

# DISSERTATIONES ARCHAEOLOGICAE

ex Instituto Archaeologico

Universitatis de Rolando Eötvös nominatae



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## Caron limen / Portus Caria

### Ancient Port and Fort on the Black Sea Coast at Cape of Shabla

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**Abstract:** The Cape of Shabla, located 6 km east of the town with the same name, has a very rich archaeological history of some 2,500 years. The research in this area started quite early, in the late 19th century, and became more intense in the second half of the 20th century. In the last two years, Bulgarian archaeologists were joined by a group of Hungarian colleagues and established fruitful cooperation.

**Keywords:** Hellenistic, Roman, fort, Caria, port

## Location

The archaeological complex at Cape Shabla is located at the easternmost point of the Bulgarian Black Sea coast, its geographical position accounting for its geological and strategic importance (Fig. 1; Fig. 2). The geology of this flatland consists of a thick Quaternary loess layer and a rocky base.<sup>1</sup> The coastline is segmented by two adjoining shallow bays protected by reefs.<sup>2</sup> The area is exposed to rapid coastal erosion by stormy winter winds, and the sea surf also significantly affects the archaeological remains. Due to its strategic location, the area still houses military and civilian buildings, including a fishing village, summer houses, a lighthouse, and infrastructure for oil and gas extraction.

1 STANCIU – IOANE 2020.

2 There was also a reef in front of Shablenska Tuzla, north of the Cape of Shabla (PEEV 2008, 304).



## Literary sources

Fortunately, several ancient literary sources concerning Cape of Shabla survived, mentioning the place as *Portus Caria* and *Caron limen* (Καρών λιμένα), both names stressing its harbor or port nature that implies artificial mooring infrastructure.<sup>3</sup> In the 1st–2nd centuries AD, Pomponius Mela (*Chorographia* II, 22) and Arrian (*Periplus Ponti Euxini* 35) reported about a harbour between *Callatis* (Mangalia, Romania) and Cape Kaliakra. After a considerable hiatus, it is only in the 6th century AD that we reencounter this name in the works of Anonymus (*Periplus Ponti Euxini* XV, 10–14) and Procopius of Caesarea (*De Aedificiis* IV, 11,18). The latter mentioned the fortress of Kreas, which can also be associated with the archaeological remains at the Cape of Shabla.<sup>4</sup>

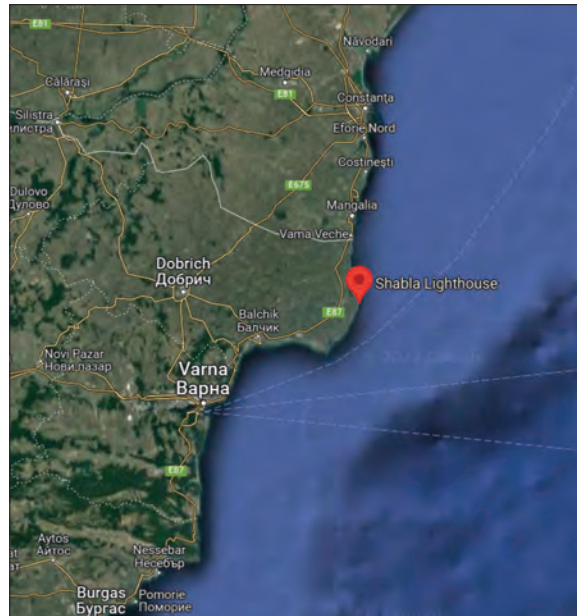


Fig. 1. The location of Shabla in North-East Bulgaria



Fig. 2. Known and supposed sites at Cape of Shabla and the semi-circular reefs, today underwater, protecting the bay (by B. Simon)

3 TORBATOV 1994, 325–326; PEEV et al. 2022, 4, 9.

4 TORBATOV 2002, 199, 206.

## Research history

The archaeological remains of Shabla were first described by Karel Škorpil, the father of Bulgarian archaeology.<sup>5</sup> He gathered information about the port and the ruins of the fortification during fieldwork at the end of the 19th century. According to his observations, the visible remains at that time had a rectangular shape with a dimension of 40×67 steps.

