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BETWEEN GLOBAL AND LOCAL

ADRIATIC CONNECTIVITY FROM PROTOHISTORY TO THE ROMAN PERIOD

Zagreb, 2024

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Vela Glava poviše Hvara, s pogledom na Paklene otoke i otok Vis / Vela Glava, with view to Pakleni islands and the island of Vis (foto / photo: Eduard Visković)

BROADER TOPICS

HVAR ISLAND

OTHER EASTERN ADRIATIC AREAS

BROADER TOPICS

Carlo De Mitri

ADRIATIC TRADE FROM PROTOHISTORY TO THE ROMAN PERIOD: AN OBJECTSCAPE OVERVIEW

Original scientific paper

The Adriatic Sea is a place of encounter and exchange not only between the shores that border it, but also between peoples, cultures, and objects of different origins. These relations have led to the creation of a material and immaterial heritage that has been nurtured from ancient times to the present. Numerous tales are told of the passage of mythological characters across lands throughout the Ionian-Adriatic basin, and they almost seem to belong to a kind of 'storytelling' carried out first and foremost by Greek historiography to include them in its own cultural and identity-based past.

These geographical areas, however, were already affected by contact with the Greek world in the Iron Age, followed by 'colonisation' at the end of the 8th century BC.

Between Archaic and Late Roman times, the study of material culture represents a useful tool for mapping routes and passages and proposing new readings of the circulation of goods and people in the Ionian-Adriatic basin.

The study of specific ceramic goods and the analysis of new contexts highlight interesting starting points for hypotheses on the dissemination of these objects. Furthermore, the application of methodologies drawn from social network analysis makes it possible to propose an interpretation of trade routes and connections in different periods.

KEY WORDS: **TRADE, SNA, POTTERY, CONNECTIONS, ORIKOS, MURO TENENTE, ADRIATIC SEA**

The aim of this paper is to provide an overview of the trade networks that affected the Ionian-Adriatic basin, focusing on particular chronological phases and specific objects, mainly ceramics. The reorganisation of old and new data through methodologies borrowed from the social sciences, such as social network analysis, can offer new insights. Particularly, UCINET or GEPHY software is used to create bipartite network graphs of selected artefacts as indicators and to associate them with sites. This creates a system where the social actors are the objects and the union lines represent a visualisation of the existing relationship between objects and sites. Also, a graph with the affiliation network is used, where sites are more or less connected based on the number of indicators they have in common.

This methodology was used in my doctoral research project (De Mitri 2023b) entitled 'From Coast to Coast', which focused on the Late Hellenistic period. From there, I began a diachronic overview from protohistory to the beginning of Late Antiquity.

I then considered objects – primarily ceramics – that provide indications of trade within the Adriatic-Ionian basin and between this basin and other areas of the Mediterranean over a broad chronological span, focusing on a few examples.

Material culture, initially analysed with a chronological-typological approach, became, in a later analytical step, an important indicator for understanding 'relational constellations', that is, different types of relationships present between people and objects (Van Oyen 2016: 358–360). This definition was then integrated into a broader concept called 'objectscape', which is the study of a repertoire of objects in a given period and geographical interval. The core of the objectscape is thus a privileged analysis of the connection between material culture and the actions taken by people (Pitts, Versluys 2021).

BEFORE THE APOIKIAI: BETWEEN IDENTITY MYTHS AND MATERIAL DOCUMENTATION

There are numerous tales of mythological characters across the lands of the entire Ionian-Adriatic basin. Cadmus, Diomedes, Minos, and Idomeneus are the most recurrent, but alongside these we also find Antenor, Jason and Medea, Andromache, Alcinous, and Phaeton. There are also the iconic heroes wandering around the Mediterranean: Ulysses and Aeneas.[1]

However, they almost seem to belong to a kind of 'storytelling' created first and foremost by Greek historiography so that its own cultural and identity-based past could encompass even distant geographical areas that were affected by their presence as early as the Iron Age, which was followed by the 'colonisation' at the end of the 8th century BC. It was an operation almost aimed at resurrecting a collective cultural memory and identity in order to justify occupation or territorial presence.[2]

BRONZE AGE: INTER-ADRIATIC AND TRANS-ADRIATIC CONNECTIONS

However, the places mentioned above had not been immune to a real encounter with Aegean peoples as early as the 3rd millennium BC; the interaction that took place was fossilised, especially between the Middle and Recent Bronze Age, owing to the material culture that was transported by these peoples, leaving an indelible physical trace.[3]

Therefore, the tales of foundations attributed to mythological heroes can overlap with the reality of relations initiated in the Bronze Age. Mythical past and archaeological documentation intertwine as if to legitimise the presence of the Achaeans in the historical age.

In this heroic age, especially in the late Bronze Age, traces of relations with the Aegean world, generically referred to as 'Adriatic connections', are more pronounced in some areas, concentrating between the Ionian area and the lower Adriatic, on both shores, and then thinning out in the central and northern Adriatic sector (Fig. 1).

However, it is necessary to distinguish between 'inter-Adriatic connections' (relations between the opposite shores of the Adriatic Sea) and 'trans-Adriatic connections' (relations between the adjacent areas of the Ionian-Adriatic basin, the eastern Aegean, and the continental area). The trademarks of 'inter-Adriatic connections' are mainly metal objects, goods of organic nature, first and foremost bitumen,[4] but also the by-products of agricultural and vegetable processing.

However, the artefacts reflecting the existence of long-distance (trans-Adriatic) relations are numerous and have been chosen as indicators: amber objects, ivory, glass paste and faïence, and, above all, pottery.[5]

1 —— The dissemination of specific myths would serve, at different chronological moments, for political motivations and commercial purposes; for example, there is the emblematic 'case' of Aeneas in the identity construction of Augustan Italy. On the figure of heroes see among others: Malkin 1998; Braccesi 2001; see also the various contributions in Braccesi, Nocita 2016 and Castiglioni et al. (eds.) 2018.

2 —— For collective cultural memory and identity: Assman 1997. A case study on founding hero honours and collective memory can be found in Sofia 2022.

3 —— For the transition from the Copper Age to the Bronze Age see in general: Cline 1994; Lo Porto 1996; Cazzella 1999. From the second half of the 3rd millennium BC, the concept of the 'Adriatic connection' is also proposed, whereby the Adriatic is also considered as a connecting point between the Balkan and Aegean worlds, as in: Bietti Sestieri 2003: 49–52 and Nicolis 2005.

4 —— For bitumen see: Faraco et al. 2016 and Bernard-Mongin et al. 2019.

5 —— The bibliography is extensive; I have indicated the main and most recent contributions from which I have extrapolated the data. Please refer to these for completeness: Vagnetti 1999; Onnis 2008; Guglielmino 2009; Guglielmino et al. 2010; Radina, Recchia 2010; De Grossi Mazzorin 2012: 73–75; Jung, Mehofer 2013; Blečić Kavur 2014; Cwaliński 2014; Cinquepalmi 2015; Marazzi 2016; Tsonos 2016; Fotiadis et al. (eds.) 2017; Wijngaarden 2017; Iacono 2019; Recchia, Cazzella 2019; Bettelli, Levi 2020; Jones et al. 2021.

The presence of Mycenaean pottery in the western Mediterranean is well known in the literature.[6]

Three main phases can be distinguished. In the Late Helladic I–II (17th–15th centuries BC), evidence in the Adriatic does not go beyond the Gargano; other crucial points are the Gulf of Taranto and the Aeolian Islands. In the second phase, Late Helladic IIIA and IIIB (14th–13th centuries BC), imported goods reach the middle Adriatic, then the entire Syracusan area of eastern Sicily, and the Tyrrhenian up to Etruria. Finally, in the third phase, Late Helladic IIIC (12th century BC), the attestations become more numerous, reaching as far as the northern Adriatic and, on the western side, Sardinia.

However, the intensification of chemical and petrographic analyses has made it possible to define two groups of different pottery: Aegean-Mycenaean pottery, which was certainly imported, and Mycenaean-type pottery, also called Italo-Mycenaean, produced in some areas of the Ionian-Adriatic coast of the Italian peninsula, especially between Late Helladic III B and C.

This testifies to an exchange of technical/manufacturing knowledge, not only in ceramics, but also in the processing of animal hard materials and metallurgical skills.

If we consider the previously selected indicators of a trans-Adriatic connection, we can define denser areas of occurrence, such as the Strait of Otranto with Mycenaean ceramics and the northeastern Adriatic with amber (Fig. 2).

The reprocessing of these data in social network analysis software provides a bipartite network graph of the selected artefacts and their associations with the sites (Fig. 3); the material culture represents the actors, and the lines establish the relationships between these objects and the sites. The most receptive sites are thus highlighted on the map in Fig. 4.

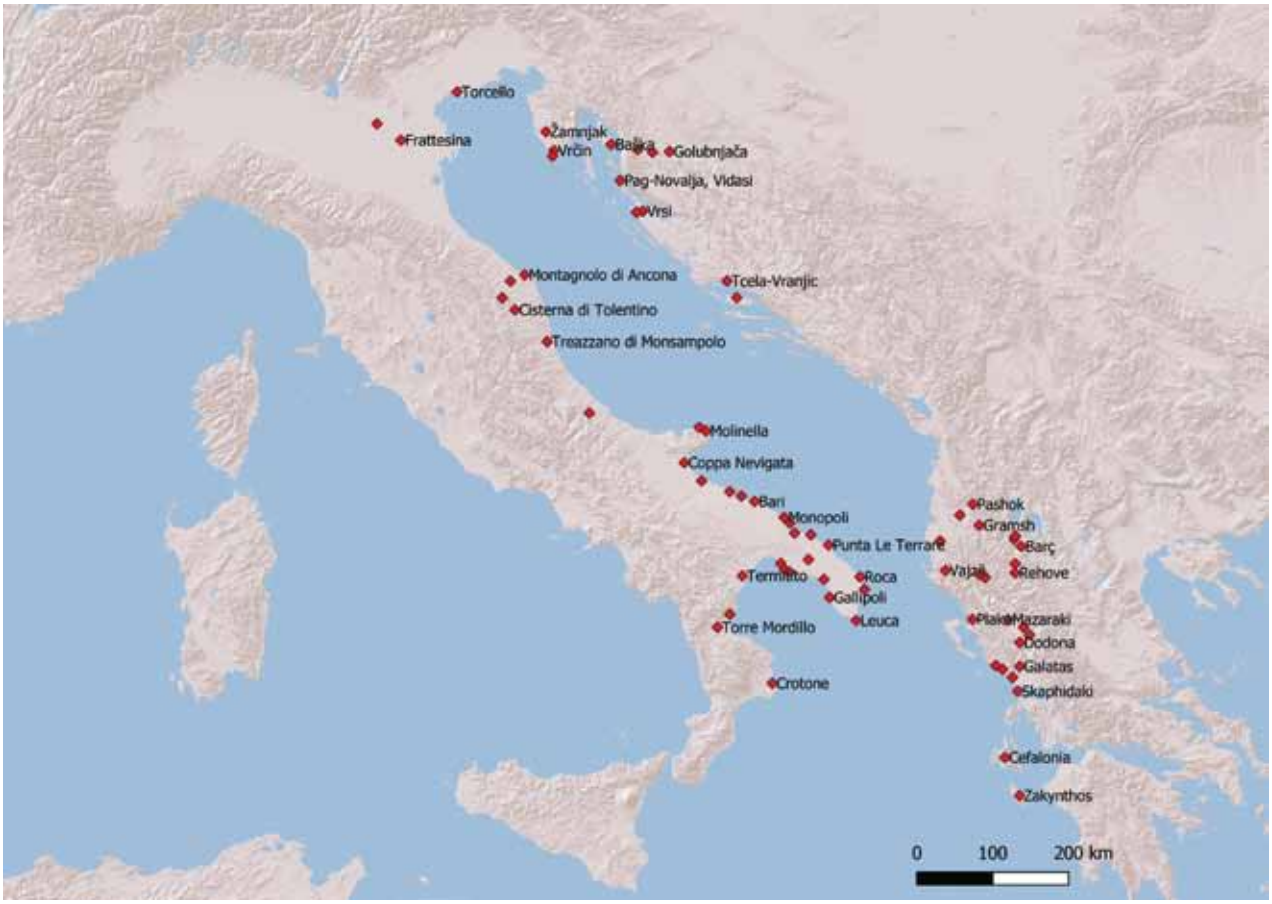

Fig. 1 — Ionian-Adriatic basin in the Bronze Age: sites with "trans-Adriatic connections" (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

6 —— The most recent synthesis work can be found in Mull 2022.

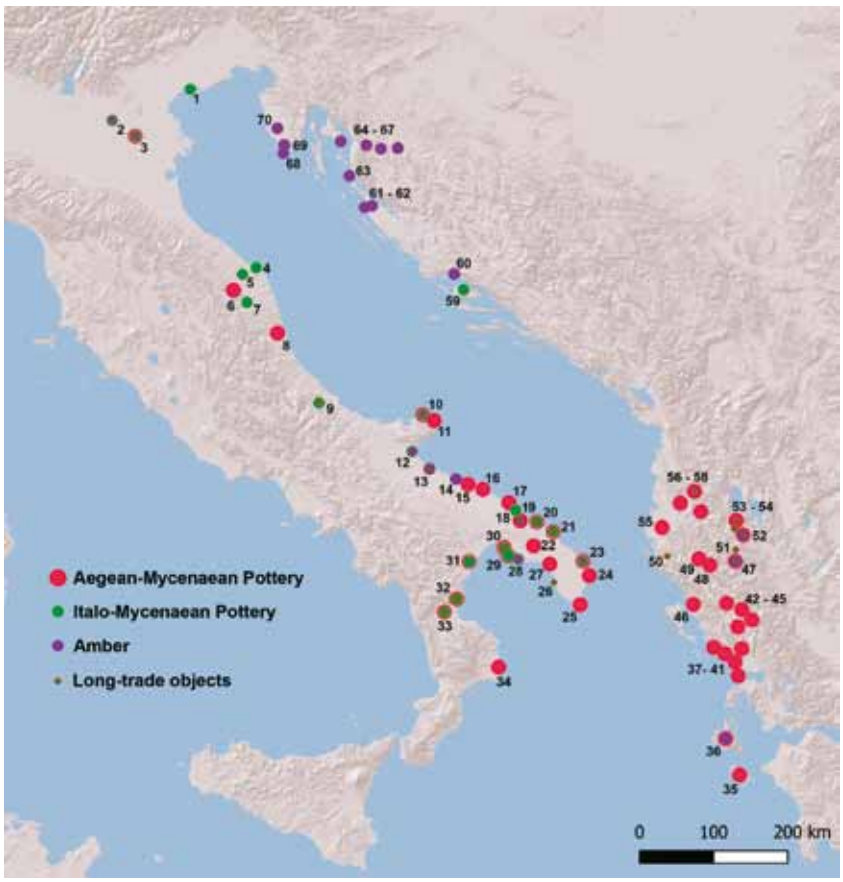

Fig. 2 — Ionian-Adriatic basin in the Bronze Age. Distribution of selected trade markers: 1. Torcello; 2. Fondo Paviani; 3. Frattesina; 4. Montagnolo di Ancona; 5. Jesi; 6. Moscosi di Cingoli; 7. Cisterna di Tolentino; 8. Treazzano di Monsampolo; 9. Archi, Fonte Raschi; 10. Grotta Manaccora; 11. Molinella; 12. Coppa Nevigata; 13. Trinitapoli; 14. Bisceglie; 15. Giovinazzo; 16. Bari; 17. Monopoli; 18. Egnazia; 19. Mass Chianchudda; 20. Torre Santa Sabina; 21. Punta Le Terrare; 22. S. Cosimo-Oria; 23. Roca; 24. Otranto; 25. Leuca; 26. Gallipoli; 27. Scalo di Furno/Porto Cesareo; 28. Torre Castelluccia; 29. Satyron; 30. Scoglio del Tonno; 31. Termitito; 32. Broglio di Trebisacce; 33. Torre Mordillo; 34. Crotone; 35. Zakynthos; 36. Cefalonia; 37. Skaphidaki; 38. Cassope; 39. Ephyra; 40. Galatas; 41. Kiperi; 42. Dodona; 43. Kastritsa; 44. Krya; 45. Mazaraki; 46. Plaka; 47. Rehove; 48. Piskove; 49. Kelcyre; 50. Vajzë; 51. Shtikë; 52. Barç; 53. Maliq; 54. Sovjan; 55. Margëlliç; 56. Gramsh; 57. Belsh; 58. Pashok; 59. Škrip; 60. Trcela-Vranjic; 61. Privlaka; 62. Vrsi; 63. Pag-Novalja, Vidasi; 64. Bezdanjača; 65. Golubnjača; 66. Kompolje; 67. Baška; 68. Krmedski Novi Grad; 69. Vrčin; 70. Žamnjak (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

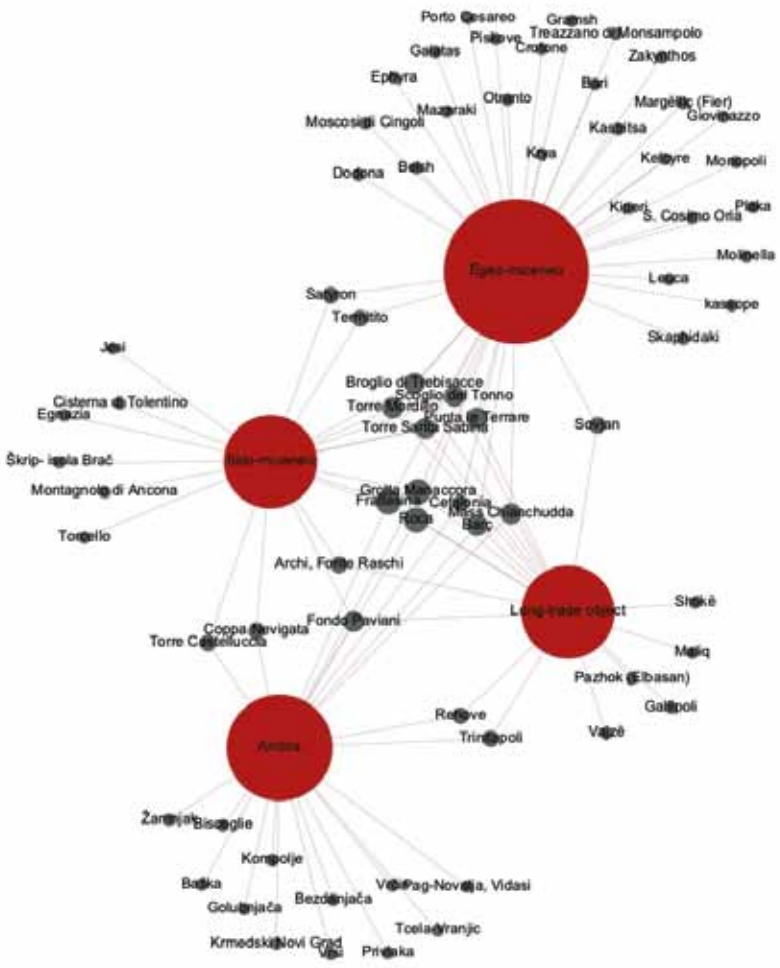

Fig. 3 — Bipartite network graph: trade markers and sites (made by: C. De Mitri)

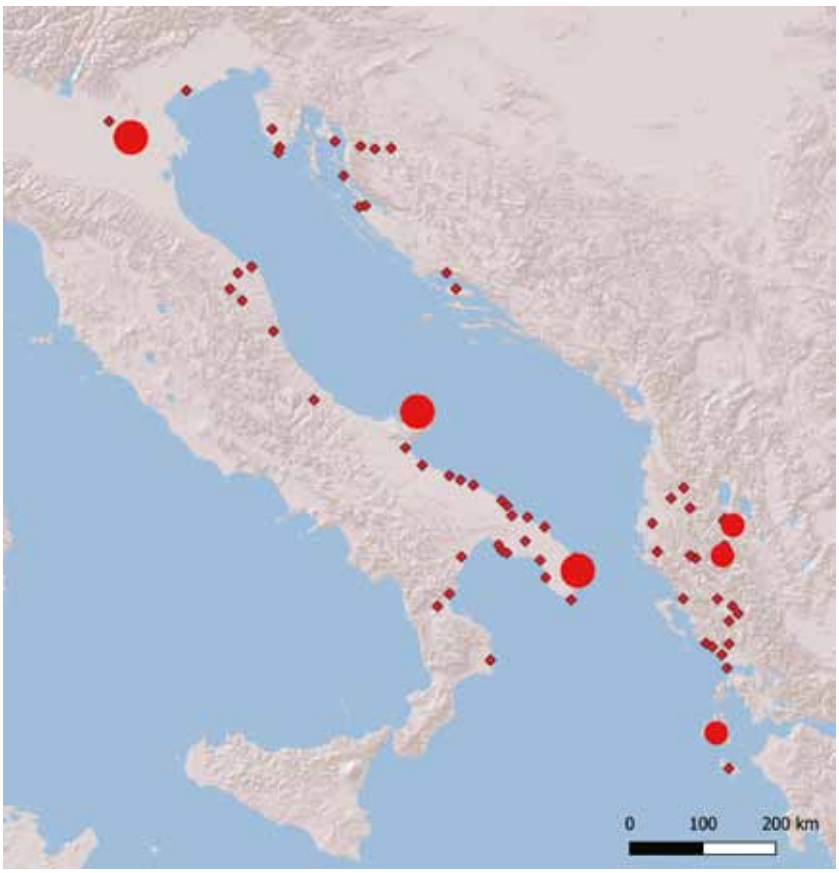

Fig. 4 — Ionian-Adriatic basin in the Bronze Age: more entangled sites (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

Within the broader process of exchange in the western Mediterranean, there are some exchange routes in the Adriatic basin that are more plausible than others. The Bridge of the Adriatic Islands – a series of islands comprising the Tremiti Islands of Italy and Croatia's southern Dalmatian archipelago islands of Palagruža, Sušac, Lastovo, Mljet, Vis, Hvar, Brač, and Šolta – is the main axis connecting the two shores of the Adriatic basin. Moreover, thanks to this axis, there is a connection between the central-northern and the southern Adriatic, the latter being closely connected to the Ionian Sea through the Strait of Otranto.

However, there also seems to be a connection that does not concern maritime distribution. In fact, in inland Albania, in the region of Lake Ohrid, there are reported settlements where trade markers have been found (Fig. 5).

In the Bronze Age, Ionian-Aegean peoples act as catalysts of new networks, but indigenous peoples are not passive elements. In fact, they interact with sea peoples and also with each other, with a reciprocity of material and experiential exchanges, that is, knowledge and skills that are transformed into productive competences leading to the production of goods that could be exported (the case of Italo-Mycenaean pottery). Therefore, the Ionian-Adriatic basin is not only a 'corridor' linked to the amber route and/or the only passage of goods from north to south and vice versa, but also a functional intermediate laboratory for the economic system between the places of origin of raw materials and the main places of their consumption.

IRON AGE. THE STRAIT OF OTRANTO: AN AREA OF OSMOSIS BETWEEN THE ADRIATIC AND THE MEDITERRANEAN

In the summer of 2019, an early archaic shipwreck was discovered in the waters of the Strait of Otranto about 22 miles from the Salento coast; its cargo included about two hundred forty ceramic artefacts of Corinthian origin, dated to the late 8th and the early 7th century BC. The first recovered and restored materials were presented: three Corinthian amphorae of type A containing olive stones, four hydriai, three trilobate oinochoai, an impasto jug, and a fragmentary pithos containing about thirty six perfectly stacked skyphoi (Davidde Petriaggi 2023).

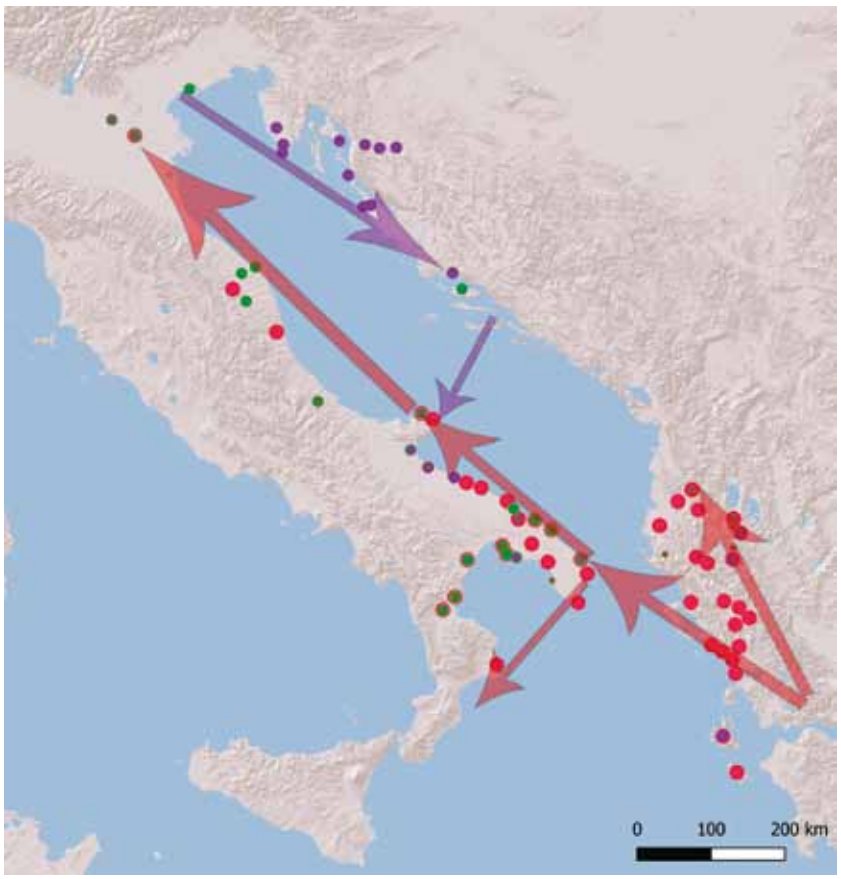

Fig. 5 — Ionian-Adriatic basin in the Bronze Age: direction of trade and connections (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

The place of discovery and the type of cargo seem to indicate the existence of a direct route between Corinth and the Salentine peninsula along the Ionian islands and northern Epirus, reaching the western coast of the Strait of Otranto without touching the coasts of Illyria (Fig. 6). Here, in fact, as also documented by the absence of Corinthian ceramic material from this period, the Greek presence is ascertained only at the end of the 7th century, with the extension of Corinthian hegemony to the area and the foundation of colonies. The state of affairs on the Salentine peninsula, on the other hand, is different: commercial exchange between indigenous populations and the Greek-Corinthian world had already begun in the 8th century BC – a situation common to other areas of the Ionian arc and Sicily.[7]

Throughout the Iron Age and the Archaic/Classical period, the 'golden age of the apoikiai', profound changes occurred in the Ionian-Adriatic area, such as the definition of settlements and greater cohesion in the anthropisation of the landscape and the segmentation of settlements; the intensification of trade relations that led to the creation of mixed settlement realities, the middle ground, in which the integration of Greek and indigenous populations was customary.

The Strait of Otranto seems to have acted both as a middle ground between the Greeks on the opposite sides of it, and as a crossing point for trade in the Ionian and the southern Adriatic.[8] Moreover, in later phases, the Strait of Otranto represented an osmotic area between the Mediterranean Sea and the Adriatic Sea, the latter defined as an autonomous geographical sector. Some settlements with plausible mixed realities, in which Greeks and natives coexisted, lead to this hypothesis.

The most emblematic cases are located in the Ionian Arc: Incoronata, Francavilla Marittima, and L'Amastuola; but the same state

7 — On the Corinthian presence see: D'Andria 1995; 2012; Castiglioni 2020.

8 — The concept of middle ground is explained in Malkin 2011 and Antonaccio 2013.

Fig. 6 — Strait of Otranto and Ionian Sea: probable route of the wreck and main sites with Corinthian ceramics from the late 8th and early 7th century BC (base map: World EEZ v11; computer processing: C. De Mitri)

of affairs is also likely on the western side of the Strait of Otranto, in Otranto itself, indicated as a gateway area, and in Brindisi, as the data from the Tor Pisana necropolis would seem to indicate.[9]

ARCHAIC AND CLASSICAL AGES: AN ENTANGLED NETWORK

The creation of the apoikiai further entangled these territories with the 'Greek' milieu; in particular, the Corinthian colonies on the east coast of the Ionian and lower Adriatic sectors became important trading hubs for the relations with the entire Adriatic basin.[10]

The distribution map of Corinthian pottery between the late 7th and the 6th century BC (Fig. 7) shows a strong connectivity in the lower Adriatic and in the Strait of Otranto. For the subsequent phase of the late 6th and the 5th century BC, the distribution map of Attic black gloss ware and black-figured vases (Fig. 8) shows how the market expanded and the first points of contact constituted the centres of irradiation of this pottery in the neighbouring areas.[11] The corpus of evidence is now enriched with new data from two sites where systematic excavations have been

9 —— For encounters between Greeks and natives in southern Italy see: Burgers 2004 and Yntema 2011. In particular for Incoronata: Denti 2022; for Francavilla Marittima: Attema 2012 and Guggisberg et al. 2018; for l'Amastuola: Burgers, Crielaard 2007; 2011; for Otranto: D'Andria 2012; for Tor Pisana, close to Brindisi: Lombardo 1994.

10 —— Studies on "Greek colonisation" in this area are extremely numerous; a useful and relevant first approach to the topic can be found in Pugliese Carratelli (ed.) 1996. I believe that the aim of present research is better served by some recent papers, such as: *Atti Taranto* 2012; Donnellan et al. 2016; Esposito et al. 2018; Lucas et al. (eds.) 2019.

11 —— For evidence of Corinthian and Attic pottery in the Archaic period in the Ionian-Adriatic basin see: Škiljan 1980: 51–52; Rendić-Miočević 1983; Ceka 1983; 1985; Dehl 1986; Kirigin 1986; Bereti 1988; *Atti Taranto* 1995; Semeraro 1997; Lenzi (ed.) 2003; Lombardo 2006; Gaucci 2011; Semeraro, Krigin 2017; Fiedler et al. 2018; Borzić 2022.

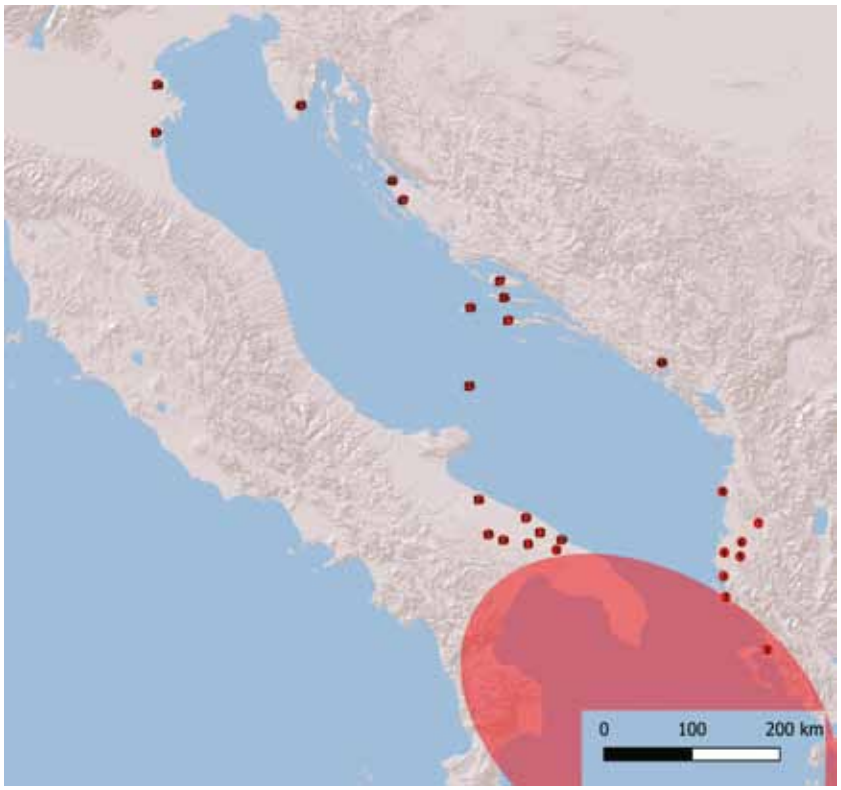

Fig. 7 — Ionian-Adriatic basin in the Archaic period: Distribution of Corinthian pottery (for the numbers see next figure). The red circle is the area with greater attestation (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

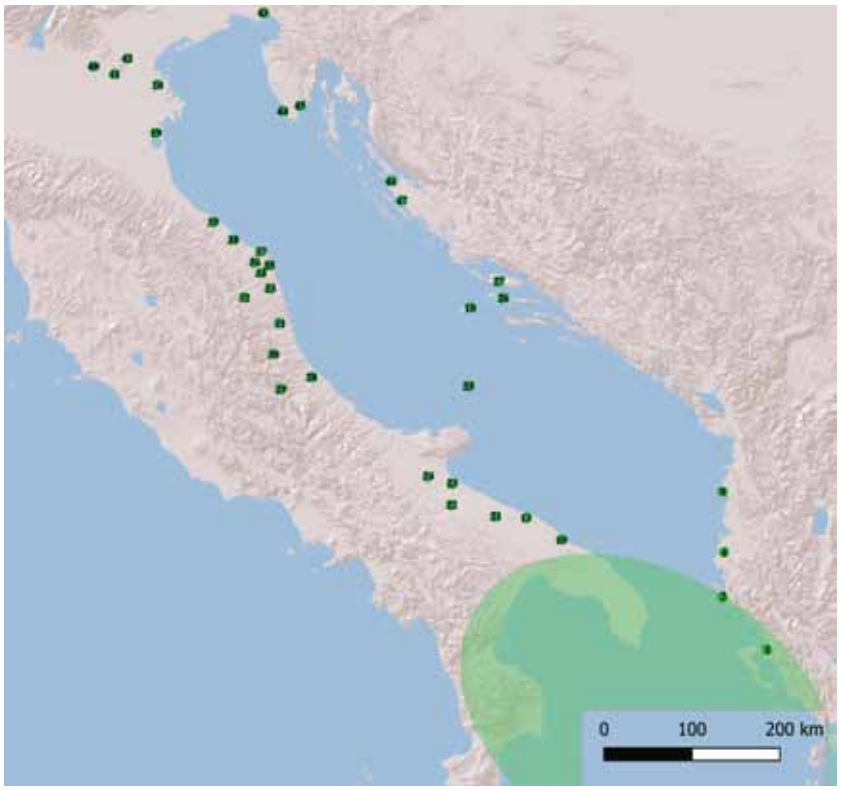

Fig. 8 — Ionian-Adriatic basin in the Archaic period: Distribution of Attic back-gloss ware and figured-vases. The green circle is the area with greater attestation: 1. Butrinto; 2. Orikos; 3. Triport; 4. Apollonia; 5. Margëlliç; 6. Babunjë; 7. Blesh; 8. Durazzo; 9. Castelluccio; 10. Egnazia; 11. Monte Sannace; 12. Castelluccio; 13. Bari/Ceglie; 14. Altamura; 15. Jazzo Fornasiello; 16. Trani; 17. Korčula; 18. Issa; 19. Spina; 20. Adria; 21. Ruvo; 22. Canosa; 23. Salapia; 24. Arpi; 25. Palagruža; 26. Hvar; 27. Brač; 28. Spoltore; 29. Montebello di Bertona; 30. Campovalano; 31. Ripatransone; 32. Tolentino; 33. Recanati; 34. Osimo; 35. Numana; 36. Camerano; 37. Ancona; 38. Montedoro; 29. Pesaro; 40. Forcello; 41. Este; 42. Padova; 43. Timavo; 44. Pula; 45. Nesactium; 46. Nin; 47. Zadar; 48. Rhizon (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

carried out in recent years: Orikos,[12] in southern Albania, and Muro Tenente,[13] a settlement on the Salento peninsula located between the most important centres of this area: Taranto and Brindisi (Fig. 9).

In Orikos, the oldest evidence dates back to the 6th century BC and is documented by Corinthian pottery, which probably arrived here due to the presence of nearby Corinthian colonies. A few intact specimens are preserved

Fig. 9 — Strait of Otranto. Location of the two sample sites: Muro Tenente and Orikos (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

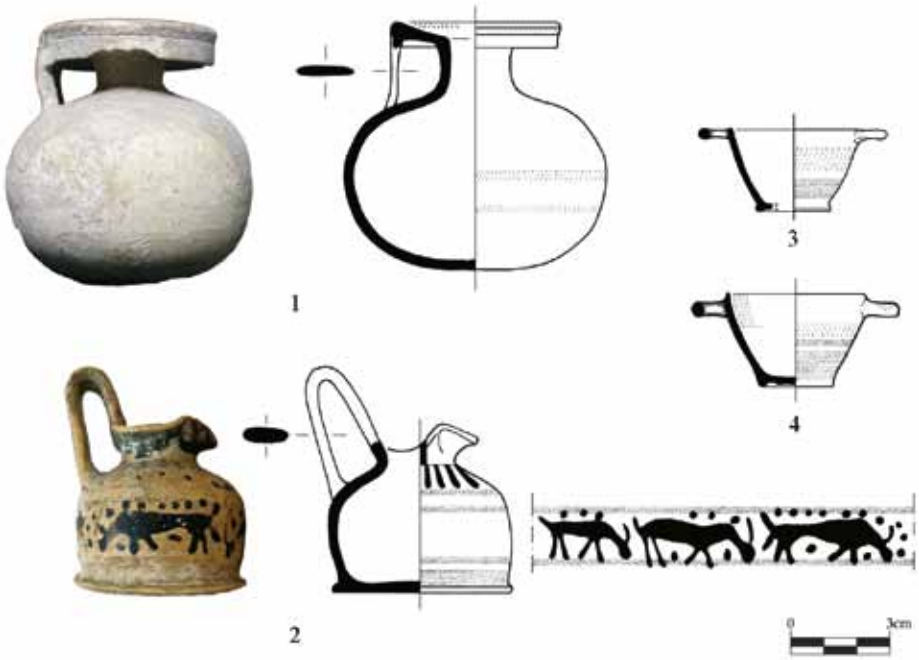

Fig. 10 — Corinthian pottery from Orikos (drawing and photo by: F. Malinconico)

12 —— The excavations at Orikos were carried out by a Swiss-Albanian mission. I would like to thank Gionata Consagra, Jean Terrier, Saimir Shpuza, Kriledjan Çipa, Barbara Gumil, Sara Loprieno, and all those who took part in various activities over the years. For reports on activities from 2016 to 2021 see: Terrier et al. 2017; 2018; 2019; 2020; 2021; 2022. For pottery found during the excavation: De Mitri, Loprieno 2018; 2019; 2020; 2021.

