very well with no. 1–4

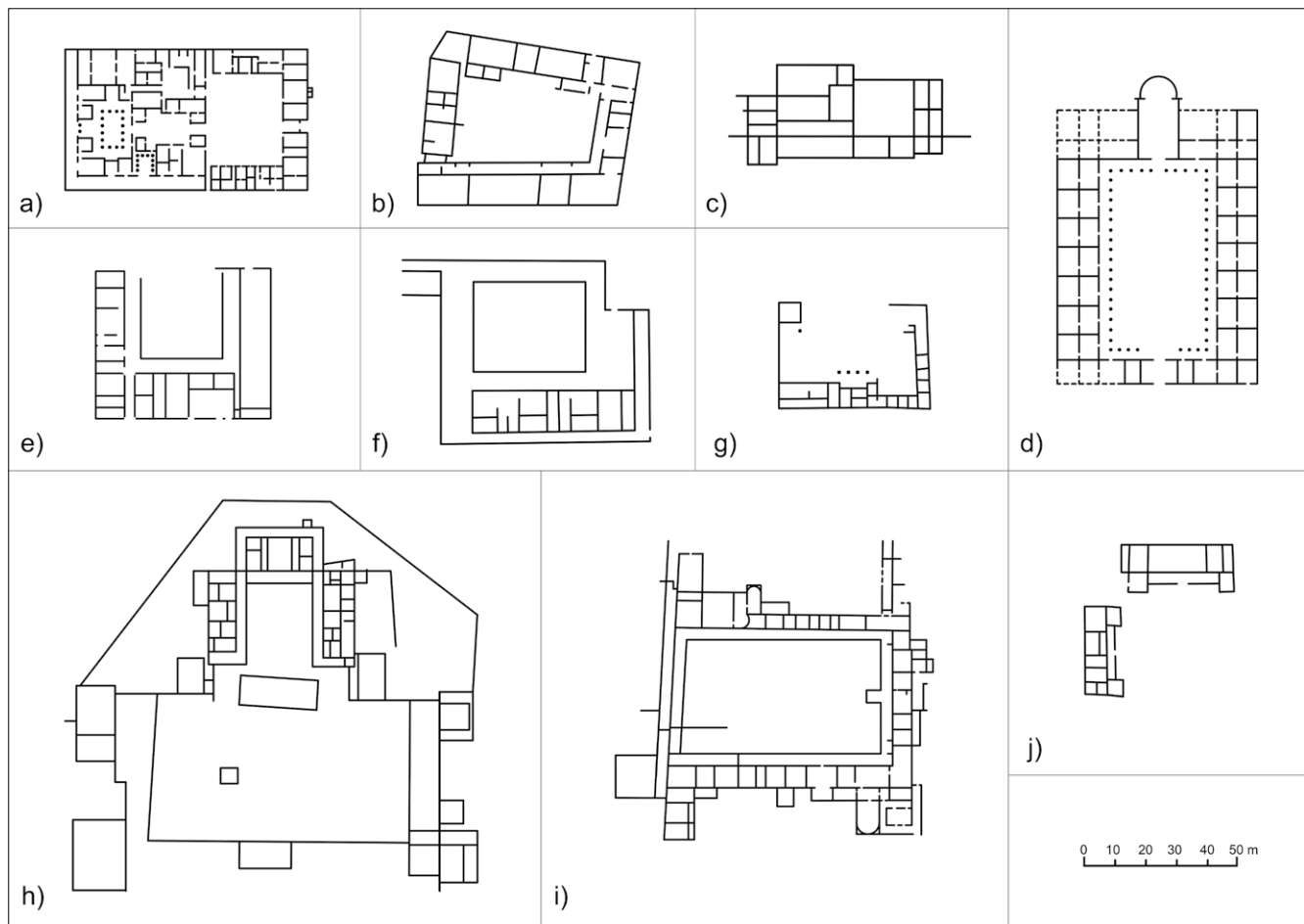
109 See Sommerey 2008, 150–152.

110 Bozköy site: Pirson 2020, 214 f. (B. Ludwig). 221–223 (F. Pirson); Pirson 2021, 266 f. (B. Ludwig – F. Pirson); Pirson 2022, 352–354 (B. Ludwig – F. Pirson – Z. M. Aksan – G. Ateş – W. Rabbel – E. Erkul – İ. Kaplanvural). Sindel site: Pirson 2022, 350 f. (B. Ludwig – F. Pirson – Z. M. Aksan – G. Ateş – W. Rabbel – E. Erkul – İ. Kaplanvural). Villae maritimae (?): Hoffmann 1993; Pirson 2017, 112 f.; Pirson 2016, 285–287 (E. Laufer).

111 Rothe 2018, 52 f.

112 Schneider et al. 2015, 65. 67 f., fig. 4 b.

113 For the research ongoing since the 19<sup>th</sup> century on Roman villas and their classification, see Smith 1997, 7. For further information on the subject, see Zarmakoupi 2014 and Pollard 2016.



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Fig. 10: Ground plans a) Settefinestre; b) Obelija; c) Akra Sophia; d) Mediana; e) Kolchi; f) Tripolitania; g) Tripolitania; h) Borg; i) Bignor; j) Beadlam

(and perhaps no. 8a–b as well, since no. 8a–b is probably an extension of no. 1 to the northwest); however, it excludes no. 5, no. 6 and no. 7 (figs. 4, 5). The identification of no. 5–7 within the building complex (no. 1–8) will be provided with a single analogy below (Settefinestre). After that further examples of the courtyard type of villa will be presented. Consequently, it would not make sense to look for a villa plan that exactly resembles that of Sultan Tepe, as the layout and general plan of a Roman villa in any given province was influenced by local architectural traditions, agricultural characteristics and climatic conditions<sup>114</sup>.

83 The villa of Settefinestre in Etruria, Italy dates from the 1<sup>st</sup> century B.C.<sup>115</sup>. The main building complex defined as *pars urbana* measures roughly 75 × 45 m in dimensions (fig. 10 a). The south-eastern part comprises a courtyard surrounded on three sides with rooms, while the north-western part includes an atrium and a peristyle surrounded by several rooms and spaces with different functions. When the structures immediately to the west of *pars urbana* are also included, the overall dimensions of the complex exceed 150 × 150 m roughly<sup>116</sup>. The villa at Settefinestre provides a close comparison with that of the Sultan Tepe site in terms of general layout. Both buildings appear to consist of two main parts: a courtyard surrounded by spaces and an adjacent part which includes several spaces. The part in which a courtyard is surrounded by spaces is very similar in both examples. The south-eastern part of Settefinestre coincides with no. 1–4 of the Sultan Tepe site. The second part adjacent to the courtyard needs fur-

114 Zarmakoupi 2014, 369.

115 Pollard 2016, 346–349, fig. 17, 2, 3.

116 Becker 2013, 319 f., fig. 20, 3; Yegül – Favro 2019, fig. 5, 28.



ther explanation. In the case of Settefinestre, the north-western part, which is adjacent to the courtyard, includes an atrium and a peristyle surrounded by several rooms with different functions and corresponding to no. 5–7 of Sultan Tepe. Unfortunately, as far as the results of magnetic prospections are concerned, it is not possible to identify the spaces of no. 5–7 accurately. For this reason, it is not possible to make further interpretations according to the present evidence.

84 There are several examples of the courtyard type of villa throughout the Roman world that may be used as a comparison for the building at the Sultan Tepe site. If such a comparison is taken as a basis, a separate function must be assumed for anomalies no. 5, 6 and 7 – like, for example, a sanctuary (see above). A villa dated to the late 3<sup>rd</sup> century A.D. is located at Obelija, Thrace (fig. 10 b). Although its dimensions do not match, it has an enclosed courtyard plan that resembles the building at the Sultan Tepe site<sup>117</sup>. The villa at Akra Sophia south of Corinth dates from the early Byzantine period and its plan includes a courtyard surrounded by rooms on three sides (fig. 10 c)<sup>118</sup>. Comparable to the Sultan Tepe building is another villa dating to the late Roman period at Mediana, Serbia (Moesia Superior), which has been defined as a villa with a peristyle plan (fig. 10 d)<sup>119</sup>. The similarity with the building at the Sultan Tepe site is merely an inner rectangular courtyard that is surrounded by rooms adjacent to each other on all sides. A Roman villa at Kolchi near Pola, Croatia comprises a central courtyard surrounded by three wings, of which two were provided with productive facilities (fig. 10 e)<sup>120</sup>. The olive farms discovered in the Tripolitania, Libya bear some similarities in terms of plan and layout of the rooms around a courtyard, though they are all described as working farms without any luxuries, having only basic residential provisions (fig. 10 f. 10 g)<sup>121</sup>.