Intensive research began in 1962 with the underwater exploration of the harbour, succeeded by two other campaigns in 1979 and 1980.<sup>6</sup> The first land surveys were only commenced in the 1970s (1977–1979) by archaeologists of the Regional Historical Museum, Dobrich: R. Boshnakov in 1976 and I. Vasilchin.<sup>7</sup> Their efforts were concentrated on the northern part of the Byzantine *castellum*; they excavated the north wall and the eastern half of the round north-western tower, where they unearthed 20 *pithoi*. I. Vasilchin also published some stray finds from the area.<sup>8</sup>

The ground plan and the chronological relations of the *castellum* were more precisely defined during the campaigns in 1995–1996 conducted by S. Torbatov and I. Hristakiev.<sup>9</sup> They unearthed the western gate of the *castellum* and the stone base of a sewer installation. In the fortified area's eastern part, remains of a dwelling came to light. Excavations were also carried out at the fort's south-western rectangular tower, shedding new light on the main phases of habitation. During their work, they uncovered the foundations of a room with hypocaust heating. A rectangular pool with waterproof plaster, a stone spout, and a big wide-necked *pithos* was also found inside the tower. This installation could be interpreted as a winery.

The excavations resumed in 2016 and are still ongoing under B. Totev (Regional Historical Museum, Dobrich) and V. Varbanov (Regional Historical Museum, Ruse);<sup>10</sup> the project was instigated by the restoration of the trestle extending into the sea, built across the central part of the *castellum*. In carrying out this task, they were aided by archaeologists from the regional historical museums in, among others, Ruse, Varna, and Silistra. The surveys focused on the southern part of the *castellum*, outside the fortification walls; the earliest, south-western tower of the Late Roman *quadriburgium* was unearthed entirely. This tower was built on top of a Roman period room equipped with hypocaust heating, underneath which the remains of a Hellenistic building were also discovered.

In 2021, a team from the Department of Ancient Archaeology of the Eötvös Loránd University (ELTE), led by L. Juhász, joined the excavation to expand their international fieldwork activity. That was made possible by the Bulgarian colleagues' very open and welcoming attitude, based on an excellent relationship with V. Varbanov and N. Rusev. The idea of collaboration met with enthusiasm from B. Totev's side, thus paving the way for successful cooperation within the frame of a five-year contract for the joint exploration of Cape of Shabla between the Dobrich Museum and the university.