13 —— The excavations at Muro Tenente were carried out by the Vrije Universiteit of Amsterdam in collaboration with Soprintendenza Archeologica of Apulia. I would like to thank Ger-Jan Burgers, Matteo Merlino, Ilaria Ricci, and Christian Napolitano. For a preliminary presentation of the data see: De Mitri 2020. The publication of these data is in Burgers, Napolitano (eds.) in press.

at the Archaeological Institute of Tirana (Shpuza 2022: 555–557), including two Middle Corinthian vases: an aryballos (Fig. 10: 1) and a broad-bottomed oinochoe[14] (Fig. 10: 2). It is likely that these specimens came from a necropolis, the location of which has not been identified. Excavations have confirmed that the oldest traces of frequentation, with a few sherds of cups of various types and two miniature kotylai[15] (Fig. 10: 3–4), date back to the 6th century BC. Corinthian productions seem to have been replaced between the 6th and 5th centuries BC by Attic imports, mainly black-painted, but also figurative, as attested by finds from the excavation and materials from the Institute: a stemless cup (Fig. 11: 1) and a lekythos (Fig. 11: 2), close to the products of the workshop of the Painter of Megera.

The Archaic layers at Muro Tenente mostly contain local production; the less numerous imports are dominated by objects made in the colonies of Magna Graecia, such as the Ionic cups of type B2 (Fig. 12: 1–2), which would appear to be of Tarentine and Metapontine manufacture on the basis of macroscopic characteristics of the clay.[16] Ionian production is indicated by fragments of transport amphorae of the Corinthian A type (Fig. 12: 3) and a specimen of squat lekythos (Fig. 12: 4), maybe of 'Protocorinthianizing' fine wares.[17] Finally, two cup-skyphoi (Fig. 12: 5–6), one of them with black figures, can be attributed to an Attic workshop.[18]

The Adriatic basin becomes that sea of intimacy[19] in which the two shores are intertwined, and this situation will continue until the mid-4th century BC, as indicated by the pervasive occurrence of Attic red-figured vases (Fig. 13; Mannino, Roubis 2000; Giudice 2004; Mannino 2006), present at the Orikos excavations as well (Fig. 14).

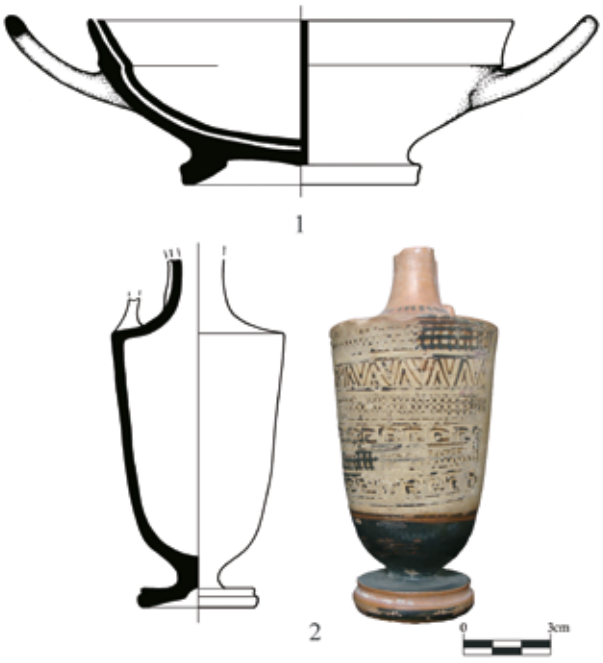

Fig. 11 — Archaic Attic pottery from Orikos (drawing and photo by: F. Malinconico)

HELLENISTIC AGE: THE WESTERN BORDER OF THE EASTERN MEDITERRANEAN[20]

The foreign policy undertaken by Rome in the Hellenistic age radically altered the social and economic structure of the Mediterranean, initiating a process that would culminate in the control of the territories bordering it. The various military and diplomatic actions initiated by Rome already from the end of the 4th and the beginning of the 3rd century BC constituted the prodromes of a process that would culminate in the control of the Ionian-Adriatic basin (Fig. 15). After the battle of *Sentinum*, Rome spread to the central Adriatic area of the peninsula; the progressive creation

14 —— I would like to thank the museum officials of the Institute of Archaeology in Tirana for reporting this object.

15 —— For miniature Corinthian conventionalizing kotylai, see Risser 2001: 68–71.

16 —— The presence of Ionic-type cups of Tarentine and Metapontine production at Muro Tenente is documented in excavations carried out in a funerary area (Semeraro 1997: 123–131). These cups are also compared with the material found in the sanctuary area of Santa Maria d'Agnano in the Ostuni hinterland (Coppola et al. 2008: 211–214).

17 —— The 'Protocorinthianizing' fine wares had already been recognised at Valesio: Yntema 2001: 107–108.

18 —— For an analysis of Attic black-figure vases in Messapia, see Semeraro 1997: 377–388. There are numerous attestations from the Tarentine necropolises; for some related specimens see D'Amicis et al. 1997: 288, nos. 81.11, 17.

19 —— For this definition see Auriemma (ed.) 2017.

20 —— The analysis of the Late Hellenistic period, both historical and ceramic studies, is now in De Mitri 2023b.

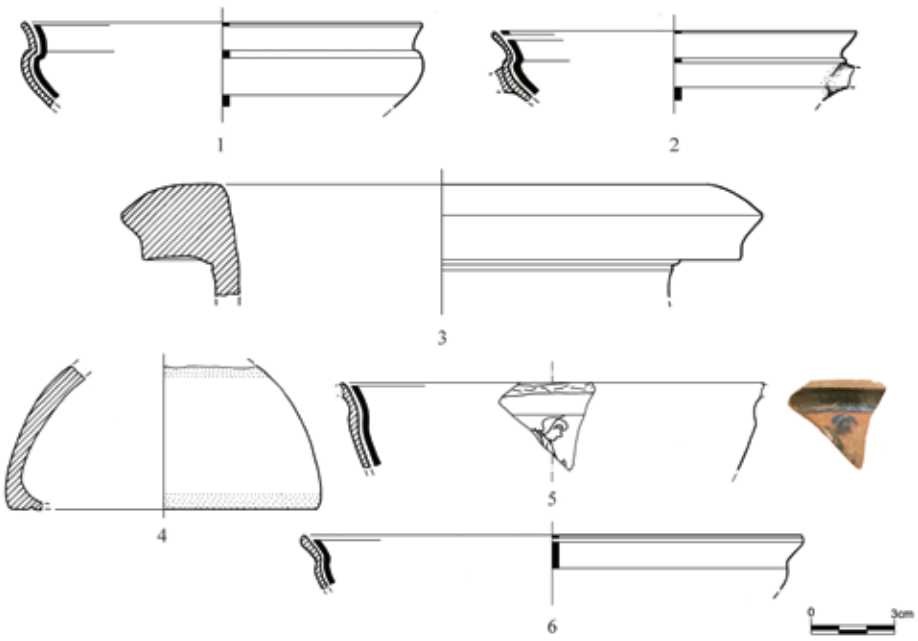

Fig. 12 — Archaic pottery from Muro Tenente (drawing and photo by: F. Malinconico)

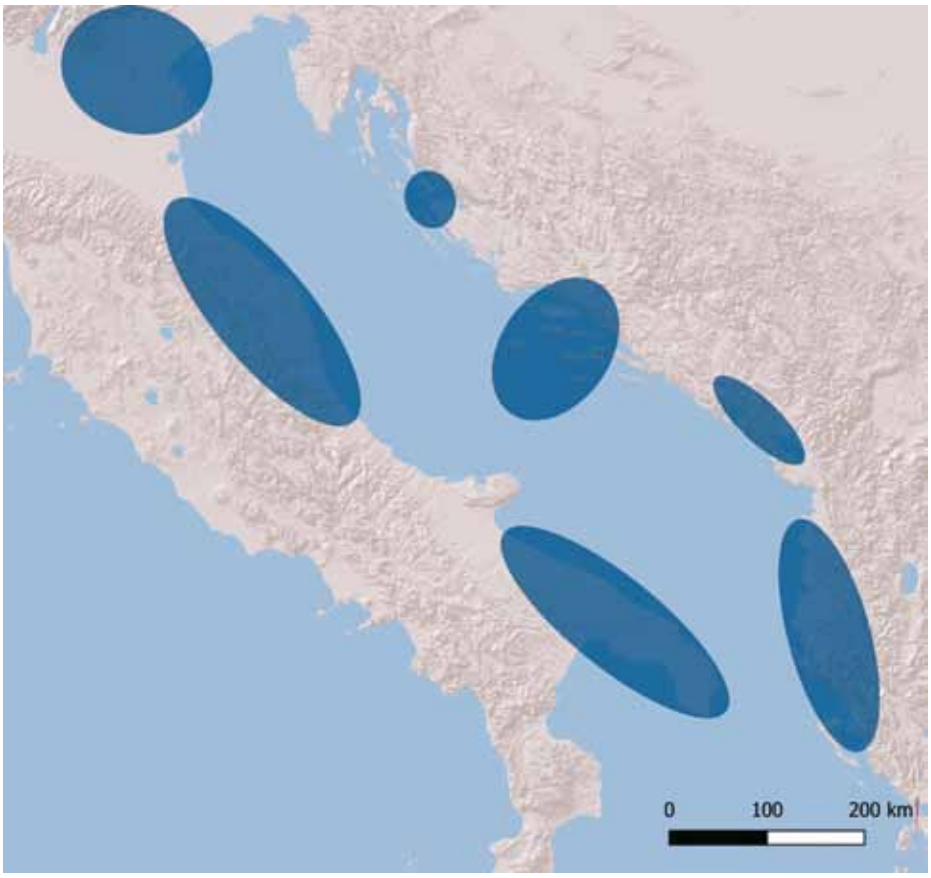

Fig. 13 — Ionian-Adriatic basin in the Classical period: areas of distribution of Attic red-figured vases (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

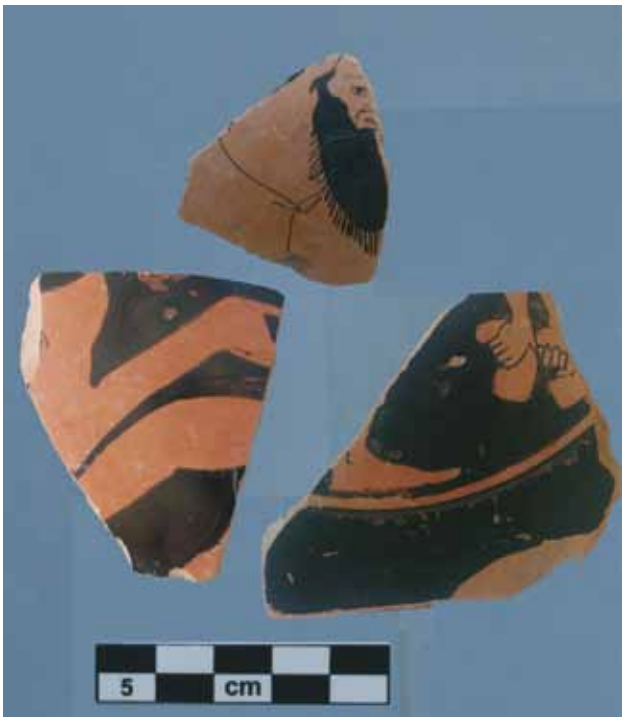

Fig. 14 — Attic red-figured vases from Orikos (photo by: C. De Mitri)

of a series of colonies along the Adriatic coast, veritable outposts and key points of a political and territorial reorganisation, ensured the control of the entire Ionian-Adriatic basin. The consolidation of control on both shores came about as a result of military campaigns, such as the Second Illyrian War, the military exploits in Aetolia led by Marcus Fulvius Nobilior, and those in Epirus, led by Lucius Aemilius Paullus, which, together with the taking of Corinth in 146 BC, sanctioned the passage of the entire Ionian-Adriatic area into the Roman orbit (Fig. 16). The study of particular ceramics selected as indicators in understanding the networks of the Ionian-Adriatic basin in this period allows us to highlight the strong link between this area and the eastern Aegean.

On the basis of the main features of the coastal landscape and marine currents, the Adriatic-Ionian basin can be subdivided into two sectors (Fig. 17).

The first sector comprises the northern Adriatic, historically known as Caput Adriae, contiguous to the middle Adriatic, which extends to the Adriatic Islands Bridge, a demarcation line from the Gargano peninsula to the Tremiti islands and the southern Croatian archipelago. South-east of this line we find the second sector, the south Adriatic, which stretches to the final sector, the

Fig. 15 — Visualisation of early Roman interventions in the Adriatic area (base map: World EEZ v11; computer processing: C. De Mitri)

Fig. 16 — Visualisation of Roman interventions in the Ionian-Adriatic basin (base map: World EEZ v11; computer processing: C. De Mitri)

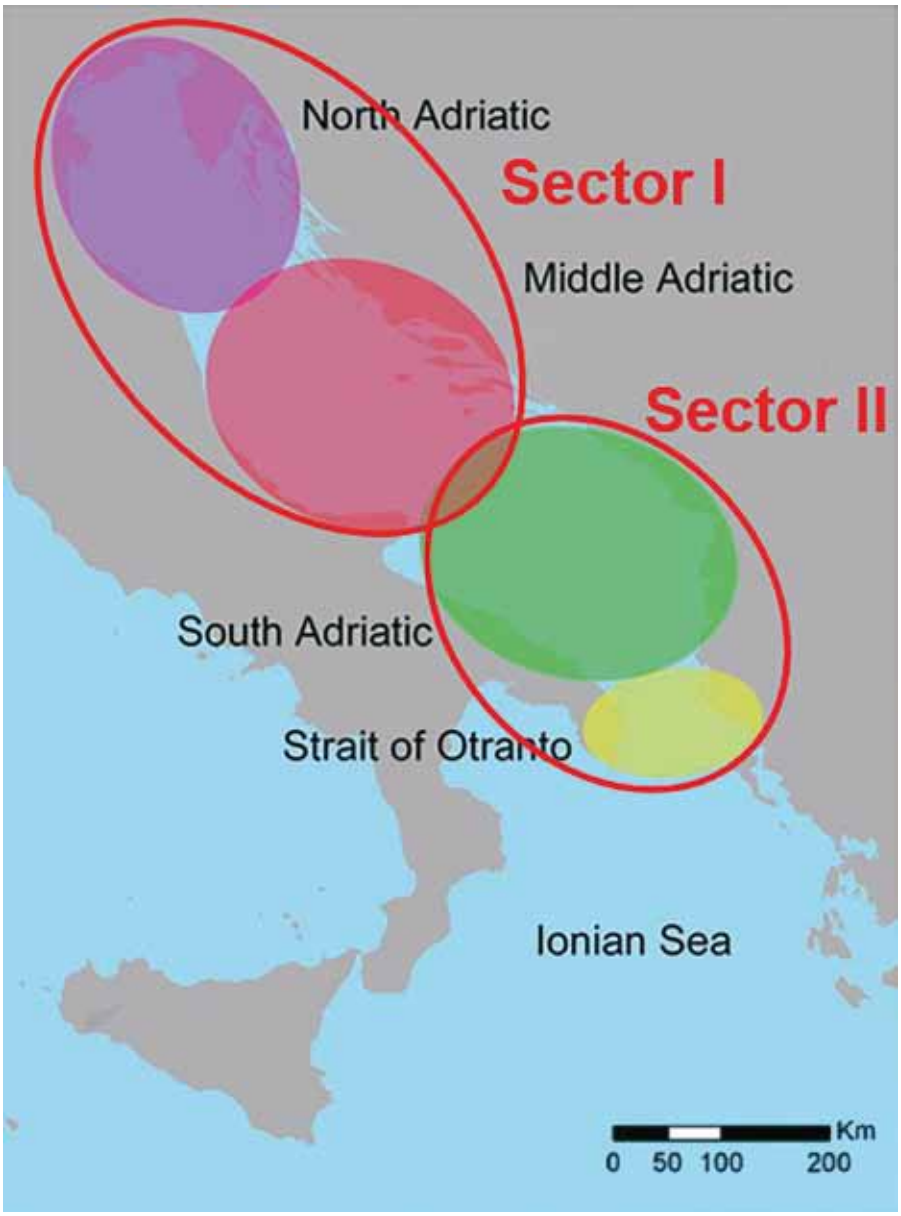

Fig. 17 — Ionian-Adriatic basin: subdivision into sectors (base map: World EEZ v11; computer processing: C. De Mitri)

Strait of Otranto. The Strait of Otranto is bounded to the north by a line running from Punta Palascia to the Karaburun peninsula in the Gulf of Valona, and to the south it is limited by the Ionian Sea.

In these two sectors it is possible to identify objects that serve as indicators of a trade network; in the first sector these objects are: Phoenician amphoriskoi, thorn kantharoi made in Dalmatian-Illyrian workshops, Dalmatian Hellenistic relief pottery, mastoid cups in black gloss ware, medallion cups, micro-Asiatic Hellenistic relief pottery, Aegean amphorae.

In the second sector, the indicators are: eastern-Aegean and micro-Asiatic pottery, Apulian pottery, Illyrian pottery, Greek-Epirot pottery, Phoenician pottery. The bipartite network graph of the selected artefacts in both sectors (Fig. 18–19) allows us to propose the articulation of the main trade routes (Fig. 20–21).

The bipartite network graph (Fig. 22) of the selected artefacts grouped by production area for the entire Ionian-Adriatic basin, and extended to the entire Ionian Sea, highlights some of the most connected sites. The cartographic (Fig. 23) transposition of the affiliation network, concerning the sites with the largest association of materials, visualises a possible network of trade routes that has its epicentre and hub on the island of Crete (Fig. 24).

ROMAN AND LATE ROMAN PERIODS: THE SHIFT OF ROUTES FROM THE EASTERN TO THE WESTERN SHORE. GLOBAL *VS* LOCAL[21]

For the imperial period, up to the beginning of the 4th century AD, the analysis of the most representative contexts and the use of certain materials shows strong homogeneity and homogenisation of the entire Ionian-Adriatic basin.

The selected pottery classes (Fig. 25) were produced within the area encompassing southern Illyria, Epirus, and western Greece, and they circulated in the Adriatic-Ionian basin. Those classes are: red slip ware, Illyrian cooking ware, and Corinth relief ware. Also, there is a kind of fine ware that was produced in the western Mediterranean and reached the eastern

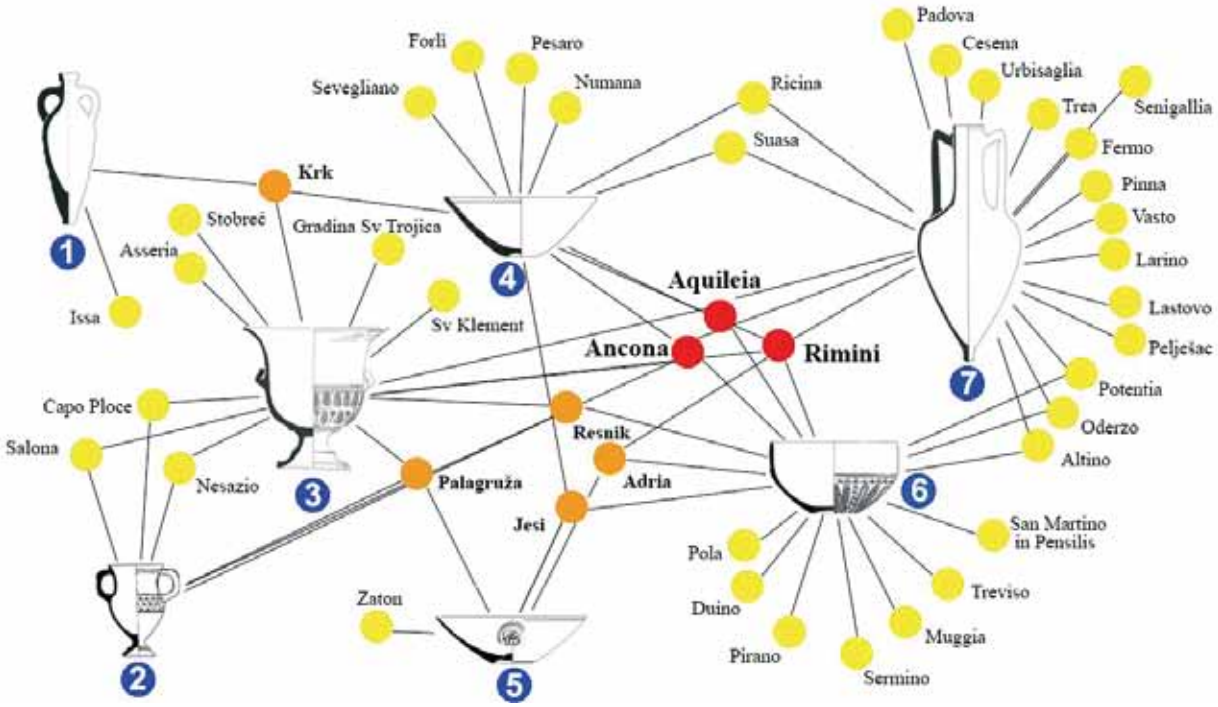

Fig. 18 — Bipartite graph based on specific ceramic objects in Sector I of the Ionian-Adriatic basin: 1. Phoenician amphorisko; 2. Thorn kantharos by a Dalmatian workshop; 3. Dalmatian Hellenistic relief pottery; 4. Mastoid cup; 5. Medallion bowls; 6. Micro-Asiatic Hellenistic relief pottery; 7. Rodian amphorae (made by: C. De Mitri)

21 —— The detailed analysis of data for this period can be found in De Mitri 2023a, with all bibliographical references.

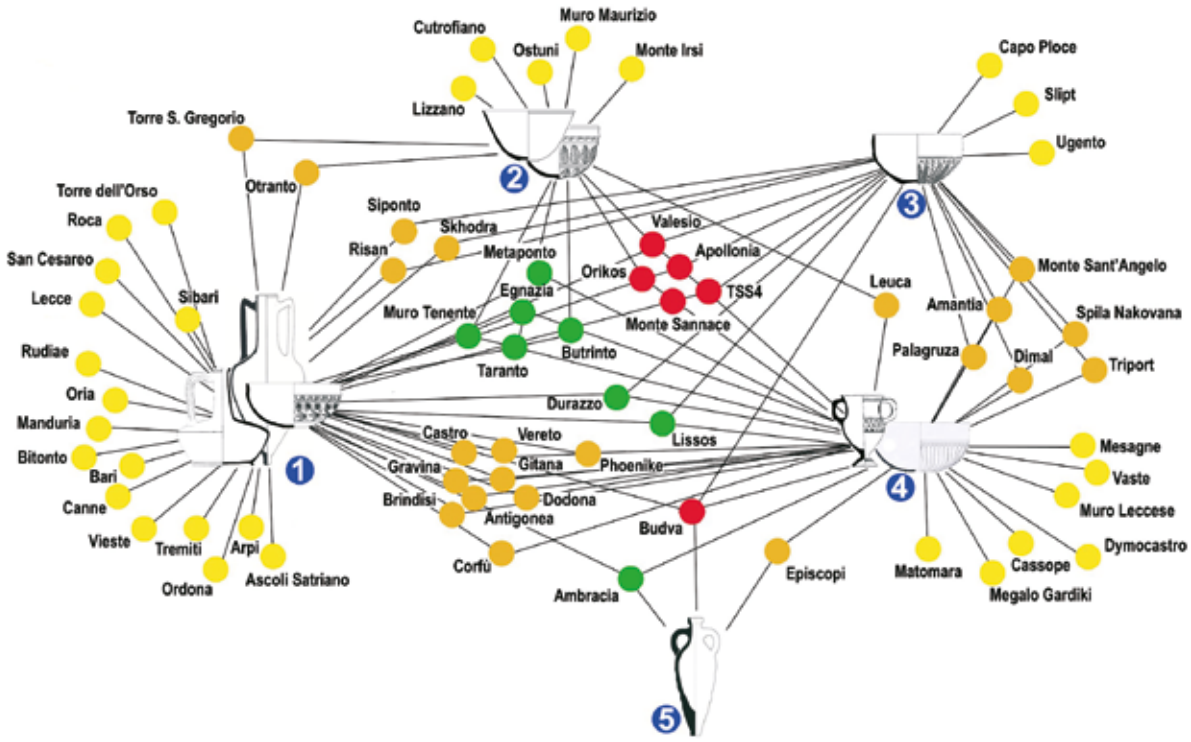

Fig. 19 — Bipartite graph based on the provenance of specific groups of ceramic objects in Sector II of the Ionian-Adriatic basin: 1. Pottery by Aegean and micro-Asiatic workshops; 2. Pottery by Apulian workshops; 3. Pottery by Illyrian workshops; 4. Pottery by Greek-Epirotan workshops; 5. Pottery by Phoenician workshops (made by: C. De Mitri)

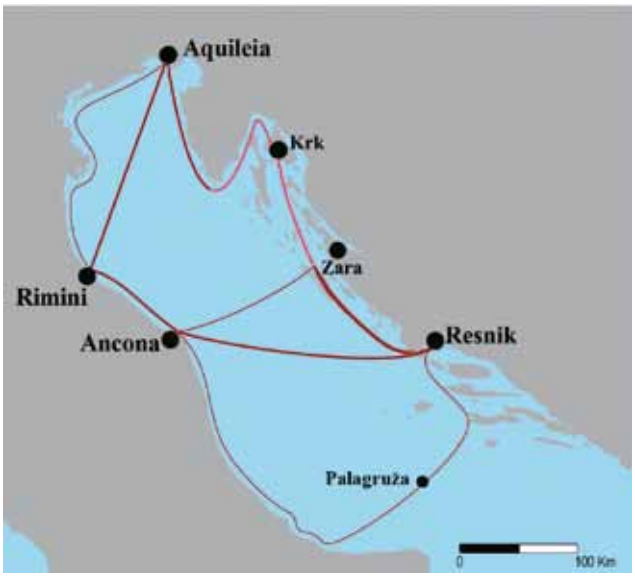

Fig. 20 — Main maritime connecting routes in the north-central Adriatic basin (Sector I) in the Late Hellenistic period (base map: World EEZ v11; computer processing: C. De Mitri)

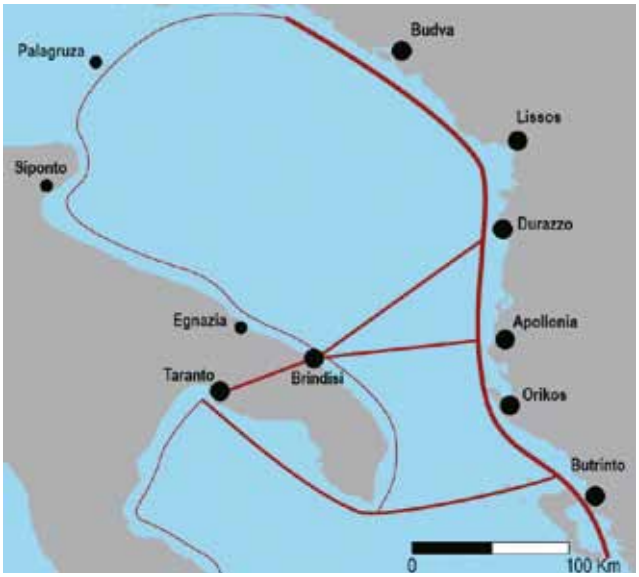

Fig. 21 — Main maritime connecting routes in the south Adriatic and the Strait of Otranto (Sector II) in the Late Hellenistic period (base map: World EEZ v11; computer processing: C. De Mitri)

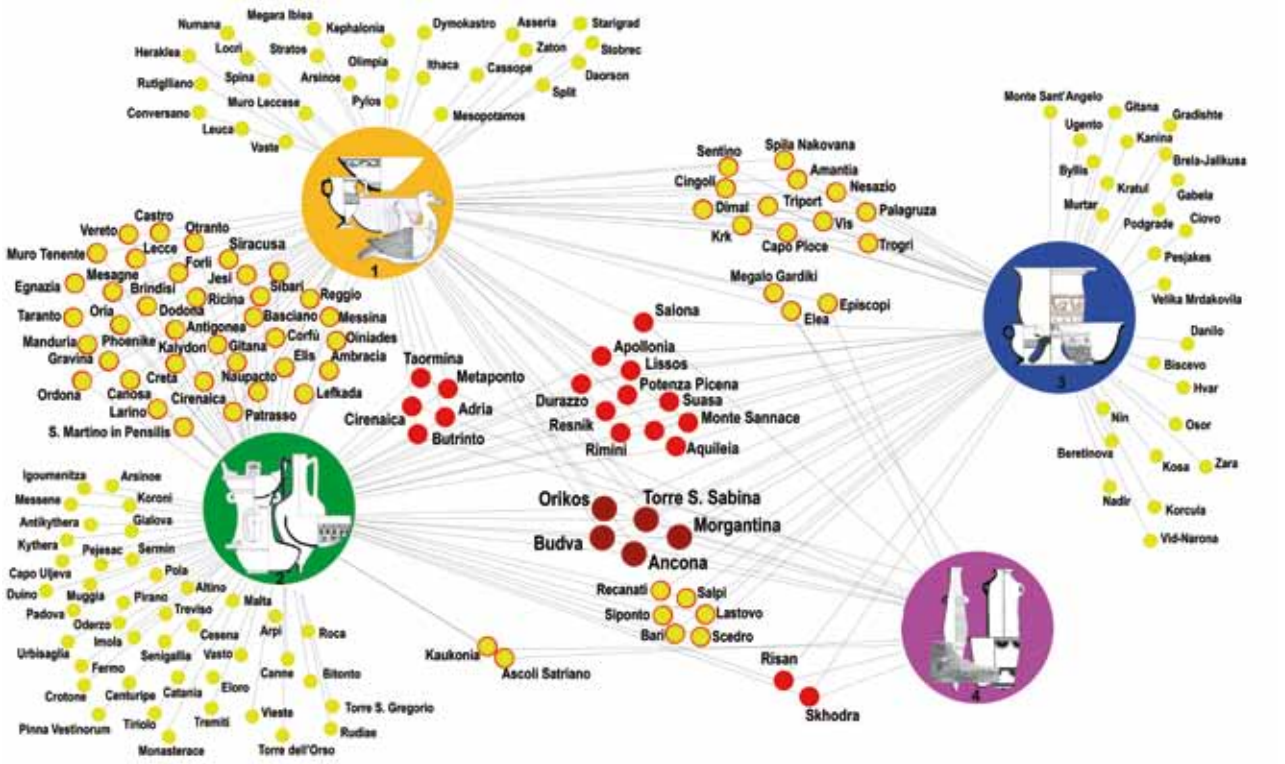

Fig. 22 — Bipartite graph based on the provenance of specific groups of ceramic objects in the Ionian-Adriatic basin: 1. Greek-Epirotan production; 2. Eastern-Aegean production; Dalmatian-Illyrian production; 4. Punic, or "Punicianizing", production (made by: C. De Mitri)

Fig. 23 — Cartographic transposition of the affiliate networks in the Ionian-Adriatic basin and the Ionian Sea (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

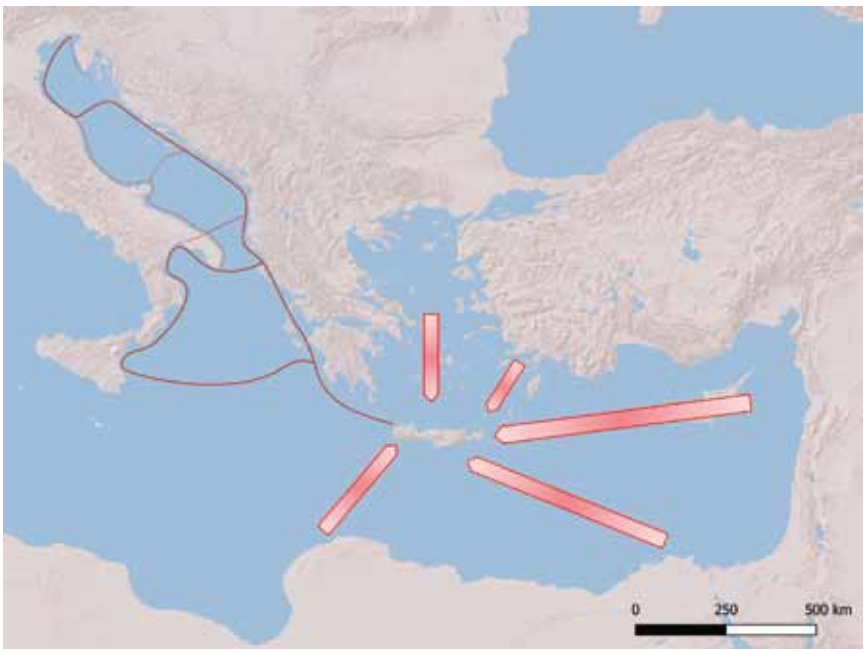

Fig. 24 — Main maritime routes in the Ionian-Adriatic basin and the connection, via Crete, to the Aegean and eastern trade circuits (base map: ESRI Shaded Relief; computer processing: C. De Mitri)

markets via the Adriatic corridor: Gaulish slip ware. Finally, eastern slip ware B is the eastern Mediterranean class most widespread in the west.

The bipartite network graph (Fig. 26), with links between objects belonging to selected classes of late imperial pottery and the places where it was found, shows the group of settlements in which all five classes are present: Apollonia, Aquileia, Brindisi, Corinth, Durrës, Olympia, and Otranto. It is followed by other groups, with the number of classes progressively decreasing. The group with four classes is composed by Athens, Butrint, Gortina, Ordona, and Trieste. The group with three classes includes Doclea, Egnatia, Nicopolis, Orikos, Salapia, San Foca, Valesio, Knossos, Phoinike, Aenona, Antioch, Argos, Benghazi, Ephesus, Patras, Rimini, Suasa, and Zadar. Finally, there are groups with two or one of the selected ceramic classes.