85 A villa complex at Borg in Saarland, Germany comprises a similar arrangement of three ranges of buildings around a central courtyard according to the archaeological excavations, survey and geophysical investigations (fig. 10 h)<sup>122</sup>. The site underwent several building phases and reached its acme during the early 3<sup>rd</sup> century A.D.

86 The Roman villa at Bignor in West Sussex in the south of England can be considered as a parallel for the building at the Sultan Tepe site both in terms of general layout of its plan and also its dimensions (fig. 10 i). Defined as a courtyard type villa, it consists of an inner courtyard surrounded by galleries and rooms on all four wings and measures approximately 120 × 90 m<sup>123</sup>. Archaeological investigations conducted at the site revealed that the building was first built as a modest establishment in the early 3<sup>rd</sup> century A.D. and it was later enlarged during the 4<sup>th</sup> century A.D.<sup>124</sup>. Archaeological excavations and geophysical prospections revealed three ranges of buildings around a central courtyard at Beadlam in Northern England (fig. 10 j)<sup>125</sup>. Although the overall dimensions of the building complex are smaller, the general layout of the villa at Beadlam is comparable to that of the Sultan Tepe building, especially the arrangement of spaces northeast, southwest and northwest of the building complex. Investigations revealed several building phases, resulting in a courtyard villa in the early 4<sup>th</sup> century A.D.

87 For the Sultan Tepe site, a residential part (*pars urbana*), a production area (*pars rustica*) and most likely a storage area (*pars fructuaria*) would be expected<sup>126</sup>. Con-

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117 Mulvin 2004, 390 f., fig. 4.

118 Gregory 1985, 411–417, figs. 2. 3.

119 Mulvin 2004, 388, fig. 2.

120 Bowden 2018, 382 f., fig. 20, 2.

121 Percival 1976, 63–66, figs. 14. 16.

122 Dodd 2021, 17, figs. 6–8.

123 Smith 1997, 179–182, fig. 48.

124 Black 1983.

125 Dodd 2021, 12–17, figs. 2–5.

126 Zarmakoupi 2014, 366; Pollard 2016, 331.

sequently, several functions will have to be attributed to the spaces within the building. These may be the residence of the owners, dormitories for workers or slaves, kitchen, *triclinium*, storerooms for crops, sheepfolds, workshops, wine and oil presses, threshing floors and mills<sup>127</sup>. However, based on the currently available findings from archaeological investigations and magnetic prospections, it is difficult to determine the location of the living and working quarters. Further conclusions could only be drawn from the dimensions of the building complex and its sub-areas. cat. 1.04 suggests a reduced simple architecture, which could be found in basements, rooms for production or villas. The basin (cat. 1.06) and the mortar (cat. 1.08) in the surrounding area point to agrarian production as well.

88 Would it be possible, for example, to interpret the large dimensions of the potential villa at Sultan Tepe as an indicator of wealth and luxury? Research on Roman villas in Hispania demonstrates that some of the villa sites were not inhabited after a while and began to function as either industrial or agricultural buildings<sup>128</sup>, while some went through a phase of »monumentalization«<sup>129</sup>. In fact, many Roman villas initially consisted of small farmsteads or hamlets, for example as an aisled building, and later developed into a courtyard villa with the addition of new structures<sup>130</sup>. The phases that a villa at Sultan Tepe might have gone through cannot be determined without excavation. However, it is likely that a potential villa complex also underwent phases of additions and modifications.

89 To what extent can such changes in turn be linked to rising prosperity or an urban elite from Pergamon? Clues to this issue may be provided by the architectural elements found, since the size and decoration of a Roman villa can be regarded as indicators of the status and social position of its owner<sup>131</sup>. A base moulding (cat. 1.02) and a column (cat. 1.04) could be interpreted as indications for a prestigious rural residence or villa with luxurious interior decoration (cat. 1.03). The presence of these finds actually indicates a person or a family with sufficient economic resources and a corresponding social position.

90 The economic basis of a potential villa at Sultan Tepe was most likely agricultural products. There are no known resources in the immediate vicinity, such as wood that could be timbered or rocks that could be quarried. However, there was a large area of fertile farmland in the western lower Bakırçay plain and the site itself was protected from river flooding (see above »Topography and Environment«, §§ 10–12). Agricultural goods could be produced at the Sultan Tepe site in an economically favourable location and transported to nearby markets on the coast, e.g., to the harbour towns of Elaia or Pitane, and of course to Pergamon. Current research shows that potential villas existed in very similar locations in the western lower Bakırçay plain from the Imperial period to late antiquity. In Sazlık and Bozköy, for example, agricultural goods as well as ceramic products were produced. Evidence of rich architectural decoration of rural villas in the Pergamon Micro-Region, including marble elements and coloured mosaics, was found, for example, in Bozköy and Çalibahçe (fig. 1)<sup>132</sup>.

91 The nearby burial ground on Sultan Tepe hill, described above, could also be associated with the owners of a rural villa in the western lower Bakırçay plain. There,

127 Carrington 1931, 119. 124. 127; de Haan 2016, 722; Pollard 2016, 334.

128 For an example where a religious site was replaced by a farmstead in the Roman period, see Smith 1987, 245.

129 Lewit 2004, viii–ix.

130 Percival 1976, 100.

131 Smith 1997, 4. For further information on the presence of sophisticated architectural elements such as marble use, columns, luxurious decorative elements at Roman villas and the consequential interpretation of elite ownership, see Pollard 2016, 332–334. 341.

132 Ludwig 2023, 165–174 with further references.

the owners could have been buried at a prominent place near the villa and away from the fertile farmland.

92 Although their prototypes are known from earlier centuries, Roman villas in general are thought to have appeared in the Roman world by the 2<sup>nd</sup> century B.C.<sup>133</sup>. Later, the 4<sup>th</sup> century A.D. is considered by some scholars as a time when the number of rich villa buildings increased again in different regions within the Roman Empire<sup>134</sup>. There is no certainty regarding the date of the Sultan Tepe building. Pottery sherds from the survey give a wide range from the late Hellenistic and Roman Imperial period to late antiquity and Byzantine times. Based on the evidence from the magnetic prospections, a villa could have been built during the Roman Imperial period at the site. It could have continued to exist until late antiquity or even the Byzantine period. Its function, size and structure however, may have changed during this long phase<sup>135</sup>.

### Lime Kiln Scenario

93 The first scenario proposed by Schneider et al., in which the site functioned as a lime kiln from late antiquity to the Byzantine period, was based on marble fragments and magnetic prospections. The anomalies in the west of the site (no. 11) were interpreted as lime kilns (figs. 4. 5). Furthermore, the numerous marble fragments are considered not to come from the site and thus do not reflect the function or architectural features<sup>136</sup>.

94 In 2019, numerous burnt marble fragments were found in the immediate vicinity of no. 9 (cat. 1.07). Although these fragments could also indicate the burning of a building, the proximity to the kiln anomalies suggests intentional burning for lime production. The hypothesis of lime kilns from late antiquity to Byzantine times could thus be supported by new finds. In contrast to Schneider et al., however, we consider it more likely that local spolia from a predecessor building, presumably from the Hellenistic or Roman period, were used for lime production, e.g., cat. 1.01. 1.02. 1.03 and 1.07.

### Mansio (or statio?) Scenario

95 On the basis of the magnetic prospection, another scenario that has not been considered so far can be proposed. The north-eastern part of the building complex, comprising no. 1–4, can be interpreted as a *mansio* or caravanserai (figs. 4. 5)<sup>137</sup>. The word *mansio* means »a stopping place on a journey« and also »a day's journey, stage«<sup>138</sup>. It refers to a stopping place at the end of a day's journey<sup>139</sup> and derives from *maneo* in Latin, which means »to stay«<sup>140</sup>. The word *stathmos* was used in pre-Roman times for resting places used by travellers on the roads in Asia Minor. These places were located at fertile spots with access to water and included inns for the accommodation of travellers. *Mansio* thus describes places that were used by travellers as resting places, similar to the *stathmos*. The term *mansio* (plural *mansiones*) was used from the 1<sup>st</sup> century A.D., when Augustus issued certain regulations for the Imperial postal system of the Empire.

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133 Pollard 2016, 335. According to Zarmakoupi, the appearance of villas in the Roman provinces began after the 1<sup>st</sup> century B.C.: Zarmakoupi 2014, 369.