5 He gave a short unpublished description of the site; the notes were kept in his private archive (TORBATOV 1994, 326).

6 BOBCHEVA 1974, 69; BOBCHEVA 1982, 102–103, 108.

7 VASILCHIN 1978; VASILCHIN 1994, 10–24.

8 VASILCHIN 1985, 220–237; VASILCHIN 1986, 67–69.

9 TORBATOV – HRISTAKIEV 1996; TORBATOV – HRISTAKIEV 1997.

10 IVANOV et al. 2017; IVANOV et al. 2018; IVANOV et al. 2019; IVANOV et al. 2020; IVANOV et al. 2021.



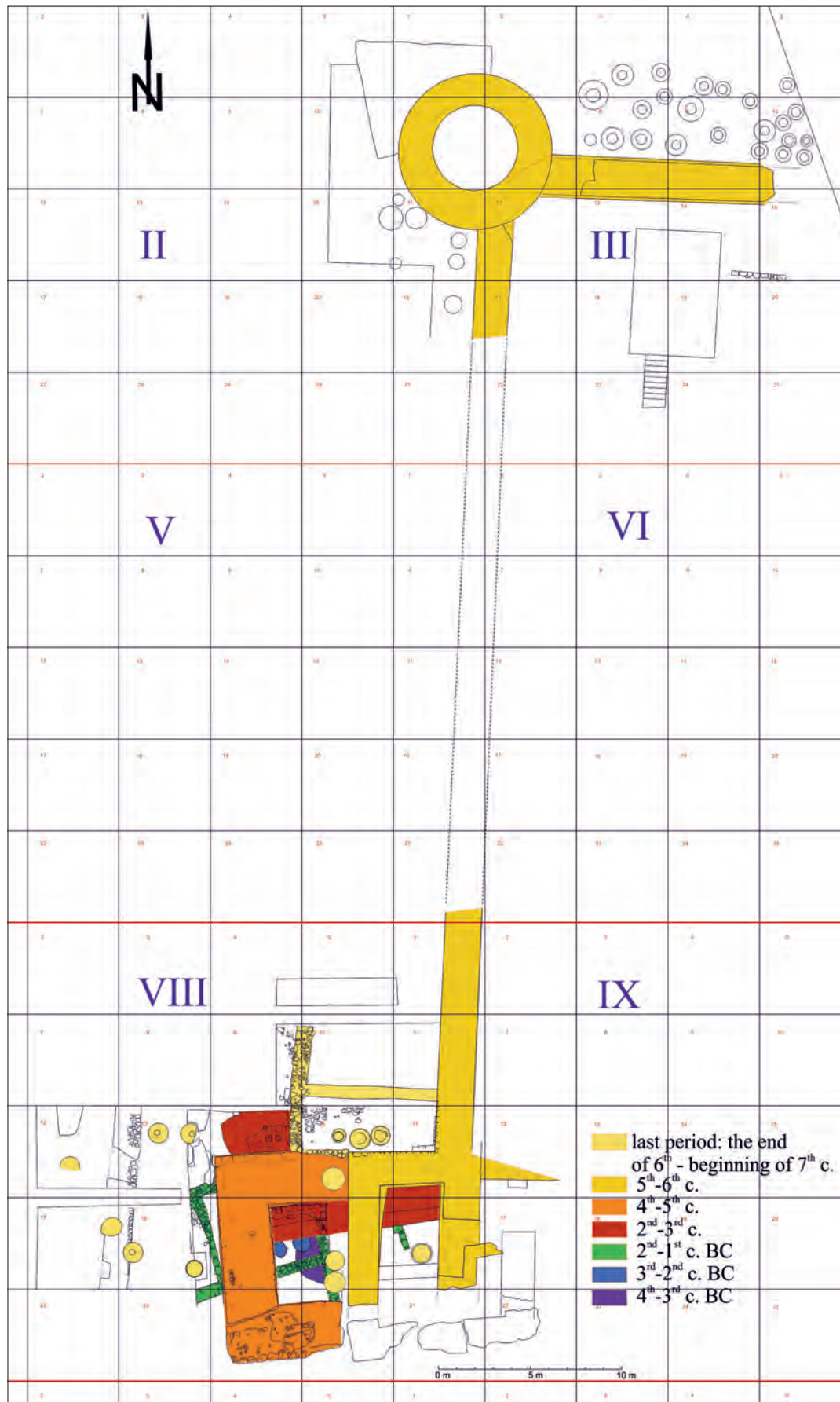


Fig. 3. Survey map of the excavated parts of Caria



## Chronology

The territory of Cape Shabla has a wide array of archaeological remains: a *castellum*, a *quadriburgium*, a port, a necropolis, etc., dating to diverse historical periods. Thanks to the excavations and the abundance of accumulated finds, five chronological phases of habitation could be distinguished (Figs 3–5).

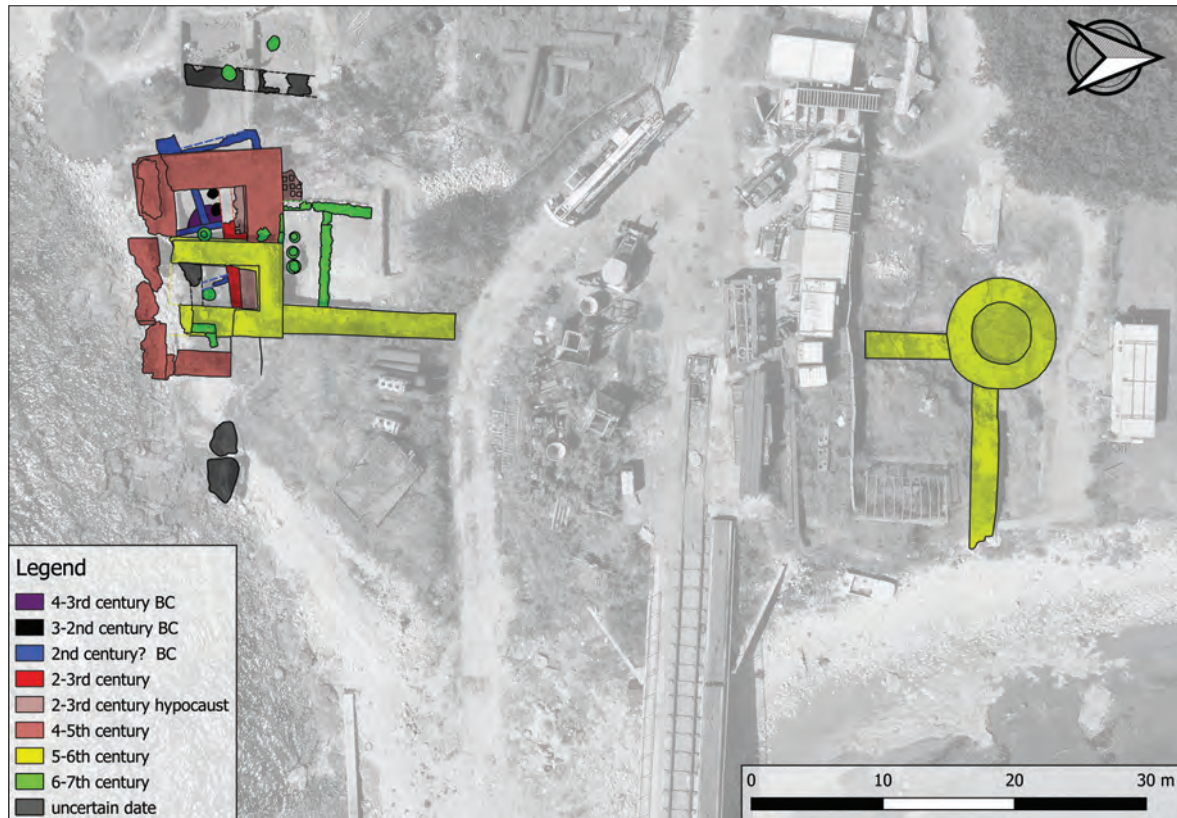


Fig. 4. Survey map of the excavated parts of Caria with the modern surface (by B. Simon)