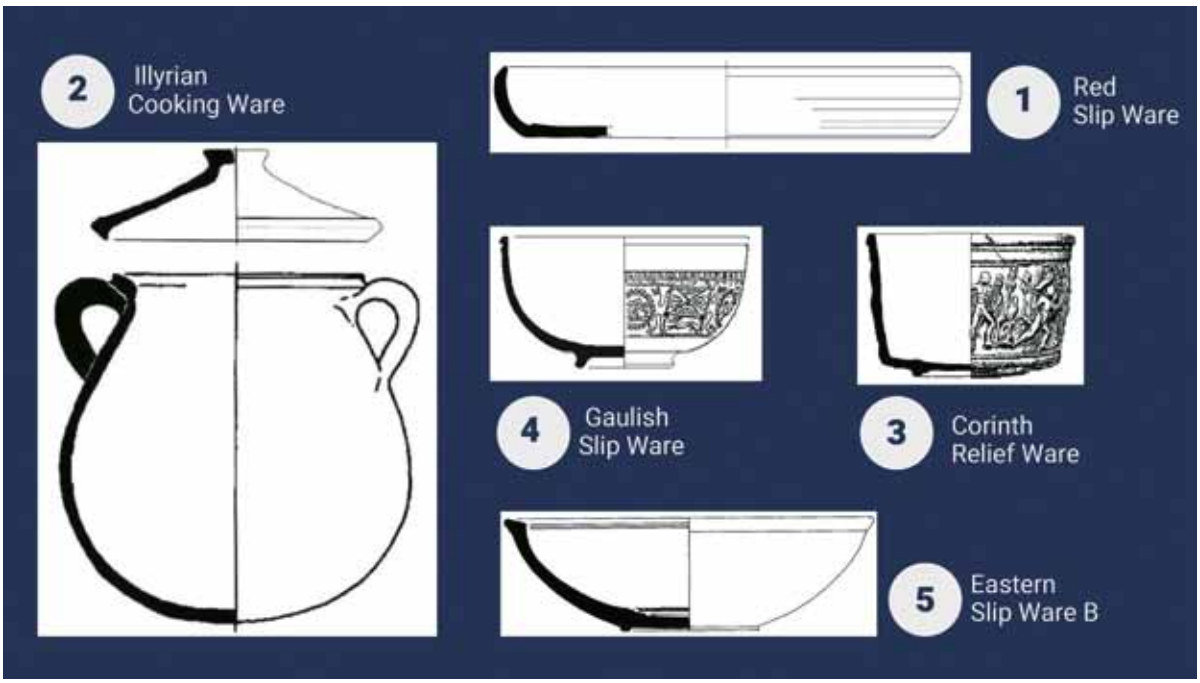

Fig. 25 — Selected pottery classes of the Late Imperial Age (3rd–4th century AD): 1. Red slip ware; 2. Illyrian cooking ware; 3. Corinth relief ware; 4. Gaulish slip ware; 5. Eastern slip ware B (drawing by: F. Malinconico)

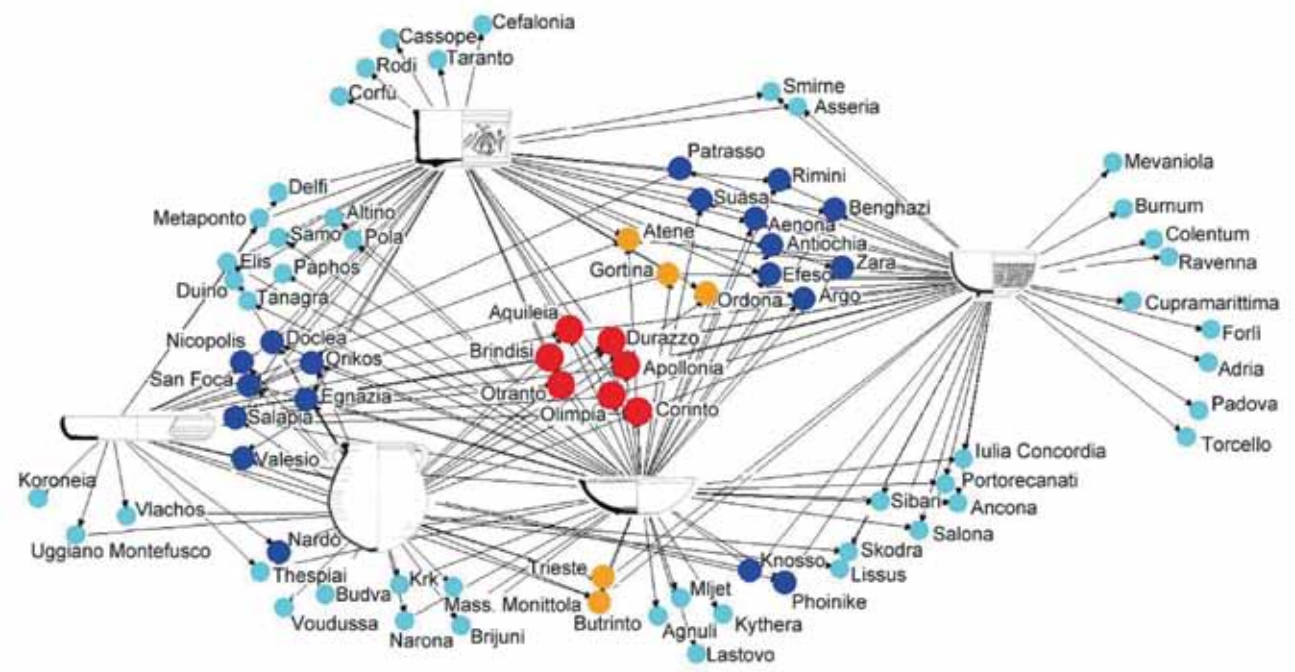

Fig. 26 — Bipartite network graph: selected pottery classes and sites linked (3rd–4th century AD) (made by: C. De Mitri)

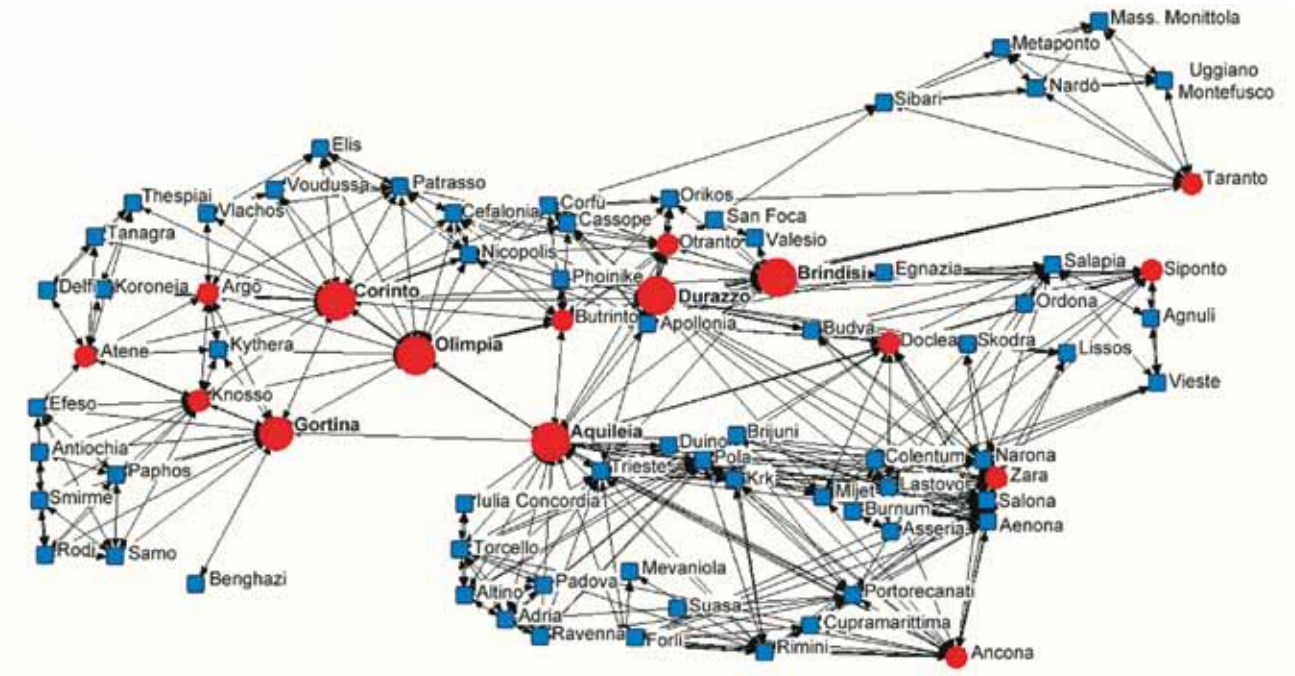

Fig. 27 — Graph with the affiliation network between sites where the selected pottery classes have been found. (3rd–4th century AD) (made by: C. De Mitri)

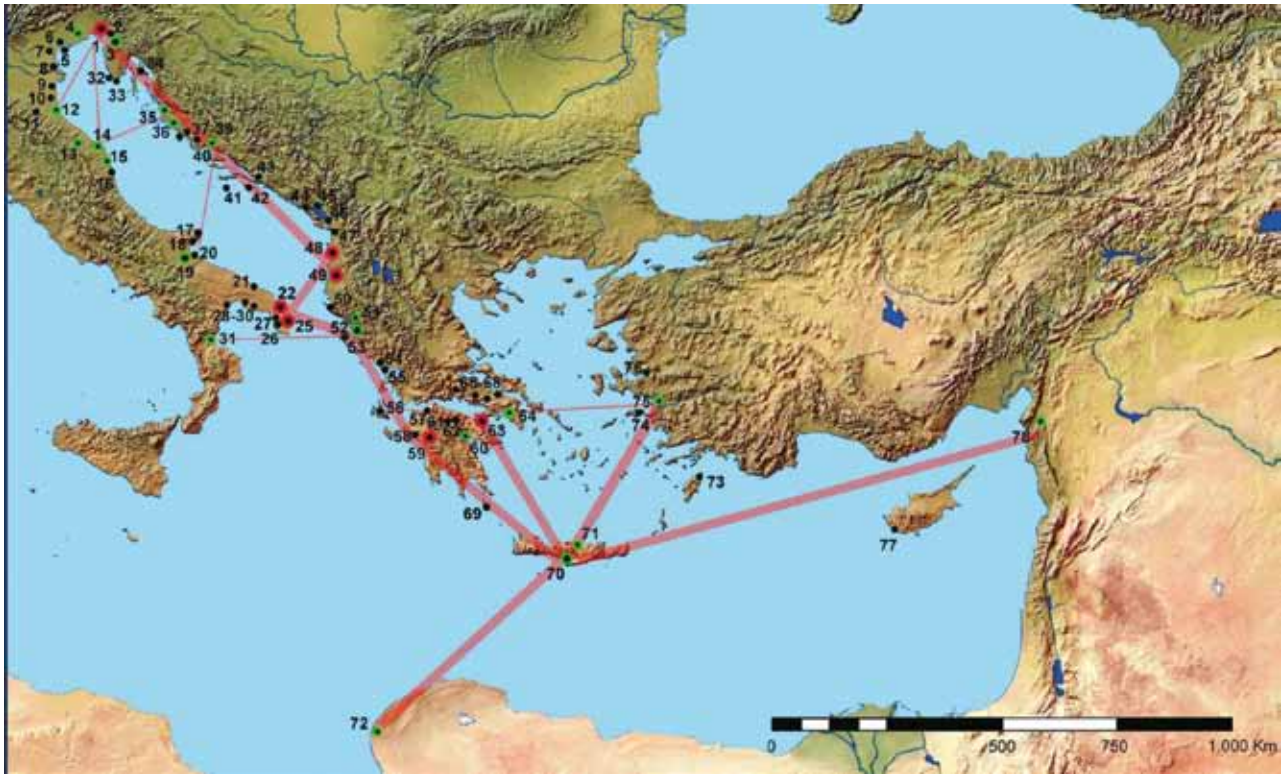

Fig. 28 — Cartographic transposition of the affiliate networks between sites where the selected pottery classes have been found (3rd–4th century AD): 1. Aquileia; 2. Duino; 3. Trieste; 4. Iulia Concordia; 5. Torcello; 6. Altino; 7. Padova; 8. Adria; 9. Ravenna; 10. Forlì; 11. Mevaniola; 12. Rimini; 13. Suasa; 14. Ancona; 15. Portorecanati; 16. Cupramarittima; 17. Vieste; 18. Agnuli; 19. Siponto; 20. Salapia; 21. Egnazia; 22. Brindisi; 23. Valesio; 24. San Foca; 25. Otranto; 26. Masseria Monittola; 27. Nardò; 28. Uggiano Montefusco; 29. Taranto; 30. Metaponto; 31. Sibari; 32. Brijuni; 33. Pula; 34. Krk; 35. Aenona; 36. Zadar; 37. Colentum; 38. Burnum; 39. Asseria; 40. Salona; 41. Lastovo; 42. Mljet; 43. Narona; 44. Budva; 45. Doclea; 46. Skodra; 47. Lissos; 48. Durrës; 49. Apollonia; 50. Orikos; 51. Phoinike; 52. Butrint; 53. Corfu; 54. Cassope; 55. Nicopolis; 56. Cephalonia; 57. Patras; 58. Elis; 59. Olympia; 60. Argos; 61. Voudussa; 62. Vlachos; 63. Corinth; 64. Athens; 65. Delphi; 66. Koroneia; 67. Thespiai; 68. Tanagra; 69. Kythera; 70. Gortina; 71. Knossos; 72. Benghazi; 73. Rhodes; 74. Ephesus; 75. Samos; 76. Smyrna; 77. Paphos; 78. Antioch (base map: Google map; computer processing: C. De Mitri)

The affiliation network graph (Fig. 27) with the same data highlights the existence of a hierarchy where some locations are more important than others, linking various sectors in both the Adriatic-Ionian and the Ionian-Aegean basins: in the Aegean, Gortina and Corinth are the main hubs; in the south-Ionian sector, Olympia; further up, in the Strait of Otranto, Brindisi and Butrint; in the Adriatic, Aquileia is the terminal of these routes. Other intermediate centres follow: Knossos, Athens, and Argos in the Aegean; in the Ionian-Adriatic basin, these are Taranto, Otranto, Siponto, Doclea, Zadar, and Ancona. A transposition of the above graph onto a geographical map (Fig. 28) reveals the existence of a connection from the central Aegean, again with the island of Crete, leading around the Peloponnese to the Ionian Sea, and from there into the Adriatic-Ionian basin. Along this route, in the southern Adriatic sector, the ports of Brindisi on the one hand and Durrës on the other controlled the route of the Adriatic corridor ending at Aquileia, most plausibly along the eastern shoreline. These ceramic indicators, plus the data from Cretan amphorae (Gallimore 2023), confirm the continuity of the connection route that passed through the Strait of Cerigotto.

Recent studies about Late Antiquity have highlighted the widespread dissemination of imported goods throughout the Adriatic-Ionian basin, although the picture was quantitatively highly uneven. By analysing fine table ware from selected sites, it was possible to provide an advanced reading of the dissemination of such goods from the 5th to the early 7th centuries AD throughout the Ionian-Adriatic area. The ceramic classes taken into consideration were African

red slip ware, mainly ARSW D and C4/5, and eastern slip ware, consisting almost exclusively of Phocean red slip ware (PRSW), and sporadically of Cypriot red slip ware, as well as other fine wares present only in certain geographical sectors. The latter include Greek red slip ware, produced in various Greek cities, attested in Corinth and Nicopolis; Late Italian slip ware, mainly from the western sector of the north Adriatic, i.e. from the area between Ancona and the Venice Lagoon, where glazed ware is also documented, believed to be of local production. Lastly, throughout the Italian peninsula, from Abruzzo to Apulia, various products falling within the category of local red painted ware are widespread. From the analysis of the percentages of fine tableware in selected contexts (Fig. 29), it is clear for the Italian shore that one can distinguish coastal sites, more closely associated with imported ceramics, from those further inland, where local production prevails; coastal areas on both sides of the southern Adriatic and the Strait of Otranto appear more receptive. Compared to the previous phase, the centre of gravity of trade seems to have shifted southwards, mainly to the advantage of the Salento peninsula, in particular Otranto and its hinterland, which seems to dialogue more with the Greek-Albanian shore. In order to understand the role played by the Salento peninsula in trade in Late Antiquity, fine pottery and transport containers cannot be used as the main markers, precisely because of their ubiquity and geographically

Fig. 29 — Percentage occurrence of selected fine ware classes at specific sites in the Ionian-Adriatic and Ionian-Aegean basins in Late Antiquity (base map: World EEZ v11; computer processing: C. De Mitri)

widespread circulation; attention must therefore be focused on another functional group: ceramics for everyday use. Following the household ware produced in the Ionian-Aegean (Late Roman micaceous Aegean ware) and Levantine areas (casserole with an inverted rim and a concave upper face, maybe produced on the coast of

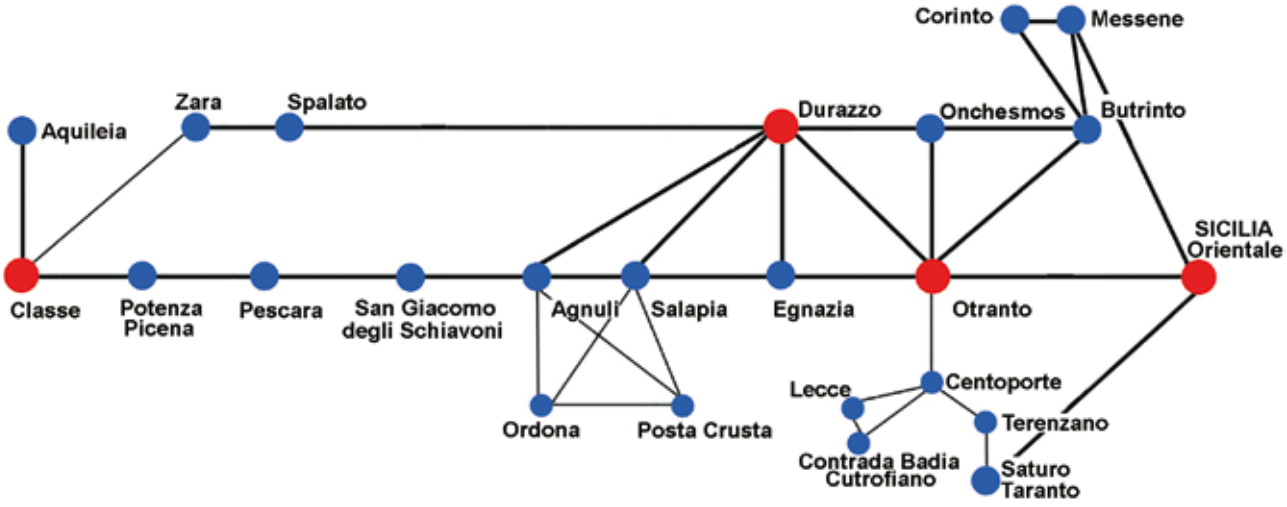

Fig. 30 — Topological map of affiliation network between sites in Late Antiquity (made by: C. De Mitri)

Asia Minor, and pots produced by Workshop X in western Galilee), it is possible to recognise a strong trading connection between the Salento peninsula and the Greek-Albanian area on the opposite shore, and a topological map helps to visualize this link (Fig. 30).

This connection is manifested not only in the circulation of goods such as daily use ceramics and LRA2 amphorae, but also in the acquisition of a formal repertoire, similar to what is observed throughout the Byzantine period (8th–9th centuries AD) with the "Mitello type" cooking pots and the globular amphorae (Leo Imperiale 2018).

In addition to this trading network, which includes the eastern coast of Sicily, there remains the link with the eastern Mediterranean world, perhaps in continuity with the "Cretan route" of the imperial period (Fig. 31). However, the circulation of eastern Mediterranean goods seems more dynamic: on the one hand, intersecting with the Ionian-western circuit that has its epicentre on the east coast of Sicily (Hodges 2012: 231),[22] and on the other hand, recurring in settlements located on the Italian shore of the middle Adriatic sector, and reaching the Balkan shore and the north Adriatic, but by secondary redistribution routes.

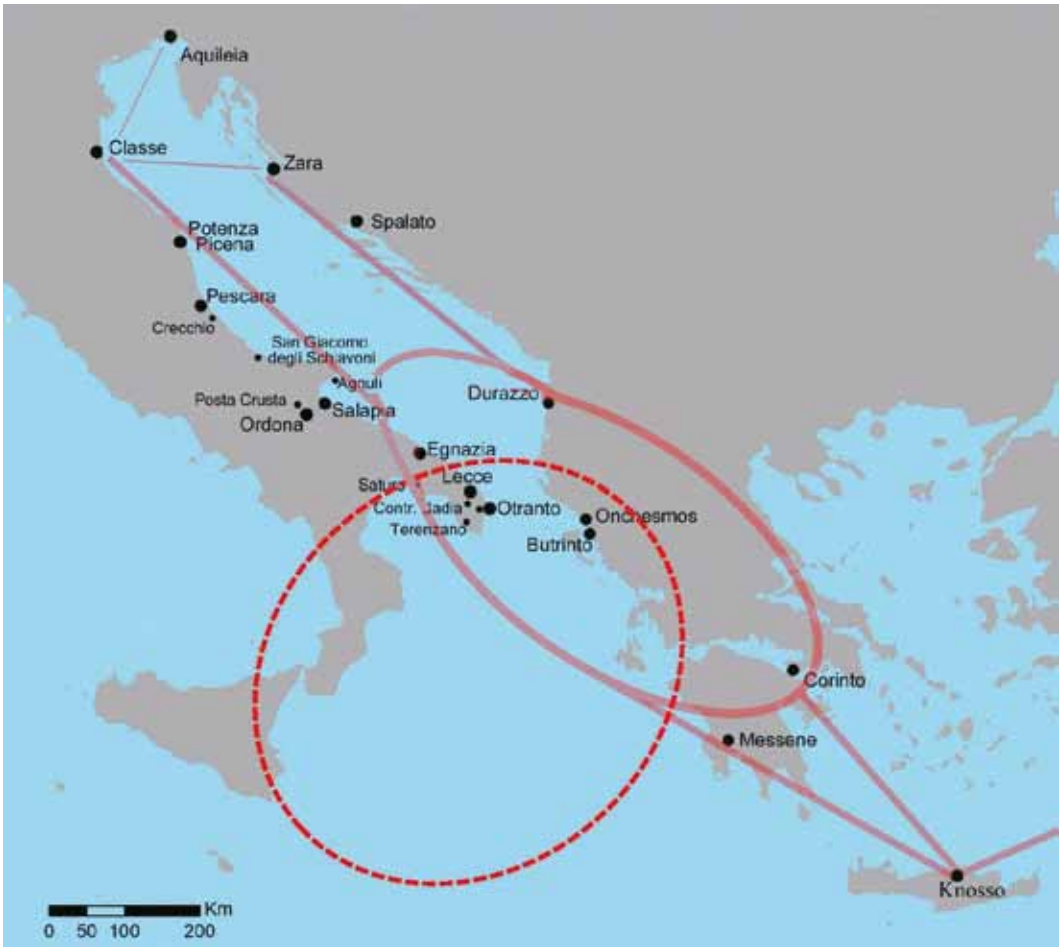

Fig. 31 — Based-map transposition of the affiliate networks in the Ionian-Adriatic and Ionian-Aegean basins in Late Antiquity (base map: World EEZ v11; computer processing: C. De Mitri)

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22 —— The possibility of a Sicilian network connected with the central-northern Adriatic through the Strait of Otranto was suggested in Negrelli 2021: 263–265.

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Martina Blečić Kavur

THINKING GLOBALLY AND ACTING LOCALLY: ADRIATIC HELLENISTIC SITULAE

Original scientific paper

Each work of art is a cultural and historical phenomenon whose values depend on its original context and on how it is perceived. However, the essence of art as an aesthetic object was not so much in its aesthetic autonomy as in its communicative function. Almost all vessels, especially metal ones, represented in luxurious drinking sets, had this status of an aesthetic narrative. As for situlae, they reflected the cognitive ripeness and sublimation of society as an accepted emblem of representation, but also the status of particular aristocracies. The area of the eastern Adriatic proudly presents examples of the so-called Hellenistic situlae. Stamnoid and bell-shaped types are particularly attractive, usually interpreted as *insignia*, valuable diplomatic gifts, or as *keimelia*. Besides, they were seen as prestigious status symbols that showed a complex and coherent relationship between the culture of drinking as a social dimension, adopted foreign objects/protocols, and toreutic art itself; also, they expressed different eschatological practices. Finally, in the 4th and 3rd centuries BCE, they were regarded as global symbols in local communities and the Adriatic basin, thus playing an important role in connecting different parts of the world.

KEY WORDS: **EASTERN ADRIATIC; BELL-SHAPED SITULAE; STAMNOID SITULAE; TOREUTICS; GLOBAL, LOCAL, GLOCAL**

INTRODUCTION

The period of the second half of the 4th and the early 3rd century BCE on the east coast of the Adriatic is characterised by the Late Iron Age and heterogeneous cultural communities. Indirectly brought onto the historic stage of the ancient world by writers of antiquity, they were ethnically identified as Histri, Apsirtides, Liburni, Delmatae, Daorsi, Illyrians, and many others. Life on the Adriatic was not typical either of the Iron Age traditions of continental Europe or of the classical Hellenistic notions of cultural penetration in the Mediterranean. As zones of intense cultural contact in the horizontal and vertical process of connection, these two "concepts" met in very specific ways and represented each other as the respective social community aspired, in a way that was selective and at the same time fusing. In the preserved material culture and the social practices associated with it, the interpenetration of global and local elements is reflected above all in the process of hybridisation or rather glocalisation. In this sense, we can trace ever stronger tendencies of the Hellenistic culture and art of that era, tendencies that were adopted and adapted by the regional communities on the Adriatic and manifested themselves in the acquisition of certain customs and the use of certain imported objects. In addition to luxurious jewellery, symbolic objects also had a special place, mostly

associated with lavish table sets made of fine ceramic or metal tableware, and often both.

When it came to metal utensils, bronze situlae, the so-called expensive bronzes, which were of truly exceptional value at the time, took pride of place. As a convenient substitute for gold and silver, they were affordable and were placed in graves reserved exclusively for the wealthy. The presence of such situlae in the Adriatic basin thus indicates (a) cultural areas/communities that could provide such vessels for themselves, (b) wealthier individuals who knew not only their economic value, but also their artistic and ideological (symbolic) value, and at the same time (c) a certain role in the representation of the status of the heterogeneous Adriatic elites in the international and transmission linking of different hierarchical positions. This implies the participation of local elites in the circulation of numerous cultural events of the period, presupposing trade and the redistribution of luxury and prestige goods, but also implying much more complex dimensions of social relations. The paper therefore discusses Hellenistic situlae as valuable symbolic objects, their findspots along the Adriat-

Fig. 1 – Distribution map of Hellenistic bell-shaped (●) and stamnoid (▲) situlae on the eastern Adriatic coast and the immediate hinterland (base map: StepMap; made by: M. Blečić Kavur)

ic, their concentration and mutual relationship, and their placement in a wider, supra-regional context through the prism of glocalisation, with the aim of reinterpreting their phenomenological significance in specific local communities.

SITULAE

In more than 150 years of research on the eastern Adriatic coast and its hinterland, several bronze bell-shaped and stamnoid situlae, or their functionally or decoratively recognisable elements, have been collected. Other situlae, such as the *kalathos* or the cylindrical type, are currently completely absent. Regarding the duration of research interventions, as well as the capacity of the areas under investigation, be they settlements or necropolises, it has been noted that they are infrequent finds, present in particular situations, which have been discussed in scientific discourse, especially recently (Blečić Kavur, Kavur 2010; Veseli 2012; Mihovilić 2017; Blečić Kavur 2012; 2015; 2021; 2022a; 2022b). Both types are typologically and stylistically classified and iconographically defined, so even though the archaeological record is often non-existent or unclear, they can be chronologically positioned and toreutically (artistically and technically) determined using the comparative method (Blečić Kavur 2021; 2022a; 2022b).

As both types of situlae were used in the extensive area from the Dnieper basin to the Iberian Peninsula, their popularity from the middle of the 4th and during the early 3rd century BCE was truly exceptional. These interesting and expensive vessels were made of precious metals, mostly bronze, which applies to all East Adriatic examples without exception. The largest concentration of their sites can be found in the Balkan and Apennine peninsulas, i.e. in the cultural-historical areas of Thrace, Macedonia, and Etruria. Consequently, the Eastern Adriatic area also had to participate in this wider circulation of ideas, concepts, and even the objects themselves (Fig. 3; 7). The more specific circumstances of their discoveries, especially the rich graves and burial sites, demonstrate the aristocracy of the time tended towards transregional connections, as they desired or needed to be part of the network of the many changes that the Hellenistic international spirit was fostering (Blečić Kavur 2020; 2021; 2022a; 2022b).

At the current state of research, we know of only 8 sites where situlae were discovered: Nesactium, Rijeka, and Novi Vinodolski in the northern Adriatic, Karin and Ošanići (Daorson) in the

Site	Bell-shaped situlae	Stamnoid situlae
Vizače (Nesactium)	5	2
Rijeka	3	
Novi Vinodolski		1
Karin		1
Ošanići (Daorson)	1	
Budva (Bouthoe)	3	6
Shkodër	1	
Pojan (Apollonia)	5	
	18	10
		28

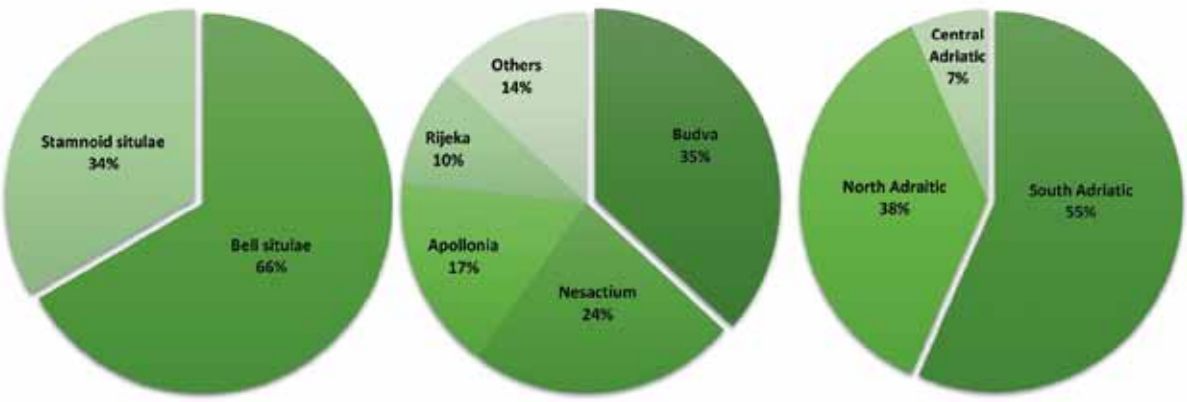

Fig. 2 – Representation of situlae and their fragments at different sites, in relation to their types and regional distribution (made by: M. Blečić Kavur)

central Adriatic, and Budva (Bouthoe), Shkodër, and Apollonia in the southern Adriatic (Fig. 1). The 28 analysed specimens are dominated by different classes: variants of bell-shaped situlae in 18 cases (64%) and stamnoid situlae or their fragments in 10 cases (36%) (Fig. 2).

However, only 5 examples – 4 bell-shaped situlae and only 1 stamnoid situla – have been completely preserved. Moreover, the largest concentration of these vases comes from the necropolis of Budva, with 9 items, accounting for 35% of all the "Adriatic" situlae. They are followed by Nesactium, with fragments of 7 (or more?) situlae, Apollonia with 5, and Rijeka with 3, while other sites have only single finds. More than half of the situlae are conspicuously located in the southern Adriatic (55%), they are slightly less numerous in the northern Adriatic (38%), and both types are only represented in the necropolises of Nesactium and Budva (Fig. 1; 2). We know of only two sites from the central Adriatic: Karin in northern Dalmatia and Ošanići in the nearby hinterland of Herzegovina. The uniqueness and value of their situlae lies in the fact that they are fully preserved and belong to different typological groups.

Bell-shaped situlae are represented with more variants and expressions in terms of quantity and variety, which is also a general tendency in their spatial distribution. Stamnoid situlae are a less frequent and more eclectic type of ware, mostly represented by single finds outside the so-called autochthonous regions, and more uniform in terms of aesthetic and artistic expression. The necropolis of Budva has a greater concentration of this type of situlae, with 6 certain specimens, standing out from the rest of the Adriatic sample and ranking among the richest sites of such vessels in the wider area of ancient Central Macedonia or Etruria (Blečić Kavur 2021: 225–226; 2022b: 103–104).

Most of the situlae were discovered in graves or necropolises of prominent settlements and their local aristocracy, which also applies to the Eastern Adriatic pattern. It is certainly interesting that only two situlae are associated with settlement contexts: the situla from Karin was probably unearthed in the settlement itself (Kirigin 2008: 4, 38, 42–43, cat. no. 18; Blečić Kavur 2021: Fig. 3: 1; 2022b: 103, Fig. 1) and the situla from Ošanići was part of a hoard from within the same settlement (Marić 1979: 54–55, Pl. 19; 20; 2000: 43–44; Blečić Kavur 2022a: 138–139, Fig. 9: 2).

Bell-shaped situlae

The production of bell-shaped situlae began in the Archaic period, particularly in the workshops of Attic and Boeotian toreuts of the 6th and 5th centuries BCE. It first experienced its greatest popularity in the "Hellenistic world", in Etruria and the neighbouring areas in the second half of the 4th and the early 3rd centuries BCE. Numerous variants of these situlae emerged in a large area, over a long period of time, and under various influences (Pfrommer 1983; Sheffton 1985; 1994; Rolley 2002: 45–50; Barr-Sharrar 2000; 2008; Treister 2001; Touloumtzidou 2011: 348–354; Zimi 2011: 53–57; Sideris 2021a; Blečić Kavur 2022a), although only a fairly limited selection has been investigated on the eastern Adriatic coast and its hinterland (Fig. 1; 3). Situlae with floral decorations under the attachment (palmettes and ivy leaves) and less frequent anthropomorphic attachments (maenads and masks) have been recorded in this area, while situlae with larger figural decorations and/or more complex scenes on the vessel body have not yet been documented.

Situlae with a palmette under the attachments are certainly luxurious items, along with those with figural decoration, that were discovered in important tombs of the time, especially in Thrace and Macedonia. We are considering a sample of 4 situlae, 23% of which are found exclusively in the southern Adriatic region. Only one situla from further south, in Apollonia (Veseli 2012: 215, Pl. I: 4), which is attributed to the Vratsa group, has palmettes below the decorative band (Sideris 2021a: 29, 45; cf. Barr-Sharrar 2000: 285; Zimi 2011: 54). There are four situlae: two fragments from Budva (Popović 1969: cat. no. 59; 1994: 123, cat. no. 85, 86) and two situlae from Apollonia (Veseli 2012: Pl. I: 5, II: 6) (Fig. 4: 1) belonging to the most numerous group, the Waldalgesheim group, where the palmette is part of the decorative band together with S-volutes and other decorations. However, the present examples belong to different subgroups within the larger entity (cf. Barr-Sharrar 2000; Sideris 2021a: 26–28). The two fragments from Budva, with a very similar design of the palmette consisting of 10 rounded leaves, most probably represent fragments of a single situla from the group of standard designed tendrils, which includes only 4 situlae so far (Sideris 2021a: 44). The restoration work on the fragments, however, discovered a silver inlay in the heart of the palmette, which drops like a spear in the centre and is thus in balance with the central

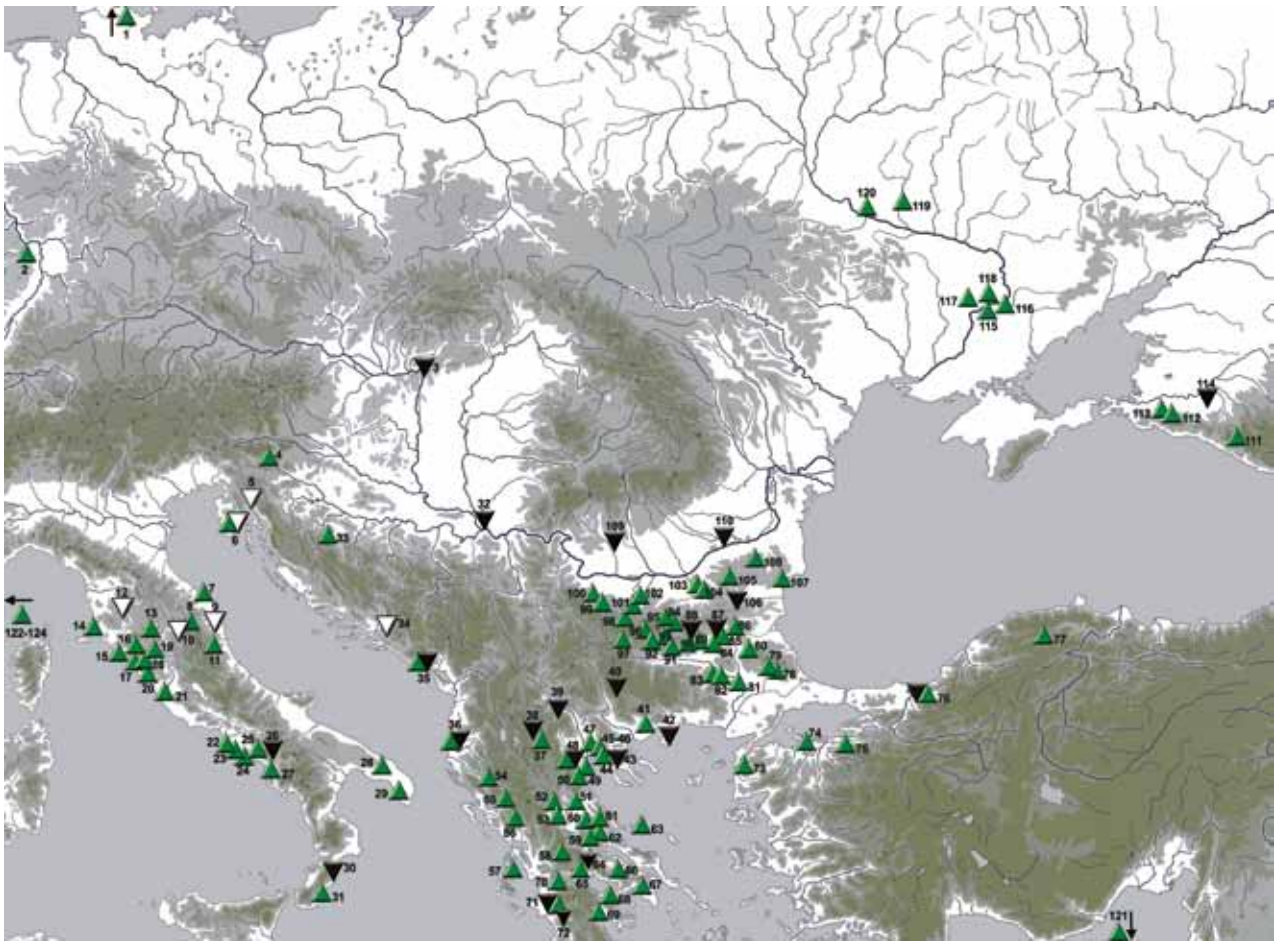

Fig. 3 – Distribution map of bell-shaped situlae with ivy leaf decoration below the attachments of groups **I and II** (according to Blečić Kavur 2022: Fig. 7, List 1)

Fig. 4 – Bell-shaped situlae with a palmette below the attachments: 1 Apollonia (according to Veseli 2012: Pl 1: 5), 2 – 3 Budva (© National Museum of Serbia, Belgrade)

spear-shaped petal (Fig. 4: 2–3). A technically, if not stylistically, similar decoration can be observed on a situla from Thrace (VBC 1137, Sideris 2021a: 26, Fig. 6), while the incised garlands and ellipses between the spirals could indicate there was a bud, as we see on a Thracian situla from an unknown archaeological context (Sideris 2021a, Fig. 7). Since separately cast palmettes were already part of toreutic situla production in the 5th century, and reached their greatest territorial expansion from the 4th to the 3rd century BCE, it is assumed there were several toreutic centres of their production. Both classes had a prominent place in the early Hellenistic Macedonian court workshops (Sideris 2016: 198–199, 208; 2021a: 35–36; 2021b: 229–230), which are the possible toreutic origin of most of the situlae in question and their fragments. They can be accordingly interpreted as a direct import into the local southern Adriatic communities.

The most numerous group of 8 bell-shaped situlae with ivy leaves under the attachment (Fig. 5) is represented along the entire eastern Adriatic coast and accounts for 47% of all situlae of this type (Fig. 2). They also differ both in the manufacturing technique and in the accompanying style of decoration. Macedonian toreutics were characterised by the technique of casting a vessel and a separate ring base during the production of the situla. This mode of production was defined as characteristic for group I of a total of 3 situlae (37%): one from Budva and two from Apollonia (Blečić Kavur 2022a: 131–133, Fig. 5: 11, 15; Veseli 2012: 216, Pls. 2: 8; 3: 9) (Fig. 5: 1–2). They have separately cast attachments with ivy leaves (variant Ib) soldered to the body of the vessel. The attachments from Apollonia are more delicate and more precisely elaborated, like those on the situla from Mazi (Touloumtzidou 2011: 361–362, Fig. 25θ–γ; Blečić Kavur 2022a, Fig. 5: 10) or Vărbica (Teleaga 2008: 448, cat. no. 991, Pl. 110: 3; Blečić Kavur, Kavur 2010: Fig. 3: 9; Blečić Kavur 2022a: Fig. 5: 12), while those from Budva are much more robust and simplified.

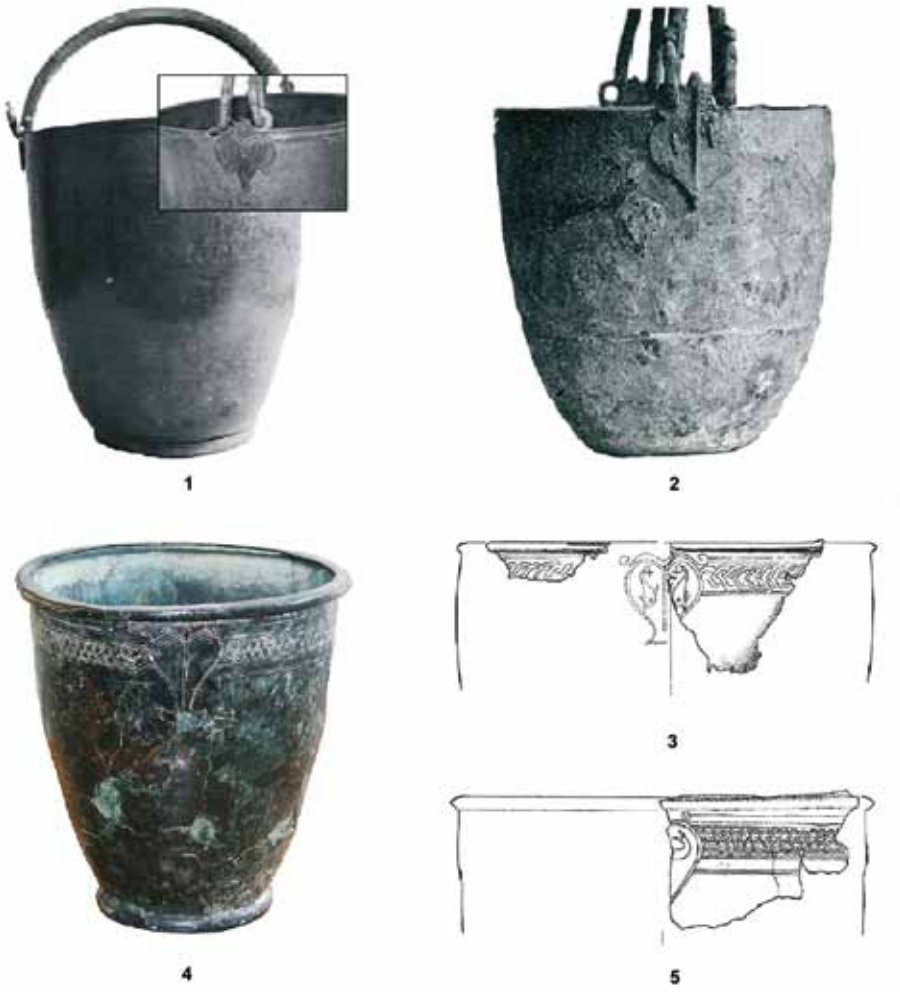

Fig. 5 – Bell-shaped situla with an ivy leaf below the attachment: 1 Apollonia, 2 Budva, 3 Ošanići, 4 Rijeka, 5 Nesactium (according to Blečić Kavur 2022: Fig. 9)

Finally, the development process in the area of Central Macedonia can be followed in separately cast attachments with a complete ivy leaf. In fact, it is present in toreutics since the first half of the 5th century BCE, which is directly attested by the lebes with the same attachments from the Mitsonounis Collection (Ignatiadou 2015: 81–83, Fig. 9; Sideris 2021a: 23–25), but we also find them on hydriae, olpae, oinochoae, and other smaller vessels, and frequently on situlae from the 4th century onwards (Sideris 2016: 128).