134 Lewit 2004, xviii.

135 For the transformation of different types of villas, see Lewit 2004, x–xi. For the decline of Roman villas in Italy, see Pollard 2016, 352.

136 Schneider et al. 2015, 74.

137 Information was obtained from a local during the 2019 survey that the site near Sultan Tepe was once known as a caravanserai. Although there is no other proof supporting this statement, this data merits further consideration.

138 Oxford Latin Dictionary 1968, 1074.

139 Smith 2013, 594.

140 Oxford Latin Dictionary 1968, 1072.



Besides serving as inns, some of these *mansiones* also included houses (palatial) for the accommodation of provincial governors and sometimes even the emperor<sup>141</sup>.

96 A caravanserai on the other hand was a large inn built for the accommodation of caravans on main roads. They were widespread especially in the eastern, central and southwestern parts of Anatolia during the Seljuk period and onwards<sup>142</sup>.

97 No. 1–4 can be compared with the plans of several *mansiones* in the Roman world. For example, a *mansio* located on Döşeme Boğazı (Döşeme Pass) in Pisidia that connects inner Anatolia with the Mediterranean has a trapezoidal plan measuring approximately 44 × 28 m in dimensions<sup>143</sup>. The general plan includes a central courtyard surrounded by rooms on all sides which is reminiscent of the Sultan Tepe site. The building is dated to the 3<sup>rd</sup>–4<sup>th</sup> century A.D.<sup>144</sup>. The plan of a *mansio* at Lower Wanborough, Wiltshire is also similar: A central courtyard surrounded by an ambulatory and behind that ranges of rooms and corridors are the main characteristics of this structure<sup>145</sup>, which is reminiscent of the general layout of no. 1–4. There is also a gate consisting of a second courtyard flanked by a corridor on three sides at the *mansio* in Lower Wanborough<sup>146</sup>. A possible gate on the Sultan Tepe site could, for example, be located between anomalies no. 3a and no. 2c. In this case, it would lead directly to the historical route between Pergamon and the coast, which runs directly west of the site.

98 Finally, this very location of the site is another aspect to be discussed in this context. The distance from the Sultan Tepe site to Pitane is roughly 20 km, while the distance to Pergamon is approximately 13 km<sup>147</sup>. Although the site was not situated on one of the assumed main routes through the plain, it was still situated at a strategic spot in the middle of the western lower Bakırçay plain as well as between Pergamon and the coast<sup>148</sup>.

99 Considering the collected pottery, the ground plan and the location, an interpretation of the Sultan Tepe site as a *mansio* in antiquity or a caravanserai in later periods seems possible.

100 The *mansio* scenario includes another interpretation that refers to the discovery of an inscription about 6 km southwest of the Sultan Tepe site<sup>149</sup>. The inscription testifies to a votive offering by a Roman military member, leading Martin Zimmermann to assume the presence of a *statio* of the *beneficarii* in the area, which were located at the main thoroughfares in the Roman provinces<sup>150</sup>. Such stations could be designed as rectangular buildings with a courtyard in front, as known from the excavations in Obernburg (Germany)<sup>151</sup>. This setting is very close to the general characteristics of *mansiones* described above. However, since the Sultan Tepe site is not located on any of the known main ancient routes along the coast or through the Bakırçay plain<sup>152</sup>, the choice of this particular location for a *statio* would be rather unusual.

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141 For further information on *mansio* and the road system during the Persian and Roman Empires in Asia Minor with reference to ancient literature, see Smith 2013, 594.

142 Hasol 2002, 261 f.

143 Mitchell et al. 2021, 32.

144 Mitchell 2020, 242.

145 Phillips – Walters 1977.

146 For further *mansiones* with similar plans, see Mischka 2011, 12; Ben-Ami – Tchekhanovets 2013, 164.

147 For the estimation of travel time between Pergamon and Pitane, including the site near Sultan Tepe, see Ludwig et al. 2023, 35 fig. 19.

148 For further information on the distance between *stathmoi* on the Royal Road in the Persian Empire with reference to ancient literature, see Smith 2013, 594. For an analysis of the interpretation of some rural sites in the southwestern Mediterranean as both villa and *mansio*, see Corsi 2020.

149 Pirson 2010, 180 (M. Zimmermann).

150 Nelis-Clément 2000.

151 Steidl 2005; Steidl 2007; Steidl 2014.

152 Ludwig 2020.

## Conclusion

101 The results and scenarios presented here are solely based on archaeological surveys combined with geo-archaeological and geophysical investigations. Excavations of underground features were not possible due to the given survey permit. The comparatively small number of finds collected on the surface also allows us only a glimpse of the occupation phases and potential functions of the site. Nevertheless, bringing together all the available information and analysing it in an interdisciplinary context allows us to draw new conclusions about the history and function of the site and thus also about the ancient rural settlement of the western lower Bakırçay plain in the Pergamon Micro-Region.

102 The examination of the pottery proves the Sultan Tepe site originated at the latest in the 2<sup>nd</sup> century B.C. Marble fragments and magnetic measurements suggest that a rural sanctuary was located here in this period. An Ionic marble cornice with dentils indicates prestigious architecture, e.g., a hall building. The marble relief, described in the small finds section, could also originate from such a structure.

103 At the latest a few centuries later, in Roman times, a rural residence or villa, developed at the Sultan Tepe site. Although there are also arguments for the function of a *mansio* or a caravanserai, the focus of the residence was probably on the production of agricultural goods in the fertile western lower Bakırçay plain. From a landscape and transport geography perspective, the location of the site was definitely predestined for this, as geo-archaeological investigations have shown. It is worth mentioning that the building at the Sultan Tepe site was constructed between two fluvial channels, a creek from the Kozak in the west and a secondary branch of the Bakırçay in the east. This could have been a water supply for the building as well<sup>153</sup>. It is a known fact that hill slopes overlooking a stream or a river were favourable for the placement of Roman villas<sup>154</sup>; in the case of the Sultan Tepe site, the relative height above the plain was at least a few metres. The location of the building complex in the midst of available farmland fits very well with the ›villa scenario‹<sup>155</sup>. The site was also advantageously situated in terms of transport on a route between the harbour towns of Pitane and Elaia on the coast and Pergamon inland. It is evident that this route runs immediately west of the site and almost parallel to the magnetic anomalies of the rural residence<sup>156</sup>. This is another parallel to other Roman villas, which were located in carefully chosen positions<sup>157</sup>.

104 Thanks to the magnetic measurements, we can assume a large rectangular structure with an inner courtyard and an extension of up to 150 × 150 m. However, it is not possible to identify and understand the function of each room, as details such as doorways between rooms, the position of hearths or fireplaces are lacking due to the nature of the current investigations. The building complex or parts of it may have been luxurious and furnished with marble. Spolia from a possible Hellenistic to Roman predecessor building as well as new architectural elements made of marble could have been used for this. The marble relief mentioned above might also have come from this household context. The owners of such a complex could have been members of Pergamon's Roman Imperial elite, who may also have been buried in the nearby burial ground on the Sultan Tepe hill on their rural property.

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153 For a similar interpretation, see Corney et al. 1994, 127.

154 Smith 1997, 20.

155 For observations of Percival on the general location of villas in the Italian peninsula, see Percival 1976, 52. 71.

156 For a similar example, see Verdonck 2016, 268. For the relationship of villas to road networks see Percival 1976, 54; Mulvin 2004, 380.

157 Zarmakoupi 2014, 369. For roadside facilities including *mansiones* see Adam 1999, 593.

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105        The examined pottery indicates that this residence existed until late antiquity or even Byzantine times. It is therefore reasonable to assume that the building was rebuilt, enlarged or reduced several times over the course of time and even changed its function. It is very likely that parts of the marble furnishings were used for the production of lime in at least one kiln in a late phase.

106        These results have considerably enriched our knowledge about rural settlements in the Pergamon Micro-Region. The compilation and interdisciplinary evaluation of all available evidence enabled meaningful interpretations of one particular rural site, which in future must be compared and related to examples that have been analysed in a similar way. At the same time, the discussion of the scenarios illustrates the challenge of a precise interpretation or function assignment of such sites solely on the basis of non-invasive investigations. It becomes clear that further research is needed in this field, as well as the development of a regional site classification system and typology, as mentioned at the beginning.



with contributions from Zeki Mete Aksan, Güler Ateş, Corinna Kauth, Annika Skolik, Bernhard Ludwig

## 108 Architectural Elements and Stone Objects

### Cat. 1.01, figs. 11. 12

**Find no.:** UM19 S 898

**Short description:** Ionic cornice fragment with dentils

**Find spot:** Fundstelle 2019/05; found in situ between the anomalies no. 10 and 2 (figs. 5. 8)

**Dimensions:** H 12 cm, L 80 cm, W 65 cm

Dentils: H 3 cm (fragmented), L 6; 6.5 and 7.5 cm, W 7.5 cm

Via: H 3 cm (fragmented), L 3; 3.5 cm, W 7.5 cm

Band: H 2–2.5 cm, W 1 cm

*Cyma reversa*: H 2 cm, W 3 cm

*Corona*: H 5 cm, W 10 cm.