### 6th–5th centuries BC

The first ancient settlement is located on the seashore, next to the modern lighthouse of Cape Shabla.<sup>11</sup> The earliest habitation records date from the 6th–5th centuries BC, when the Greek colony of *Karon Limen* was established next to a supposed Thracian port. The ancient written sources confirm that the settlement was important for shipping along the western Black Sea coast for centuries due to its key geographical location provided by a bay protected by reefs. It served as a natural harbour that, according to L. Božkov, was divided into two pools.<sup>12</sup> The smaller inner basin, located north of the *castellum*, was 160 m wide, 400 m long, and 4 m deep. Two reefs protected the bay's open water area; nowadays, the eastern reef is absorbed by the sea, and a seawall was built upon the northern one. The reefs seem to have been above sea level in Antiquity, and can be connected with the decline of the settlement, as the rising water level resulted in unfavourable conditions for ships.<sup>13</sup>

11 Numerous anchors were found in the seabed, dated as early as the second half of the 2nd millennium BC (TORBATOV 1994, 326–327). Further north, in line with the Shabla Lake, stone anchors and two Neolithic graves were discovered underwater (PEEV 2008, 303).

12 BOŽKOV 1925. Torbatov relied on the data of the 1962 and 1979–80 field campaigns (TORBATOV 1994, 326).

13 PEEV et al. 2022, 8–9.

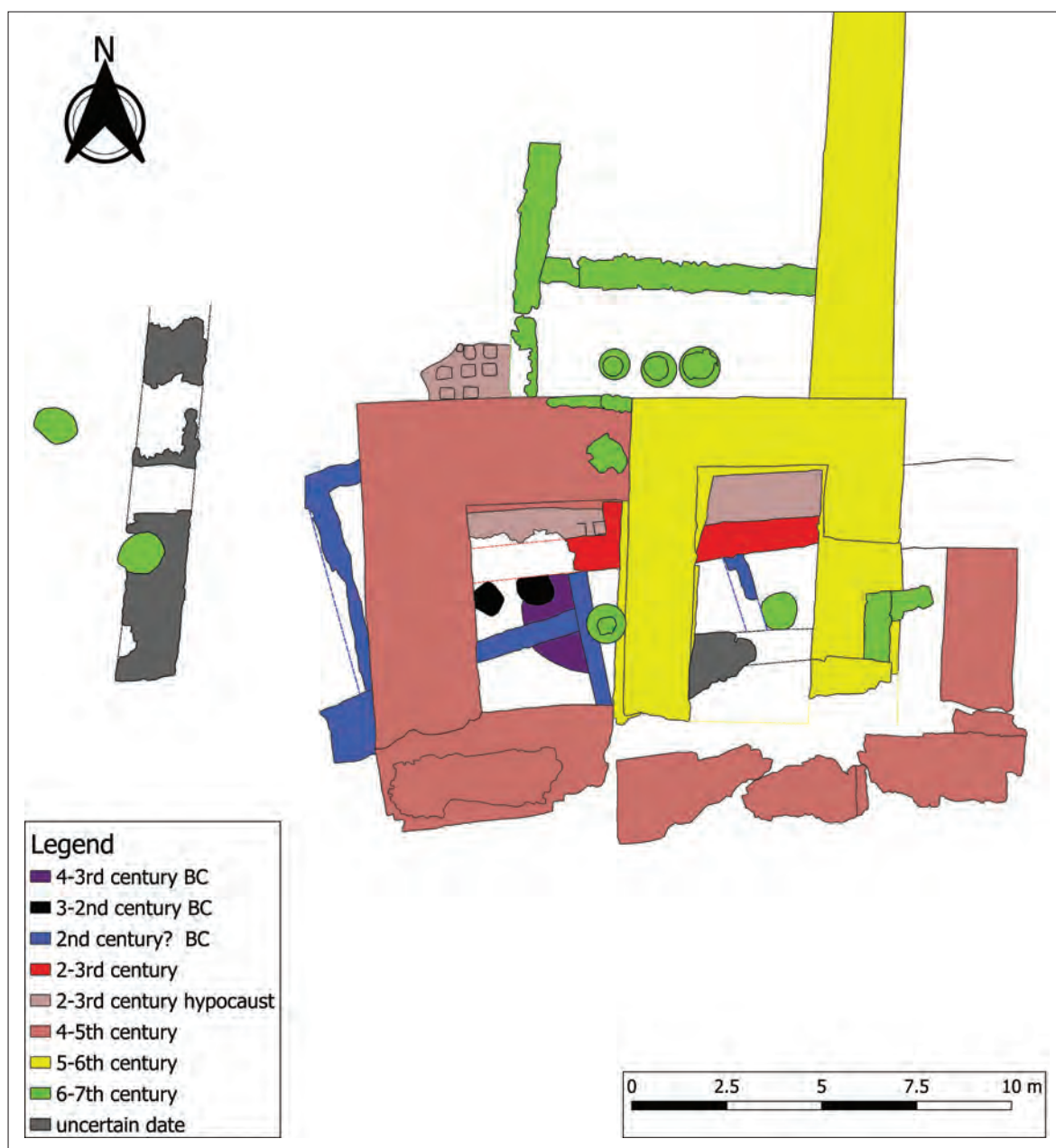


Fig. 5. Survey map of the excavated parts of the southern part of Caria (by: B. Simon)

The second basin, the bay of Kalkan kotura, where the cargo activities were supposedly done, lies just south of the *castellum*, where the modern fishing village and the weather station are located. None of the structures uncovered could be connected to the earliest settlement phase but some finds provide evidence of occupation during this period. Most of them are pottery fragments, amphora stamps from Heraclea and Thasos, a 5th-century coin from Histria (Fig. 6), etc.

#### 4th–1st centuries BC

Structures from the 4th–1st centuries BC were unearthed during the excavation in 2019 (Fig. 5; Fig. 7). The earliest one was a pit (No. 3) dug into the bedrock underneath the remains of a Hellenistic building.<sup>14</sup> Only half of it could be unearthed, as the rest was outside the excavation area. The pit

<sup>14</sup> Marked No. 3 in the 2020 excavation report (IVANOV et al. 2020).





Fig. 6. Histrian coin from the 5th century BC

had a diameter of more than 3 m and a depth of about 0.60 m. It could be dated to the second half or the end of the 4th–3rd centuries BC. The infill of the pit contained a considerable number of finds, mainly amphorae and (among others) a Heracleian amphora stamp dated to the middle of the 4th century BC, pottery, a bronze arrowhead, and a loom weight. The pit was intersected by two other pits