Group II includes situlae made of thin, forged bronze sheets with separately cast and finished parts (attachments, decorations, handles, and bases). This production technique was typical of Etruscan workshops, which were operating in the tradition of the older Iron Age Situla art. There are fragments of two situlae from Nesactium (Mihovilić 2017: Fig. 3, Pl. 1; Blečić Kavur 2024, 132) and two (or three) from Rijeka (Blečić Kavur 2022a: Fig. 1; 9: 3,7) as well as one situla from Ošanići (Marić 1979: 54–55, Pl. 19; 20; 2000: 43–44) (Fig. 5: 3–5), forming the majority of bell-shaped situlae with ivy leaves (63%). They differ not only in the technological approach, but also in the execution of the decorations, on the basis of which they are generally divided into two variants or subgroups (Blečić Kavur 2022a: 131–139). All the situlae have a broad band below the rim, containing a double or triple cable pattern that was very popular with additional decorations in Etruscan toreutics. This band incorporates a larger ivy leaf below the attachment, which is much more developed and luxurious than those of the first group and ends at the bottom in the form of an acanthus bud. It should be emphasised that the decoration of the second, less numerous variant (IIb) is composed of a figural depiction of two downward-facing incised dolphins that were inserted within the rather artistically reduced ivy leaf decoration. This ornament is known on situlae from the Italic area, and also on single fragments from Nesactium and Rijeka (Mihovilić 2017: Pl. 1: 1, 3; Blečić Kavur 2022a: 125–127, Fig. 9: 3, 7–8; 2024, 132) (Fig. 5: 4–5). Currently, these are the only examples on the eastern Adriatic coast, and their value is diminished by the lack of knowledge of their more precise archaeological context. However, the circumstances of the finds of situlae from the Italic territory (Offida, Norcia, Monteriggioni) confirm the chronology of their use in the late 4th and early 3rd century BCE (Blečić Kavur 2022a: 138–139).

Regardless of the exclusively typological determinants of the situlae themselves, but considering the preserved decorative elements, especially the figural attachments, the bell-shaped situlae may have been supplemented by anthropomorphic attachments added at a later date. Thus, the first group (type I) most probably includes the attachment cast in the shape of a female head, i.e. a maenad, from Budva (Fig. 6: 1). Until recently, it was included in the "lion – maenad" attachment

Fig. 6 – Figural and ring attachments of bell-shaped situlae: 1 Budva, 2 – 6 Nesactium (according to Mihovilić 2017: Pl. 2: 1–2, 7; 4: 1–2, 8; Blečić Kavur 2021: Fig. 9: 1; 2024: 131)

group, which is inappropriate because the spout in the shape of a lion's head is a decoration of stamnoid and not bell-shaped situlae. The maenad must therefore have originally been attached to a bell-shaped situla, but later, or perhaps already at the time, was attached to the handle of the attachment of a formerly stamnoid situla by a false hybridisation of the iconographic group. It is even more likely that they were mixed up during excavations, when individual pieces were discovered and joined inappropriately (Blečić Kavur 2021: 235–236, Fig. 9: 1). The same applies to the only preserved single attachment from Shkodër (Veseli 2012: 214, Pl. 1: 3) (Fig. 6: 2). Although it has slightly different characteristics from the one from Budva, it should be attributed to bell-shaped situlae, such as the attachment from Lokrida (Touloumtzidou 2011: 361, Fig. 27α; Blečić Kavur 2021: Fig. 9: 3) or the attachments of situlae from Pudrija and Vălčitrăn (Teleaga 2008: 448, T. 87: 1; 110: 1).

Three small anthropomorphic attachments for fastening handles to the rim of the situla from Nesactium form another special group (Mihovilić 2017: Fig. 8, Pl. 2: 1–2, 7; Blečić Kavur 2024, 131) (Fig. 6: 3–4). They are shaped with two profiled rings flanking a miniature "feminised" head instead of a palmette. It is simplistic and even underdeveloped, with prominent, oblique lines emphasised by the neck and a horizontal crown on the head. The attachments depicting a lion's head from Vrankamen in Bosnia are the only approximate comparison, but not a direct parallel (Truhelka 1893: 88; Kysela 2020: Fig. 18). Considering their quantity and profile, they could be attributed to a local Histrian workshop that took the trend of decorating bronze luxury vessels and adapted it to their pragmatic local taste (Kysela 2020: 87). However, the inside of one of the handles is engraved with a letter "V" with two single strokes (Mihovilić 2017: Fig. 11, Pl. 2: 4), and a similar phenomenon can be observed on the situla from Thrace. Its engraved letter "K" is interpreted as a sign of ownership or identification of the vessel in the treasury of the sanctuary (Sideris 2021b: 232, Fig. 249). In this sense, it should be emphasised that attachments of situlae without function were found in the area below the Roman temples in Nesactium, perhaps in older cemetery sanctuaries, where they were most likely used for water transport and other practical tasks. Furthermore, the area included 9 smaller attachments with raised triangles in the centre, between two profiled or completely smooth rings (Mihovilić 2017: Pl. 4: 1–9) (Fig. 6: 5–6); at least 4 of these attachments can be associated with the two described bell-shaped situlae (with ivy leaves) made in the Etruscan manner. Identical smooth attachments can be found on well-preserved situlae from Offida (D' Ercole 1977: B351, Pl. 29) or from Norcia (Giontella 2011: Fig. 2; Blečić Kavur 2021: Fig. 9: 4–5, 6).

Stamnoid situlae

Stamnoid situlae were in use at the same time as the bell-shaped situlae. They are associated with symposia and often found in the same contexts (Fig. 7). The vessels were made by casting, with a conical, more elegantly profiled body, broad and stretched shoulders, and a characteristic ring base. Due to their asymmetrical shape, they had three plaques under the base to fix their balance. Their main feature was on the rounded shoulders – two opposing and decorated attachments with a pronounced spout. Therefore, it is generally accepted that they served for holding and offering wine as from a jug. In fact, the attachments were much more than a mere decoration, as they were primarily a multifunctional part of the situla, combining the attachment of the movable handles, the filtering of impurities from wine, and finally the pouring from the vessel. This innovative technical solution also led to an aesthetic improvement in the visual design of the metal vessels of the time, currently known only from stamnoid situlae (Blečić Kavur 2012: 151–152; 2021: 226–227; 2022b: 105). The attachment with the spout could be decorated with three figure motifs – most frequently with a lion's head, less frequently with a satyr's head, and occasionally with the motif of a bull's or boar's head. Since their construction and morphology were basically asymmetrical, but aesthetically aimed to be balanced, the other side of the situla shoulder usually featured a decorative attachment without an active function; they most frequently depicted the portraits of Silenus, more rarely a satire, and in later periods heads of Athena or Heracles or even double heads, which are more significant for Etruscan toreutics (Candela 1985: 39–43, 45–52; Zimmermann 1998: 49–51; Blečić Kavur 2012: 153; 2022b: 105).

"Adriatic" stamnoid situlae and their fragments are present on only four sites, accounting for 34% of the total number of Hellenistic situlae (Fig. 1; 2). They all belong to the group with lion spouts (Fig. 8), of which only two, those from Budva and Karin, can be added to the "lion – Silenus" attachment group (Fig. 9). The single context we have is the one from the Budva necropolis, from the richly

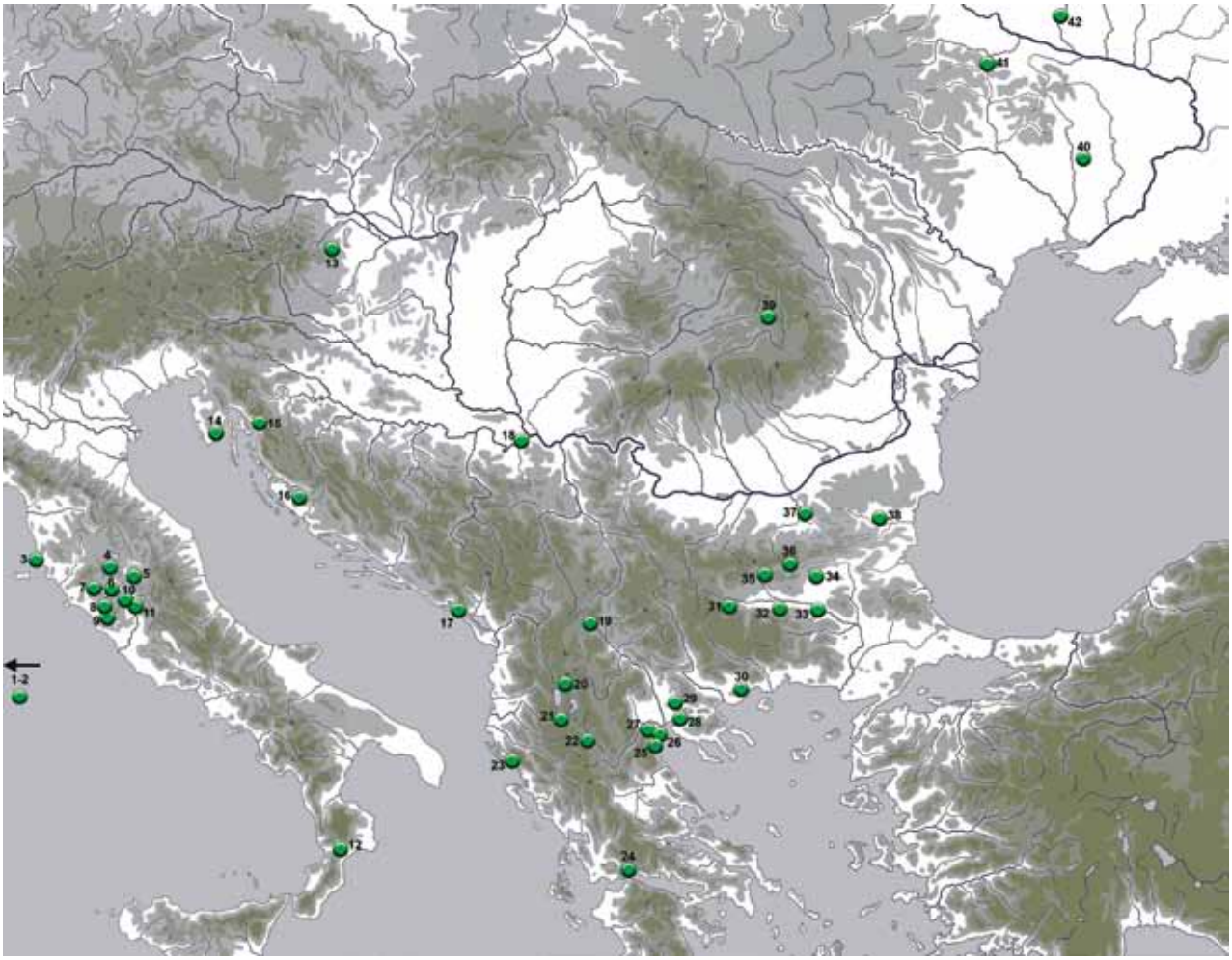

Fig. 7 – Distribution map of stamnoid situlae with the spout in the form of a lion's head (●) (according to Blečić Kavur 2022b: Fig. 2)

Fig. 8 – The spout in the form of a lion's head: 1 Novi Vinodolski, 2 – 3 Nesactium, 4 – 5 Budva, 6 Albania (according to Blečić Kavur 2012: Fig. 1; 5: 6; 2021: Fig. 2; 10: 1–2; 2024, 132)

furnished brick tomb 2/1. Due to the fact that the situla was still complete at the time of its discovery, we can confidently attribute the remaining plaque of the ring base to it (Marković 2012: 17–21, P. 3: 1; 4: 19). By determining the depicted objects of material culture, we can consider how the situla was placed in the grave of a prominent deceased person together with the corresponding ceremonial tableware (situla, cup, ladle, bowl) (Marković 2012: P. 3; cf. Kuzmanović 2021: 103–104, T. 1), thus reflecting the customs characteristic of the Macedonian ceremonial symposia of the middle and last third of the 4th century BCE, which are also known on Thracian but not on Greek territory (Archibald 1998: 331).

Attachments with a spout in the shape of a lion's head from the sites in question are of course not identical (Fig. 8). Based on their differences, up to 4 (sub)groups could be distinguished, with the most closely related attachments coming from Nesactium, Novi Vinodolski, Karin, and the one from the "lion – Silenus" group from Budva (variant a; Blečić Kavur 2021: 237–238, Fig. 2, 10–11). The heterogeneity of design of the lion's head possibly testifies to different moulds, if not different toreutic centres, which were either active in the Macedonian area or were directly influenced by Macedonian production in the second half of the 4th century BCE (Blečić Kavur 2021: 239; 2022b: 111–112). The crescent-shaped standing plaques with concave narrow sides from Nesactium also belong to stamnoid situlae (Mihovilić 2017: Pl. 4: 10–15). As a rule, three were used, so that the six tiles present here, as well as the two spouts in the shape of a lion's head, indicate that two situlae once existed at this site.

Attachments of the "lion – Silenus" group are the most common visual and iconographic symbol of stamnoid situlae (Pfrommer 1983: 254–255), and based on the current state of research, we know of at least 30 examples of them, of which up to 20 come from known archaeological contexts. This group includes the Budva and Karin attachments, which bear not only a spout in the form of a lion's head, but also a heraldic figure in the form of a medallion on the other side: the portrait of an aged, bearded Silenus (Fig. 9). Traditionally, they were placed in the same group, but recent analysis identified some differences between them, and the essential division is based on the differently shaped and artistically depicted ears and chins. The Silenus from Budva was attributed to the group of Sileni with goat ears, and the Silenus from Karin to the group with acanthus ears. Both groups can be dated to the Late Classical and the transition to the Early Hellenistic period, mainly to the second half and/or third quarter of the 4th century BCE (Blečić Kavur 2022b: 106–111, Fig. 3–6). It is also worth taking a look at the even more con-

Fig. 9 – Decorative attachments of stamnoid situlae from the group of Sileni: 1 Budva, 2 Karin (according to: Blečić Kavur 2021: Fig. 4; 6; 2022b: Fig. 1; 3)

cise and reduced portrait of Silenus from an unknown site in Albania, as it is a somewhat younger work associated with Etruscan workshops, which is also indicated by the opposite attachment with a spout in the shape of a lion's head (Blečić Kavur 2012: 158, 165; 2022b: 109–111, Fig. 6: 5; Sideris 2016: 222) (Fig. 8: 6).

The exceptional representation of *specific subjects* on stamnoid situlae in Budva, which was located at an important crossroads of land and sea routes, "the gateway to the southern Adriatic," suggests that stamnoid situlae were used over a long period and that they probably characterised the luxurious ware of Budva aristocracy for at least half a century, if not longer. The tradition of their use is reflected in the discovery of a younger ceramic stamnoid situla in the Gnathia style from the 3rd century BCE (Popović 1994: 266, cat. no. 421; Krstić 2007: 19, cat. no. 14), which in turn points to a stronger connection with the region of southern Italy, particularly Apulia, where such vessels were produced.

The capital of the Histri was located at the "gateway to the northern Adriatic," which also had a specific mediating and controlling role, especially in relation to the communities of the narrower region, but also to those on the opposite, Italic coast and in the hinterland. The discovery of two situlae of this type links Nesactium with a prestigious material culture and testifies to stronger influences from the dominant "south" on the one side, and the adaptation of Histrian aristocracy to the new tendencies on the other.

The discovery of a fragment of a situla from Novi Vinodolski and other luxury vessels from the Kvarner region, particularly the bronze foot of a drinking cup from Baška on Krk, fragments of a silver drinking cup, and the figure-decorated attachment of a lagynos or "mushroom jug" from Osor on Cres (Blečić Kavur 2015: 191–195, Fig. 68; 2020, 129–133, Fig. 4), because they complement and show the importance of the northern Adriatic as a redistribution area in an extremely progressive time.

GLOCAL

The necropolises of Budva and Nesactium include not only the highest numbers but also the most diverse types of situlae. This is a consequence of both their geostrategic position in the indented Adriatic basin in the past and the state of research of the necropolises in the present (Fig. 1). As important centres of power and redistribution of prominent items in the networks of various aspects of ancient Macedonian propaganda and economy, both sites were connected to the centres of power and their prominent markets, especially in the northern Adriatic and Etruria. The social elites from Budva and Nesactium, controlling large parts of these transmissions, obviously adopted and followed the concepts of their more dominant and eclectic neighbours, which is also evident in other luxury items throughout the Hellenistic period.

As exceptional vessels, products of toreutic art, the situlae undoubtedly reflect the spread of global cultural traits and aesthetic trends. Also, their distribution illustrates various communication networks and structured interactions that contributed to the global connections of the societies of that period. At the same time, in their context, they clearly show the adaptation to the conditions and pragmatic needs to meet the realities of local communities. Indeed, the dialectical relationships between local and global dynamics shaped the demand/consumption and production of individual objects as well as the incorporation of past societies on the Adriatic in the process of glocalisation as an integral aspect of the globalisation process. The importance of local or regional levels was in no way inferior to the importance of the global level, as local spaces were shaped and local identities were simultaneously created through local circumstances and global contacts (e.g. Roudometof 2016; Hodos (ed.) 2017; Fine, Thompson (eds.) 2018; Montoya 2021) (Fig. 10).

Furthermore, in addition to their function of offering water, mixing, serving and pouring intoxicating elixirs, situlae had value as presentational and outstanding objects, and some of them could be used over a longer period of time, even for several generations. In addition to their use as utilitarian objects, they were used extensively at various profane and ritual celebrations, banquets and symposia, as part of ritual or funeral sets for feasts. All these activities promoted the "internationally" accepted ritual of alcohol consumption for the purpose of exchanging hospitality, demonstrating position and power dynamics and promoting trade (Perego 2013; Blečić Kavur 2020: 134). All the East Adriatic vessels were exotic luxury products, mostly as directly imported objects, but also as local reproductions of foreign models (Budva, Nesactium). As a kind of medium, their consistent use also promoted the ritual consumption of sophisticated drinks during select activities, such as proces-

Fig. 10 – Personal/individual, local/regional, and global processes in the intertwined and joint creation of a glocal concept (made by: M. Blečić Kavur)

sions and libations. They represented the highest value of applied art of the time, intended for the elite circles of society, and the iconographic decoration as a metaphor had to be understood in the contemporary system of communication values within the local aristocracy. They were therefore often interpreted as markers or *insignia*, as valuable diplomatic gifts or *dora*, or even as treasured family heirlooms or *keimelia* (Theodossiev 2000: 68–69; Treister 2002: 63–64; cf. Barr-Sharrar 2008). In the sense of prominent status symbols, they were seen as an "iconological language" in the context of the complex and coherent relationship between drinking and the tradition of wine consumption, adopted foreign protocols and objects of various forms of artistic expression, and toreutic art itself (Perego 2013; Blečić Kavur 2020). As cultural capital, they clearly evoke personal and collective potentials, eschatological thinking, and ritual practices in these areas, which corresponded to the universal essence of Hellenism and were thus read on a completely global level while acting locally in their environment.

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Danijel Džino

'MARITIME CULTURAL LANDSCAPES' IN PROTOHISTORIC AND ANCIENT EASTERN ADRIATIC SHIPBUILDING TRADITIONS

Preliminary communication

The theoretical concept of a 'maritime cultural landscape', developed by Christer Westerdahl emphasises the relationship between the nautical environment and the cultural and socio-economic context of its exploitation by people which inhabit it. The complex eco-geographical configuration of the Adriatic coast can be recognised, without much debate, as a plurality of different 'maritime cultural landscapes'. This relationship between human processes and maritime geo-ecology significantly impacted on the needs of the local population, which were then transferred onto their specific requirements in shipbuilding design throughout the past. This paper will discuss how different 'maritime cultural landscapes' in the protohistoric northern and southern Adriatic impacted the development of different local shipbuilding traditions, resulting in three different ships described in the written sources: *serilia*, Illyrian lemb and pre-Roman liburnian.

KEY WORDS: **LEMB; LIBURNIAN; *SERILIA*; ANCIENT SHIPBUILDING; ADRIATIC**

This paper will discuss the influence of 'maritime cultural landscapes' on shipbuilding traditions in the protohistoric Adriatic, and the development of three different ships known from the written sources: the *serilia*, Illyrian lemb (*lembos*, *lembus*) and pre-Roman liburnian (*liburnica*, *liburna*). These three ships, along with the general shipbuilding traditions in the Iron Age eastern Adriatic, were recently extensively discussed in a co-authored English-language monograph, and many of the conclusions drawn in the present study stem from the author's collaboration with Luka Boršić and Irena Radić Rossi (Boršić et al. 2021). There is no space here to go into more detail about the evidence and arguments presented in this book which shows that the Illyrian lemb and pre-Roman liburnian are different types of ships, developed in two different parts of the eastern Adriatic by two different population groups. Rather, I would like to elaborate more on the connection between 'maritime cultural landscapes' in the eastern Adriatic and the development of these three types of ships — an idea that was only briefly addressed in the book.

The complex eco-geographical configuration of the Adriatic coasts combined with the archipelago of the islands facing its eastern coast provided a plurality of different 'maritime cultural landscapes' in any historical or prehistorical period. This concept, first used by Christer Westerdahl (1992; 2011) and later elaborated or applied to case-studies by many other authors (Jasinski 1993; Tuddenham 2010; Flatman 2012; Pungetti 2012; Lira 2017, etc.), emphasizes the relationship between the nautical environment and the cultural and socio-economic context of its exploitation by population which inhabit it. In other words, a 'maritime coastal landscape' is the result of interaction between human processes and an environment consisting of sea, coast and islands, over a longue durée. This relationship includes networks of sailing routes and ports, maritime and land connections, maritime social practices, and so on — combining land, sea and human activities in a joint analytical concept. Some more recent scholars argue that it is time to move on from this concept towards more esoteric directions such as seeing sea as an 'hyperobject'

(Campbell 2020), after the influential book of Timothy Morton (2013). However, I do not think that the concept of 'hyperobject' is useful replacement for Westerdahl's idea as it is derived from a secular, ideologically charged, ontological attempt to ascribe 'divine' attributes to certain concepts that transcend locality, such as climate change, and by extension attach it to current popular issues of race or gender.

Westerdahl's ideas that the relationship between human processes and maritime geo-ecology impacts on the needs of the local population can be traced, consciously or unconsciously, to influences of the French Annales school and the ever-unavoidable Fernand Braudel (1972) and his views on unity of Mediterranean, which Westerdahl acknowledged quite a few times. While we today conceptually perceive the Mediterranean less as Braudel's unified entity and more as Horden and Purcell's (2000) 'unity in diversity', it is nothing new to claim that maritime landscapes affect human social and economic development. The usefulness of Westerdahl's concept, however, is that it can be applied to wide variety of contexts and one of them is certainly the set of specific requirements in shipbuilding design. He himself also addressed this, arguing that shipbuilding design is influenced by variety of factors. While not excluding tradition, Westerdahl (1994) warned about much more significant factors which are maritime experience and maritime social practices, or in other words the environment, the intended function of a ship, and transportation zones. The design of ships cannot be seen as representative of a culture of homogenous communities on land, but rather of a particular maritime community (Harpster 2017), with technology changes in design are manifestations of changes in the society which implemented them (Adams 2017).

THE SEA

Let us first briefly look at the Adriatic Sea, which was defined earlier as a plurality of different 'maritime cultural landscapes' on account of its well-known geo-ecological diversity, which had a major impact on premodern navigation. The Adriatic has clear morphological differences along its longitudinal axis, and we can divide it into three sub-basins: northern, central and southern. Another significant difference can be distinguished between its western and eastern coast. The shallow and sandy Italian western coast, that also has several large lagoons in the north and almost no islands, is very different from the landscapes of the eastern coast surrounded by a plenitude of islands. However, the eastern Adriatic coast does not reveal unified landscape – and the differences could be seen between the north and south. In the north, Istria and Ravni kotari provide some fertile and arable land, like the limited stretch of land in the bay of Kaštela and the lower stream of the Neretva River, while the southern Adriatic in modern Albania has a shallow and sandy coast and only a few islands, thus lacking navigation characteristics created by the islands further north. The rest of the coast is characterised by narrow strips of land cut from the hinterland by massive karstic mountain-chains such as Mosor-Biokovo mountain-chains, stretching between Split and mouth of Neretva. Apart from landscapes, it is also important to acknowledge other influences on navigation – such as the variety of weather patterns, namely different types of winds.

The severe limitation of resources available on the hinterland of the eastern Adriatic coast, such as metal ores, water, or arable land, directed its population through prehistory, proto-history and pre-modern history towards the exploitation of the marine and agricultural resources of the coast and islands, and increased connectivity enabled by maritime links. These geo-ecological differences translated into different needs that the pre-modern population of these micro-regions had in regards to production, trade or connectivity, and the strategic importance of certain landscape points for controlling maritime traffics and connections with the mountainous hinterland of the east Adriatic. Therefore, we can justifiably claim that the different local circumstances of eastern Adriatic, created by limitations imposed by geo-ecological factors, were negotiated with maritime connectivity, which the Adriatic, as part of wider Mediterranean system, provided (Boršić et al. 2021: 6–9).

THE PEOPLE

Iron Age population of the eastern Adriatic were divided into number of different ethnic and political groups, and this diverse ethno-political picture was certainly not static through the first millennium BC. In the late Bronze Age, a relatively homogenous cultural zone on the Italian and northern-central eastern Adriatic coasts forms (Blečić Kavur 2020).

This cultural zone slowly fracturs and regionalises, especially after ca. 500 BC, when more significant differences in material culture can be detected together with the appearance of new and more complex political institutions usually recorded as ethnonyms in ancient written sources (Dzino 2012; 2014). The most important Iron Age indigenous groups which extensively engaged in maritime activities were related to different parts of the east Adriatic coast. In the north Adriatic sub-basin there were the Histri (Buršić Matijašić 2008; Cestnik 2009; Mihovilić 2014) and Liburni (Šašel Kos 2005: 182–188; Blečić Kavur 2015; Barnett 2019; Kukoč, Čelhar 2019; Vitelli Casella 2021: 59–69; Čelhar et al. 2023), and in the southern sub-basin lived the so-called south Illyrian communities (Galaty 2002; Siewert 2004; Dimitrijević 2018), with some important ethnonyms preserved in the sources such as 'Daorsi' (Behram 2022), 'Ardiaei' or 'Labeatae', all depicting indigenous political groups and alliances. Material evidence shows that these groups belonged to different social networks, which might indicate cultural and even ethnic differences.

While different in ethno-cultural matters and patterns of inclusion in wider regional social networks, these northern and southern Adriatic indigenous societies all started to experience significant social transformations from the later 5th century BC. Archaeologically confirmed changes in material culture, which started to prioritise and appropriate mass-produced – especially pottery – imports, reflected substantial changes in the ways these communities and especially their elites defined themselves, which is best seen amongst the Liburni (Batović, Batović 2013; Barnett 2016; Miše 2015; 2019), central Adriatic (Barnett, Ugarković, 2019; Ugarković, Paraman 2020), and south Illyrian communities (Cabanes 1988; Dimitrijević 2018; Dyczek, Recław 2020). This process was amplified with the establishment of the Greek central Adriatic colonies in the fourth century BC (Cambi et al. 2002; Cabanes 2008; Kirigin 2009; Poklečki Stošić 2010; Miše 2017; Ugarković 2019). Increased communal and individual needs for imported artefacts must have forced east Adriatic indigenous communities to look towards more efficient ways to obtain these imports by significantly improving their naval capabilities, regardless of whether these capabilities were used for trade, piracy or both of these naval enterprises.

THE SHIPS

While there are several images of ships found on both sides of the Adriatic in the Iron Ages, it is difficult to believe that these did not experience any changes within the last centuries BC (Boršić et al. 2021: 42–58). There are three distinct terms used for ships from the pre-Roman eastern Adriatic in the Graeco-Roman written sources. The *serilia* – a sewn-plank (laced) ship said by Roman writers to have been used by the Histri and Liburni (Festus, 460–461), or just Liburni (Aul. Gell. *Noct. Att.* 17.3) – is well attested in the material record of the areas inhabited by these groups (Boršić et al. 2021: 26–42), the southern Alpine areas and the Italian north Adriatic – with noticeable regional differences between these three regions (Pomey, Boetto 2019: 8–19). There are two types of sewn-plank ships discovered – small boats used for multiple purposes and larger sailing vessels – so it seems that *serilia* was a generic term used by written sources to describe shipbuilding tradition, rather than specific type of ship.

Most of the sewn-plank shipwrecks are carbon-dated to the last centuries BC and first centuries AD, with some exceptions such as the Zambratia shipwreck, carbon-dated from the 12th to 10th century BC. This type of shipbuilding reflects very old prehistorical traditions stretching all the way to the Neolithic and was less frequently used (but still used) in the wider Mediterranean after ca. 5th century BC, when the different shipbuilding technology of mortise-and-tenon started to dominate. These traditions were limited to the northern Adriatic – the absence of sewn-plank shipwrecks from the southeastern Adriatic is well demonstrated by a recent inventory of known ancient shipwrecks (Royal 2012: 411–431; 2013; 2015). However, it is important to notice that these shipwrecks from the southeastern Adriatic were not systematically excavated, so it is theoretically possible that some of these boats were built in sewn-plank technique. The analysis of sewn-plank shipbuilding traditions in the northwestern Adriatic (Willis 2016) suggests that the preservation of these traditions was carried by 'communities of practice', or in this case techno-communities[1] of shipbuilders who were connected to broader Mediterranean networks but chose to preserve traditions. Willis, in her dissertation, also makes the convincing argument that local

1— 'Techno-communities' are the groups of people that carry out particular activities by employing particular technologies. When a technology is transferred, the recipient 'techno-community' adopts it by inventing new functional types whose performance characteristics are more suitable for participating in activities of their own social/political/ethnic group (Schiffer 2009: 825–826; 2011: 175–176; Skibo, Schiffer 2008: 125–133).

elites were not the driving force behind the preservation of naval traditions in the design of *serilia*, but rather the shipbuilders.

The evidence for the lemb is more meagre. This type of ship was originally invented in the Aegean basin and is first mentioned in sources from the fourth century BC (Arist. *De motu an*. 710; Anaxandrides, Frag. 35; Dem. *C. Phorm*. 10.7; *Zenoth*. 6.4–7.5; Lucyrg. *Leoc.*17). Its invention is ascribed to the Cyrenians (Plin. *HN* 7.208), although this statement cannot be confirmed or denied. Written and papyrological sources from the fourth—first century BC indicate that this term was applied to small ships and pirate boats (Plaut. *Bacch*. 278–280; *Men*. 440–444), cargo ships (*P. Cairo Zen*. 59015; *P. Petr*. 2.20.4), auxiliary ships used in warfare, moving platforms for catapults (Diod. Sic. 20.85.3; Philo Mech. D21, D38; Polyb. 1.53.9; App. *Pun*. 50), and for general piracy in the Aegean (Livy, 37.27.4; Polyb. 21.12; Posidonius, F28 §12). However, at some point, likely in the third century BC, the lemb was adopted for specific use in the southern Adriatic. The sources indicate that this was a fast and small undecked boat with a characteristic prow, used by the local population for trade, piracy and the transport of troops. Despite some experiments in design by Macedonians at the times of king Philip V, the lemb never achieved prominence as a battleship in later periods. Material evidence is absent, however, images of boats on coins minted in the 3rd and 2nd century BC by southern Adriatic communities depict boats with a specific shape that had bow and stern extensions which extended waterline and *maneuverability*. These could very likely be depictions of south Adriatic lembs (Boršić et al. 2021: 50–55, 175–176). The adoption and reimagining of this Aegean type of ship corresponds chronologically with the earlier mentioned increased competition amongst local communities and their elites for obtaining imported foreign products. This led to increased trade and piracy, activities which co-existed in pre-modern communities not necessarily as opposites but rather as a part of the same social process used for income supplement or even accumulation of capital, sponsored by local elites (De Souza 1999; Horden, Purcell 2000: 156–158; Gabrielsen 2001; 2013; Beek 2015; Wendt 2016).

Finally, about the third type of ship – the liburnian – we know almost nothing before its inclusion in Roman imperial fleets of the late Republican and early imperial periods, except that it was an exceptionally fast ship useful in combat engagements. Its name leaves little space to speculation on its origins – the original liburnian was without doubt developed by the Liburni from the northern Adriatic (App. *BCiv* 2.6.39; Veg. *Mil*. 4.33). The ship is first mentioned in the mid-first century BC. Describing the events from 49 BC, Caesar states that the Pompeian commander M. Octavius arrived with his ships to besiege Salona, the future capital of Roman Dalmatia, after the departure of *liburnarum ex Illyrico*, relating the term to the type of ship (Caes. *BCiv*. 3.9; Čače 2013: 36–38), not the Liburnian-Achaean naval squadron, which is also specifically mentioned by him (Caes. *BCiv* 3.5). At approximately the same time, Philoxenus of Alexandria – probably referring to an earlier period – describes *liburnos* as a pirate ship of beamed and rounded shape, like the Phoenician *gaulos* (Philox, Frag. 79b). Plutarch also mentions liburnians in 58 BC (Plut. *Cat. Min*. 54.4-6) and Lucan depicts them as a component of the Roman fleets during civil wars between Caesar and Pompey (Luc. 3.524-537; Morrison 1996: 131), but neither of these are trustworthy accounts, as the term could have been applied as an anachronism.

The liburnian is mentioned again as part of Octavian's fleet, playing a role in the battles against Sextus Pompeius in 36 BC and the famous naval battle of Actium in 31 BC (Prop. 3.11.29–46; Hor. *Epod*. 1.1–5; App. *B Civ* 5.11.103; 5.12.111–112; Plut. *Ant*. 47). These and later mentions relate to the Roman version of the liburnian, adopted as a ship-of-line in early imperial fleets, described as fast ship of the bireme class with distinguishable pointy prow (Morrison 1996: 170–174, 263–264; Boršić et al. 2021: 146–148, 153–172). It is certainly difficult to believe that the Roman version of liburnian was identical to the original, so visual evidence from the Roman reliefs, coins and paintings is worthless if we want to understand the liburnian prototype. The only visual depiction of the ship from the Liburnian areas is a damaged fragment of a stone relief from Varvaria (Bribirska glavica), which is difficult to date and without peculiarities in design (Boršić et al. 2021: 49–50 with fig. 28). It also remains unclear whether the original design of the liburnian was affected by changes in shipbuilding designs coming from the Mediterranean, or it had a more traditional local design – thus whether it was the result of an evolution or revolution in design. Written evidence, namely Diodorus Siculus, describing

the conflict between the Greek settlers in Pharos in the early fourth century BC (Diod. Sic. 15.13-14) and the locals from the mainland (probably the Liburni), does not suggest the existence of ships similar to liburnians of the later centuries. Thus, it is highly likely that the liburnians we heard of in the first century BC were a more recent type of the ship.

DISCUSSION

To go back to Westerdahl. The appearance of different ships in two different maritime environments by different political (and probably ethnic) protohistoric groups in Adriatic shows a strong connection between environmental and human processes. Different geo-environmental factors, which include the landscape, winds, sea-depth, currents, the availability of ports and the relief of the coast and hinterland in the northern Adriatic are very different from southern Adriatic. The communities in these two parts of the Adriatic shared simultaneous social transformations caused by the intensification of contacts with an increasingly globalised Mediterranean world in last centuries BC, which was reflected in the development (or maintenance) of these ships.

The noticeable geo-ecological differences between northern and southern Adriatic sub-basins and their different 'maritime cultural landscapes', as well as different needs of the local prehistorical and proto-historical populations, impacted on their sailing traditions, ship building techniques and designs. As mentioned earlier, the design of the sewn-planks (laced) *serilia* ships from the northern Adriatic represents the preservation of shipbuilding traditions perpetuated and enforced by networked communities of shipbuilders, rather than local elites. Rationale for preserving these traditions should certainly be seen in the attempts to negotiate identity within non-elite stratum, here specifically amongst groups of technical specialists in light of the intensive engagement with Roman imperial networks their societies experienced. However, these reasons were practical as well – the specific nature of the north Adriatic landscapes supports the notion of 'maritime cultural landscapes' as interconnected networks of human communities and maritime landscapes, which influenced the development and long life of shipbuilding traditions.

On the other hand, the appearance of the Illyrian lemb and pre-Roman liburnian reflect changes in shipbuilding design which must have been influenced by the changing needs of local communities and/or their elites. More evidence makes it easier to establish this argument for the Illyrian lemb. The southern Adriatic populations adopted and adjusted the small and fast Aegean type of ship to their needs, rendering it useful for obtaining prestige Mediterranean goods through either trade, the interception and pillaging of trade ships, or a combination of both of these maritime activities. The development of more complex social networks, through the polity we know as the Illyrian kingdom, also made use of these ships in military activities, especially for fast transport of troops. This transfer of knowledge must have been done through contacts between communities of shipbuilders which acted as 'techno-communities' inventing a new functional type of ship whose performance characteristics suited the changed needs of the population and its elites (Dzino, Boršić 2020).

We are less certain about the particular needs of northeastern Adriatic, Liburnian groups that impacted the development of the liburna. It could certainly have been a similar need to obtain prestige imports. As we can see from archaeological evidence mentioned above, Mediterranean imports increase in quantity in both elite and non-elite Liburnian funerary contexts in last centuries BC. The change might also be indicated by the recent exploration of prehistoric maritime structures in the Kvarner Gulf and Dalmatia. These findings suggest that maritime power shifted from the central eastern Adriatic islands to the Liburnian northeastern Adriatic around the mid-first millennium BC (Parica 2021). Thus, this increase of trade and piracy opportunities, as well as the infrastructure for maritime activities, certainly could have necessitated the development of new and fast ship. Other reasons, such as political insecurity and a need to protect trade from maritime piracy or competitors in trade cannot also be discounted.

This short overview of ships from the protohistoric and historic Adriatic, known from historical sources and material evidence, presents arguments that the development or maintenance of the traditions in design can be understood through the prism of Westerdahl's concept of a 'maritime cultural landscape'.