**Material:** Marble

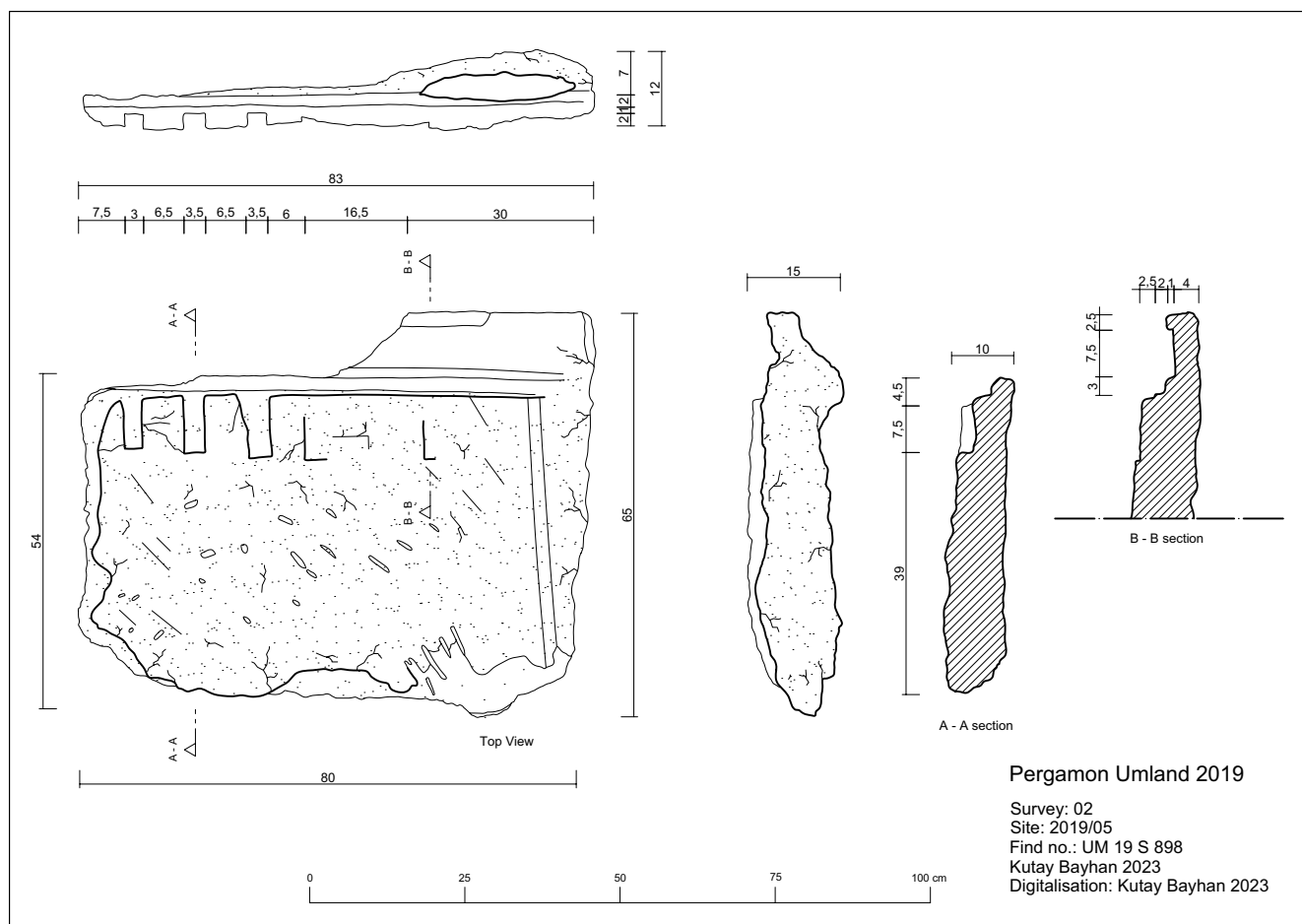
**Tool marks and technical details:**

- Bottom bed: fragmented and rough worked surface with pock-marked dressing from a point and hammer.
- Facing surface: generally smoothed surface worked with rasps and fine claw chisel.
- Unfinished dentil zone: four dentils are worked, but fragmented. A drill line marks preparation for further work.
- Dentils, band, *cyma reversa*: smoothed ground with traces of rasped surface.
- *Corona*: rasped surface on both margins and traces of claw chisel in the middle zone.
- Joining surface: heavily fragmented, one side shows an original smooth surface worked with a claw chisel.



Fig. 11: cat. 1.01 Cornice fragment with dentils. Scale bar: 50 cm

Fig. 12: cat. 1.01 Cornice fragment with dentils

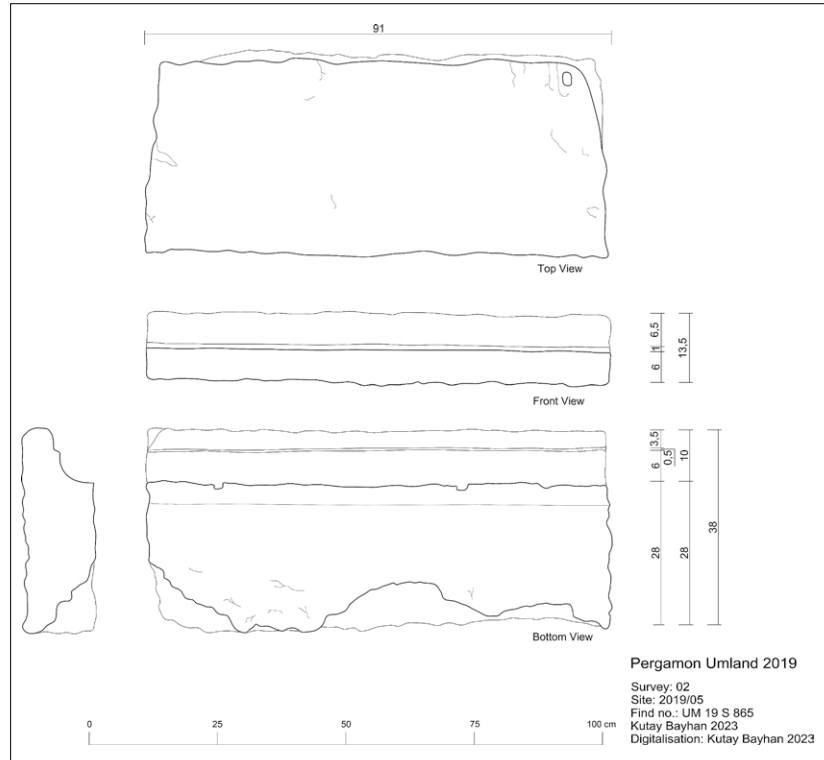




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Fig. 13: cat. 1.02 Base or plinth profile. Scale bars: 50 cm and 20 cm

Fig. 14: cat. 1.02 Base or plinth profile



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- Top bed: Left roughly and rough rustication and chisel-drafted margin, pock-marked dressing. Fragmented area of the *sima*, but subsequently pecked. Particularly many pockmarks are located in the central area. Left roughly in the rear area of the top bed, but not pecked.
- Back face: fragmented.

**Description:** The bottom bed consists of a joining surface measuring 45.5 cm, which is made of a rough surface/rustication. Dentils are heavily fragmented, only four are worked out. A prepared drill line shows the dentils prepared for further elaboration. A band (moulding) and a *kyma recta* are leading to a *corona* (»Hängeplatte mit Traufnase«). Above it, a small part of a *sima* is preserved in a few centimetres. The facing has a smoothly plain finished surface. Smoothed ground with traces of a rasped surface can be observed on the band moulding, the *kyma recta* as well as on the *corona*. Here, two different smoothing techniques can be seen. The margins are rasped, while the middle of the *corona* is worked with a claw chisel. One joining has a plain/smoothed surface worked with a mason's chisel, while the other one was left rough worked with a small claw chisel or is fragmented. The back face is also fragmented. While the *sima* is fragmented, the surface of the top bed was worked secondarily as a rustication with a pock-marked dressing and a chisel drafted margin. **Suggested dating:** Hellenistic, probably Roman

**References:** Leon 1971, 269: dentil Type D; Rumscheid 1994, 317 f. (dentils); Mattern 2001, 16 f.: »Hängeplattengeison; Typ 1«; Hoffmann 2011, 176 (comparison)

**Cat. 1.02, figs. 13. 14**

**Find no.:** UM19 S 865

**Short description:** Base moulding

**Find spot:** Fundstelle 2019/05

**Dimensions:** H 13.5 cm, L 91 cm, W 38 cm

Torus: H 6.5 cm, W 3.5 cm; Band: H 1 cm, W 0.5 cm;

Cavetto: H 6 cm, W 6 cm

**Material:** Marble

**Tool marks:**

- Top bed and bottom bed: smoothed ground
- Facing surface: smoothed ground with rasp
- Joining surfaces: anathyrosis.
- Back face: fragmented.