Fig. 7. Remains of a Hellenistic building

(Nos 1 and 2) dated to the 3rd or 2nd centuries BC.<sup>15</sup> They had an irregular shape with dimensions of 0.96×0.8 m and 0.98×0.9 m, respectively. The first one was very shallow, containing only a few Hellenistic pottery sherds, while the second was about 0.2 m deep and contained some more pottery fragments with fine, black-glazed sherds from the ‘West slope’ pottery style among them.<sup>16</sup>

Only 0.45 m above pits Nos. 1 and 2, the remains of a building were discovered (Fig. 7), with different sections unearthed in 2019 and 2020.<sup>17</sup> It was cut through and destroyed by a building with a hypocaust installation from the 2nd–3rd century AD and the subsequent *quadriburgium* tower. By today, three rooms orientated northwest-southeast have been uncovered. The 0.55–0.6 and 0.66–0.7 m-wide and up to 0.35 m-high walls were built of raw stones bound together by mud. So far, the building’s known dimensions are 5.5 m in width (northwest-southeast) and 7 m in length (north-east-southwest). Based on its stratigraphic position, it is dated to the Late Hellenistic Period (2nd century BC?). Its more recent layers contained 17 terracotta figurine fragments, some of the most interesting finds from the area of Caria (Fig. 8). At this stage of research, it can be assumed that these remains belong to an imposing public building, possibly a temple.

15 Marked Nos 1 and 2 in the 2019 excavation report (IVANOV et al. 2020).

16 BOŽKOVA 2012.

17 IVANOV et al. 2020; IVANOV et al. 2021.

Altogether twenty-nine Hellenistic coins have been discovered until now, the latest a pseudo-autonomous issue of Callatis from the 1st century BC. Among the other finds from the Hellenistic period, we have to mention copper nails from ships, bronze arrowheads, a Thracian brooch fragment, lead fishing weights, lead clamps for repairing pottery, a small bronze bell as well as lead sling bullets. The building material, e.g., the tiles (*solenes* and *kalypter*), is very characteristic of the imposing massive stone architecture of the Hellenistic *polis*. The most abundant finds are pottery sherds from the 4th–1st centuries BC: the types include local and imported vessels, e.g., *kantharoi*, fish plates, *skyphoi*, *kylixes*, *lekythoi*, etc. Numerous amphora stamps, dated between the 4th and 2nd centuries BC, were also found,<sup>18</sup> representing the trade centres of Heraclea (9 pcs), Thasos (Fig. 9) (6 pcs), Sinope (5 pcs), Rhodos (5 pcs), Paros (1 pc), North Aegean centres (3 pcs), and four undetermined pieces. The finds reflect the significance and trade connections of Caron Limen.