While our knowledge about them – especially the pre-Roman liburnian – is limited, it is clear that *serilia*, the Illyrian lemb and the pre-Roman liburnian cannot be seen as separate from human activities *and* Adriatic maritime landscapes. They reflect changes in indigenous Adriatic societies in the last centuries BC, a time when this area was experiencing a 'culture shock', with more intense reflexive integration into the Mediterranean networks. These changes are manifested not only in the adoption and transformation of shipbuilding traditions, but also their maintenance – all of which provides evidence that protohistoric Adriatic societies dealt with cultural change in various ways: from resistance to adaptation.

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HVAR ISLAND

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PURKIN KUK: PREHISTORIC HILLFORT, MOUND, GREEK-HELLENISTIC FORTIFICATION, OR PUBLIC MONUMENT?

Original scientific paper

For 147 years, we have known about Purkin Kuk, or Purčinkuk as it was called then. It stands on a hill above Stari Grad, on the southern side, at an elevation of 275.30 meters above sea level, offering a view of the Stari Grad Bay, Stari Grad (Pharos), the Stari Grad Plain, Šolta, and Brač. This archaeological site, the highest in the vicinity of Stari Grad, attracted the attention of Gian Antonio Botteri and Šime Ljubić in the second half of the 19th century. They described it as a prehistoric tumulus or stone mound. The site was forgotten for nearly a hundred years until Marin Zaninović conducted excavations there in three short campaigns (1978–1980). Zaninović holds the opinion that this is a hillfort mound, hillfort fortress, and settlement, which is agreed upon by Nikša Petrić and Miroslav Katić. Based on several recent field surveys, including those from 1982 and 1988 conducted by members of the project called *Hvar – Archaeology of the Mediterranean Landscape* (later the *Adriatic Islands Project*), as well as the documentation prepared by Željko Peković in 2019, this paper will attempt to summarize the results of previous excavations and field surveys of Purkin Kuk and highlight the complex issues and potential interactions and integrations between the cultural schemes of local and Hellenic populations of the island of Hvar in the pre-Roman era.

KEY WORDS: **PURKIN KUK, MOUNDS, STARI GRAD PLAIN AND JELSA PLAIN, PREHISTORIC LOCAL POPULATION AND THE GREEKS, PHAROS, GREEK WALLS, BELEBIĆI, LAZE.**

INTRODUCTION

The large mound and the walls along its western side at the site of Purkin Kuk have long attracted the attention of everyone interested in the history of Stari Grad and its surroundings because of their monumentality and prominence (Figs. 1–2). Since this site is shrouded in mystery, we believe it is appropriate to dedicate more attention to this still unprotected site and attempt to show the current state of affairs on the ground and the challenges it presents. It is a difficult task, especially for two slow retirees from the opposite ends of the island of Hvar who decided to try and determine what this is all about. Thanks to the article of Gian Antonio Botteri from 147 years ago (see Appendix 1), the one-day excavations by Šime Ljubić (1876), the ten-day excavations by Marin Zaninović (1978–1980), and especially thanks to Željko Peković, who applied for the 2019 competition by the Split-Dalmatia County related to the creation of an Integral Program for the Stari Grad Plain (its outcome is still a mystery to us), as well as our recent one-day field surveys

Fig. 1 – View of the Purkin Kuk mound from the southeast, to the left of the mound is Z2. In the background: Stari Grad, Stari Grad Bay, Šolta, and Brač. Drone shot from 2019 (photo: Ž. Peković)

Fig. 2 – View of the Purkin Kuk mound from the southwest towards the Stari Grad Plain and Vrboska, the eastern part of Brač, and the mountain of Biokovo in the background; to the right: the villages of Dol Sv. Marije, Dol Sv. Ane, and the hill of Hum (photo: J. Barbarić)

(2021–2023), we were able to delve a little deeper into the problem of Purkin Kuk. We are grateful to Željko for kindly sharing part of their documentation related to potential future research on Purkin Kuk. But let us start from the beginning.

HISTORY OF RESEARCH

It has been 147 years since the professional circles first heard about Purkin Kuk, or Purčinkuk, Purchiuchuch, or Purćiukuk as it was recorded back then. As we will see, a little was written about this site from 1876 to 1897; then there was a 70-year silence until 1966, when Marin Zaninović stated that he and Vladimir Mirosavljević "identified the hillfort predecessor of ancient Pharos for the first time" (Zaninović 1966: 58). Zaninović still maintained that it was a hillfort after his three excavation campaigns at this site (1979, 1980 and 1981), and referred to it in his recent book "Ilirski ratovi" (Zaninović 2015) as a prehistoric hillfort tumulus, a hillfort settlement, the main pre-Greek settlement in this area, and the predecessor of Pharos, i.e. an indigenous Illyrian settlement and fortress. Neither Zaninović, nor Nikša Petrić and Miroslav Katić after him, who wrote about Purkin Kuk in passing and accepted his opinion that it was a hillfort settlement with a mound, provided any convincing evidence to confirm its existence.[1] After Zaninović, no archaeological excavations were conducted at Purkin Kuk and no significant interest was shown in the protection of the site, even though Gian Antonio Botteri had already insisted upon that.

It all actually began in 1876, when an unsigned article titled "Il Purčinkuk di Cittavecchia" was published in the Zadar newspaper *Il Dalmata* (Botteri 1876a, transcript in Appendix 1). From the context of the article, it is clear that it was written by Gian Antonio Botteri (1822–1929), a citizen of Stari Grad and a well-known lawyer, politician, liberal, and enthusiast and collector of archaeological monuments. Since we are bringing this article to the attention of archaeologists for the first time, we provide a transcript of its original text in Appendix 1 to this paper. We will present here the main information provided by Botteri, noting that we could not precisely determine what some of the references pertain to, that is, where some specific features he describes are located and what some of his measurements (feet, meters) apply to.

Botteri states that the hill of Purkin Kuk, to the south, about 1000 feet (=302 m)[2] above Stari Grad, there are two old monuments connected to each other. One is a prehistoric tumulus with a diameter of 30 m and a height of 5 m; on the western side of the tumulus, there is a 2 m high pile of stones where stone blocks were found, including one corner block measuring 1.10 x 0.50 x 0.40 m with a carved prominent drafted edge 0.15 m wide, with sides measuring 0.7 m. Botteri takes this as clear evidence of the existence of a corner of a destroyed quadrangular structure measuring 15 x 15 m, which he believes are the remains of a tower.[3]

When describing the sizes and shapes of the visible stone blocks, Botteri compares them to the walls of the towers at Maslinovik and Tor, and concludes that the walls of Purkin Kuk are older than those at Maslinovik and Tor based on Hamilton's classification (Hamilton 1806).[4] According to him, the walls of the towers at Maslinovik and Tor are built from square or rectangular stone blocks in isodomic, pseudo-isodomic, or rectangular styles, while the walls at Purkin Kuk are not always like this, as they also include polygonal or trapezoidal, rhomboid, rectangular, square, and pentagonal blocks. He also notes that none of this is sufficiently well established yet. He then mentions that he informed his esteemed fellow citizen Šime Ljubić, then curator of the Zagreb Museum, about this site, and that Ljubić immediately gathered more than 39 workers. It is briefly described what Ljubić excavated there in one day: the top of the mound to a depth of 1.5 meters and parts of rustic walls along the western side of the tumulus. He notes that bad weather prevented Ljubić from continuing the excavations.

1 — The meaning of the Croatian term „gradina", here translated as hillfort, is much discussed, see Čović 1965: 33; 1988: 82–84; Suić 2003: 1–13; Benac 1985: 199, etc. Regarding the hillforts in the Stari Grad Plain and Jelsa Plain, see: Kirigin et al. in press.

2 — We assume he refers to the Austrian foot. In his second work, Botteri (1876b: 188) states that Purkin Kuk is about 1000 feet high and is about 1 km away from Stari Grad. The straight-line distance from Stari Grad to Purkin Kuk is about 1500m.

3 — It is a block that is 140 cm long on the south side, 55 cm on the west side and approximately 45 cm high.

4 — We were unable to access this article.

Botteri then writes that it would be good to investigate the walls of the tower down to bedrock, as well as those on the north and east sides, **if they exist** (our emphasis). He also mentions that the interior of the tower should be examined to discover similar rhomboid blocks like those visible (excavated?) on the west wall, measuring 1.5 m in width, 3 m in length, and 2 m in height, without traces of doors or openings on the sides or remnants of arched spaces at the top. He states that this (western) wall, seemingly explored on various occasions, did not show traces of finds or fragments from antiquity. According to his calculations, it was possible to investigate five similar sections.[5]

He further writes that the tumulus should be meticulously and carefully investigated because he believes it originated from some sort of system (our emphasis) instead of randomly piled stones. He mentions that the outer edge of the mound consists of small, fist-sized stones mixed with dark humus, followed by layers of randomly placed stones about ten times larger than the previous ones,[6] also mixed with humus and living plant roots.

Now we come to something that seems very important but is not entirely clear to us. Botteri mentions that in the middle of the tumulus, at approximately one foot from the outer surface, there are unworked stones of similar size to the previous ones, with a volume of about 10,000 cm each (=*l'una*) (?),[7] forming something like a parabola that becomes larger from top to bottom, with humus and smaller stones in the middle. He thinks this might be a **central cone** (our emphasis); at a distance of 2 m from the outer edge of the cone towards the west on the northern side, there is a corner of a dry-stone wall at a right angle, with stones approximately the size of 5000 cm each (=*l'una*) (?);[8] the bottom of the inner corner contained fragments of an urn with two handles, looking almost newly made, with a pointed bottom and a rim shaped like a drinking vessel (= *calice*). According to him, this indicates that the tumulus was either explored or that the sides of the tumulus were subsequently used by others as a mausoleum, or finally that the tumulus was originally intended for someone who still peacefully lies in its centre.

Botteri concludes his article with a plea to preserve this site against weathering and reckless vandalism and to create a detailed plan of the site and investigate all four sides of this structure.

We saw that Botteri had alerted Ljubić about this site, so Ljubić, as Botteri writes, organized more than 39 workers on 19 October 1876 to go excavate Purkin Kuk on that rainy autumn day. Ljubić wanted "*to dig through the massive ancient tumulus above the aforementioned Stari Grad*," which "*seemed best suited to the oldest times due to its shape*." However, bad weather prevented him from continuing the excavations that year, and he never resumed them.[9] Only five years later he briefly mention these one-day excavations, the costs of which he covered himself. He notes that Purkin Kuk showed "*signs of its great antiquity, such as fragments of handmade vessels, a stone* trough*, two pieces of a millstone, etc.*" A year after Ljubić's excavations, one of his workers, Luka Sansović from the nearby village of Dol, brought him three chert blades (Fig. 3) that he had found "*about a meter deep in virgin soil* ***near*** *that tumulus*" (our emphasis) (Ljubić 1881: 5–6, Pl. V: 2–4).[10] Since his article was not only about Purkin Kuk but also about other sites "*from the Stone Age*," Ljubić does not mention anything about the construction of the tumulus or the walls described by Botteri.[11] In any case, Botteri and Ljubić are talking about a prehistoric tumulus, therefore a mound, and not of a hillfort or hillfort settlement.

5 — This probably refers to the remaining visible part of the western wall: 3 m excavated (1 section) and 5 unexcavated sections = 15m.

6 — The size of a fist is approximately 10–12 cm x 10–12 = 1–1.2 m, but we believe such stones are too large for the fill of this mound. Or not?

7 — It is unclear whether this is a typo: either the wrong number or cm instead of mm. In fact, 10.000 cm = 100 m.

8 — See note 7.

9 — Until Botteri alerted him to the mound at Purkin Kuk, Ljubić was unaware of this site and of the towers at Maslinovik and Tor. This can be seen from the book he published in 1873, three years before he was introduced to Purkin Kuk (Ljubić 1873). The first chapter, titled „The Pelasgian-Greek Period", shows that Ljubić was familiar with the construction methods of the „cyclopean" walls of Pharos, and it can be assumed that he would also have mentioned those on Purkin Kuk, Maslinovik, and Tor if he had known about them (Ljubić 1873: 5-7).

10 — In the Archaeological Museum in Zagreb, these finds are listed under inventory numbers P-1894, P-1895, and P-1896.

11 — Botteri published his article on November 8th, but wrote it on October 26th, seven days after Ljubić had excavated at Purkin Kuk. Ljubić, however, does not cite Botteri's article, but only an anonymous short note about the finds of flint blades published in 1879 in *Bullettino di archeologia e storia dalmata*, Vol. 2, Split, 144.

Fig. 3 – Three chert blades; their drawings and descriptions were published by Ljubić (1881: 6, Pl. V, 2-4) (photo: Archive of the Archaeological Museum in Zagreb)

Botteri will mention Purkin Kuk once again 21 years later, when talking about an interesting tradition related to the fact that the Church of St. Nicholas in Stari Grad stands in the very centre of ancient Pharos. He states: "*However, it is certain that tradition places the church of St. Nicholas in the beautiful centre of the* ancient city*, and below the* Stradun*,*[12] *a kind of long and wide avenue leading to it* [the church]*, there is a corridor (tunnel) that leads left towards the south to the top of the mountain called* Purchiuchuch *(Purćiukuk), the peak where many years ago a prehistoric tumulus was destroyed and dismantled in a barbaric way (see Il Dalmata 1876 No. 90), next to the foundations of a square tower built without the use of mortar, using rustic blocks with edges worked by a flat angular hammer – a tower that was an observation point or a temple, or maybe a great tomb monument.*"[13]

After Botteri and Ljubić, as we said, Purkin Kuk would not be mentioned for another 70 years. Finally, in August 1966, Vladimir Mirosavljević and Marin Zaninović visited Purkin Kuk and confirmed the presence of a "*typical hillfort rampart*" and a levelled mound in the middle (Fig. 4). According

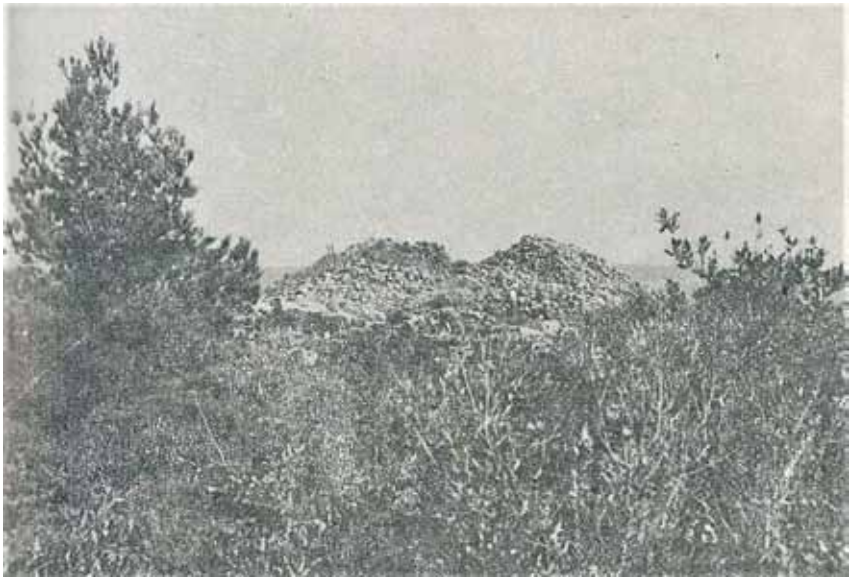

Fig. 4 – A photograph of the Purkin Kuk mound from 1978. View from the southwest, where a trench (probably made by Ljubić) is clearly visible in the middle of the mound (from: Zaninović 1978: Pl. XIX: 2)

12 —— This street existed until the construction of the old road to the city of Hvar in the 1930s: it went from the direction of the city, approximately 40 meters east of the Dominican monastery, towards the eastern part of the Church of St. Nicholas (see Austrian cadastral map). We thank Aldo Čavić for this information.

13 —— Botteri 1897 (front page): „*E' certo però che la tradizione colloca la chiesa di San Nicolò nel bel centro della'* Antica Città*, e, sotto lo Stradone, che le dà accesso, una specie di lungo ed ampio viale, fa correre un sotterraneo, che mena a sinistra verso mezzodi, sino alla vetta del Monte, detto* Purchiuchuch *(Purćiukuk) vetta dove, anni fa, fu alla barbarica sventrato e smantello un tumulo preistorico (V.* Dalmata *1876 N. 90) tumulo accanto al quale rimangano ancora le fondamenta di una torre quadrata costruita senza calce e a pietra bugnata con spigoli angolari rettilinei e listelli a martellina, torre, che, se non fu torre di vedetta o tempio, sarebe stata pure un monumento sepolcrale, illustre*". Regarding this tunnel, it should be noted that the valley („gudura"), once densely terraced, between the Church of St. Nicholas and Belebić in the 1834 cadastral map is called *Valle St. Nicolo* and that the stream (*sorgente*) of *Rudina* is drawn through the middle of it. A medieval path went through there; it was used by the inhabitants of Stari Grad to go to the other side of the island, most likely over the highest peak of Hvar, Sv. Nikola.

to them, the rampart, including the mound, was about 40–44 meters long, 30 meters wide, and over 4 meters high. On the surface, they found various prehistoric and ancient artifacts and preliminarily concluded that "*the life of the local Pharian Illyrians continued here parallel to the existence of the Hellenic settlement down in the bay*" (Zaninović 1973: 205). Zaninović conducted excavations at Purkin Kuk during three short campaigns from 1978 to 1980 (a total of 10 days). His excavations were focused on the massive walls on the western and southern sides of the mound, which were mentioned by Botteri and which we will refer to as Z1 (western) and Z2 (southern). Both sketches of the site, especially the position and extent of the walls published by Zaninović (1978, appendix at the end of the journal; 1995: 141), should be discarded because, as we will see, they do not correspond to the actual situation. The information provided by Zaninović for Z1 and Z2 is no more detailed than Botteri's; in fact, Botteri described the remains of these walls in more detail, including the diverse shapes of their blocks. Zaninović expanded the excavation of Z1 towards the north (Fig. 5: Z1a–c) and the excavation of a trench along the inner eastern part of Z2 (Fig. 5: Z2a–d).[14] He (re)excavated the corner where Z1 and Z2 meet (described by Botteri) down to the bedrock and determined the height of two blocks to be 95 cm and that the lowest corner block does not have a drafted worked edge, "anathyrosis." He then notes that Z1, after the corner, has a large block measuring 1.20 meters in height and 1.60 meters in length (Fig. 6). Z1 extends 16 meters in length and is 1.5 meters wide, after which it turns east for 2.30 meters (our label: Z1a) and then turns again towards the northeast, where it was excavated for 7 meters (our label: Z1b and c). This part looks more like a supporting wall of a "*large hillfort mound, which goes down the steep*

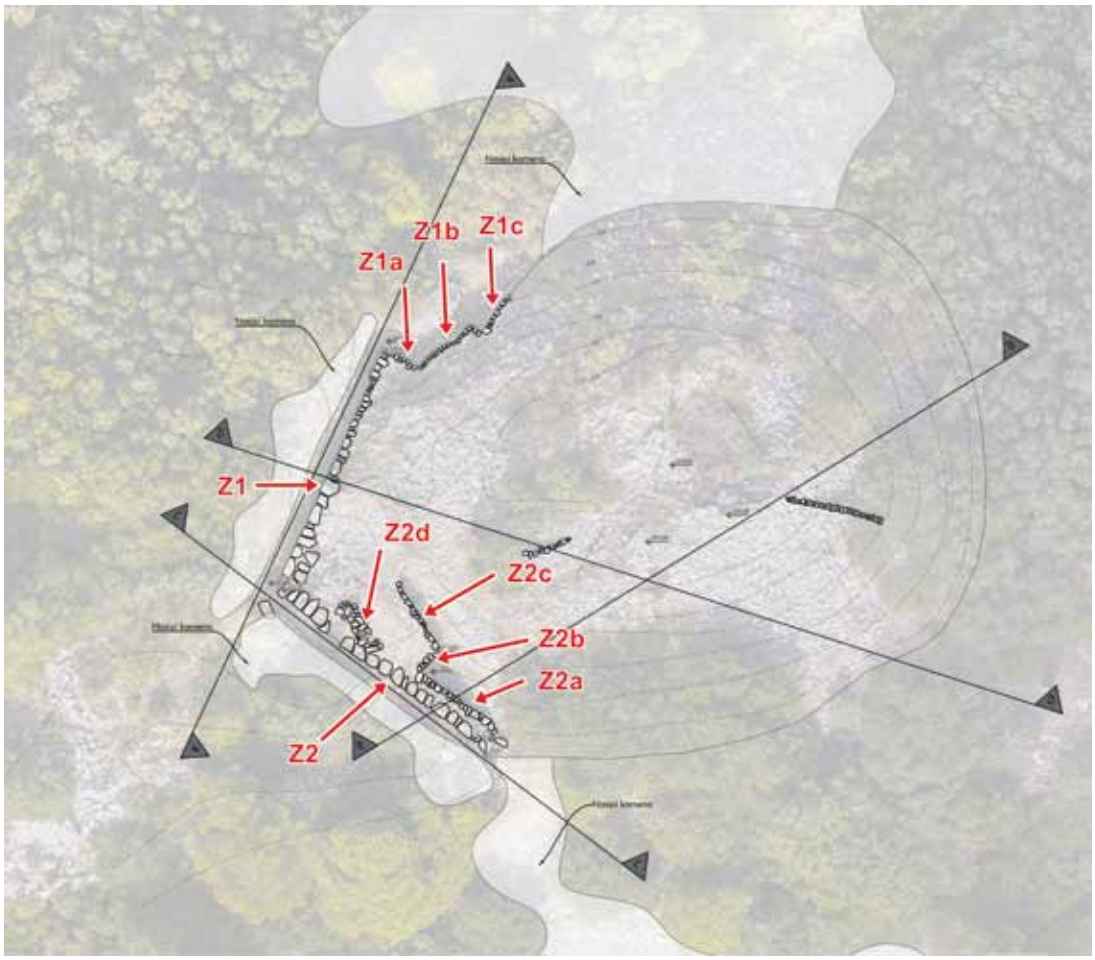

Fig. 5 – Ground plan of the mound at Purkin Kuk with the remains of Z1 and Z2 (photo: Ž. Peković; modified by: B. Kirigin, J. Barbarić)

14 — Zaninović does not provide enough precise data about these masonry structures, which we will describe in more detail below.

Fig. 6 – Extreme south-western part of Z1 and the corner of Z1 and Z2. In the lower left, a large stone block in Z1; above the corner, a dislocated corner block with a drafted edge; below it, two blocks with drafted edges *in situ* (photo: B. Kirigin)

northern slope for about a hundred meters; this steepness served as a natural protection and did not require large massive megaliths like those on the easily accessible western side" (Zaninović 1981b: 62–63). Digging along Z1a–c he did not reach to the bedrock. In the lower part of Z1a, a "*foundation projection was excavated, extending 35 cm from the upper wall built on it, and it is 1.80 meters long.*"[15] This wall is 1.60 meters high. He then notes: "*We excavated the corner joint*[16] *to a depth of 1.20 meters, but we were again unable to reach the foundation of the wall because of difficulties in widening the trench between the wall and the excavation and the large blocks...*" (Zaninović 1981b: 63).

His southeastern wall (our Z2), like Botteri's, is 15 meters long. They reached the bedrock "*at the end of the southeastern section*" (Fig. 23) where there is a nearly vertical cliff 3 meters high. At this end, a 2 x 3 meter trench was opened on the north inside of Z2. Among the mixed large and small stones and red clay, he discovered the inner face of Z2 (our label: Z2a), made of smaller stone blocks (Fig. 24: Z2a; Figs. 25–26). Z2 is 1.5 meters wide. The middle is filled with irregularly shaped stones and red clay. The trench was then extended westward. There, "*at 7.30 meters from its southern end, a second wall appeared, perpendicular to the rampart, which is 1.40 meters wide here (Fig. 24: Z2b; Fig. 25). It is also the height of the excavated part of this dry-stone wall, which is 1.80 meters long and ends in an irregular heap*" (Zaninović 1981b: 62). The position of the corner and walls of Z1 and Z2 led Zaninović to conclude that they were built here because the western part of the hillfort was the hardest to defend (Zaninović 1981b: 62–63).[17]

15 — We did not identify that block during our visit on 10 October 2022, but it could have been buried under stones.

16 — We assume this is the corner of Z1 and Z1a.

17 — That is correct, but reaching that location from the west with an army is nearly impossible. It might be easier to approach from the east, although that is also problematic because the access is such that the goal can only be reached if the soldiers go one after the other in a single file. But what would an army even be doing here?

The indigenous settlement, according to Zaninović, was located on the southern slope just below the summit, where there is a "natural terrace, 8–10 meters wide, about 50 meters long, on which dwellings could also have been situated" (Zaninović 1978: 49; 1995: 153).[18] This area, called Laze, will be discussed in more detail later.

Regarding the found artifacts, Zaninović notes: "*the finds along the walls include fragments of handmade and ancient ceramics, as well as several seashells*" (1995: 153). In Appendix 2 (nos. 4–6, 10–13), we describe where Zaninović found various fragments. Since we cannot verify them (as their storage location is unknown), we can only observe that he found them. Certainly of interest are the polished tools made of porphyry, which he found on the northern, western, and southern slopes of the mound (Appendix 2: 5–6, 10). Based on the finds of blades reported by Ljubić, he believes that Purkin Kuk dates to the Early Bronze Age (Zaninović 1978: 48; 2015: 160). However, based on the similarities between the walls of Purkin Kuk and those at Tor, he dates the "*hillfort rampart*" or "*fortress*" to the time of Demetrius of Pharos, i.e., the end of the 3rd century BCE (Zaninović 1984: 42; 2015: 170). Due to its excellent view of the Stari Grad Bay (Vala), the Stari Grad Plain, and the surrounding hills including Tor, with views of Šolta and Brač, Zaninović argues that this was undoubtedly the very fortified place mentioned by Diodorus (Diod. Sic. XV, 14) "*where the Greeks allowed the barbarians to continue living*" (Zaninović 1973: 205; 1978: 50; 1984: 42; 2015: 160, 164, 166). He also considers it to be an "*imposing hillfort site*" (Zaninović 1984: 42).

Nikša Petrić would also briefly discuss Purkin Kuk in two papers, noting that it is a "*well-fortified hillfort*" and that the northern slope includes "*potsherds from the Bronze Age, Iron Age, and antiquity*" (Petrić 1975: 244–245; 1979: 73).

Miroslav Katić, on the other hand, argues that Purkin Kuk was part of the tribal community of Stari Grad and that the inhabitants of Purkin Kuk represented the core of that community, "*overseeing the Stari Grad Bay, and in the 5th century BCE, when the opportunity arose, establishing a lowland settlement on the coast*," i.e. at the site of present-day Stari Grad. He also notes that the settlers from Paros created the same system of protection for the Stari Grad Plain and "*that they would build their watchtower right next to the old Illyrian stone mound on Tor. They would build a new tower on the northern side of the island, at the Maslinovik site, and a larger fortified structure would be erected at Purkin Kuk*" (Katić 1995: 52).

During the systematic field survey of the island of Hvar by members of the international project "Hvar – Archaeology of the Mediterranean Landscape" (1982–1993), Purkin Kuk was also examined (SG0015.00; Gaffney et al. 1997). It was determined that it is a large stone mound at least 43 meters long, and that the western side has massive walls which may form a part of a Greek/Illyrian watchtower partially integrated into the prehistoric mound (SG0015.01; Gaffney et al. 1997: 189–190).

In his study of Greek Pharos, in the chapters "Hillforts and mounds around the Stari Grad Plain" and "Mounds in the Stari Grad Plain," Branko Kirigin expresses the opinion that Purkin Kuk is not a fortress because its area is small compared to other nearby hillforts and there is insufficient documentation to confirm that it is an "*imposing hillfort site*," a "*main hillfort*," or a "*prehistoric predecessor of the ancient city*." He suggested that the walls of Purkin Kuk mightbe "*a Greek/Illyrian watchtower (something similar to that at Tor),* or the *"remains of some holy site created next the mentioned tumulus"* (Kirigin 2004: 31–32; 2006: 19–20), and that it is "*quite possible that it had a special (cult?) function which continued even in the Greek period with additions next to its western section*." Citing Malkin (1987: 184), he notes that "*during colonization, in some cases, the Greeks respected indigenous cult sites*" (Kirigin 2004: 113–114; 2006: 91). Elsewhere, Kirigin notes: "*This mound, being the largest on the island, could have had some ritual significance, possibly relating to the control of land fertility of the plain and thus must have been connected the nearby native settlement at Stari Grad itself. Beeing so important it is possible that the new settlers - the Greeks - added a sanctuary to the west side of the mound, that would coexist with the native ritual site.*" He adds, "*As the excavations were never continued it is hard to conclude what in fact this structure represents. It looks like a fortification (more than twice the size of the Greek towers at Tor and Maslinovik, both visible from here), but it could also be a storage house as fragments of pithoi - large round storage vessels were found, or a sanctuary where offerings (decaten) mentioned in two Greek inscriptions from Pharos dedicated to Aphrodite of grain were given*" (Kirigin 2003: 39).[19]

18 — We were unable to verify the existence of this terrace. The terrain is overgrown but not impassable. A terrace implies a leveled area created for cultivation. It is not shown on the Austrian cadastral map from 1834, nor on the aerial photograph from 1944 (here Fig. 7).

19 — The tenths mentioned in the inscriptions do not refer to grain but are general in nature.

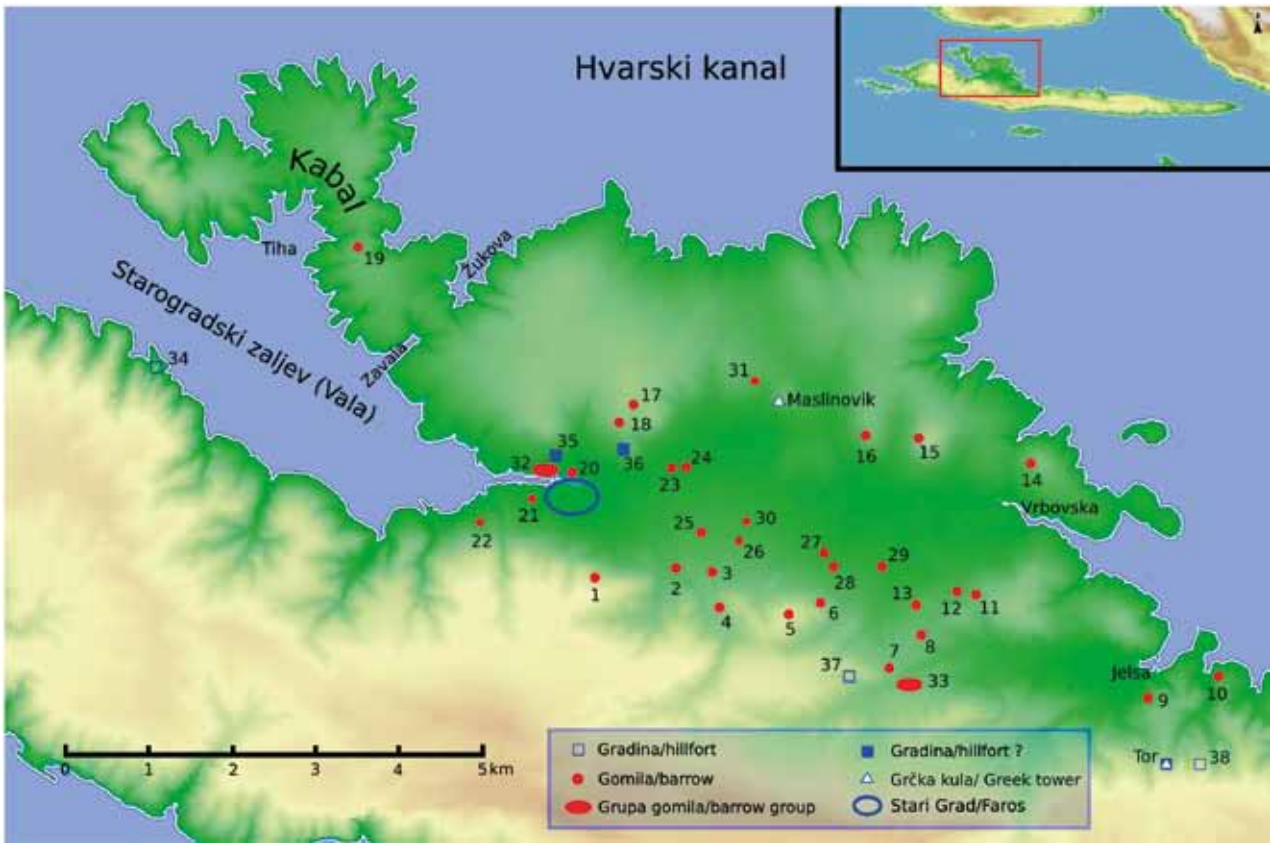

Fig. 7 – Hillforts and mounds in the Stari Grad Plain and Jelsa Plain (from: Kirigin et al. in press).

In a recently published book on Roman Pharia, Vinko Tarbušković briefly mentions Purkin Kuk in a summary of the archaeological past of the island of Hvar, referring to Zaninović and Petrić and suggesting it as a possible "*hillfort of cultic character*," citing Kirigin (Tarbušković 2018: 8, 18, 25, 26, 28, 37).

This is basically everything that has been written so far about Purkin Kuk.

In almost all of their works on Purkin Kuk, Zaninović, as well as Petrić and Katić, talk about an Illyrian hillfort or hillfort settlement, but, as we have already noted, they provide no evidence to support this. Zaninović states that, as we mentioned, the prehistoric settlement should be sought on the southern steep slope of Purkin Kuk because it is sunny and sheltered from the bora wind.[20] On the other hand, Petrić, as we have seen, mentions that the slope "*descending towards the Stari Grad, i.e. the northern side, contained potsherds from the Bronze Age, Iron Age, and antiquity*," but without providing further details except for noting that "*the hillfort has not been systematically researched*" (Petrić 1979: 73). Purkin Kuk is referred to as a hillfort on the internet (Wikipedia etc.) and in tourist presentations. As we will see, Purkin Kuk has many interesting and attractive details that are closer to the true picture of this site and are much more reputable than the misinformation that is publicly available now. But repetition naturally leads people to start believing that the misinformation is the truth, because it is stated by prominent archaeologists.

LEGENDS

Botteri (1876a) notes about Purkin Kuk that "*after having attracted the imaginative attention of the inhabitants of the central part of the island for centuries, eternalizing the legend of its buried treasure, it eventually attracted the*

20 — His statement is contrary to his opinion that the indigenous settlement at Tor was on the steep north-facing slope exposed to bora wind (Zaninović 1973: 208; 1978: 25; 1981a: 201, 203, 204; 1982: 62).

attention of those who intended to study these ancient memories. The popular myth surrounding the mountain peak became the subject of study, which has produced a solution that has not yet been published, and which may sound fantastic today but could be confirmed by proven facts tomorrow". He then mentioned, as we noted above, the legend of the existence of an underground tunnel connecting Pharos with Purkin Kuk. Ljubić (1881: 5) mentions that there is a folk tale "*about an immense treasure buried there (a hen with 12 golden chicks, etc.)*," but a story with a similar theme told by Rakelina Moškatelo (born in 1938) from Dol is much more interesting. She says: "*It is said that Queen Teuta buried a golden hen with seven golden chicks on Purkin Kuk. Since then, many people have dug around Purkin Kuk to find that hen. This can be seen by the trenches in the middle of Vela Gomila. Nearby, there is Vilina Stina* [Fairy's Rock]. *It is a large rock offering a view of the entire Dol, and it is said that a fairy brought that rock here on her head*" (Anonymous 2012: 4; Dragić 2018: 285). Zaninović (1978: 47) recounts a story he heard from workers while he was conducting excavations there. They say that the mound on Purkin Kuk was built by "*convicts who carried large stones up here*", that "*fairies gathered here*" and that "*gold is hidden here*." To the west, close to Purkin Kuk, there is the toponym of Belebići (see below). This is an old toponym of Velebit mountain range, which is associated with a story about fairies (Jardas 1957: 39; Marjanić 2005: 111–169, 143, note 56). These legends do not mention anyone being buried at Purkin Kuk.[21]

NAME

The toponym consists of Purčin or Purkin, an adjective, and Kuk, a noun. In older literature, as we have seen, we find Purčinkuk, Purchiuchuch (Purćiukuk), or Purčin-kuk (Botteri, Ljubić), while all the more recent works mention only Purkin Kuk. Purkin Kuk is a broader toponym that encompasses not just the mound, but also the wider area around it. Since it has become customary to equate the mound with the toponym Purkin Kuk, we have retained this name. The Austrian cadastral plan from 1834 (cadastral parcels 3988, 3989, 3991, 3940)[22] and Austrian military maps (2nd and 3rd survey, 1851–1854) do not mention this toponym. In toponymy, "kuk" is a term for a solid monolithic rock (Curić, Curić 1999: 31).[23] Toponyms with an adjective and a noun are not old and do not indicate their content.[24] Nearby, at the neighbouring village of Dol Sv. Ane, there is Vela Gomila (JE0090.00), which literally means "large mound" with prehistoric pottery on its surface (the toponym is recorded in the Austrian cadastre from 1834, but the mound itself is not marked). It is about 1.5 km east of Purkin Kuk in a straight line. Its toponym indicates social memory and content, which is not the case with Purkin Kuk. However, the mentioned legends show that the awareness of the age and mysticism of Purkin Kuk existed among the local population more than we recorded for other mounds on Hvar. We have seen that the mound on Purkin Kuk was also called Vela Gomila.[25]

MOUND LOCATION

The mound (Fig. 1; Fig. 2; Fig. 8: 1) is not at the very top of the hill, but on the eastern slope of a larger plateau, which is about 10 meters higher than the place where the mound is situated – an area known as Belebići and Njivice (Fig. 8: 4–5).[26] Near Belebići, the sketch by Zaninović from 1978 shows a square cistern (c. 2x2 m), which Ivica Moškatelo (a local school teacher from Dol) says was built after World War II. Along the eastern part of the mound, Zaninović drew a small regular dry stone structure that we were unable to identify due to vegetation; to the east of it, he drew a small shed (*štacija*) that was built at the end of the

21 — The fact that Purkin Kuk is still interesting as a story is also shown by the comic strip „Bortul, the Knight of Purkin Kuk" published in *Tartajun* no. 11, 2015.

22 — Purkin Kuk is a cadastral breaking point between Dol and Stari Grad: during the survey of 1834, trigonometric point no. 14 was placed on the mound (Roić, Sanseović 2022).

23 — This solid monolithic rock on Purkin Kuk could be the Vilina Stina, visible only from the direction of the south and Dol. A similar toponym with a mound is Orlov Kuk near Kula Norinska, close to the Neretva estuary, see Čače 1985: 66, 68–70. On Velebit, especially in Paklenica, adjectives with the noun „kuk" are very numerous and some are connected to Velebit mythology, such as Urljaj Kuk, now Anića Kuk, which is the largest rock on Velebit (Šprljan 2018: 125 and passim).

24 — Vladimir Skračić, oral statement, 16 June 2022.