**Technical details:** Dowel hole in the rear area of the bottom bed.

**Description:** Well preserved, but partly fragmented marble base moulding with smoothed surface a dowel hole on the bottom bed. The structure consists of a torus and an inverted cavetto.

**Suggested dating:** Hellenistic to Roman

**References:** Leon 1971, 269: dentil Type D; Rumscheid 1994, 317 f. (dentils); Mattern 2001, 16 f.: »Hängeplattengeison; Typ 1«; Hoffmann 2011, 65 fig. 34 (comparison)



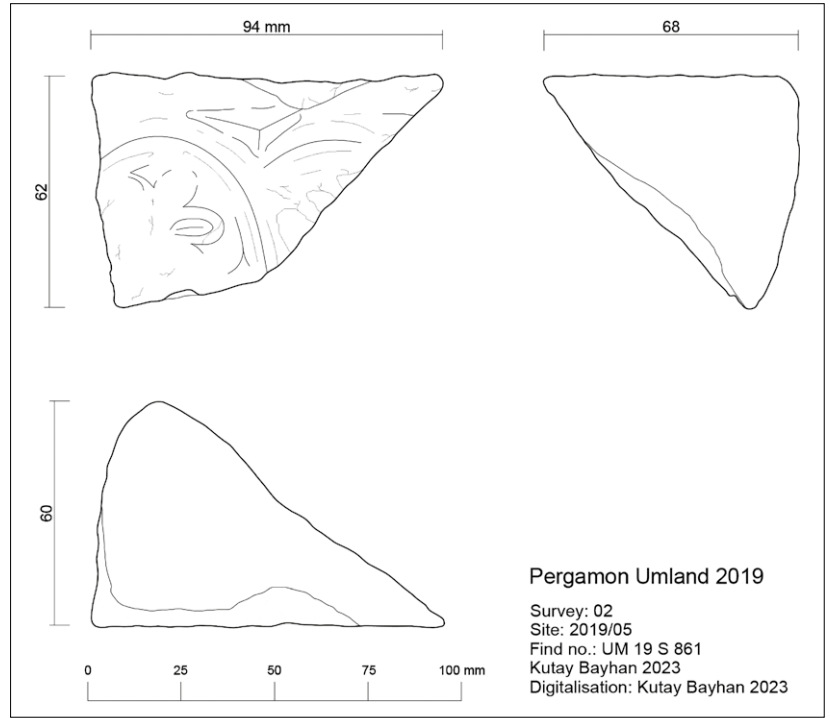
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Fig. 15: cat. 1.03 Moulding fragment with floral decoration. Scale bar: 5 cm

Fig. 16: cat. 1.03 Moulding fragment with floral decoration

Fig. 17: cat. 1.04 Column with dowel hole. Scale bar: 50 cm

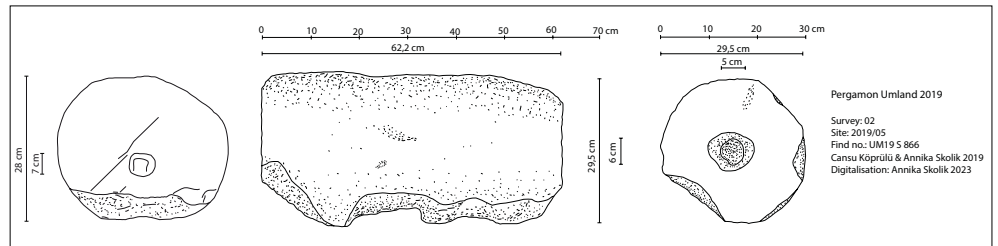
Fig. 18: cat. 1.04 Column with dowel hole



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#### Cat. 1.03, figs. 15. 16

**Find no.:** UM19 S 861

**Short description:** Moulding fragment with floral row *cymation*

**Find spot:** near Fundstelle 2019/05

**Material:** Marble

**Dimensions:** H 6.2 cm, L 9.4 cm, W max. 6.8 cm

**Description:** Heavily weathered moulding fragment with floral row *cymation*

**Suggested dating:** Roman (maybe middle Imperial)

**References:** Mattern 2001, 62 f. («Blattstab»)

#### Cat. 1.04, figs. 17. 18

**Find no.:** UM19 S 866

**Short description:** Column with dowel holes

**Find spot:** near Fundstelle 2019/05

**Material:** Light grey limestone

**Dimensions:** L 62 cm, Ø 29.5 and 30 cm

**Technical details:** Dowel holes on each top side: Quare dowel hole: 7 × 6 cm × H 2 cm and round shaped dowel hole: Ø 5–6 cm × H 3 cm

**Description:** Heavily bumped but completely preserved smooth column (H 62.2 cm) on the surface of which there are still some remains of stucco. There are various forms of dowel holes on the sides.

**Suggested dating:** Hellenistic to Roman

**References:** Laufer 2021, 186–188





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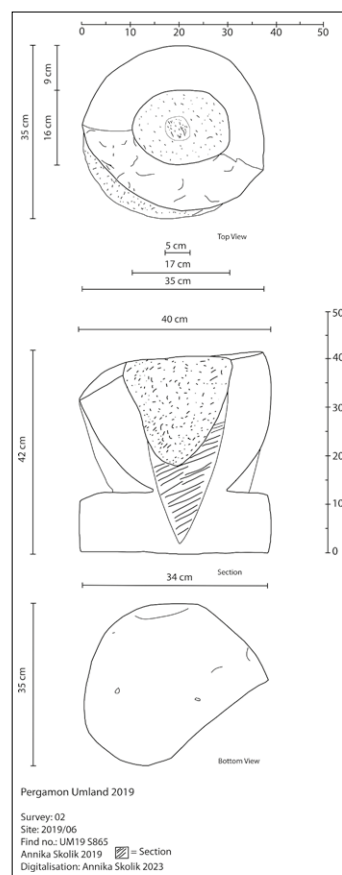
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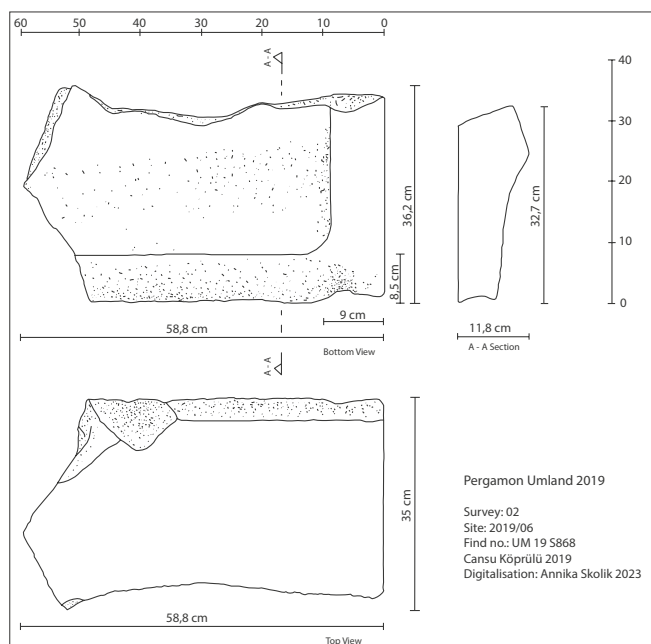
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Fig. 19: cat. 1.05 Rubble stone with mortar. Scale bar: 5 cm