Fig. 8. Head of a Hellenistic terracotta figurine

### 2nd–3rd centuries AD

During the excavations in 1995–1996 inside the south-western tower of the *castellum*, a building with a hypocaust installation belonging to the preceding period was discovered. A small section of a room was unearthed with its 0.8 m-wide south wall built of raw stones, bound with mortar, and plastered on the inside. According to the new surveys, the building expands to the west and northwest, where its parts have been destroyed by the tower of the *quadriburgium* (Fig. 10; Fig. 11). The stones of its north, west, and parts of its south



Fig. 9. Thasian amphora stamp from 312 BC

wall were removed in Antiquity, leaving behind the mere foundation trenches that mark their outline. Only one-third of the south wall has been preserved. The hypocaust floor was made of a layer of small rammed stones covered by a 0.1 m-thick plaster layer. The *suspensura* was composed of vertically placed circular bricks with a diameter of about 0.18 m, fixed to the floor with mortar. There were also pillars made up of three rows of rectangular yellow bricks, each row consisting of bricks measuring 17×30 cm each, with 0.26 m space between each pillar. Only four pillars have been preserved, while the impressions of ten more were detectable on the floor. At the current state of research, the dimensions of the building are approximately 7 m in width (north-south) and more than 10 m in length (including the section discovered in 1995–1996). S. Torbatov interpreted the structure as part of a bath complex. A great amount of construction debris could be observed: pillars, bricks, *tegulae*, *imbrices*, and *tubuli*. Only a fragment of a ceramic lamp (Fig. 12), discovered in the context of the building, could be used for dating. Pottery sherds from

18 The amphora stamps from the excavations in Shabla have been evaluated by dr. Kalin Madjarov (NAIM-BAS, Sofia). The publication is in print.



the 2nd–3rd centuries were few in the excavated area. At the current state of research, the building is estimated to have been in use until the middle of the 3rd century AD. Only one of the coins found in this area can be connected with this period.



Fig. 10. Remains of a building from the Roman Imperial period



Fig. 11. Remains of a building from the Roman Imperial period



#### 4th–5th centuries AD

The emergence of the fortification system that can also be seen today is dated to the Late Antique Period when a *quadriburgium*-type fortress was erected in the immediate proximity of the port (Fig. 13). Its layout probably coincided with the foundations of the square fortress described by K. Škorpil. The south wall was partially destroyed by the sea and is visible under the still-standing section at sea level today. It was made from cut stones and mortar with the *emplectum* technique. In 2018–2019, a few metres west of the *castellum*



Fig. 12. Fragment of an oil lamp from the 2nd–3rd century AD

wall, the foundation of a square tower was discovered.<sup>19</sup> Its 2.8 m-wide walls were built using the *opus emplectum* technique and belonged to the *quadriburgium* fortress. Its superstructure was partly destroyed in the Early Byzantine Period, as the stones were probably reused for the construction of the *castellum*. The construction date of the *quadriburgium* has not yet been defined precisely. There are no finds reliably dated to the 4th century, and pottery sherds from this period are few. Altogether one hundred and twenty-seven coins were discovered during the campaigns between 2016–2021,



Fig. 13. Aerial view of the south-western rectangular tower of the Late Roman *quadriburgium* and the Early Byzantine *castellum*

<sup>19</sup> IVANOV et al. 2019.





Fig. 14. Orthomosaic of the section of a wall uncovered in 2022 west of the *quadriburgium* tower (by B. Simon)

mainly outside the fortification walls: thirty pre-Roman (end of the 5th century BC–1st century AD), one Roman (3rd century AD), twenty-eight from the 4th century (five from its early half), fifty-three from the 5th century (thirty-four from the late half, while a third are lead imitations), ten from the 6th century, and five from the 20th century.

#### 6th and beginning of the 7th century AD

The outline of the walls of the *quadriburgium*, at least the preserved section, was used during the construction of the Early Byzantine *castellum* (Fig. 13).