25 — For information on how the toponym „Gomila" can refer to a hillfort, see Batović 2004: 905–906.

26 — Zaninović (1978: 50) states that this plateau was called Grohote. In fact, this location is west of Njivice and above the Duboka valley.

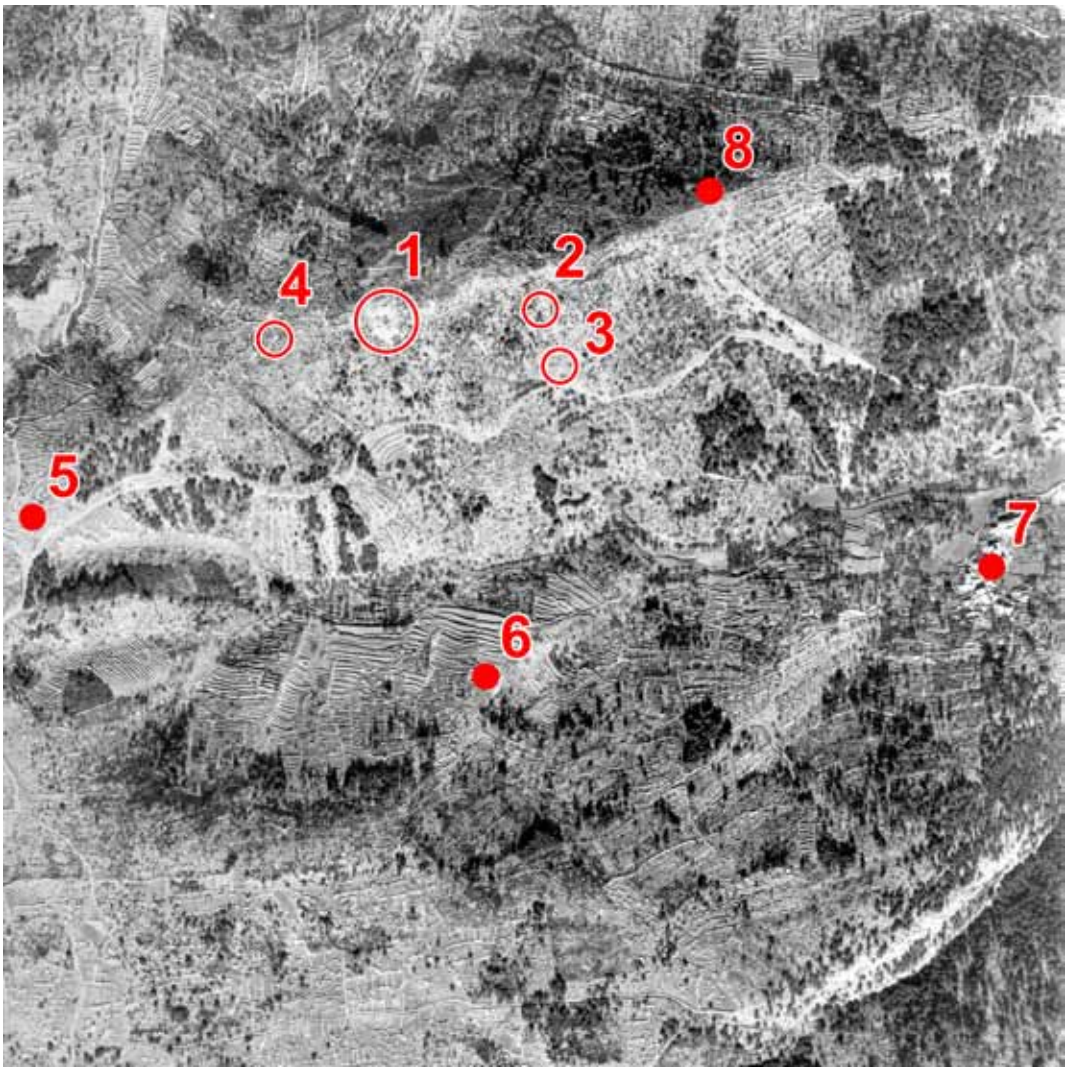

Fig. 8 – Aerial photograph from 1944 of the area around Purkin Kuk. **1.** Mound at Purkin Kuk, **2.** Purkin Kuk (SG064.00), **3.** Laze (SG063.00), **4.** Belebići, **5.** Njivice, **6.** Lombardija, **7.** Dol Sv. Marije, **8.** Likoreva kuća (Ostojić) (photo: RAF; modified by: B. Kirigin, J. Barbarić).

19th century to house the hail defence (Moškatelo 2008). The mound itself is on a gentle eastward slope, towards Likareva Kuća (Ostojić house, Fig. 8:8), which further descends to the Church of St. Roch, situated in front of the fertile valley of Dol Sv. Marije (Fig. 8: 7). This slope is clearly visible on the Z2 wall incline, where the elevation difference from the corner connecting it to Z1 is lower by about 1.0 – 1.5 m (Fig. 9: II). The terrain slope from the highest point on the western end of Z2 to the highest point on its eastern end shows an elevation difference of 5.50 m, so it turns out that the corner of Z1 and Z2 with the drafted edge is actually at the highest natural point of this monument (271 m above sea level), while the peak of the mound itself is now at an elevation of 275.20 m. The elevation difference between the lowest point of the northern corner of Z1 and the highest point on the mound is 6.9 m, while the highest peak of the mound is 5.80 m higher than the lowest point of Z2 (Fig. 9: II). Slightly east of the end of Z2, there is a narrow path leading east towards Dol. Immediately next to it on the south side is the top of the cliff called Vilina Stina. This cliff is also located below the southern part of the mound, where it is about 4–5 m high. It creates a kind of long shallow overhang, and people used to shelter there from the rain while herding goats and sheep.[27] The steep southern part below the mound and Vilina Stina is called Laze. To the west

27 — Oral statement by Ivica Moškatelo.

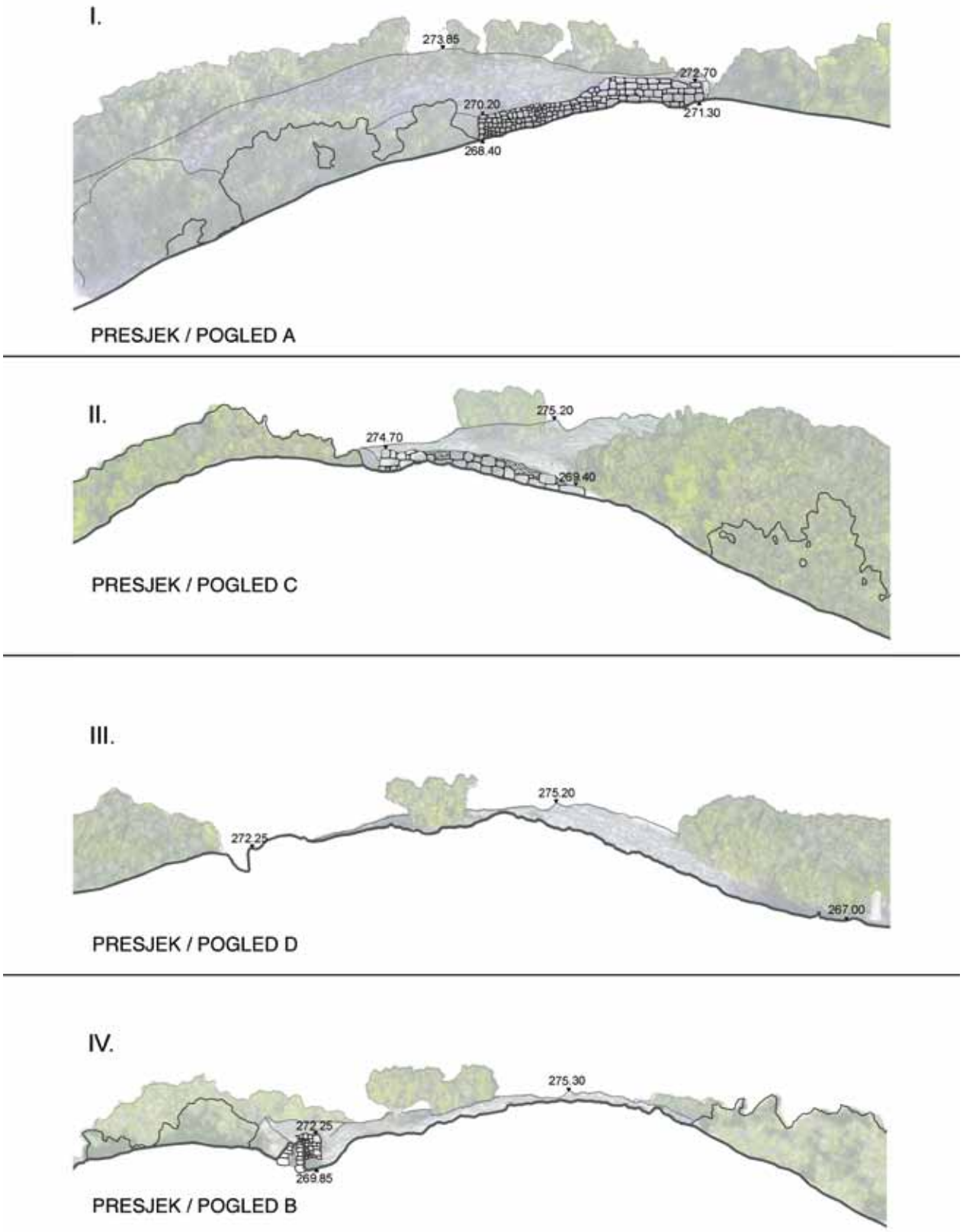

Fig. 9 – Cross-sections through the mound at Purkin Kuk indicated in Fig. 4. Note: the shapes of the blocks of Z1 and Z2 in these cross-sections are arbitrary (author: Ž. Peković; modified by: A. Milošević, B. Kirigin)

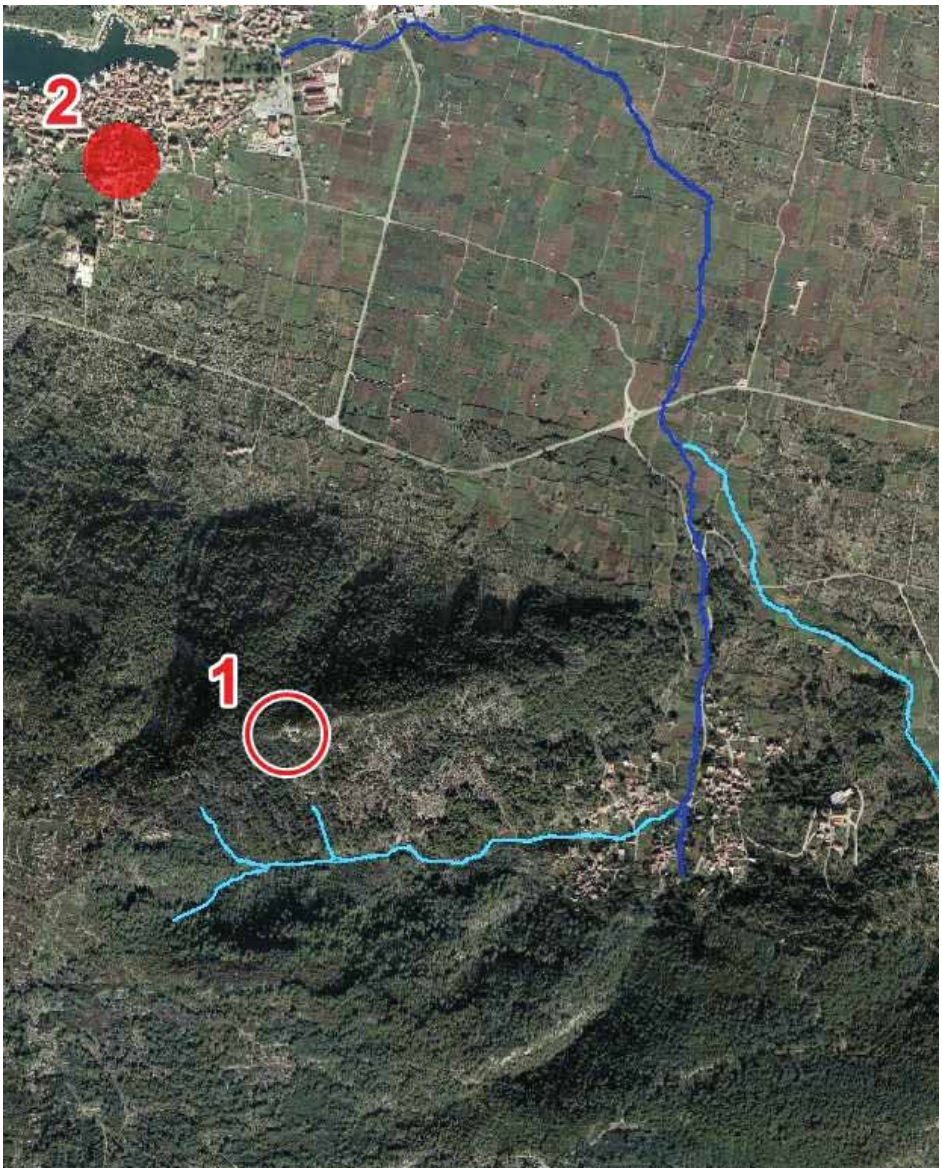

Fig. 10 – Reconstruction of watercourses from Dol to Stari Grad. The main course is marked in dark blue, the tributaries in light blue. **1.** Purkin Kuk, **2.** Stari Grad (Pharos) (from Moškatelo 2007; modified by: B. Kirigin, J. Barbarić)

of Laze is Pliš, further east are Piski, while the area from Piski to the Church of St. Roch is called Bonda. These four toponyms make up the northern slope of the valley called Lombardija, which has a stream/torrent (*torrente Lombardia*) flowing through the middle of it, as noted in the Austrian cadastre from 1834. The stream is known as Kokotić and has three tributaries, one of which springs about a hundred meters below Purkin Kuk (Fig. 10; Moškatelo 2007: 14).[28]

Today, there are no large or heavy stones on the mound itself, except occasionally on the western side. Most of the stones are medium-sized or smaller – about the size of a fist, as Botteri says. There are no noticeable worked stone pieces. Around the mound, a large worked block is located on the southern slope below Z2 (Fig. 11). On the current surface of the mound, besides significant damage on the western and in the cental part of the mound, where six benches

28 —— Torrential tributaries were mapped in the Austrian cadastre from 1834. This karst creek indeed flows into the sea in Stari Grad, in the Vorba area, while an underground stream is located within the ancient city, between the old transformer station and Remete kuća, where the headquaters of the Agency for the Management of the Stari Grad Plain is.

Fig. 11 – Displaced worked block on the southern slope just below the mound (photo: B. Kirigin)

and a telescope (!?) were recently installed (Fig. 12),[29] there is a significant quantity of reddish stones (similar in colour to potsherds), soil, humus, dry leaves and branches, low vegetation, and grass; also, in the centre and around the mound, there are holm oak and marquis trees, making a surface inspection of the mound almost impossible. Rare potsherds are visible on the mound's surface, but there are no animal bones, house daub, or shells. At the top, there is a visible concrete triangulation geodetic point (Roić, Sanseović 2022).

Fig. 12 – Bench, telescope, and an information board on the mound; on the left, the inner walls of Z2 (photo: J. Barbarić)

29 —— They were installed by the Agency for the Management of the Stari Grad Plain. Peković's project envisioned a gazebo for visitors slightly west of the corner of Z1 and Z2 (Fig. 12), which is a much more appropriate solution.

VISIBILITY

Zaninović had already noticed that Purkin Kuk had exceptional visibility of its surroundings, from Šolta across Brač, to the Stari Grad Bay, Stari Grad (Figs. 1–2), the large fertile plain and the surrounding hills, the village of Dol, and the high ridge of the main Hvar massif towards Tor and further to the Makarska coast (Figs. 1–2). In fact, since Purkin Kuk is not at the top of the hill, the only obstructed view is towards the southwest, behind Belebić and the beginning of the western part of the Lombardija valley, almost to Lompić at the entrance to the Stari Grad Bay. Here, the ground of Purkin Kuk rises slightly, blocking the view (surveillance) in that direction.[30] This direction also provides the easiest but longest approach to Purkin Kuk. Perhaps this is why Belebići include the remains of walls made of larger stone blocks and coarse ancient pottery, which we recorded in 1982 (see below). However, it is not crucial for the mound to have a view of the entire surrounding landscape, but it is important that the mound overlooks places where people live and work. In the narrow rocky area in the southwestern part of the island, which is not visible from Purkin Kuk, few people reside.[31]

EXCAVATIONS

In the legends we mentioned, it is said that people dug at Purkin Kuk in search of treasure buried there by Queen Teuta. It is said that fairies lived there, that it is the site of Vela Gomila and Vilina Stina, that convicts carried stones for its construction, and that there was a tunnel from Stari Grad to Purkin Kuk. These traditions are certainly old and clearly indicate that the inhabitants of Dol and Stari Grad associate this place with witchcraft, mystery, and sanctity. Botteri also speaks about this; regarding his cone in the middle of the mound and the dry stone walls around it, we do not know when they disappeared or where they had stood. They might have been removed by Ljubić when he excavated the mound in 1876. His trench in the middle of the mound is most likely the one seen in the photograph published by Zaninović (1978, Pl. XIX, Fig. 2) (Fig. 4). Zaninović notes that during World War II, in 1944, the Nazis "*set up their machine gun and artillery nests on Purkin Kuk to control the entrance to the Stari Grad Bay in anticipation of a possible Allied invasion of our coast. In doing so, they damaged part of the fortification wall*." Unfortunately, it is not specified where these nests were located or the place where the wall was damaged (Zaninović 1978: 50). In Peković's aerial photograph of the complex on Purkin Kuk (Fig. 13), we see that the middle of the mound has some kind of square pit full of greenery, probably branches placed there when the terrain was cleared by the Agency for the Management of the Stari Grad Plain to improve the visibility from the mound. In fact, it is part of the mentioned excavation of the mound in the east-west direction (probably made by Ljubić). Trees of holm oak are also visible at the mound, especially around the mound itself, which, as we have seen, caused significant problems for researchers. This vegetation was less abundant in earlier times, when holm oak was collected for heating, cooking, and making various utilitarian items (Fig. 8). However, unlike other mounds on hilltops in Dalmatia, the vegetation here is considerably more pronounced, suggesting that the mound may contain more soil, as mentioned by the researchers themselves (red soil, black soil, humus). This soil might indicate that the mound was not built solely from stones but was subsequently filled with soil at some point in prehistory, like the mound of Velika Gruda near Tivat in the Bay of Kotor (Primas 1996; Della Casa 1996; Govedarica 2010; 2021; Forenbaher 2023). However, it is also possible that the black soil is a remnant of some cremation deposit resulting from ritual fires on an altar, which further intensified the connection of Purkin Kuk with the broader surroundings on specific days.[32]

We do not know exactly where and how much Ljubić excavated on that rainy day. Using the formula provided by Chapman et al. (1996: 162–163) for northern Dalmatia, one person can excavate and deposit around 0.8 m² of stones per day. Since it was a bad day, and the first day, it can be

30 — Visibility from Purkin Kuk on Google Earth is extremely lacking, especially for the southwest and north parts. The elevation is also inaccurate.

31 — The terracing of slopes and higher plateaus on the island of Hvar took place in the 19th century AD, during a great boom in Dalmatian wines that sustained the livelihood of 80% of the population (Defilippis 2001: 59-60).

32 — Indirect similarities can be found in the famous sanctuary of Zeus on Mount Lykaion in Arcadia, which existed from the Mycenaean to the Hellenistic period (Romano, Voyatzis 2014; 2015; 2021), but there the dark layer is full of various finds.

Fig. 13 – Aerial photograph of the complex at Purkin Kuk with an imagined lookout spot (photo and made by: Ž. Peković)

assumed that a single worker could not meet this standard but had a lower output, say 0.5 m². This would mean that all of Ljubić's workers moved or excavated at least 19.5 m³ (almost 1% of the total volume of the mound, see below). We do not know if he started excavating from the top of the mound, nor do we know where the stones ended up (most likely down the slope of the mound itself). The trench that is somewhat visible today, in the east-west direction, is approximately 17 meters long, about 6 meters wide, and around 2 meters deep according to our measurements. It is possible that he also excavated in the areas where the western and southern walls were discovered, as mentioned by Botteri (1876a), which were mostly visible at the height of a single row of blocks, and already excavated at the corner of Z1 and Z2 and northward. In this area, Zaninović continued the excavations, revealing a larger part of the outer face of these walls, which he did not sufficiently document; also, we do not know where his excavated material ended up (it appears to be along the outer edges of the trench near the walls and down the southern and northwest slopes), nor do we know the location of the mentioned artefacts.[33]

As we have seen, the top of the mound is largely destroyed, and the features observed by Botteri are no longer discernible. However, the stones on the south eastern, eastern, and partly northern side of the mound are fairly uniform. If the mound was circular in shape, its original appearance, assuming Z1c is its outer edge, would have had a diameter of 26.3 meters. The embankment of the mound is particularly pronounced on the northern side, where it is now impossible to determine its end due to vegetation (Zaninović mentions a length of 50–100 meters). The one on

33 — We know about the members of the archaeological team of these excavations, but we do not know the number of hired peasants from Dol (Zaninović 1978; 1981). We were unable to trace the finds, although we tried.

the eastern side is quite clear due to the relatively flat terrain, measuring about 18 meters from the top to the outer edge. On the southern side, there is a cliff (Vilina Stina), so the situation is different here, although it is also difficult to determine the exact state due to vegetation. The situation on the western side is the most complex. Here, from the top of the mound to the corner of Z1 and Z2, the embankment extends for 27 meters, which is 9 meters longer than on the eastern side. The slope on this side is not uniformly steep like on the other sides but appears to be on two levels: the higher one forms the embankment as elsewhere, while the lower one is somewhat flatter and at times at the height of Z1 and Z2, possibly due to various previous excavations and fillings.

We should point out something that differs from all previous observations: Z1 and Z2 are not at a right angle but the angle is wider by 12 degrees (Fig. 5). The orientation of Z1 is not exactly north-south; rather, it tilts towards the east by 23 degrees, while Z2 tilts towards the southwest by about 27 degrees. It seems as if these two walls form a fan with the mound as the main central decoration. Also, both walls are not on the flat bedrock surface but on slopes: Z1 slopes down towards the north, and Z2 towards the east, with a height difference of about 1–2 meters on both sides. For the northern corner of Z1 to reach the height of the southern corner, it is missing about 2.5 meters in height, while the difference is slightly lower for Z2.

Since it is stated that there was a square tower measuring 15 x 15 meters here, this concept does not match the state of affairs on the ground. However, even if we assume it was the case, the southeastern corner of this supposed square building would have been almost right on the very top of the mound! This would certainly not be possible, as it would require removing a substantial part of the mound (at least a quarter), and no objective would be achieved.

The description of Z1 and Z2 is provided below, but we can say here that these walls were built in the 4th/3rd century BCE, which indicates that they are younger than the mound itself but are associated with the mound for reasons that are still unclear to us. In fact, it is unclear why defensive walls would be constructed around the western part of the mound. If we exclude the possibility that this was a military structure, we are left wondering what exactly this site represents. In the region of Herzegovina, specifically at Ošanjići near Stolac and at the mound of Martinovića gomila, about 6.3 km away in a straight line, it is known that large stone mounds are located within Hellenistic defensive walls of these settlements, as confirmed by archaeological finds. The area of the acropolis around the mound in Ošanjići measures 146 x 60 meters and is protected by a rampart with gates and towers that is about 65 meters long. At Martinovića gomila, the acropolis with the mound is protected by a Hellenistic rampart that is 160 meters long (Marić 1975; Marijan 1999). Although this is an interesting parallel, we will see that it cannot be directly related to Purkin Kuk.

DESCRIPTION OF THE WALLS

Z1

This wall is 16.25 meters long. From the southern end, extending for about 11.90 meters, the wall is uninterrupted and reaches a height of about 2.80 meters, where eight rows of blocks of various shapes and dimensions are preserved (Figs. 14–16). Further on, towards the northern corner, the original Z1 is visible at a height of two to three rows, made up of large, well-fitted blocks, with one block added above them on the corner (Fig. 14). The northern end (the corner with Z1a) is preserved at a height of 1.90 meters. The bedrock is not visible. At the bottom, there are smaller blocks; the lower two rows are evidently original larger blocks, but their finished edges are not visible. The two upper large blocks are an addition (Fig. 15). On the opposite southern side of Z1 near the large block (1.20 m high, 1.80 m wide), the wall is preserved in three rows of blocks with a total height of 2.10 m (Fig. 6). The southern end of Z1 (the corner with Z2) is preserved in two rows of larger blocks with drafted edges at a height of 1 m. The corner rests on the bedrock. On top of them, there is a third larger block with drafted edge that is displaced and overturned (Fig. 6).

The height difference between the lowest levels of the southern and northern corners of Z1 is 2.9 meters (Fig. 9: I). Since this wall was last excavated 44 years ago in a trench about 1 meter wide, vegetation and the collapse of the western profile make it impossible to determine whether the bedrock was reached everywhere (the same is true for Z2). What can be seen indicates that most of the lower blocks of this wall are made of various finely finished blocks of smaller dimensions com-

Fig. 14 – View of the central highest part of Z1 from the west side (photo: B. Kirigin)

Fig. 15 – View of the central part of Z1 with polygonal blocks and superimposed blocks on the left (photo: B. Kirigin)

Fig. 16 – Extreme northern corner of Z1 (photo: B. Kirigin)

pared to the upper ones, which are larger. These lower blocks are mostly polygonal, and some are triangular; they are very compact in appearance, and with good joints (Figs. 14–15). Perhaps this is because they were buried for a long time, unlike the upper larger blocks, some of which are polygonal and some rectangular, separated by the effects of vegetation and weathering. The same is true for Z2. Around the middle of Z1, its height decreases towards the north. The width of this wall, 1.55 meters, is visible only on the southern part over a length of 4 meters. Z1 was horizontally stacked, and the builders ensured that the blocks were well arranged, obviously indicating that they had a clear construction plan.

Z1a

The length of Z1a is 2.30 meters, and the visible height is 1.60 meters. It extends in an east-west direction (Fig. 17). This wall is at a right angle to Z1 but is not constructed in the same manner as Z1. The corner blocks are large and almost rectangular and without drafted edges. Further on, there are smaller rectangles that are not as tightly fitted as those in the lower rows of Z1. However, this may be due to the pressure from the mound's fill. The width is unknown. It cannot be compared with the construction of Z2b and Z2c, especially not with Z2a (see below). Additionally, Z1a intersects with Z1b and is earlier. Behind Z1a, there are stones overgrown with grass, and it is possible that the inner corner of Z1 and Z1a is located there somewhere.

Z1b

It extends in a southwest-northeast direction and clearly abuts Z1a (Figs. 18–20). It is 4 meters long, and the visible height is 1.30 meters. It appears to have been built to support Z1c. Its northeastern end is sloped from bottom to top, clearly showing that it was added onto Z1c (Fig. 20). At that spot, the blocks, some of which are regular, are rather carelessly arranged. In general, the blocks of this wall are not as compactly stacked as those of Z1. Among these, at the bottom of this wall, there is a block 70 cm long, protruding 35 cm, which is 180 cm long according to Zaninović (1981: 63, Pl. 46, Fig. 2). The bedrock on which it lies is not visible. Behind Z1b is the mound's fill, with visible traces of Z1c, which is evidently earlier than Z1b.

Fig. 17 – View of Z1a from the north (photo: B. Kirigin)

Z1c

It is 3.5 meters long, with a maximum height of 1.70 meters. The top three rows were added later. The wall slopes to the north and disappears into the mound's fill. The wall is more compactly built than Z1b, although not nearly as much as Z1. The blocks are of various sizes and shapes, but they do not appear to have been taken from Z1. The wall is built straight, which would not be expected for a retaining wall of the mound. However, since only 3.5 meters are visible, it is possible that the wall was curved as seen in Fig. 5. The bedrock on which it lies is not visible. Behind this wall is the mound's fill.

Z2

It is 15 meters long and 1.5 meters wide (Fig. 5; Figs. 21–23). The bedrock is not visible due to the scattered debris from the southern profile of the trench excavated by Zaninović. Unlike Z1, this wall is visible at a height of 2–4 rows of blocks built in the same manner as Z1. Its eastern end is not precisely defined as it is close to the bedrock and about 2 meters away from the edge of the cliff (Vilina Stina), so it could have easily collapsed there

Fig. 18 – View of Z1a and the southern part of Z1b (photo and modified by: B. Kirigin)

Fig. 19 – View of the northern part of Z1b and the southern part of Z1c (photo and modified by: B. Kirigin)

Fig. 20 – Junction of Z1b and Z1c (photo: J. Barbarić)

Fig. 21 – Western end of Z2 (photo: B. Kirigin)

Fig. 22 – Central part of Z2 (photo: J. Barbarić)

Fig. 23 – Extreme eastern part of Z2 (photo: J. Barbarić)

(Fig. 23). It is not noticeable that it turns north.[34] From that point, a path leads east along the northern edge of Viline Stine, which further leads to the village of Dol Sv. Marije. Along the path, about 20 meters to the east, there is a plateau with a weathered informational board about the site, where fragments of ancient pottery and tiles are found. On the same path, just about 100 meters east of the mound, on a terrace 50–60 meters long, there is an area around 200 m^2 of potsherds, including a fragment of a Greco-Italic amphora (Pl. 3, 17). We have marked this site with the code SG0064.00 (Fig. 8: 2; Fig. 27: 2).

Z2a

It is 6 meters long (Fig. 5) and parallel to Z2. It is composed of rougher, larger, irregular, and unworked stones, with smaller stones in between, leaving quite a bit of empty space. They are arranged in no particular order. They cannot be compared with Z2, although they most likely form its inner face. In the highest part, next to Z2b, which it leans against (!), it is preserved to a height of 2.20 meters with about 7–8 rows of stones (Fig. 24). The wall slopes to the east to a height of 0.5 meters, similar to the outer face of Z2.

Z2b

It is 1.80 meters long and 2.2 meters high. It is constructed similarly to Z2a, except that the corner with Z2cI has larger stone blocks that are more regular but with unworked faces (Fig. 25). The blocks are visible to a height of 8–9 rows.

Z2c

Before the recent inspection, we thought this was a single wall 5.10 meters long with a maximum height of 1.70 meters, where about 11 rows of stones were preserved. In reality, this wall was built in two phases. Z2cI is part of Z2b, is 1.30 meters long, and is composed of larger, more regular blocks (Fig. 26: left). Z2cZ was added on top of it, and is built from smaller irregular and regular stones (Fig. 26: right) in a typical dry-stone construction style. The bedrock may be visible at the highest point. Towards the west, it merges into the unexplored part of the mound.

Z2d

Cluster of stones, probably from earlier excavations (Fig. 5: Z2d).

Inner corner of Z1 and Z2

This corner appears to have been excavated before Botteri's paper (see above). The excavation is visible over a length of at least 4 meters (Z1) and around 1–2 meters (Z2), but it seems that this area was subsequently filled with larger stones after the excavation (Fig. 28). The construction method of these internal walls cannot be discerned without excavation.

THE LAZE SITE (SG0063.00)

We discovered this site in spring 2023 while surveying the southern slope below Purkin Kuk. It is located on cadastral parcel 681. The slope below Vilina Stina is quite steep. We noted that Zaninović believes there was probably a prehistoric settlement here but does not provide any evidence for this. The area is called Laze and there are olive trees (quite neglected in places) supported by small, scattered dry-stone walls. This is somewhat visible on the RAF aerial photograph from 1944 (Fig. 8: 3; Fig. 27: 3). Laz, Loz, Laza, Lazi is a toponym that denotes a cultivated area enclosed by dry-stone walls created by clearing the slopes of the hill (Roki–Fortunato 1997: 270; Benčić 2013: 273). About 200 meters east of Purkin Kuk and Vilina Stina, at a level approximately 70 meters lower, covering about 4000 m², there are finds of indigenous and Greek pottery and roof tiles (see below) among the terraces of olive groves, whose surface is covered with stones and small vegetation. Generally speaking, there are significantly more Greek pottery finds than local indigenous ones (about 10:1), and there is a small amount of Greek fine pottery (Appendix 3; Pl. 1). We assigned the code SG0063.00 to this site (Fig. 8: 3; Fig. 27: 3).[35] Reliable identification

34 — Zaninović did not mark the position of the 2 x 3 m trench that he excavated in this area, nor its extension westward to Z2b. It is possible that the collapse of the mound, or the northern side of the trench, partially buried it. The excavated material was evidently deposited down the steep cliff on that side where we came across a few fragments of coarse pottery from antiquity and one detached block of this wall (Fig. 11).

35 — Ivica Moškatelo collected finds in the Laze area and left them in piles at various locations, and he also had some fragments at home. Everything has now been handed over to the Stari Grad Museum.

Fig. 24 – View of Z2a from the northeast; on the right, Z2b and Z2c (photo: B. Kirigin)

Fig. 25 – View of Z2b from the southeast; on the left, Z2a (photo: B. Kirigin)

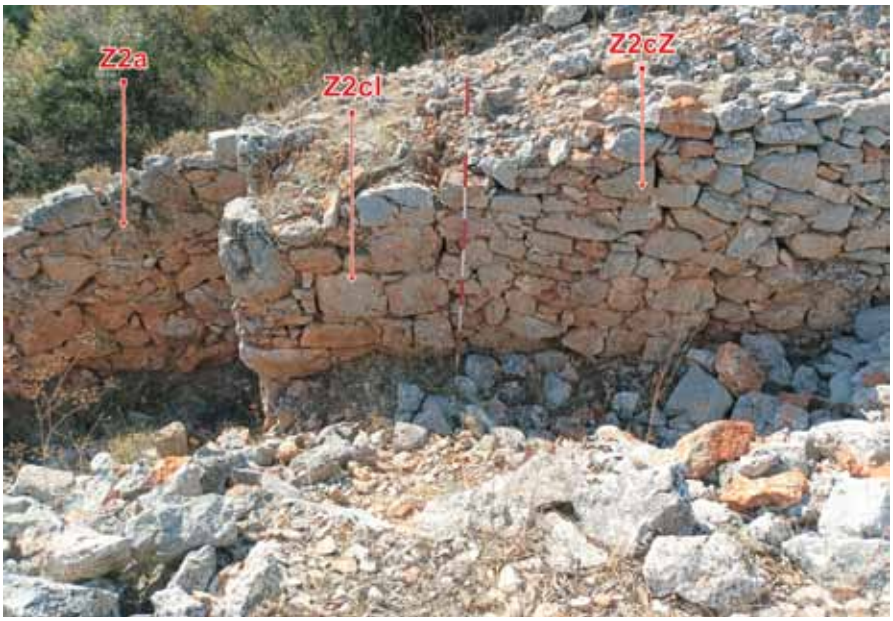

Fig. 26 – View of Z2cI and Z2cZ (photo and modified by: B. Kirigin).

is quite a problem for surface finds, considering they have been subjected to weathering and various disturbances for centuries – even millennia – making their surfaces quite damaged and worn. Nevertheless, the discovered finds provide a new dimension to the study of Purkin Kuk. At the end of this paper there is a catalogue of fragments shown in Pl. I–IV (Appendix 3). There are no finds below the stone (*inkunjani)* path (Fig. 32)[36] leading to Dol Sv. Marije (Fig. 8: 7), and further west to Belebići and Njivice (Fig. 8: 4–5). To reach Purkin Kuk, one follows a path that runs along the slope of the terrain, located about 50 meters above the *inkunjani* path. A little further east of SG0063.00, on the path, we also discovered a smaller number of fragments of pottery and tegulae. We assigned the code SG0064.00 to this site (Fig. 8: 2; Fig. 27: 2).

BELEBIĆI (SG0016.00)

The site of Belebići lies about 200 meters west of Purkin Kuk, at 286 meters above sea level (approximately 10 meters higher than Purkin Kuk), on a narrow ridge that separates the wider Lombardija valley to the south from the narrow, steep Budinjac valley to the north and Stari Grad. Danica Moškatelo from Dol directed us to the remains of large blocks at this location on 25 January 1982 (Fig. 29). Vujnović and Gaffney barely found it seven years later, and we have recently attempted to locate it several times without success, primarily due to the dense forest and scrub. It consists of large stone blocks (80x60 cm) arranged in a dry-stone wall, visible in a single row above the surface, positioned at a right angle on the northeastern side. Among the vegetation, it could be determined that the northern wall is visible for a length of 7 meters, and the eastern wall for 6.70 meters, which does not mean that they were not longer. It is not known whether they had an inter face. On the surface, we found an ancient pithos sherd, 5 body sherds of amphorae (?), and one fragment of a coarse vessel.[37] The location is important, because if it is determined that it was some sort of fortification, it could be said that it served as a position which had a better visibility towards the southwest than Purkin Kuk, and that these two sites were therefore related. Also, there is the question of whether these are the remains of a third tower that forms part of the protection of Pharos.

Fig. 27 – Aerial view from the south of 1. Purkin Kuk, 2. Purkin Kuk (SG064.00), and 3. Laze (SG063.00), (photo: J. Barbarić; modified by: B. Kirigin)

36 — *Inkunjoni put* is the local name for a path covered with flat stones stuffed into the ground (Benčić 2013: 203).

37 — Fragments are kept in the Hvar Heritage Museum, but we were recently unable to find them, nor the 5 fragments from Purkin Kuk.

Fig. 28 – Inner corner of Z1 and Z2 (photo: J. Barbarić)

Fig. 29 – Sketch of the stone blocks at Belebići, made on 25 January 1982 (taken from the field notes of B. Kirigin)

RECENT FINDS FROM LAZE (SG0063.00) AND PURKIN KUK (SG0015.00 AND SG0064.00)

So far, we have visited Purkin Kuk on five occasions: in 1982, 1988, 2021, 2022, and 2023, focusing on analysis, photographing details, and describing the remains. We did not conduct a systematic surface field survey. We noted the conditions at the site: trees, leaves, roots, various diggings, excavations, recent construction of foundations for benches, and a telescope on the mound itself (sic!) (Fig. 12). There are almost no archaeological artifacts on the mound itself, although there used to be (Appendix 2). In Pl. 1–4, we publish fragments that we recently discovered at the Laze site (SG0063.00), including a fragment of a south Italian pithos of the "a colletto" type found at Purkin Kuk (Pl. 2: 7) and a fragment of a Greco-Italic amphora rim at SG0064.00 (Pl. 3: 17).

LOCAL INDIGENOUS POTTERY

As we have seen, both Ljubić and Zaninović mention finds of this pottery, but without any details. Our visits confirmed the existence of such pottery, but in significantly smaller quantities compared to Greek pottery finds. It mainly consists of body sherds, but we also found one base (Pl. 1: 1) and two different tanged handles of the same type. These are typical fragments with tiny white inclusions that cannot be dated more precisely. Among these finds from Purkin Kuk, there are also four fragments of body sherds discovered in 1988 (Fig. 31: top left). From the Laze site (SG0063.00), one base and one tanged handle were found (Pl. 1: 1–2). Additionally, we found an unusual fragment with an internal "opening," which has something like a relief angular handle on the other side that is not symmetrical with the "opening" (Pl. 1: 3).