Fig. 20: cat. 1.06 Monolithic rectangular vat/press basin. Scale bar: 50 cm

Fig. 21: cat. 1.06 Opening in the face side of the basin. Scale bar: 50 cm

Fig. 22: cat. 1.07 Burnt marble fragments. Scale bar: 50 cm

Fig. 23: cat. 1.08 Mortar. Scale bar: 50 cm

Fig. 24: cat. 1.08 Mortar

Fig. 25: cat. 1.09 Fragment of a sarcophagus lid. Scale bar: 50 cm

Fig. 26: cat. 1.09 Fragment of a sarcophagus lid

Fig. 27: cat. 1.10 Pedestal with an integrated white marble Attic base



**Cat. 1.05, fig. 19**

**Find no.:** UM19 S 895

**Short description:** Rubble stone with mortar

**Find spot:** Fundstelle 2019/05

**Material:** Andesite and mortar

**Dimensions:** Rubble stone: 5.5 × 7 cm

**Description:** A 5.5 × 4 cm layer of white mortar mixed with sand is observed.

**Suggested dating:** Roman

**References:** Wulf-Rheidt 1999, 6 f.

**Cat. 1.06, figs. 20. 21**

**Find no.:** UM19 S 896

**Short description:** Monolithic rectangular vat/basin

**Find spot:** near Fundstelle 2019/05

**Material:** Andesite

**Dimensions:** L 129 cm, W 100–115 cm, H 50 cm

Thickness of walls: 10–20 cm

(Inner) basin: L 70 cm, W 100 cm, H 29 cm (with plaster), H ca. 34 cm (without plaster)

Opening (covered with plaster): L 5 cm, W max. 5 cm, H 9 cm

Volume: 203 l (without plaster) – 238 l (with plaster)

Three-parted area: margin part L 18.5–21 cm, middle part: L ca. 33 cm, margin part L ca. 15.5–16 cm, intermediate bar: L ca. 2.5 cm

**Description:** Fragmentary, but well-preserved rectangular basin with a likewise rectangular inner surface. The outer sides are roughly pecked, while the inner side and the narrow side with an opening are smoother. It has a volume between 203 to 238 litres. The inner surface has been covered with fine stucco. On the narrow sides, the stucco is only partially preserved, while on the bottom almost the entire surface is preserved. The opening on the narrow side has been reshaped later by the stucco.

**Cat. 1.07, fig. 22**

**Find no.:** UM19 S 869

**Short description:** Burnt or weathered marble fragments

**Find spot:** Fundstelle 2019/05; found in situ between anomaly no. 5a and 9 (figs. 5. 8)

**Material:** Marble

**Dimensions:** Various sizes

**Cat. 1.08, figs. 23. 24**

**Find no.:** UM19 S 867

**Short description:** Mortar

**Find spot:** near Fundstelle 2019/05

**Material:** Andesite

**Dimensions:** L 42 cm, W 35–40 cm, H 35 cm

Base: H 11,6 cm; inner Ø 5–16 cm

**Description:** A fragmented mortar with a high standing ring and a bulbous form with a round inner surface that runs steeply to the pointed ground.

**Cat. 1.09, figs. 25. 26**

**Find no.:** UM19 S 868

**Short description:** Fragment of a sarcophagus lid

**Material:** Limestone

**Dimensions:** L 58.8 cm, W 36.2 cm, H 11.8 cm

**Find spot:** Fundstelle 2019/06

**Description:** The top bed consists of a rough surface carefully worked with a point. The bottom bed has an anathyrosis with a smooth strip measuring 8.5 and 9 cm, followed by a rebated surface worked with a point. The facing surface is carefully smoothed.

**References:** Jacobsthal 1908, 428 f.; Radt 1999, 270 f.; Pirson et al. 2011, 136. 182 f.

**Cat. 1.10, fig. 27**

**Find no.:** UM06 S 606

**Short description:** Pedestal with an integrated white marble Attic base

**Find spot:** Ovacık01, at »Lastıkçı« (tyre dealer); according to the owner, comes from Teut114

**Dimensions:** L ca. 44 cm, H 55 cm; diameter not documented; detailed dimensions (from bottom to top): base profil: H (plinth) 6 cm, H (torus) 4 cm, H (scotia) 4.5 cm; upper profile: H (arch and hollow) 5 cm, H (front moulding) 2.5 cm; Attic base: H (plinth) 5 cm, H (lower torus) 4.5 cm, H (scotia to upper torus) 6.5 m

**Material:** White marble

**State of preservation:** Complete; one upper corner of the pedestal partially broken off; more severe damage to the Attic base (especially to the upper torus and top); surfaces chamfered and sintered.

**Description:** The pedestal is profiled and finely smoothed on three sides only, whereas on the back it is only pointed and the profiles were left unfinished. On the front, the pedestal has a base profile (sequence: plinth, torus, narrow moulding, scotia, torus, narrow moulding) as well as an upper finishing profile (sequence: narrow moulding, arch, hollow set off to the front, front moulding). An Attic base is worked onto the pedestal (profile sequence: plinth, torus, moulding, scotia, moulding, lower torus). On the top of the Attic base there is a rectangular dowel hole in the centre (6 × 6 cm, D 3.5 cm); a broken-out notch extending from it could be a casting channel. Column pedestal with an attached base were found in the Propylon forecourt of the Asklepieion at Pergamon (Ziegenaus 1981, 11 pl. 1 a. c. 49D). A pedestal from the funerary temple of the Western Necropolis in Side shows a comparable sequence of profiles (Gliwitzky 2010, 149. 204 no. 205 fig. 230).

**Suggested dating:** Roman Imperial period (?)

**References:** Ziegenaus 1981; Gliwitzky 2010



28



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Fig. 28: cat. 01.11 White-grey marble Corinthian capital

Fig. 29: cat. 01.12 White marble Attic base with different dimensions

Fig. 30: cat. 01.13 Wall panelling fragment with a profiled contour. Scale bar: 10 cm

Fig. 31: cat. 01.14 White marble column shaft fragment. Scale bar: 5 cm

Fig. 32: cat. 01.15 White marble column shaft fragment with grey and red veining. Scale bar: 5 cm



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#### Cat. 1.11, fig. 28

**Find no.:** UM06 S 607

**Short description:** White-grey marble Corinthian capital

**Find spot:** Ovacık01, at »Lastıkçı« (tyre dealer); according to the owner, comes from Teut114

**Dimensions:** H 37 cm; Ø (top) 67 cm

**Material:** White marble, grey veining

**State of preservation:** Fragmented; the upper part of the capital is half preserved (high leaf partly present), the lower part and the back of the capital are completely missing; the abacus corners with the volutes are broken off; surfaces partly chamfered.

**Description:** The massive crest of the bracts is clearly set off from the calathus in the upper area, which is clearly visible between the bracts and the helices. The acanthus leaves, which are arranged close to each other, are only recognisable in their basic form with some drill furrows. The leaf fingers touch those of the neighbouring leaf; this results in distinct spaces in the form of triangles. The helices have ridges on one side, the ridge being slightly angular set off from the margin; the end of the helix is connected to the adjacent turn by a rectangular ridge. A wide space remains between the helices, in which the supporting stalk of the abacus flower winds upwards in slightly angular coils. The abacus flower is heavily chamfered. The volutes are completely missing. The four sides of the abacus swing back concavely towards the abacus flower.

**Suggested dating:** Middle Roman Imperial period

#### Cat. 1.12, fig. 29

**Find no.:** UM06 S 608

**Short description:** White marble Attic base with different dimensions

**Find spot:** Ovacık01, at »Lastıkçı« (tyre dealer); according to the owner, comes from Teut114; the coloured marble column (UM06 S 620) is placed on it.

**Dimensions:** L (plinth) ca. 34 cm, H (total) 22.5 cm; Ø ca. 44 cm; detailed dimensions (from bottom to top): H (plinth) 6 cm, H (lower torus) 5 cm, H (lower moulding) 1.5 cm, H (scotia) 4.5 cm, H (upper torus) 5.5 cm

**Material:** White marble

**State of preservation:** Complete; plinth and upper torus are each more damaged in one place; surface sintered.

**Description:** Attic base with the profile sequence: plinth, torus, moulding, scotia, moulding, notch, torus. Lower torus and plinth are on the same line of alignment. The upper torus lags slightly behind the alignment of the upper moulding. The upper torus is slightly higher than the lower one; the scotia is relatively low.

#### Cat. 1.13, fig. 30

**Find no.:** UM09 S 209b

**Short description:** Wall panelling fragment with a profiled contour

**Find spot:** South west of Teut114

**Dimensions:** L 32 cm, H 19.8 cm, W (top) 3 cm, W (bottom) 3.4 cm

**Material:** White, relatively large crystalline marble, slightly grey veined

**State of preservation:** Fragmented; upper and

lower end preserved; broken at the narrow sides and recently broken into two fragments.