The *castellum* is not large. The 13 m-long north wall has only partly been preserved; in front of that, 20 *pithoi* were unearthed in the 1970s. The dimensions of the *pithos* field are still not clear, but such phenomena were also discovered outside the 46.8 m-long west wall terminating in two towers. The northern one is round; its superstructure was destroyed in the 1960s when concrete modules and blocks weighing over 110 tonnes were poured over its remains. Following their removal, the 1.7–2 m-wide tower foundations could be unearthed. The inner and outer wall faces were made from cut stones, bound and plastered with mortar. A 1.2–2.4 m wide trapezoidal stone platform connects to the north-eastern tower (Fig. 3).

In 1996, the west gate was excavated beneath the trestle. It was built using large stone blocks to flank the 1.6 m-wide passage. The trails left by the heavily loaded carts could be detected in the stone pavement alongside sewer and drainage installations.

In 2021, during the excavations in front of the south-western tower of the *quadriburgium*, two more occupation phases were distinguished: an earlier one, dated to the 5th–6th centuries, and a younger one from the second half of the 6th – beginning of the 7th centuries. Both are connected to the decline of the settlement when its fortification system ceased to serve its purpose. The southwest corner of a building was also discovered, incorporating the *castellum* as its east and south walls. The extent of its unearthed part is 2.5 m north-south (length) and 7.2 m east-west (width). The 0.6–0.7 m-thick walls were built of raw stones soldered with mud. Based on the three *pithoi* recovered from its interior, it most likely served as a storage building.

In 2022, the foundations of a wall were discovered immediately in front of the south tower of the *quadriburgium* (Fig. 14). It was built of cut stones soldered with soil and ran northwards almost parallel (at a slightly acute angle) to the *castellum* wall. A *pithos* was placed on its top in early Byzantine times. The function and the course of the wall have yet to be clarified.

The ten 6th-century coins mentioned above may be connected with this last period. A coin hoard of thirty-six *folles* also came to light, with the latest piece being one of Emperor Justin II and his wife, Sofia. The hoard was discovered in a burnt debris layer of a building excavated in 1995–1996.<sup>20</sup> The probable winery installation could also be dated to this stage. Most finds from the site also belong to this period: these include ceramic lamps (Fig. 15), ceramic lids with relief decoration (Fig. 16), fishing tools (hooks, lead weights for nets), brooches, a belt buckle (Fig. 17), etc. The youngest datable object is a 40-*nummi* coin of Emperor Phocas from the years 605–606.

### Non-destructive surveys and prospects

The mainland area at Cape Shabla has not previously been investigated using non-destructive methods; only underwater sonar surveys have been carried out to identify the ancient harbour of Caria. Our future goal is to reconstruct the topography of the archaeological site. This year has been a pilot phase of this work through which we have been able to sketch a schematic archaeological map of Cape Shabla based on



Fig. 15. Fragment of an oil lamp from the 6th century



Fig. 16. Fragment of a relief-decorated ceramic lid from the 6th century



Fig. 17. Belt buckle resembling a human face

<sup>20</sup> TORBATOV 2002, 214.