GREEK FINE POTTERY

We can attribute only four fragments to this group. These are small fragments from small vessels, two of which may belong to skyphoi, and one to a smaller jug with a handle (Pl. 1: 4–6). They seem to belong to the early Hellenistic period. However, one extremely fragmentary piece, with a minimal thickness of 1 cm and traces of a black gloss, seems to belong to a larger vessel (unpublished).

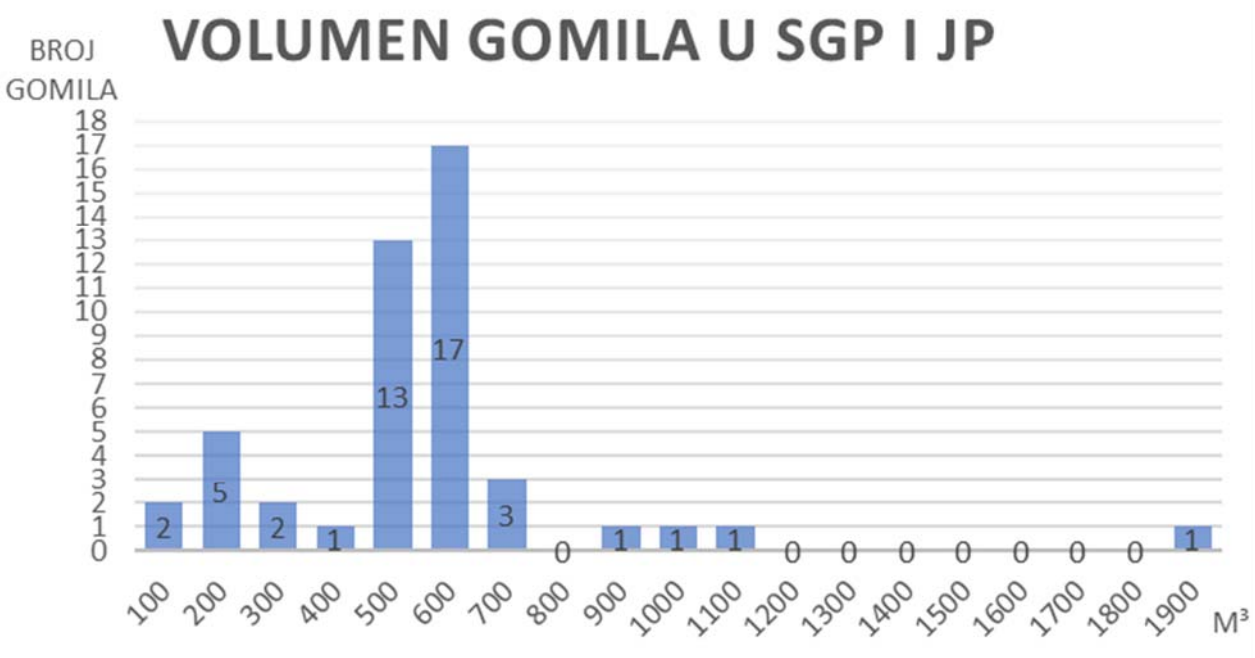

Fig. 30 – Histogram with the volumes of mounds in and around the Stari Grad Plain and Jelsa Plain (from: Kirigin et al. in press)

Fig. 31 – Finds from the 1988 field survey (photo: B. Kirigin)

PITHOI

The finds of pithoi are also very interesting. We are familiar with five different rim types of these vessels. One of them belongs to the Apulian "a colletto" type, which dates from the mid-6th to the end of the 4th century BCE (Fig. 31: second from the bottom left; Pl. 2: 7; Leone 2014; Lamburgo, Pace 2017; Bažoka, Šuta 2022: 15, Pl. XV: 1). Due to its wall thickness, this fragment seems to have belonged to a large pithos that could reach a height of 130–140 cm (Leone 2014: 111, 108, note 6), and it certainly would not have been easy to transport to Purkin Kuk. It was found around the mound in 1988. Three rims seem to belong to the Pharos 1 type, i.e. the Attic "neckless" type (Pl. 2: 8–10), while one seems to belong to the Pharos 2 type (Pl. 2: 11). All of them are small and can be dated from the mid-4th century to the 3rd/2nd century BCE. Since large rims of the Pharos 1 type pithoi from the mid-4th century BCE were also found in Pharos (Kirigin 2017), it is possible that the "a colletto" pithos fragment is older than the mid-4th century BCE and could date to a time before the settlers from Paros arrived in Stari Grad. In addition to these fragments, there is one body fragment of a pithos (?) with horizontal ribs (Pl. 2: 12) similar to those known from Pharos (Kirigin 2018: 62, Pl. 4: 17). Pithoi required protection, so it is possible that the roof tiles mentioned below were used to cover the room where the pithoi were stored.

AMPHORAE

Among the collected sherds of amphora rims, handles, neck-body junctions and bases, we identify Type B amphorae (Pl. 3: 13–15) and Greco-Italic amphorae (Pl. 3: 17) found at SG0064.00, as well as related types (Pl. 3: 16). One small fragment of an amphora handle, probably of Type B, is overfired (Pl. 3: 15). Another fragment of a dark reddish-brown fabric has an oval cross-section. One fragment of the body has two round perforations (Pl. 3: 18), while another has a carved cross on the inside (Pl. 3: 19). All the amphora fragments could date from the mid-4th to the end of the 3rd century BCE.

Among the amphora fragments, there are also three fragments of different handles that are difficult to classify, as well as two fragments of necks with similar fabrics.

Fig. 32 – Tall dry stone wall (c. 3 m) along the paved path at the position of Laze (photo: B. Kirigin)

BOWLS AND/OR POTS

Three fragments might belong to this group (Pl. 4: 20–22), but they are difficult to define more precisely. Their fabric is typically Hellenistic.

ROOF TILES

It is certainly very interesting that Greek tiles were found here, both flat ones with raised edges (Pl. 4: 23–27) and multi-faceted cover tiles (Pl. 4: 28), mostly found at the Laze site (SG0063.00), while fewer have been found along the southeastern edge of the mound and at the top of Vilina Stina. The tiles with flat raised edges are made of reddish clay; they are abundant in Pharos (for their numbers see Jeličić Radonić, Katić 2015: 77–78) and at the towers of Maslinovik (Kirigin 2023) and (much less) at Tor (Kirigin 2022). Although they belong to the same type, none of them have an identical shape of the raised edge. They can be dated to the period from the mid-4th century to the 3rd century BCE. It is unclear what was covered by these tiles. It remains to be determined whether it was some kind of roof along the mound or at the Laze site, for habitation or storage for ritual activities on or in front of the mound. There is no doubt that they were brought from Pharos. While there are almost no Greek pottery or tile finds in the Stari Grad Plain, they are present at the towers of Maslinovik and Tor. However, a large number of pithoi have been recorded only at Pharos and here at Purkin Kuk.

The collected finds are interesting because of the nearby Purkin Kuk and the fact that this is the only site among some 150 sites within and around the Stari Grad Plain with such a large number of Greek artifacts.[38] It is difficult to determine

38 —— The only exception is the tower at Maslinovik, but excavations have been carried out there, and the context is also different.

the purpose of the Laze site. Was it a permanent economic estate or a storage facility? The Greek pithoi are small compared to the South Italian "a colletto" pithos (Pl. 2: 7) found at Purkin Kuk. The amphorae also suggest storage of food or liquids, and the roof tiles indicate that the room had a roof. Whether Laze is related to Purkin Kuk remains to be determined, but there is a possibility.

STONE FINDS

On the surface of the Laze site (SG0063.00), we discovered three fragments of volcanic rock with crystals that might belong to a millstone. It is possible that they are from Brusnik (Fig. 33: left), weighing 957 grams; also, one fragment (527 grams) of a cobble, most likely sandstone, with a flattened top, suggesting it might have been used as a type of hammer (Fig. 33: right).

DISCUSSION

The above analysis clearly indicates that Purkin Kuk is not a hillfort, nor a Greek tower, nor part of a defensive system of Pharos, as previously established by Gaffney and Stančič (1991: 78).

We start with Z1 and Z2. From the descriptions above, their complexity is evident. It is still unclear what connection they had with the mound and what they actually represented. What was their purpose? Everything indicates that they were added to the mound. Z1 was modified after partial collapse, especially in the northern part, using a different, less careful technique, while the inner face of Z2 (Z2a, b, c) was also constructed using a different building technique, and its construction time is also unclear. We also determined that the walls of Z1 and Z2 are not at right angles and that both were built on slopes rather than on flat or nearly flat terrain. It is also evident that Z1c is older than Z1b, and that Z2c consists of two walls: Z2cI and Z2cZ.

We have already mentioned that the lower part of these two walls (Z1 and Z2) contains smaller blocks, mostly polygonal (Fig. 14–15). They have a very compact appearance, tightly fitted with finely carved joints, and their outer face has a uniformly rustic texture. Above and around them are larger blocks, mostly rectangular. This construction method was not used for the towers of Maslinovik and Tor,[39] where it mostly involves well-arranged rectangular and trapezoidal blocks in a pseudo-isodomic style. The method of using polygonal blocks would belong to Randsberg's types 8–11, especially type 11, which he dates to the period between 350 BCE and 275 BCE, and even up to 200 BCE.

Parallels are mainly found in western Greece: in Epirus and on the Ionian islands of Ithaca and Kefalonia (Randsborg 2002: 214–227), and also in Shkodër in Albania (Ceka 2005: 134, Fig. 31, with a settlement wall that Ceka dates to the 4th century BCE and considers it an Illyrian creation). Regarding the combination of polygonal and rectangular blocks, especially at the corners, there is a parallel on the island of Lefkada in the Ionian Sea, where towers have rectangular upper and corner blocks with drafted vertical edges and polygonal blocks below them and between the corners (Morris 2001: 316–317, 331, 335–336, Fig. 37, Fig. 61). This combination may be related to the availability of stone collected in order to build these walls. It appears that the rule was for corner blocks to be rectangular, while the others could vary depending on the available stone.

There is also the question of where the stone for building the mound and Z1 and Z2 came from. Was the ridge plateau levelled, or was it built, as the mentioned legend suggests, by "*convicts who carried large stones up here*"? Still, we do not yet know whether the mound was built all at once or constructed in several stages (except for the western part), so it makes no sense to speculate further. The toponym "kuk", as we have seen, denotes a solid monolithic rock (Vilina Stina). Excavating over 1800 m³ of stone would require considerable effort. The quarry was certainly not far and was likely located to the west, in the area towards Belebići and Njivice (Fig. 8: 4–5), which are at a slightly higher level than Purkin Kuk, thus facilitating the transport. The volume of the stone fill of the mound at Purkin Kuk is impressive and significantly surpasses the volume of other mounds in and around the Stari Grad Plain and the Jelsa Plain (Fig. 30). It amounts to about 1833 m³![40] The only other isolated mound over 1000 m³ in the area within the plain is Jurkovica

39 — We do not discuss the walls of Pharos here because it has not yet been determined which are the oldest (see Popović, Devlahović 2018). Recent rescue excavations (2022) within Stari Grad seem to have revealed the original defensive wall of Pharos from the 4th century BCE, but these results, understandably, have not yet been published.

40 — We calculated the volume according to the formula provided by Forenbaher 2023: 174–176.

Fig. 33 – Stone fragments. On the left, volcanic rock; on the right, a cobble of sandstone (?) with a flattened top (by impacts?); both found in the wider area of Laze (photo: B. Kirigin)

(JE0219.00), measuring about 1002 m³ – almost two times less than Purkin Kuk. Most of the mounds in the Stari Grad Plain and the Jelsa Plain, 30 of them, have a volume of 500 to 600 m³, with only 3 ranging from 900 to 1100 m³, while the mound at Purkin Kuk has the largest volume.[41] Besides Jurkovica, the only other mound in the plain that could be comparable in size and volume to Purkin Kuk is Marijca Gomila (JE0019.00, with a diameter of about 26 m). However, this mound was completely destroyed by stone crushing in the late 1980s, so we do not know its original height. Nevertheless, on its surface, levelled by an dredging machine right down to the original ground, we discovered fragments of prehistoric pottery, bones, and an ornamented shell pendant that could date from the 3rd millennium BCE. Among the remains, we did not find any grave remains (Kirigin 2004: 35, Pl. I: D; 2006: 22, Fig. 4; Kirigin, Vujnović, Barbarić in press).

According to Table 12 provided by Forenbaher (2023: 176), which estimates the labour required to raise mounds, our mound would be comparable in volume to the mound of Velike Grude near Tivat and mound AN 39 in Eraci in the hinterland of Biokovo, with volumes of 1700 m³ and 1800 m³ respectively (Primas 1996; Della Casa 1996; Bilić et al. 2011; Forenbaher 2023). According to Forenbaher's calculations, it would take one person about 2550 to 2700 days, or around 7 years, to build our mound, while a group of 30 people would need between 42 and 50 days, meaning they could complete it in two working seasons. This fact alone sets apart the mound at Purkin Kuk as an exceptional phenomenon in this area. Is this enough to suggest that the monumentality of Purkin Kuk also indicates that this mound was an important place for the local community, a site of special character, located at the highest position in the Stari Grad Plain, a site of pilgrimage and various rituals? It could have been an effective site for displaying the power of the community, both to neighbours and visitors. However, as we lack stratigraphic and laboratory analyses, we will need time to understand its function and significance.

41 —— For more details on the hillforts and mounds in the Stari Grad Plain and Jelsa Plain see: Kirigin, Vujnović, Barbarić in press.

If Purkin Kuk was a cult site, it is possible that the offerings, symbols, or equipment for ceremonies did not leave clear traces (as is the case with Vela Gomila on Vis island: Kirigin et al. in press) and that this may have produced gaps in the chronological span of Purkin Kuk and in finding elements to clarify the function of this site. However, we must also consider that the offerings may not have been lavish nor included animal sacrifices (as, for example, to Zeus on Mount Lykaion in the Peloponnese, see below). We must keep in mind that if some rituals were conducted at Purkin Kuk, there had to be enough space for the people who participated in these activities. Perhaps the "stone trough" mentioned by Ljubić is the remnant of an altar used for offering gifts, similar to what Pausanias described on Mount Arachnaeus (near Epidaurus in Argolis), where "altars to Zeus and Hera are located, and sacrifices are made to them when rain is needed" (Paus. 120, II: 25; see also Alcock 1994: 254. It is the common people, the peasants, not the elite, who ask for rain). Similarly, the Vilina Stina from the legend (see above) could also be a type of altar or sacrificial site, similar to those known in ancient Greece (Peatfield 1994: 22). However, the ceramic material we discovered during field surveys of Purkin Kuk (see above, as well as Appendix 3 and Fig. 31) and the nearby area of Laze does not indicate a votive character, nor does it include cult symbols or ceremonial equipment, even though Purkin Kuk meets all the topographical conditions of a peak sanctuary as noted by Peatfield (1994: 23).

Although we do not know when the mound was created, everything points to its great age. It is possible that this great age has changed it by means of natural processes, climate changes and erosion, and, as we have seen, by the addition of Z1 and Z2 and various later diggings, military entrenchments during World War II, and archaeological and other excavations. Thus, its appearance has significantly changed after 147 years since Botteri's visit. We do not know if it was built at a specific moment or if it had continuous or intermittent additions and modifications in pre-Greek times, which could explain its large volume.[42] The question is whether it contains one or more graves (the same, similar, or different) from different periods and with different burial rites. However, it is possible that the initial mound did not contain a grave (or graves), which would mean it had a different role for the community that built it. It is therefore possible that the mound at Purkin Kuk was a ritual centre or observatory not associated with the cult of ancestors.

Peak sanctuaries are known from prehistory and antiquity in Greece, especially on Crete during the Minoan period (Peatfield 1994; Jones 1999), and also on the Greek mainland, where the particularly important cult of Zeus Lykaios on Mount St. Ilias (1380 meters above sea level) in Arcadia near Megalopolis offered a view of almost the entire Peloponnese and was especially active in the late Classical and Hellenistic periods (Jost 1994; Romano, Voyatzis 2014; 2015; 2021).[43] Just below Zeus's altar on the southern side of the mountain is an unenclosed temenos measuring 55 by 120 meters. It is recorded that the area included a small house for the needs of the priests, for storing votive offerings, or for providing shelter to strangers or fugitives (Romano, Voyatzis 2014, 576–570 with earlier references).[44] On the island of Paros, Zeus was worshipped on Mount Kounados near the ancient city, which is almost at the same altitude as Purkin Kuk. On that mountain, there were temples of Zeus Hypatos, Aphrodite, and Eileithyia (Kouragyos et al. 2018: 150). It is possible that Pharos, as a new city, established a cult on Purkin Kuk that satisfied both the local ritual and the need of the new city to appease the Greek deities that could help them survive. Zeus is not unknown in Pharos. On the obverse of the oldest series of silver and bronze coins, there is an image of Zeus (Bonačić Mandinić 2004, 58–62, nos. 87–96).

Interestingly, Purkin Kuk is precisely aligned north-south between the highest peaks of Brač and Hvar: Vidova Gora (778 meters above sea level) and Sv. Nikola (628 meters above sea level). Is this a coincidence? Of all the mounds on hilltops around the Stari Grad Plain and the Jelsa Plain, the mound

42 — Some mounds, like Velika Gruda near Tivat, were enlarged several times over a thousand years to eventually reach a volume of about 1700 m³ (Forenbaher 2023). Therefore, it is possible that the original mound on Purkin Kuk with the primary grave was a smaller mound, and that it was enlarged in various ways during the Bronze and Early Iron Ages to reach its present size. However, the preserved material remains do not provide the possibility of confirming these assumptions.

43 — The central sacrificial site at the top of the hill, in the form of a 30-meter diameter mound, was formed from a 1.5-meter-high black earth embankment filled with ash, burnt animal bones, and finds from the Neolithic to the Hellenistic periods (see note 53). For some other Zeus sanctuaries on Greek mountains, see Alcock 1994: 254–255; Wiznura, Williams 2021.

44 — This situation on Mount Lykaion is evoked by the mound on Purkin Kuk and the position of Laza, see above.

on Purkin Kuk is at the highest elevation and therefore has the greatest visibility. Additionally, on Vidova Gora, there is a smaller hillfort with a possible mound (18 x 18 meters) (B014.00), from which one can see the Hvar Channel and the open sea (Stančič et al. 1999: 34, 52–54; Barbarić 2022: 27, 29). The highest peak of Hvar, Sv. Nikola, looking out over the open sea on one side and aligned with Sv. Vid on Brač across Purkin Kuk on the other, has neither a mound nor a hillfort. Therefore, it is highly likely that the mounds on the hills around the Stari Grad Plain, including Purkin Kuk, are primarily related to the plain and served to enhance the physical, symbolic, and religious sense of the local community that the space belonged to them, regardless of whether they were burial mounds or public monuments like sanctuaries that were created, expanded, and preserved over a long period, like Purkin Kuk.

The mentioned large corner blocks at the junction of Z1 and Z2 have drafted vertical edges (often referred by Croatian scholars as blocks with anathyrosis) and are as wide as those at Tor. They would not have been made if those walls, or at least part of them, were not intended to be high, at least to the height preserved at Tor (about 6 meters). However, this may not always be the case, as evidenced by the three-story tower of Poros on Lefkada, which is today visible up to the height of 7 meters but lacks drafted edges on the corner blocks; it was built in the pseudo-isodomic style with a single face, meaning that the internal face is made up of blocks of the external face (Morris 2001: 291–298). An additional problem regarding the height of our walls is that the northern corner of Z1, preserved to a height of 1.9 meters, lacks drafted corner blocks like those at the southern corner. For the eastern part of Z2, we have no data on how the wall ended, nor can we determine if there used to be an access to the mound from the direction of Dol as previously suggested (Zaninović 1981b: 62). If these walls were at least 6 meters high, they would have completely obstructed the view of the mound when observed from the southwest.

If this were, by any chance, the previously (see above) proposed rectangular structure – a tower – regardless of whether its walls (Z1 and Z2) are at right angles or not, then its northeastern corner would be almost at the centre of the mound! We can hardly accept such a solution, but it is equally difficult to propose an alternative, especially a convincing alternative.

We have seen that the construction style of Z1 and Z2 is characteristic of western Greece and southern Illyria from the mid-4th to the 3rd century BCE. We can associate it with the Greeks who founded Pharos, specifically with the second generation of settlers, when the Stari Grad Plain was most likely parcelled out and when the towers at Maslinovik and Tor were built. This major project of reorganizing the previous relationships and use of the plain, as well as changing the ownership structure, which was carried out by the largest settlement on the island of Hvar at that time, the polis of Pharos, was certainly not the most brutal project regarding the local population.[45] Even though we cannot clearly trace this through the current material remains of both communities in the broader area of the plain, their cooperation is inevitable. This is indicated by the local pottery found together with Greek pottery in the lowest archaeological layers excavated in Pharos (Kirigin, Hayes, Leach 2002: 243–246; Kirigin, Barbarić 2019), making it very likely that the new settlers from Paros used local pottery alongside their own. Additionally, recent studies of animal bones from Pharos have shown that the Greek settlers had sheep, goats, pigs, and cows in their daily lives. The analysed sheep bones indicate that the settlers from Paros did not bring them from Greece, although their sheep were larger. This differs from the situation in Greek settlements in southern Italy and indicates that the settlers from Paros acquired animals from the natives (Sanford 2012; Sanford Gaastra 2016), which is a relationship that was unknown to us until recently. This is also suggested by the Iron Age jewellery (fibulae, omega pins, pins) of local Balkan production from the 5th/4th century BCE discovered in Pharos and at Tor (Jeličić Radonić, Rauter Plančić (eds.) 1995: 68, no. 22, 103, no. 70; Zaninović 1982; Kirigin 2022).[46]

45 — Before the arrival of the Greeks, the Stari Grad Plain could have been a grazing area for various livestock: sheep, goats, cows, horses, and donkeys. Howe (2008) cites Xenophon for the wealth of Athens, stating that it came from sheep, and then from wine, oil, or grain. Therefore, it is possible that the local inhabitants of the Stari Grad Plain produced wool and cheese for trade or exchange, but we have no evidence of this so far.

46 — For comparisons of fibulae from Pharos see Odža 2009: 50, No. 25. We thank Sanja Ivčević for this information.

When settling, the Greek inhabitants could easily decide where to build their sanctuaries (temples, altars) within the city itself (for which we currently have no *in situ* data).[47] However, how did they decide where to establish their sanctuaries in the chora and at the border areas of their new and completely unknown territory, to which they had no traditional ties like they had on their native island of Paros? Did they randomly choose new cult sites, or did they adopt old indigenous ones similar to their own? Other Greek cities in the western Mediterranean and the Black Sea were in a much better situation than ours regarding this matter, because, for most of them, it is known where their sanctuaries, temples, etc., were located in the chora, whether in terms of spatial distribution or chronology. However, even there, there is no data on indigenous sacred sites in the areas occupied by the new Greek apoikiai (Carter 2006: 15). In mainland Greece, including Paros (an island that had only one polis, unlike some other Greek islands, even those smaller than Paros),[48] the polis did not have only economic interests in its territory (e.g. marble), but this fertile island also had sacred sites outside the city itself, in the immediate vicinity and on the hills (summarized in Kirigin 2004: 48–49; 2006: 35–37; more detailed in Kourayos et al. 2018). That familiar landscape with various sanctuaries, full of memories, was not what they encountered when they arrived on Hvar, where everything was new, and they had to create it from scratch or establish a new tradition. How did they achieve this, and did they achieve it at all? Did they, as Malkin (1987: 151) suggests, need to gain the favour of local deities? Or did they integrate local sanctuaries into their mythological cosmos? Unlike other Greek colonies in southern Italy and Albania (to mention just close neighbours), Pharos was a very small city (about 10 hectares) with a very small territory (chora and eschatia), where everything was accessible within an hour or two by foot.[49] Therefore, perhaps there was no need to build sanctuaries outside the city and on the "borders" like other older Greek cities outside the mainland area, such as Dyrrachion (Davis et al. 2003) or Metaponto (Carter 2006). If we believe the description of Diodorus (Diod. Sic. XV: 13–14) of the conflict between the Greeks and the regional indigenous communities immediately after the founding and construction of Pharos, after that fierce naval battle[50] and the initial animosity, there must have been a transformation, an inevitable rapprochement and interaction between two different island Mediterranean communities. An example of such relationships could be the Iron Age settlement in the town of Hvar (Kirigin et al. 2022), Stari Grad itself, and Purkin Kuk, where the Greek settlers accepted the local cult as their new sacred place and made an addition (a *temenos*? Malkin 1996: 1481, Temenos: "an enclosed sacred space, subjected to purification") or a platform where they could gather and from which they could look at their city and the nearby landscape filled with sacred places (mounds) and the fertile field from which both communities lived and which they defended. Purkin Kuk thus became a new meeting place for the two communities, which gradually built and shaped a common cult site connected to the land and its fertility, creating a new, unpredictable relationship. Whether they worshipped the same deities or each their own, and whether they had the same rituals, remains to be seen.

CONCLUSION

Purkin Kuk is a complex archaeological site that was used for many centuries, as suggested by the aforementioned descriptions and findings: chert blades, coarse prehistoric and various ancient pottery and tiles that do not extend into our

47 — Indirect evidence for Aphrodite's cult is based on two inscriptions from Pharos mentioning women dedicating Aphrodite a tenth of something (SG0012.34 and SG0012.35). Given that Zeus is the main figure on older coins from Pharos, followed by Persephone and Artemis (Bonačić-Mandinić 2004: 58–70), it is possible that they also had some kind of temple inside or outside the city, but also other deities, and even Celts (Kavur, Blečić Kavur, Kirigin 2018).

48 — E.g. the Cycladic island of Keos had four, even though it is smaller than Paros (Reger 2004).

49 — For comparison, let us note that the chora of Metapontum was about 20,000 hectares (Carter 1990), while that of Pharos was about 1350 hectares (Kirigin 2004: 17; 2006: 6), or about 14 times smaller. In the chora of Metapontum, there are at least 14 Greek sanctuaries, some of which are quite large (Carter 1994).

50 — There is no knowledge of the traces or the exact location of this naval conflict. We should also bear in mind that recent research shows that Greek „colonization" was not violent in most cases. For example, Sara Owen dismantled the established claim that the Parian foundation of Thasos in the 7th century BCE was violent; she warned that ancient written sources (in our case Diodorus Siculus) should not be used as unproblematic evidence of what happened (in our case) on Hvar in 384/3 BCE (Owen 2018: 88-89, Pharos on p. 91), especially from the perspective of a historian from the time of Augustus (almost four centuries after the events he describes), who, incidentally, advocates the imperialist policy of his fellow islander Dionysius the Elder. For more on peaceful Greek settlement, see: Manoledakis 2016; Kirigin 2017: 305, note 1; 2018b: 447, note 2. For indigenous pottery in the Greek context of Pharos, see: Kirigin, Barbarić 2019.

era, i.e., into the Roman period.[51] These latter items may be related to the walls on the western side of the mound, while it cannot be said for the former items whether they belonged to the mound or to a period before the mound was constructed (at least when it comes to the chert blades). The same can be said for the fragments of a stone wedge, polisher, or axe of porphyry mentioned by Zaninović as being found on the surface of the mound. This also applies to Botteri's urn with a pointed bottom, two handles, and a chalice-like rim (probably some kind of amphora), as well as the objects mentioned by Ljubić (see Appendix 2). All these items would be important if they existed today or if they had been better documented (like the chert blades). However, these finds were certainly not produced at this site but were brought from elsewhere: according to colleague Perhoč, the chert blades are most likely from Gargano, and the porphyry from northern Italy (Bolzano), while our two fragments of diabase (perhaps millstone fragments) are most likely from Brusnik (Fig. 33). The mentioned polished porphyry objects may have arrived at the mound from some other context that preceded the construction of the mound. Since the local pottery with calcite cannot be more precisely dated, the chert blades are most likely from the Neolithic or Eneolithic period,[52] and if the wedge, polisher, or axe of porphyry belonged to the mound, then the mound would belong to the 3rd millennium BCE (Forenbaher 2023). Therefore, it is possible that we do not have any data that we can reliably associate with the period of the local Bronze and Early Iron Ages, that is, from the time immediately before the founding of Pharos. There is no doubt that both Ljubić and Zaninović knew that the found fragments were millstones, but we now do not have those fragments, nor do we know what they looked like or what stone they were made of.[53] Additionally, it should be kept in mind that there are no finds of animal bones, burnt bones, household daub, terracotta, or metal objects (like those from Tor and Maslinovik) nor later Roman, medieval, or Early Modern finds, or even shell casings from the Nazis.

If we exclude the finds of chert, and the wedge, polisher, or axe, which seem to belong to the pre-Greek period, to whom does the indigenous and Greek pottery found on Purkin Kuk and at the position of Laze belong? To the indigenous people or to the Greeks, or to both – a new group living together? Are they the result of a context of cultural osmosis, or were they first one and then the other, or were they together after the founding of the apoikia?

Purkin kuk is not a mound that represents a demarcation boundary, a marker, between two or more communities on the island. Its position, monumentality, clear visibility, and relatively easy access from the Stari Grad Plain suggest that Purkin Kuk watches over it and instils a sense of security when protecting its goods. Purkin Kuk could rather be a central point within our territory. In terms of surveillance over the Stari Grad Plain, better visibility (and proximity) is provided by the smaller mound at Hum over Vrbanj (Fig. 2; Fig. 7: 5), but also by the mounds at Hum near Vrboska, Škudljivac, and Starač (Fig. 7: 15-17) are no less significant. Therefore, when it comes to ordinary surveillance (guard duty) over the Stari Grad Plain, the location of the mound on Purkin Kuk is not crucial by itself.

In any case, various interesting interpretations can be spun about what else might have been on Purkin Kuk, but such essays would be literal rather than archaeological. Finally, we present several hypothetical reconstructions of altars dedicated to Zeus in Olympia, Apollo in Didyma, and altar III on the island of Samos, as published by Hans Schlief in 1934 (Fig. 34) (Schlief 1934: 145, fig. 4-5, 147, fig. 7, 150, fig. 8, 154, fig. 10). We hope our paper will motivate thinking about what Purkin Kuk might have looked like and what kind of attention should be applied in any future excavations.

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51 — Both Maslinovik and Tor have a similar situation.

52 — These chert blades were recently examined at the Archaeological Museum in Zagreb by our colleague Dr. Zlatko Perhoč, whom we thank for this information.

53 — On Hvar there is natural sandstone which is sometimes confused with fragments of millstones... On the other hand, millstones (small, hand-held) could have been used in households, if there was a prehistoric settlement there, because they certainly kept grain in the house (brought from who knows which fields) and ground it daily as needed" (e-mail from S. Forenbaher, June 17th 2022).

Ivica Moškatelo from Dol Sv. Marije, who works as a history teacher at the Elementary School in Stari Grad, our retired colleague and friend Tonči Milošević, our young colleague Joško Barbarić from the town of Hvar, and Siniša Matković Mikuličić, owner of the Secret Hvar tourist agency. We are also grateful to the staff of the Stari Grad Museum and director Aldo Čavić for letting us peruse the materials and providing us with field equipment. The finds that we are publishing here are stored in the museum. We are especially grateful to our colleague, prehistorian Zlatko Perhoč, for his help in identifying the chert blades published by Šime Ljubić in 1881, and to our colleague Jacquelin Balen from the Archaeological Museum in Zagreb for letting us publish a photograph of these objects here.

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Attachment 1

BOTTERI, G. A. 1876, IL PURČINKUK DI CITTAVECCHIA, IL DALMATA, VOL. 90, ZARA, 2–3.

http://dikaz.zkzd.hr/index.php?q1=&q2=&advSrez=advSrez&advS_=advS_&yinf=no&q3=&q4=&q8=&y1=-1&y2=2022&podS=izbor&podList%5B%5D=33
Accessed: June 1st 2022

La vetta del Purčinkuk alla spalle di Cittavechia, in mezzogiorno alta forse un migliaio di piedi, dopo avere, per seccoli e secoli, attirato l'imagininosa attenzione degli abitatori del centro dell'islola, perpenuando la tradizione di tresori sepoliti lassu, fini per attrarla anche in quelli che intendono alla richerca delle antiche memorie. E cosi avevenne che il mito popolare onde e avvolta la cima del monte, fu fatto oggetto di studi ed ebbe unal soluzione non pubblicata peranco, e forse fantastica oggi, ma che domani potrebbe essere pure convalidata dalla prova dei fatti.

E col mito si studio la natura del terreno, ma soltanto quale ei si presetava all'esterno, ala sua cioe, superfice,. E il primo resultato ne fu: che la in cima riposavano due monumenti vetusti, uno accanto all'altro, anzi oggi entrambi assieme connessi; all' oriente un Tumulo preistorico, di circa cinque metri di altezza, sopra una superfice circolari per trenta metri di diametro; ad occidente poi un mucchio di macerie, alto due metri, ma mucchio informe e nascosto in sui contorni da arbusti selvosi; pero fra le pietre ala rinfusa gettate ai suoi piedi, due su presentarano rettamente colla facia bugnata; errano caratteri quelli da porre la fabbre ai ulteriori richerche; e tosto si frugo tra gli arbusti, si scosto ramo da ramo, e si giunse a un terza, lunga metri 1:10 alta 0.50, grossa 0.40, avente, non gia una bugna, ma due, una di fronte ed una di lato, con una projezione di 0.15, ed alla linea della loro unione angolare, due listetti largi 0.7 battuti a martello, con spigolo rettilineo. Era questo un carattere indubbio di un avanzo angolare di un edifizio distrutto. La mente corse tosto alla Torre di Maslinovik e al Thor di Gelsa; poi si raccolse, poi l'occhio indago, deplora, disegno, e un Torre quadrata, do15 metri per lato, il sopra rizzo.

Se ne scrisse al compilatore del Manuale annuario; ma egli, forse per partito preso, si rifiuto di dar ricetto allo scritto; se ne scrisse ala Rivista Dalmatica, ma la Rivista non esca* (La Rivista usci e ne parla alla pagine 188 e 189; N.d.R.); se ne parlo all' egregio di illustre conservatore del Museu di Zagabria, e finalmente si trova l'uomo che ne capi l'importanza. Non esito egli un instante, ma tosto delibero di salirvi; e il giorno 19 ottobre 1976 con trentanove e piu lavoratori, egli a sue spese diede mano all'impresa.

Ma quel giorno, oltrecche dall'autunno, anche della nubi e della pioggia aceorciato, non basto all'uopo; dal Tumulo non si incavo che una zona mediana per circa un metro e mezzo di altezza; delle Torre si scopersero due lati soltanto, quello di mezzogiorno e quello di ponente, ma solo per un filare di pietre. Ad ogni modo cio basto per stabilirvi, ormai con tutta certezza, colassu l'esistenza di un edifizio bugnato, forse di grande importanza per gli studi storicihi comparativi. Sinora di construzioni megalititichi a bugna, non se neaveano in Dalmazia che soli due esempi di fatto: uno il Murazzo di Salona, l'altro le murrra di Cittavechia. Puu tardi se scopri anche il Thor di Gelsa; o il console britannco Burton tanto se ne interesso,, da imprendere un apposito viaggo a queste parti e da scriverne sopra una buona memoria per gli studiosi dell'Inghilterra.

Oggi invece ne abiamo due di piu; la Torre di Maslinovik e quella di Purčinkuk; e cosi in Dalmazia sono cinque in tutto; e di cinque, quattro sul'isola, e, di quattro sull'isola, tre nel nostri comune. Lo stile ne pare in genere identico in tutte; pero, fra le tre torri dell'isola, e tutte quadrilaterale, si potrebbe ora trovare un gradazione di tempo; quella di Maslinovik, con m. 7:60 di lato, pare coeva a quella di Gelsa con m. 7:05 anche di lato, ma ambedue piu recenti di questa del Purčinkuk con m. 15 di lato, mentre nelle prime due i massi sono sempre parallelogrammi quadrati o rettangolari, e cadono fra la terza o quatra classa sulla scala di Hamilton, nell'ultima invece i massi non sono sempre, come in quella, ne isodomi, ne pseudo-isodomi, ne quadrilateri, ma anche poligono, e qundi trapezoidi, trapezi, romboidi, rombi, retangolari, quadrati, e pentagonali, e cadrebbero perchio tra seconda e terza classe

dulla medesima scala. Tuttavia tutto codesto non e peranco ben accertato. All'uopo farebbe mestieri mettere allo scoperto fino al suolo, non solo i due lati, di mezzogiorno e ponente, ma ben ancora quegli altri di borea, e di levante se pur esistenti. Converebbe inoltre practicare delle richerche entro il presunto perimetro della Torre onde vedere se ci esistono altre buche murate a secco, pari a quella romboiidale che sta al angolo ovest, larga un metro e mezzo, lunga tre, e profonda due, senza porta o apertura nei lati, e senza traccie di volta in alto;quest'una fu, a quanto pare, esplorata in varie volta e non lascia ombra di oggetti o frammenti antichi; secondo i calcoli, se ne potrebbero ancora forse scoprire cique di simili; e se cosi, e se tutte, od anche una sola delle stesse vergini ancora, un gran lembo che avvolgo l'oscurita storica dell'edifizio, sarebbe levato, e chi sa quando luce potrebbe derivare anche alla stori del nostro paese.

In pari tempo gioverebbe procedere allo scoprimento, ma accurato e paziente del Tumulo. Gia sinora si avrebbero degli inizi che il Tumulo si construiva dietro un dato sistema, anziche si ammucchiasse a casaccio. La fascia esterna non presente che piccole pietre del volume di un pugno, miste a nero terricco; poscia vengono strati di pietre di decuplo volume circa, anche miste a terra vegetale nera, ne compatte, ne connesse, ne solide, ma con vuoti interstizali, il tutto percorso, a linea sinuose, da piu o meno lunge radici, dove orizontali, dove oblique, e dove anzi per lo piu verticali.

Nel centro poi del Tumulo, apartire da un piede circa della superficie esterna, si vedono della pietre rozze di pari grandezza delle ultime, cioe del volume di circa 10,000 centimetri l'una designare come curva di una parabola, dall'alto in basso sempre allargatesi, e terriccio con pietre piu piccole in mezzo; il che farrebe aorgomentare all'esitenza e construzione, anzi tutto, di un con nel centro; ppoi in ponente a circa due metri dalla linea del cono, si paleso al nord un angolo retto di mura a secco, con pietre di forse 5000 centimetri l'una, e nel fondo dell'angolo i frammenti di un urna a due anse, fresca quasi di fabrica, del fondo accuminato e dall' orlo a calice; indizio, o che il Tumulo servirono successivamente ad altri di mausoleo, o finalmente che il Tumulo era in origine abitato da quello che ancora si riposa tranquilo nel mezzo. Ulteriori indagini sveleranno anche questo mistero.