**Description:** The profile of the plate consists of two fascias, above a bead moulding and a moulding.

**Cat. 1.14, fig. 31**

**Find no.:** UM09 S 209c

**Short description:** White marble column shaft fragment

**Find spot:** Teut114

**Dimensions:** L 9.5 cm, H 9.2 cm; Ø (reconstructed) between 28 and 32 cm (fragment too small)

**Material:** White marble with light grey streaks

**State of preservation:** Fragmented

**Description:** Fragment of a column with a finely smoothed surface.

**Cat. 1.15, fig. 32**

**Find no.:** UM09 S 209d

**Short description:** White marble column shaft fragment with grey and red veining

**Find spot:** Teut114

**Dimensions:** L 15.5 cm, H 11.5 cm; Ø (reconstructed) between 45 and 50 cm

**Material:** White marble with occasional reddish alteration and grey inclusions

**State of preservation:** Fragmented; chamfered surface

**Description:** Fragment of a column with finely smoothed surface.

## 109 Pottery

**Cat. 2.01, figs. 33. 34. 35**

**Find no.:** UM19 Sy02 Fst 05, K6

**Description:** Rim fragment of a bowl with black slip

**Dimensions:** Rim Ø: 4 cm

**Material:** Clay: 5 YR 6/6 reddish yellow; Slip: 2.5 Y 2.5/1 black

**References:** Schäfer 1968, C13–C20 pl. 4; Rotroff 1997, no. 965–1036 figs. 62–64

**Cat. 2.02, figs. 36. 37**

**Find no.:** UM19 Sy02 Fst 05, K8

**Description:** Base fragment of a small bowl with black slip

**Dimensions:** Base Ø: 1.3 cm

**Material:** Clay: 2.5 YR 6/6 light red; Slip: 2.5 Y 2.5/1 black

**References:** Rotroff 1997, 1030–1033 fig. 64

**Cat. 2.03, figs. 38. 39**

**Find no.:** UM19 Sy02 Fst 05, K5

**Description:** Foot fragment of a jug/amphora

**Dimensions:** Ø 2.5 cm

**Material:** Clay: 5 YR 5/8 yellowish red; Slip: 5 YR 6/4 reddish yellow

**References:** Bezczky 2013, Typ 6 no. 546–548 pl. 41, pl. 56, 2



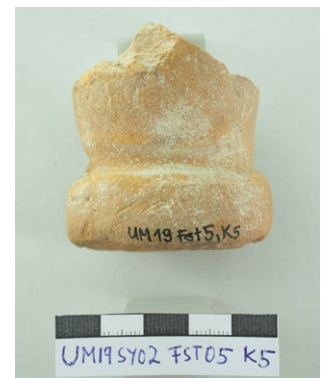
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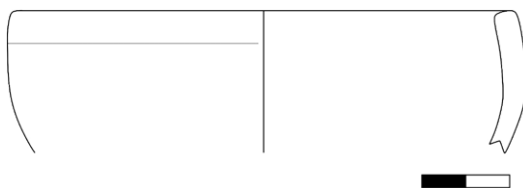
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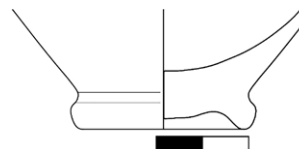
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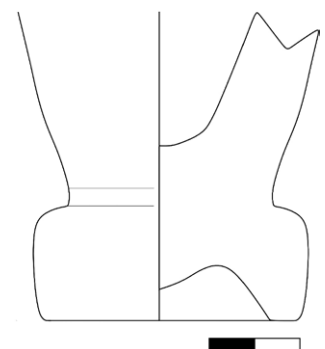
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Fig. 33: cat. 2.01 Rim fragment of a bowl with black slip. Scale bar: 5 cm

Fig. 34: cat. 2.01 Rim fragment of a bowl with black slip. Scale bar: 5 cm

Fig. 35: cat. 2.01 Rim fragment of a bowl with black slip. Scale bar: 2 cm

Fig. 36: cat. 2.02 Base fragment of a small bowl with black slip. Scale bar: 5 cm

Fig. 37: cat. 2.02 Base fragment of a small bowl with black slip. Scale bar: 2 cm

Fig. 38: cat. 2.03 Foot fragment of a jug/amphora. Scale bar: 5 cm

Fig. 39: cat. 2.03 Foot fragment of a jug/amphora. Scale bar: 2 cm



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Fig. 40: cat. 2.04 Rim fragment of a bowl with an out-turned rim. Scale bar: 5 cm



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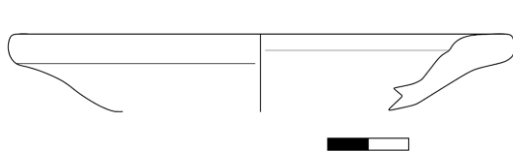
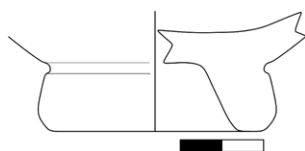
Fig. 41: cat. 2.04 Rim fragment of a bowl with an out-turned rim. Scale bar: 2 cm

Fig. 42: cat. 2.05 Base fragment of a bowl. Scale bar: 5 cm

Fig. 43: cat. 2.05 Base fragment of a bowl. Scale bar: 2 cm

Fig. 44: cat. 2.06 Rim fragment of a plate with a thickened rim. Scale bar: 5 cm

Fig. 45: cat. 2.06 Rim fragment of a plate with a thickened rim. Scale bar: 2 cm



43

45

#### Cat. 2.04, figs. 40. 41

**Find no.:** UM19 Sy02 Fst 05, K7

**Description:** Rim fragment of a bowl with a out-turned rim

**Dimensions:** Ø 9 cm

**Material:** Clay: 2.5 YR 5/8 red; Slip: 2.5 YR 6/6 light red

**References:** Meyer-Schlichtmann 1988, Schalen Gruppe 2: Typ Sa 11 pl. 14

#### Cat. 2.05, figs. 42. 43

**Find no.:** UM19 Sy02 Fst 05, K3

**Description:** Base fragment of a bowl

**Dimensions:** Ø 2.5 cm

**Material:** Clay: 2.5 YR 5/6 red; Slip: 10 R 4/6 red

**References:** Meyer-Schlichtmann 1988, Typ N 2 pl. 38

#### Cat. 2.06, figs. 44. 45

**Find no.:** UM19 Sy02 Fst 05, K2

**Description:** Rim fragment of a plate with a thickened rim

**Dimensions:** Ø 6 cm

**Material:** Clay: 2.5 YR 5/8 red; Slip: 2.5 YR 6/6 light red

**References:** Meyer-Schlichtmann 1988, Typ Sa 29 pl. 19

#### Cat. 2.07, figs. 46. 47. 48

**Find no.:** UM19 Sy02 Fst 05, K9

**Description:** Rim fragment of a kitchen vessel with an overhanging lip

**Dimensions:** Ø 5.8 cm

**Material:** Clay: 5 YR 5/6 yellowish red; Slip: 5 YR 5/4 reddish brown

**References:** Berndt 2003, Kochtopf Form 24 pl. 114 (KG 313); Lüdorf 2006, Schüsseltypus S II, pl. 20 S 13

#### Cat. 2.08, figs. 49. 50. 51

**Find no.:** UM19 Sy02 Fst 05, K31

**Description:** Rim fragment of a kitchen vessel with flat neck and beaded rim

**Dimensions:** Ø 3.9 cm

**Material:** Clay: 10 YR 7/3 very pale brown; Slip: 5 YR 7/3 pink

**References:** Lüdorf 2006, 57 f. Amphorentypus A XII pl. 16 A103; Korkut 2007, 1–22 Schüssel no. 47 fig. 8





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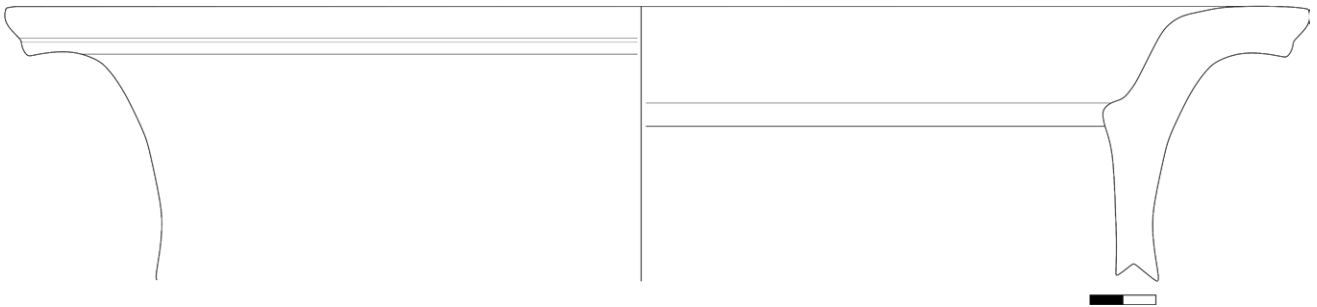