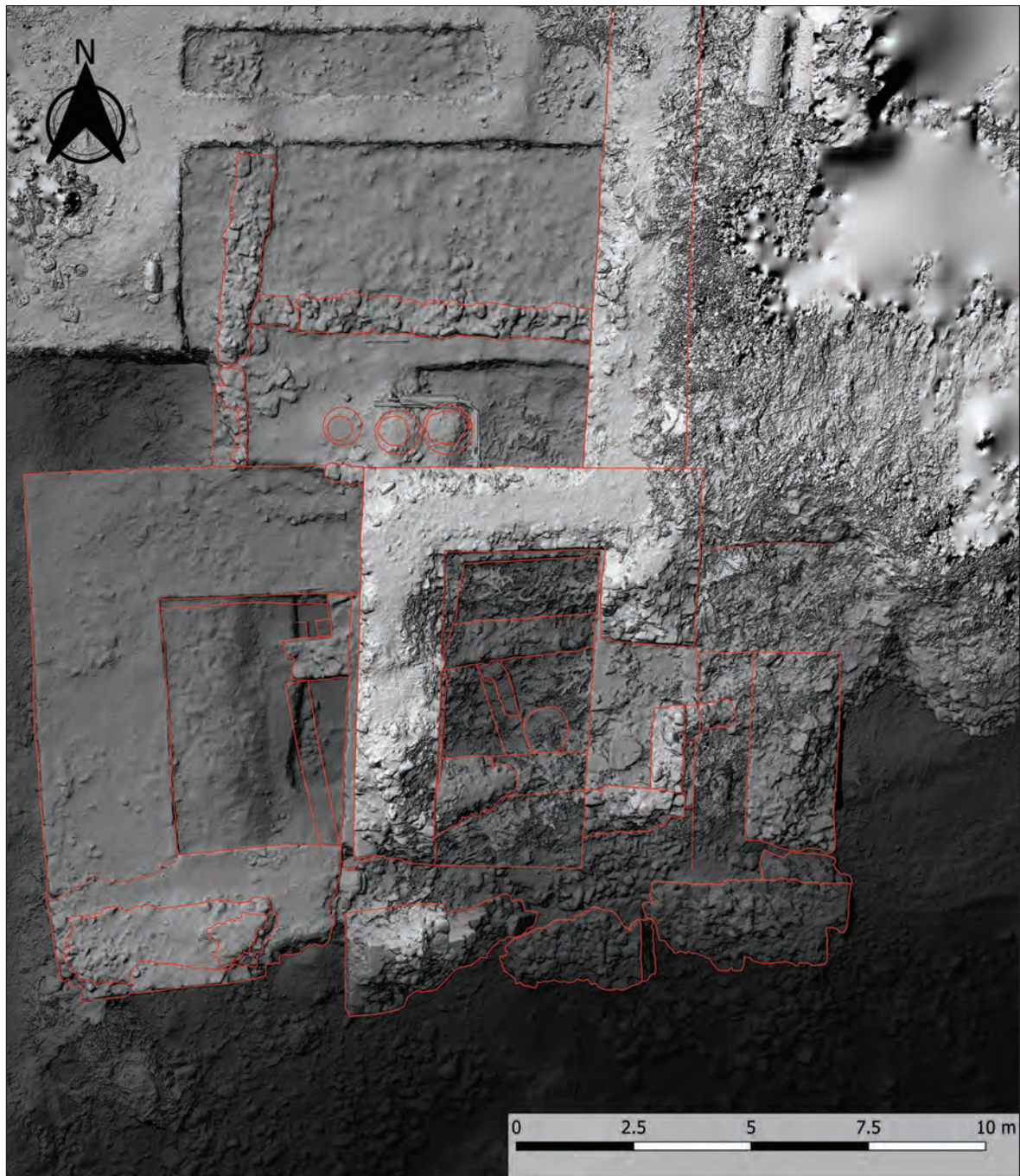


Fig. 18. 3D surface model of the south-western part of the fort (by B. Simon)

local oral sources, visible landmarks (burial mounds), and fieldwalking (Fig. 2). The latter concentrated on an area west of the known fortress, next to the bend of Road 901 bypassing the Cape of Shabla. Here a minor deforestation revealed pottery sherds dating to the 4th–6th centuries AD, suggesting that the ancient town was more extensive than previously thought. The cemetery of the settlement lies west of the explored area, where the burial mounds are still visible today.

Thanks to the cooperation with ELTE from 2021, the excavation was also digitally documented with a DJI Phantom 4 and a Mavic 2-type drone. The systematic use of low-altitude aerial photography (LAAP) allowed us to generate 3D surface models (Fig. 18) and orthomosaics (Fig. 14), which not only

accurately represent the current state of the ruins but also provide a solid basis for future research.<sup>21</sup> Applying a geodetic survey with ground control points (GCPs) enabled us to use the models and orthomosaics in GIS software. The LAAP and the digital surface models created will also be effective tools for the identification of the burial mounds in the western area: a plan for the coming seasons.

We also intend to carry out geophysical surveys in the area with the aim of broadening the prospects for future excavations. The ancient cemetery and the fields between that and the fortress are considered available for geomagnetic surveys, with only the possible modern waste being a problem.

During this year's campaign, we tested whether the geological conditions were ideal for a ground-penetrating radar (GPR) survey. A Mala GX 450 HDR device was used in the newly opened western trenches shortly after removing the topsoil. The first impressions were promising as the linear structures appearing on the radar screen were later explored and proved to be part of a modern pipeline, suggesting that there is no major obstacle for mapping wider areas to identify archaeological building remains. In addition, selecting appropriate equipment will only be possible after processing this year's survey. The soil above the wall remains appeared to be quite thick, which may require a radar device with different amplitude in the future. Also, the excavation area must be cleared of all shrubs and modern waste preceding a full-scale GPR survey.

Based on the extensive previous research, we can now pose more detailed questions to focus on our future joint Bulgarian–Hungarian efforts. We intend to determine the function of the wall found in 2022 and to further expand our knowledge on the various aspects of the settlement (military, residential, religious, public infrastructure, and necropolises) during the different periods of habitation in ancient Caria.

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21 The untextured 3D model of the site (2022 autumn state) is downloadable from: [https://upload.wikimedia.org/wikipedia/commons/5/51/Shabla\\_Karia\\_2022.stl](https://upload.wikimedia.org/wikipedia/commons/5/51/Shabla_Karia_2022.stl)

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