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Fig. 46: cat. 2.07 Rim fragment of a kitchen vessel with an overhanging lip. Scale bar: 5 cm

Fig. 47: cat. 2.07 Rim fragment of a kitchen vessel with an overhanging lip. Scale bar: 5 cm

Fig. 48: cat. 2.07 Rim fragment of a kitchen vessel with an overhanging lip. Scale bar: 2 cm



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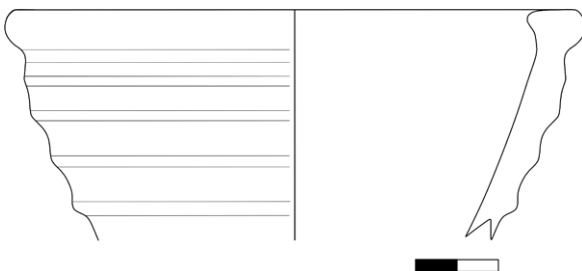
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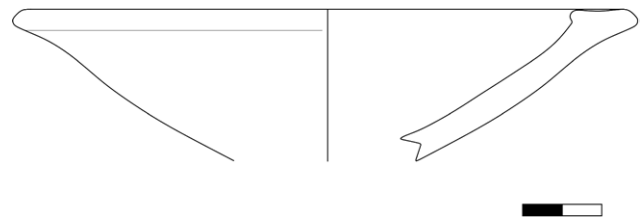
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Fig. 49: cat. 2.08 Rim fragment of a kitchen vessel with flat neck and beaded rim. Scale bar: 5 cm

Fig. 50: cat. 2.08 Rim fragment of a kitchen vessel with flat neck and beaded rim. Scale bar: 5 cm

Fig. 51: cat. 2.08 Rim fragment of a kitchen vessel with flat neck and beaded rim. Scale bar: 2 cm

Fig. 52: cat. 2.09 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 5 cm

Fig. 53: cat. 2.09 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 5 cm

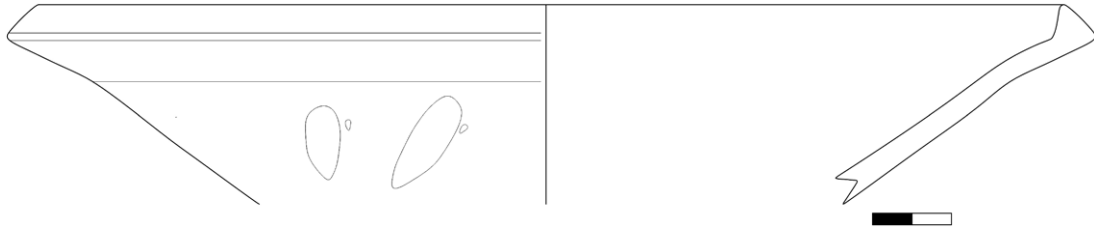
Fig. 54: cat. 2.09 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 2 cm



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56



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Fig. 55: cat. 02.10 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 5 cm

Fig. 56: cat. 02.10 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 5 cm

Fig. 57: cat. 02.10 Rim fragment of a plate with a tickled rim of white glaze ware. Scale bar: 2 cm

**Cat. 2.09, figs. 52. 53. 54**

**Find no.:** UM19 Sy02 Fst 05, K23

**Description:** Rim fragment of a plate with a tickled rim of white glaze ware

**Dimensions:** Ø 5.5 cm

**Material:** Clay: 2.5 Y 8/1 white; Glaze: monochrome medium green glazed

**References:** Böhlendorf-Arslan 2004, 247–250. 467 cat. 592, R75 pl. 26. 128; Böhlendorf-Arslan 2008, no. 64–65 fig. 16

**Cat. 2.10, figs. 55. 56. 57**

**Find no.:** UM19 Sy02 Fst 05, K22

**Description:** Rim fragment of a plate with a tickled rim of white glaze ware

**Dimensions:** Ø 13 cm

**Material:** Clay: 2.5 Y 8/1 white; Glaze: yellow brown glazed

**References:** Böhlendorf-Arslan 2004, 255–258. 497 cat. 728, R81 pl. 27 pl. 145; Böhlendorf-Arslan 2008, 402 f. no. 64 fig. 16

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## ZUSAMMENFASSUNG

### Der Fundplatz Sultan Tepe und seine Umgebung in der westlichen unteren Bakırçay-Ebene

Untersuchung der komplexen Ebenen einer ländlichen Residenz in der Mikroregion Pergamon

Zeki Mete Aksan – Bernhard Ludwig – Güler Ateş – Annika Skolik – Fabian Becker – Ercan Erkul – Wolfgang Rabbel – Jörn Lang – Sarah Al Jarad – Felix Pirson – Brigitta Schütt

Ein ländlicher Fundplatz in der Mikroregion Pergamon, der in der westlichen unteren Bakırçay-Ebene liegt, wurde in den vergangenen zwei Jahrzehnten durch zwei interdisziplinäre Forschungsprojekte entdeckt und untersucht, an denen verschiedene Disziplinen wie Archäologie, Alte Geschichte, Geographie und Geophysik beteiligt waren. Die Ergebnisse jüngster geophysikalischer Prospektionen und geografischer Analysen in Verbindung mit archäologischen Daten aus intensiven und extensiven Surveys ermöglichen es, mehrere Hypothesen zur Funktion der Stätte zu entwerfen und auf dieser Basis Interpretationen auch ohne Ausgrabungen zu entwickeln. Die umfassende Analyse der magnetischen Anomalien, der architektonischen Bauglieder, der Keramikfunde und der geografischen Gegebenheiten der Fundstelle lässt auf verschiedene Besiedlungs- und Nutzungsphasen von der späthellenistischen bis zur byzantinischen Periode schließen. Die Schlüsselphase der Sultan Tepe Fundstelle in der westlichen unteren Bakırçay-Ebene bildete eine ausgedehnte ländliche Residenz mit landwirtschaftlichem Charakter, möglicherweise eine römische Villa.

## SCHLAGWÖRTER

Pergamon, archäologischer Survey, Geophysik, Geographie, Villa, Heiligtum, Mansio, Tumulus

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## ÖZET

### Batı Aşağı Bakırçay Ovası'ndaki Sultan Tepe Yerleşmesi ve Çevresi

Pergamon Mikro-Coğrafyasında Kırsal bir Konutun Karmaşık Katmanlarının İncelenmesi  
Zeki Mete Aksan – Bernhard Ludwig – Güler Ateş – Annika Skolik – Fabian Becker – Ercan Erkul – Wolfgang Rabbel – Jörn Lang – Sarah Al Jarad – Felix Pirson – Brigitta Schütt

Aşağı Bakırçay Ovası'nın batısında yer alan Pergamon mikro bölgesindeki kırsal nitelikli bir alan, son yirmi yıldır arkeoloji, Eski Çağ Tarihi, coğrafya ve jeofizik gibi çeşitli alanları kapsayan, disiplinler arası iki arkeolojik yüzey araştırmasıyla keşfedilmiş ve incelenmiştir. Yoğun ve kapsamlı yüzey araştırmaları neticesinde elde edilen arkeolojik verilerle birlikte, en son jeofizik araştırma ve coğrafi analizlerin sonuçları, arkeolojik kazılar olmaksızın alanın işlevine dair çeşitli senaryoların ortaya konmasına ve yorumların yapılabilmesine olanak tanımaktadır. Manyetik anomaliler, mimari unsurlar, seramik buluntular ve alanların coğrafi özellikleri üzerine yapılan kapsamlı analizler, Geç Hellenistik dönemden Bizans dönemine kadar farklı yerleşme ve kullanım evrelerine işaret etmektedir. Muhtemelen bir Roma villası olarak tanımlanabilecek tarımsal karakterli ve kapsamlı bir kırsal konut, batı aşağı Bakırçay ovasındaki Sultan Tepe yerleşmesinin kilit evresini meydana getirmektedir.

## ANAHTAR SÖZCÜKLER

Pergamon, arkeolojik yüzey araştırması, Jeofizik, Coğrafya, villa, kutsal alan, han, tümülüs

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## METADATEN

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