Ma, pur tolto il velo del tempo a codesti due monumenti, l'opera del ricercatore non sarebbe ancora compiuta, bisognerebbe darsi a lavori che ne garantissero la conservazione, non solo conto la lenta azioni del tempo, ma anche precisamente conto quella violenta del vandalismo.

Per l'effetto, importerebbe invocare l'attenzione a l'ajuto della commissione incaricata della ricerca e conservazione dei monumenti antichi. Ma per attrarre codesta importante attenzione, e per finire, a scuoterne dasseno l'interesse con efficacia di risultato, urge prima di tutto di levarne disegno; se non che, codesto disegno non e cosa per ora possibile, bisogna prima isolare e scoprire tutte e quatro le faccie dell'edifizio. Lavoro questo, al quale i membri del comitato promotore pel rintraccio e conservazione per ora delle sole mura di Faria, sarebbero ben lieti di dar mano quanta prima, purche la spettabile amminisrtrazione comunale, previa approvazione dell'onorevole consiglio paesano, trovasse nel noto suo amore pel lustro e benessere del paese la intelligente e generosa inspirazione di fornir tosto dalla cassa comunale i mezzi all' uopo necessari.

Attachment 2

PURKIN KUK – ARTEFACTS FOUND

no.	Year	What	Where	Who	Comment
1	1876	Fragments of urn with two handles, pointed bottom, and chalice-shaped rim	Bottom of inner north corner	Botteri 1876	Unknown whereabouts and material
2	1876	*"fragments* of handmade *vessels*, a stone *trough,* two pieces of a *millstone, etc."*	On the mound	Ljubić 1881	Unknown exact findspot and current whereabouts
3	1877	3 small flint knives	Near the mound at the depth of 1 m	Ljubić 1881: 5–6. Pl. V: 2–4	In AMZ, here Fig. 2
4	1978	A few fragments of handmade pottery, a few seashells and limpets or barnacles	While excavating Z1	Zaninović 1978: 49	Unknown whereabouts, unpublished
5	1978	A fragment of a hand-held wedge or polisher in a scattered state, made of porphyry	At the western end of the hillfort plateau	Zaninović 1978: 49	Ibid.
6	1978	Fragment, same as above	On the northern, collapsed side of the collapsed hillfort mound, close to the base of collapse	Ibid.	Ibid.
7	1978	Fragments of ancient pottery made of red fired clay, as well as handmade pottery with characteristic grains of limestone crystals	Belebići plateau, from PK walls towards west	Zaninović 1978: 50	Ibid.
8	1978	Handle of ancient vessel	In a ravine between Belebići and Grohote	Ibid.	Ibid.
9	1979	"Potsherds from the Bronze Age, Iron Age, and antiquity"	Northern slope of hillfort	Petrić 1979: 73	Ibid.

no.	Year	What	Where	Who	Comment
10	1980	"Fragment of wedge or axe of reddish stone, close to it a fragment of an ancient pot"	"Southern slope of hillfort below its rock"	Zaninović 1981: 61	Ibid.
11	1980	"4–5 potsherds of ancient character... (black polished Hellenistic? fragment)"	"at the south end of southeast wall, on its southeast side, we opened a 2x3 m trench"	Zaninović 1981: 61–62, explaining why they should be associated with the wall building period	Unknown whereabouts, unpublished
12	1980	Millstone fragment	"In the dig opposite the corner"	Ibid., p. 61	Ibid.
13	1980	"fragment of the bottom of a pot, an amphora or jug, of ancient, probably Hellenistic, origin"	"In the southern dig"	Ibid., p. 61	Ibid.
14	1988	4 fragments of local body sherds, coarse, one possibly BA, 14 G/H fragments: a fragment of the rim of a pithos of the "Apulian type", body sherds of table wares or amphorae, and one root of a pot handle (?)	On the mound and along the walls	Unpublished: field survey N. Vujnović, P. Popović, Z. Fistonić, and B. Kirigin, 10 Nov 1988	Stari Grad Museum, here Fig. 27.
15	Collection of Ivica Moškatelo from Dol	around 20 fragments	On the southern slope, Laze area		in Stari Grad Museum
16	most recent	See Attachment 3			in Stari Grad Museum

Attachment 3

CATALOGUE OF THE MOST RECENT FINDS (PL. 1-4)

Abbreviation: MPD = maximum preserved dimension

1. Pl. 1: 1. Base fragment of local pottery with fairly dense small and rare large (up to 1 mm) white inclusions. MPD: 4 cm. Well-fired pale reddish clay, with a thin layer of darker black color on the inside. Site: Purkin kuk.
2. Pl. 1: 2. Fragment of a large vessel of local pottery with a tanged handle and fairly dense small and rare large (up to 4 mm) white inclusions. MPD: 8.1 cm. Well-fired pale reddish clay. Site: Laze.
3. Pl. 1: 3. Fragment of a vessel (?) with an internal „opening" of about 8 cm which has a relief angular handle on the other side that is not symmetrical with the „opening". Pale reddish clay with a few small light inclusions and one larger addition up to 5mm in length. Traces of a yellowish coating (?) along the edge of the „handle". MPD: 9.5 cm. Traces of lichen. Possibly an import from southern Italy. Site: Purkin kuk or Laze.
4. Pl. 1: 4. Fragment of the base of a small vessel made of pale ochre clay with traces of a black-glase stripe below which, to the edge of the base, there is a brown stripe. The interior has no coating. MPD: 3.1 cm. Site: Laze.
5. Pl. 1: 5. Fragment of the profiled base of a vessel made of pale ochre clay without traces of a coating. MPD: 5.3 cm. Site: Laze
6. Pl. 1: 6. Fragment of a handle and neck of a vessel made of ochre-red clay with tiny inclusions (mica?). MPD: 4.7 cm. Site: Laze.
7. Pl. 2: 7. Fragment of a rim of a southern Italian pithos of the „a colletto" type made of well-purified yellowish clay with small mica. The top of the rim and part of the interior are damaged. In profile, there are quite a few cavities, both large and small. Fragment code 2020/015 8 8.9. MPD: 12.5 cm. Rim thickness 3.5 cm, body thickness around 3 cm. Site: Purkin kuk.
8. Pl. 2: 8. Fragment of a rim of Pharos 1 type pithos made of reddish clay with darker inclusions of 1-4 mm. The interior is greyish. MPD: 10 cm. Upper surface 6.5 cm. Site: Laze.
9. Pl. 2: 9. Fragment of the rim of a Pharos 1 type pithos made of well-fired dark brownish-reddish (surface) clay with darker inclusions and some smaller white ones. MPD: 7.6 cm. Upper surface 6.8 cm. Site: Laze.
10. Pl. 2: 10. Fragment of a rim of Pharos 1 type pithos made of brown-reddish clay with irregularly distributed white inclusions of 1-3 mm. Well-fired. MPD: 10.5 cm. Width of the upper surface 5.5 cm. Site: Laze.
11. Pl. 2: 11. Fragment of a rim of Pharos 2 type pithos made of reddish clay with a pale yellowish coating on the outside and inside. The core is grey, so the reddish surface layer is 4-5 mm thick. Several cavities and small white inclusions. MPD: 15 cm. Upper surface 6.2 cm. Inner diameter approximately 36 cm. Site: Laze.
12. Pl. 2: 12. Body fragment of a pithos(?) with remnants of three ribs on the outer surface. Well- purified reddish clay with rare small white inclusions. In profile, smaller cavities. MPD: 7.7 cm. Site: Laze.
13. Pl. 3: 13. Fragment of the neck and shoulder of a type B amphora made of well-purified ochre-reddish clay. MPD: 5.8 cm. Site: Laze.
14. Pl. 3: 14. Fragment of the base of a type B amphora made of well-purified ochre clay with very rare small white inclusions. On the inner side, there is a remnant of a circular indentation, about 2 cm in diameter. On the outer side, a groove between the point itself and the body of the amphora is barely visible. MPD: 7.3 cm. Site: Laze.

15. Pl. 3: 15. Overfired fragment of a handle of type B amphora with a slightly pronounced central rib. The core is dull reddish, and the exterior is grey with a thickness of c. 0.7 cm. MPD: 6.6 cm. Site: Laze.
16. Pl. 3: 16. Fragment of the rounded rim of an amphora. The rim itself is made of greyish-reddish clay with rare tiny mica crystals. The neck has a core of reddish clay. MPD: 8.5 cm. Inner diameter c. 18 cm. Site: Laze.
17. Pl. 3: 17. Fragment of the rim of a Greco-Italic amphora made of well-purified ochre clay with a greyish core and rare inclusions and small cavities. MPD: 9.2 cm. Inner diameter c. 12 cm. Found at SG0064.00.
18. Pl. 3: 18. Fragment of the body, probably of a type B amphora, with two circular perforations. Well-purified clay. Light ochre on the inside, more reddish on the outside. glued by I. Moškatelo. MPD: 9.2 cm. Wall thickness 1.2 cm. Site: Laze.
19. Pl. 3: 19. Fragment of the body of an amphora (?) made of ochre-reddish clay with rare small darker inclusions. An incised cross before firing on the inner side. MPD: 8 cm. Wall thickness 1.5 cm. Site: Laze.
20. Pl. 4: 20. Rim and shoulder fragment of a bowl (?) made of ochre clay with quite dense darker inclusions of 1 to 4 mm. The core is greyish. MPD: 9 cm. Inner diameter approximately 34 cm. Site: Laze.
21. Pl. 4: 21. Fragment of a bowl or pot made of well-purified reddish clay with small cavities, mica, and rare small white inclusions. Below the rim are two shallow horizontal grooves. MPD: 7.5 cm. Inner diameter approximately 26 cm. Site: Laze
22. Pl.4: 22. Fragment of a bowl or pot made of a slightly darker reddish clay than no. 20, with smaller cavities, mica, and rare larger inclusions up to 3 mm in size. MPD: 7.5 cm. Inner diameter approximately 30 cm. Site: Laze.
23. Pl. 4: 23. Edge fragment of a roof tile made of well-purified reddish-brown clay with rare large darker inclusions up to 0.5 cm and smaller cavities. MPD: 9 cm. Site: Laze.
24. Pl. 4: 24. Edge fragment of a roof tile made of well-cleaned reddish-brown clay with very rare small white inclusions. MPD: 11 cm. Site: Laze.
25. Pl. 4: 25. Edge fragment of a roof tile. Reddish-brown clay with rare white inclusions up to 3-4 mm. The interior is light brownish-grey. MPD: 10.5 cm. Site: Laze.
26. Pl. 4: 26. Edge fragment a roof tile made of well-purified reddish-brown clay without any inclusions. MPD: 12.5 cm. Site: Laze.
27. Pl. 4: 27. Edge fragment of a roof tile made of well-purified reddish-brown clay with rare dark inclusions, c. 0.2 cm. MPD: 7.5 cm. Site: Laze.
28. Pl. 4: 28. Fragment of a cover tile made of well-purified reddish-brown clay. On the inside, straight grooves are visible. MPD: 13.5 cm. Site: Laze.

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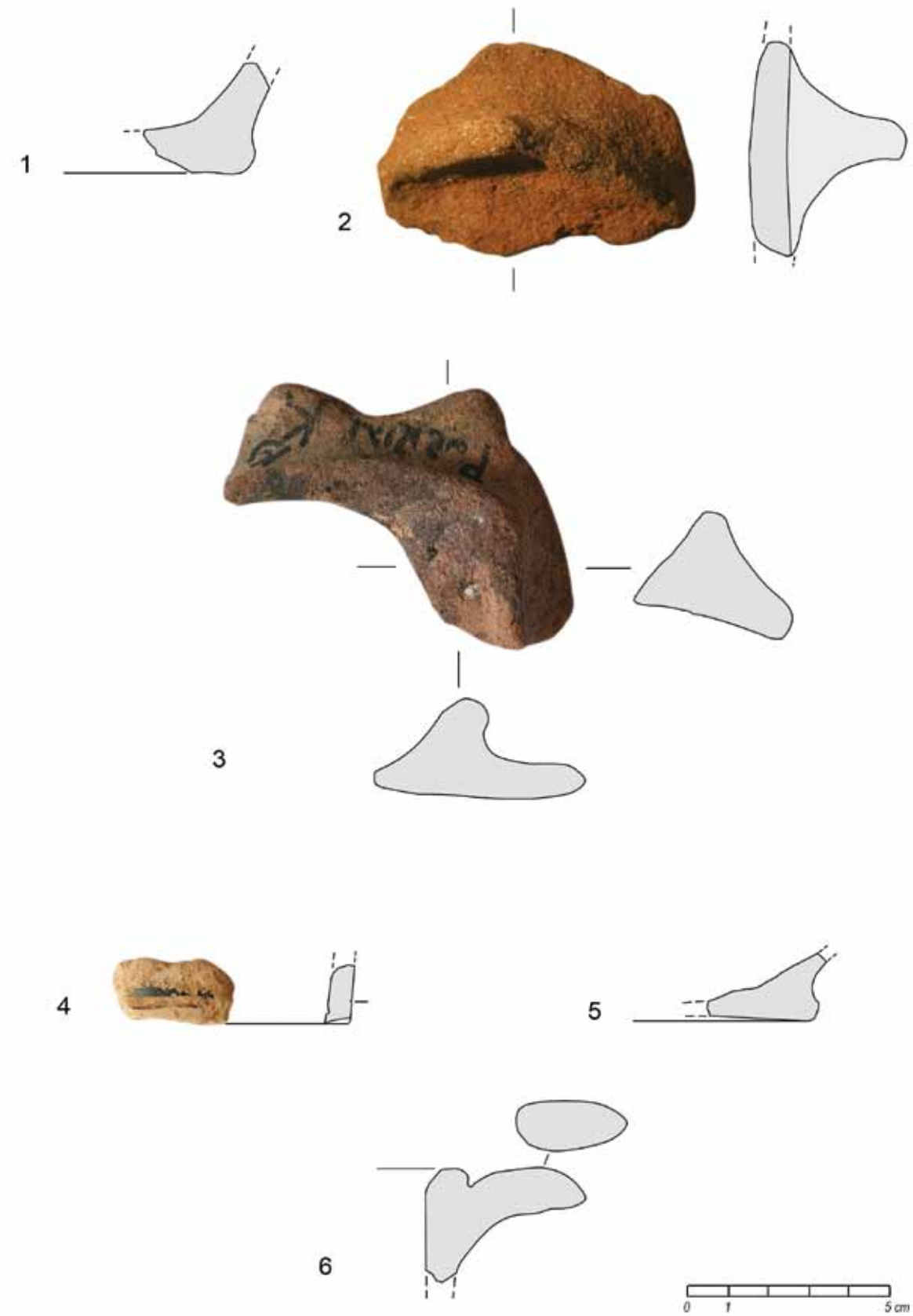
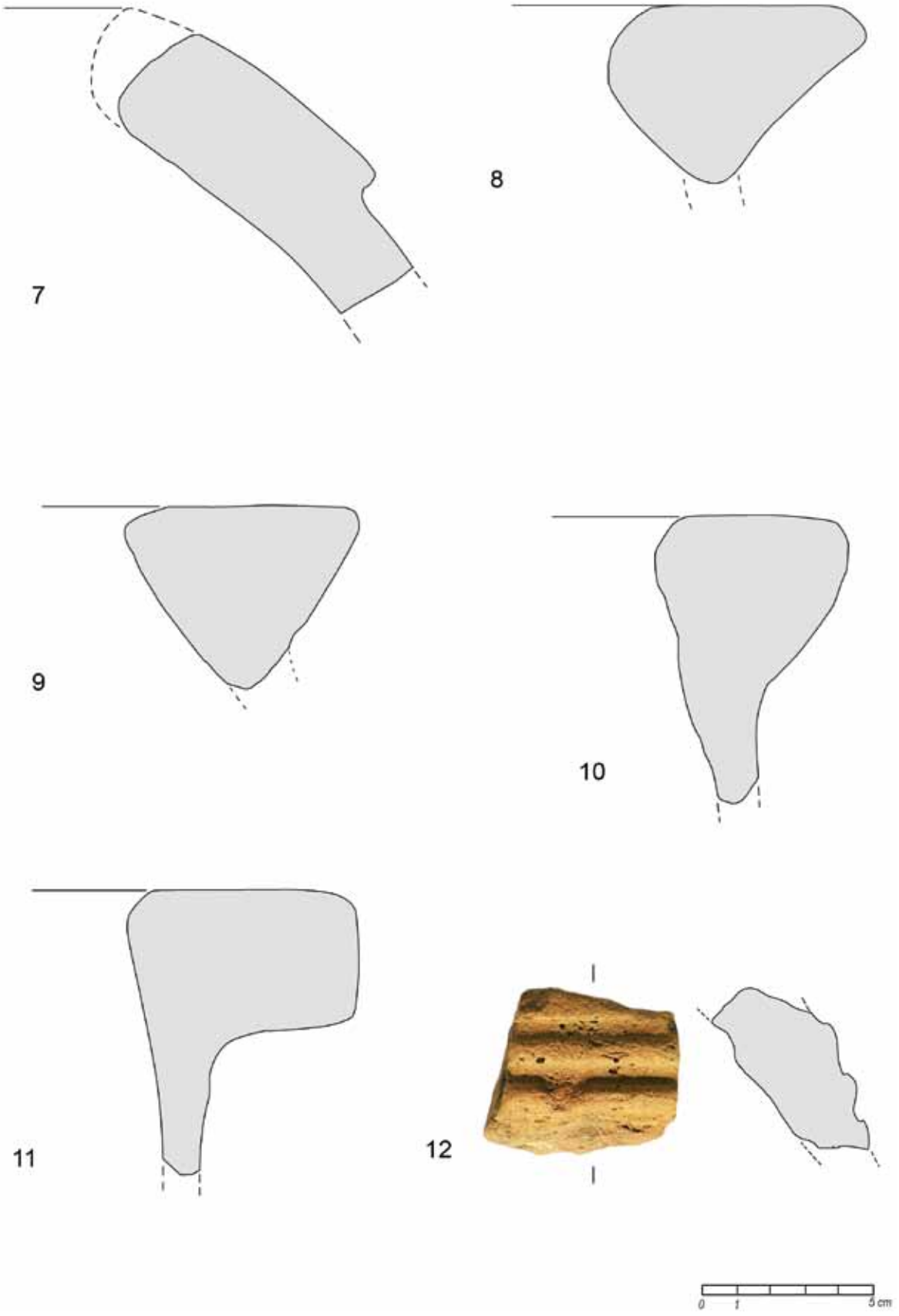
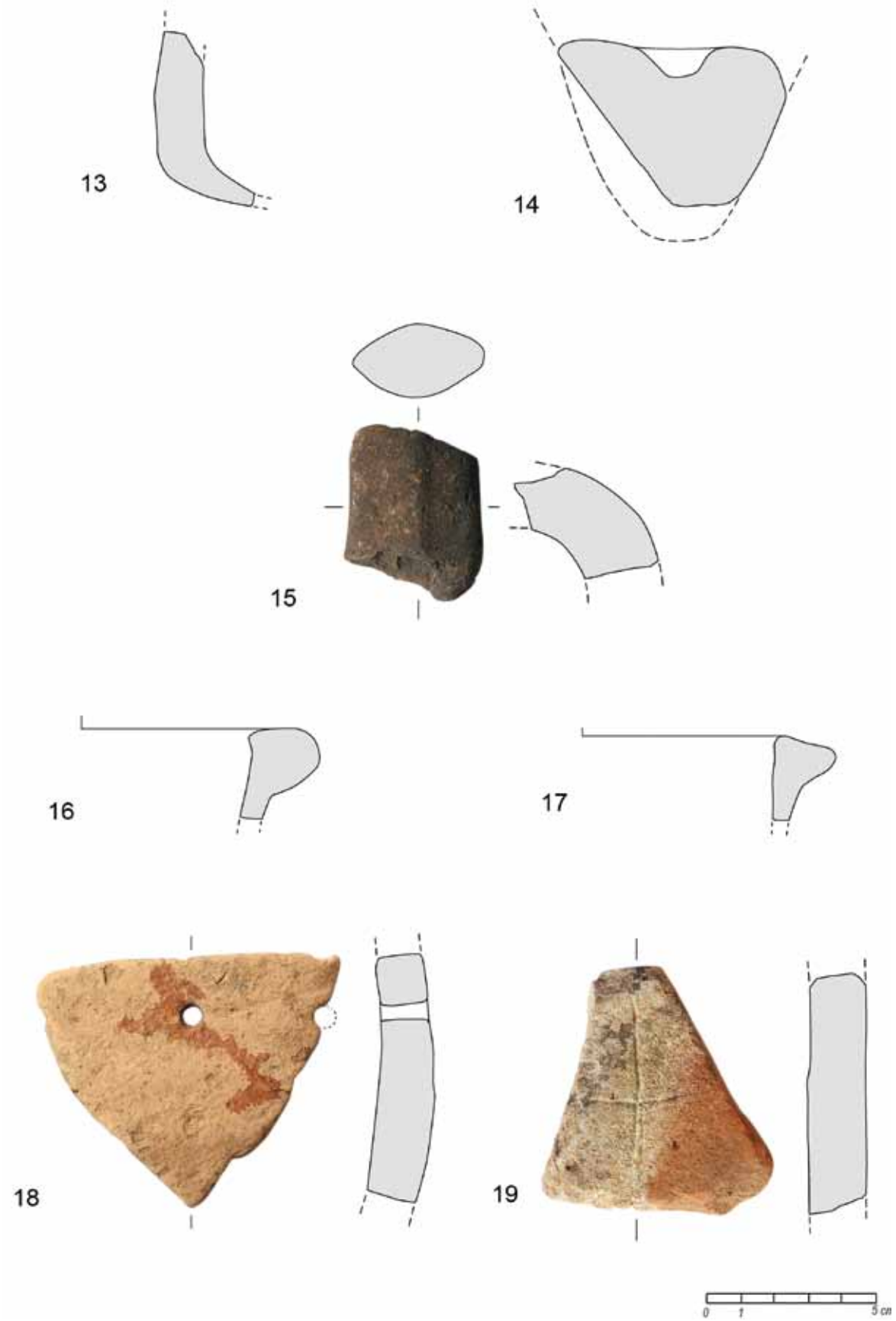


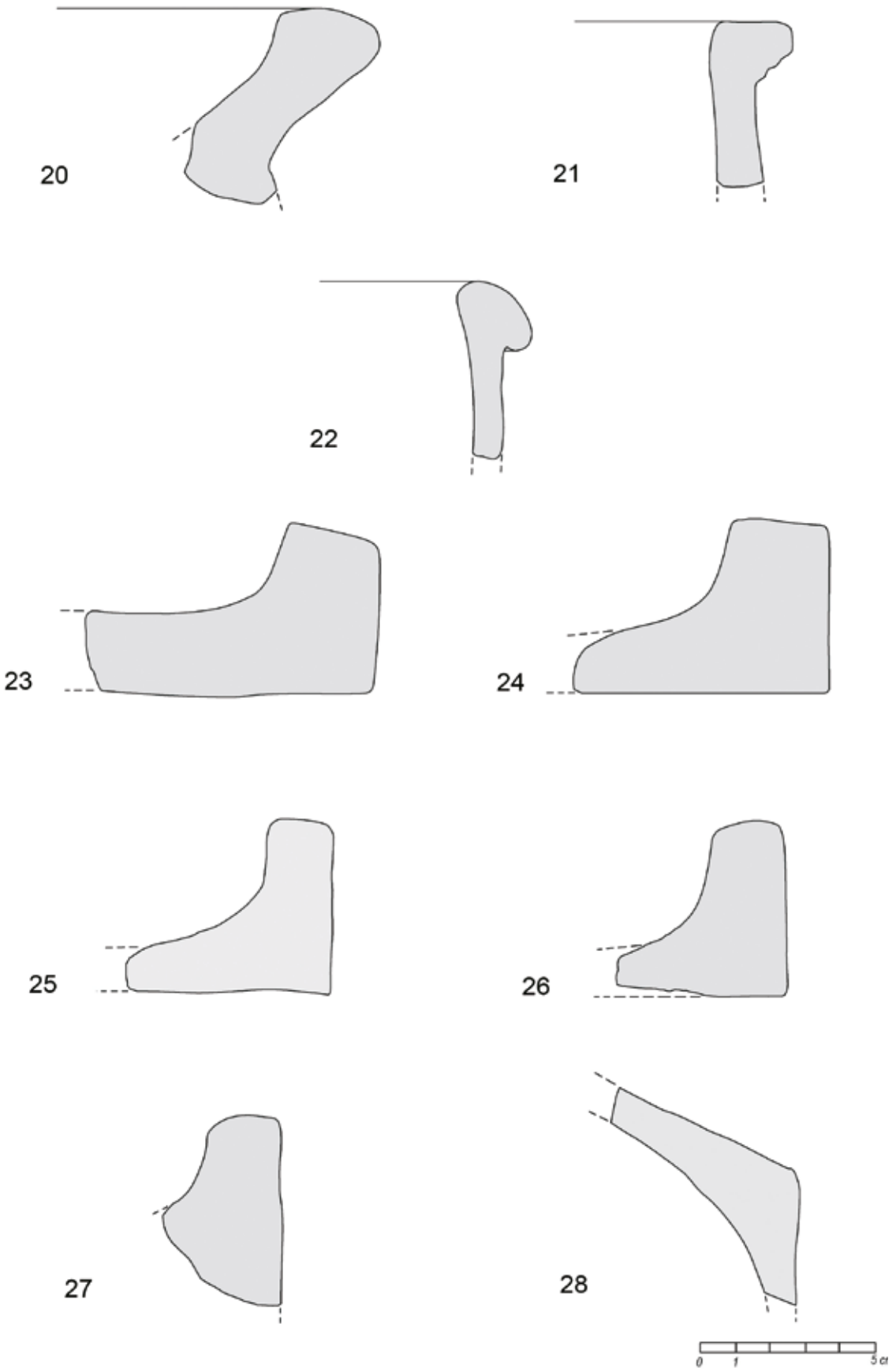
Pl. 1 – Prehistoric indigenous pottery: Nos. 1–3; Greek pottery: Nos. 4–6. Site: Laze (SG0063.00) (drawing and photo: P. Kukoč)



Pl. 2 – Purkin Kuk. South Italian and Greek pithoi: Nos. 7–12. No. 7 from Purkin Kuk, Nos. 8–12 from Laze (SG0063.00) (drawing and photo: P. Kukoč)



Pl. 3 – Greek amphorae: Nos. 13–16 and 18–19. Site: Laze (SG0063.00). No. 17. Site: Purkin Kuk (SG0064.00) (drawing and photo: P. Kukoč)



Pl. 4 – Purkin Kuk. Greek roof tiles: Nos. 20–28. Site: Laze (SG0063.00) (drawing and photo: P. Kukoč)

Marina Ugarković

FACING THE GORGON IN PHAROS: A GLIMPSE INTO CENTRAL ADRIATIC GLOCALITY?

Original scientific paper

Among the numerous pottery artefacts unearthed in archaeological excavations in Stari Grad on Hvar Island (modern Dalmatia, Croatia), preserving the material testimonies of Pharos, an ancient Greek polis in the central-eastern Adriatic, one particular fragment of a vessel, probably a fish plate, stands out as a remarkable and captivating artefact. This fragment features a subsequently incised image within the depression in the middle of its floor, identified as a graffito depicting a Gorgoneion, an image of the Gorgon's head. As such, it represents not only a unique advanced artistic expression from the 4th or early 3rd century BCE in a region where imagery is rare, but also evidence that a well-known Greek cultural tradition was practised in the central Adriatic, embedded into the facets of insular cultural identity and possibly a religious/spiritual sphere.

KEY WORDS: **PHAROS, GREEKS IN THE ADRIATIC, BLACK GLOSS POTTERY, GRAFFITO, GORGONEION, CULTURAL IDENTITY**

INTRODUCTION

For centuries, Stari Grad on Hvar Island (central Dalmatia, eastern Adriatic), today a UNESCO protected cultural heritage, has been in the focus of generations of different types of scholars. This comes as no surprise, since it stands on the material remains of Pharos, an ancient Greek polis and one of the oldest cities of the central Adriatic region founded by Cycladic Parians in 385/384 BCE (Diod. Sicul. 15, 13, 4). Consequently, Pharos was one of the last Greek colonies established in the central and western Mediterranean (Fig. 1). Since the 1980s, the town of Stari Grad and its island context have been the focus of archaeological investigation that has intensified in the last few years. These ongoing research activities have recognized Pharos as an influential contributor to swifter development of regional protohistory and emergence of early history, with its political and economic heyday in the 4th and 3rd century BCE, and cast light on aspects of its cultural, social, and economic traits and policies (Gaffney, Stančič 1992; Forenbaher et al. 1994; Jeličić-Radonić 1995; Gaffney et al. 1997; Gaffney et al. 2002; Kirigin 2004; Kirigin 2006; Popović 2010; Jeličić Radonić, Katić 2015; Jeličić Radonić, Göricke Lukić 2018; Popović, Devlahović 2018; Kavur, Blečić Kavur, Kirigin 2019; Barnett, Ugarković 2020; Popović 2020; Visković, Ugarković 2021; Miše et al. 2022; Ugarković et al. 2022; Zojčeski, Buća 2022; Ugarković et al. 2023). Nonetheless, most of our knowledge of Pharos, including the precise perimeter of the ancient city, and what preceded it (the extent and other elements of the earlier local settlement), is still very limited.

Fig. 1 – Map of the part of the Mediterranean (base map: NASA World Wind (retouched), modified by: Eric Gaba (Sting); close-up base map: Geoportal DGU; made by: M. Ugarković)

In an attempt to unravel some of the unknown facets of Pharian agencies that actively shaped (g)local central Dalmatian cultural practices, which are partly reflected in the preserved material evidence, this paper will focus on the study of a unique ceramic artefact that stands out among hundreds of thousands of recovered Greek pottery fragments, due to its graffito with the depiction of a Gorgoneion.

CONTEXT

The so-called Remete site, house and garden (*Remete kuća*, *Remete vrt*), situated at the south-eastern edge of the modern urban core of Stari Grad, is one of the most researched micro-regional areas today, also presented as an archaeological site for a wider audience. In the course of several decades, rescue and research excavations conducted by several institutions have provided important insights into different phases of urban planning and architecture, as well as numerous ceramic and other finds from the time of Greek, Hellenistic, and Roman Pharos (Jeličić Radonić, Katić 2015; Popović 2010; Popović, Devlahović 2018; Kirigin, Barbarić 2019).[1]

The ceramic artefact that is the subject of this paper was found during the 2013 excavation campaign, conducted by the Museum of Stari Grad. It was discovered in trench L in the Remete garden, which was situated between the discovered segment of the southern fortification wall of the ancient Greek city and the stone structure used as a cistern (Popović, Devlahović 2018: 388-390; Kirigin 2018: 397). This elaborate stone-walled

1 — The excavations on the Remete site and its immediate vicinity have been conducted by the Conservation Department in Split (1994-2004), the Museum of Stari Grad (2009-2013, 2017-2018), the Institute of Archaeology, and the Museum of Stari Grad (2022-2023) and a public institution, the Agency for the Management of the *Stari Grad Plain* (2022-2023).

structure, used for pulling spring water out of it, was one of the earliest Greek architectural structures in this area. As the stratigraphy suggests, it was built earlier then the nearby rampart segment and repaired when the rampart segment was erected (Popović, Devlahović 2018, 389, 391; Kirigin 2018: 401; Kirigin, Barbarić 2019: 223). Although an in-depth study of the ceramic assemblages has not yet been conducted, the finds include pottery, preliminarily roughly dated to the middle and late 4th century BCE (black gloss and plain painted tableware, amphorae...), five coins, also from the 4th century BCE (three minted in Heraclea and two in Pharos), and a fragment of a vessel with an incised figural motif in a thick layer of crushed shells, defined as stratigraphic unit 451 (Popović, Devlahović 2018: 390; Kirigin 2018; for examples of Corinth type B amphorae from SU 451 see nos. 4 and 6 and 7). This layer has been considered in the context of deliberate fills serving to level the area around the cistern and interpreted as a drainage used for the preparation of new buildings, such as the erection of the new city wall and the repairs of the cistern (Popović, Devlahović 2018: 389, 390, fig. 17; Kirigin, Barbarić 2019: 227, 228, fig. 14 B). Therefore, in line with the date proposed for the erection of new elements and the reparation of old elements of the Pharos urban tissue – from the (advanced/late) 3rd century BCE to the (early) 2nd century BCE (Popović, Devlahović 2018: 390, 391; Kirigin 2018: 397) – the context in which the remaining part of the vessel was found seems to suggest its earlier chronology, possibly in connection with other documented finds, preliminarily dated to the middle and the second half of the 4th century BCE, although an earlier 3rd century BCE date cannot be excluded.

THE CERAMIC ARTEFACT: A LOOK AT ITS TYPO-CHRONOLOGY, FUNCTION, AND POSSIBLE PROVENANCE[2]

The discovered ceramic artefact could be classified as black gloss ware (Fig. 2). Only the lower part of the vessel with its base has been preserved. The vessel was made from fine levigated clay, red-yellow in colour (Munsell 7.5 YR 7/3), with visible yet uncommon small orange and white inclusions. Most of its surfaces are covered with black gloss, with the exception of the underside of the base, where five black concentric bands are suggested on the otherwise reserved area. The gloss is dull and smooth, partially flaked off. A thickened and distinct edge divides the central flat depression of the floor from the rest of the vessel wall, which breaks off after the edge, while the ring-shaped base has a concave underside. At some point, but clearly after firing, the inner side of the bottom was adorned with graffiti, in this case a figural mark. It was made with the use of the incision technique, depicting a figural motif, a face that covered the whole depression area. The visible distinct features of the face include eyes, eyebrows, mouth, and hair (curls), while the nose is missing due to the state of preservation. The most elaborate feature are the wide, almond shaped eyes, emphasised by eyebrows, and the clearly visible curls fall down the right cheek (Fig. 3).

Notwithstanding the lack of many morphological elements, the preserved traits of the artefact point to its being an open shape. The only known ceramic shapes with a central depression inside the lower part of the vessel are fish plates, a common element of the 4th century BCE ceramic assemblages, that continued to be produced and used in later periods of the last centuries BCE (Rotroff 1997: 15, 146–149). The edge of the central depression on fish plates is typically separated from the rest of the bottom with a groove, a feature that might have existed on the Pharian example, but the breakage of the vessel wall at this particular point prevents us from confirming or rejecting this assumption.

Fish plates appear in two pottery classes: red-figure plates with depiction of fish and other marine life (McPhee, Trendall 1987; 1990), and plain black glazed/gloss (Morel 1981, série 1121), both of which have been found in central Dalmatia. The shape seems to have been invented in Attic workshops, and is therefore considered Greek in origin, though it is known to have been manufactured in different ceramic workshops in the Mediterranean and beyond, including the Adriatic (e.g. Sparkes, Talcott 1970: 147, 148; Morel 1981, série 1121; Rotroff 1997: 15, 146–149; Vreka 1998; Ugarković 2013, and therein cited bibliography). Regionally, one red-figure example of possible local manufacture is known from Issa (Ugarković

2 —— The artefact in question is currently misplaced, and could not be at the time of writing of this article analyzed in person by the author.

Fig. 2 – Ceramic fragment from Pharos, with the graffito depicting the Gorgoneion (drawing and photo: P. Kukoč)

Fig. 3 – Ceramic fragment from Pharos, with the face (photo: B. Kirigin)

2013; 2019a: 66, 67; 2019b: 41, 66.1), while several black glazed/gloss fish plates (and their fragments) come from different sites, including Pharos (Forenbaher et al. 1994: 25, fig. 7, 2; Jeličić Radonić 1995: 110, br. 4; 111; Ugarković 2013: 87, 88; 2019a: 96), where more examples of this pottery type, currently unpublished, have been discovered during recent excavations.

Even though fish plates were primarily used on an everyday basis for serving food, some of their specimens no doubt played symbolic and other roles in different cultural activities (Ugarković 2013, with bibliography). This is in line with central Dalmatian evidence, where most fish plates have been found in settlements (for Issa: Čargo et al. 2018: 79, nos. 118; Pharos: Forenbaher et al. 1994: 25, fig. 7, 2; Jeličić Radonić 1995: 110, 111; Tragurion: Kovačić 2002: 384, fig. 17; Epetion: Faber 1983: T III, 6, along with many unpublished examples from recent excavations), with some in graves as well (the Martvilo necropolis of Issa: Čargo et al. 2018: 79, nos. 116, 117; Jovanović 2023: 186, 491, 492, no. 9.2; 813, no. 40.9; 851, 852, no. 46.3; for the Vlaška Njiva necropolis of Issa: Ugarković 2013; 2019a: 66, 67, 96; 2019b: 41, 66.1).

Since only part of the vessel has been preserved, it is impossible to attempt to make detailed comparative analogies with regards to specific morphological traits, and their development in different productions, and consequently offer more argumented provenance and precise chronology. However, some observations can be made. When compared to possible Greek models, our shape is rather peculiar, as it has a flat-bottomed depression formed with the addition of a ridge, as opposed to a deeper, rounded shape of the depression, as well as a raised base instead of a ring foot. Some general analogies, with an almost flat bottomed depression, though not exactly of this shape, and with a raised base of a somewhat different morphology, could be found in the example of a 3rd century BCE fish plate from Apollonia or Budva (only the flat bottomed depression) in the very south of the eastern Adriatic (Vreka 1988: 124, Tab. VI, 54; Ugarković 2013: 88, 89, 7b). For a short time in the first half of the 4th century BCE, in Attic production, the underside was reserved and decorated with bands of glaze with a central dot (Sparkes, Talcott 1970: 148, 353, e.g. nos. 1065-1068), similarly to the Pharian example, where the existence of a central dot can only be speculated about since the middle part of the bottom is missing. For the ridge around the depression, it is generally easier to find parallels in Hellenistic fish plates rather than Classical ones, suggesting its date, based on typology, should be rather in the late 4th century or early 3rd century BCE, and not earlier.

When proposing provenance, an additional problem can be recognized in the insufficient knowledge of the local and regional production of this shape, as such studies have not been conducted yet. Moreover, the general study of

local Pharian pottery production is still in its infancy. While preliminary observations should be taken with caution, the existing indirect and direct production evidence (e.g. kiln remains, ceramic discards of overfired and deformed vessel fragments, moulds and small kiln supporters), as well as the preliminary stylistic and morphological characteristics and archaeometric traits, have been used to argue for a plausible Pharian production of fineware during the 4th and 3rd centuries BCE, with the hypothesis of a workshop or workshops situated possibly in the south-eastern part of the residential city area (Migotti 1989: 20, T: 7, 1; Katić 2000; Kirigin et al. 2002; Kirigin 2004: 70, 165; Miše 2005; Popović 2010: 139-141, fig. 5; Jeličić Radonić and Katić 2015: 140–145; Popović, Devahović 2018; Kirigin, Barbarić 2019: 227; Miše et al. 2022; Ugarković et al. 2022). It has been further suggested that Pharian fineware included black gloss tableware characterised by yellowish clay and quality gloss (Kirigin 2004: 165, 173; Miše 200: 31), whose local production in the 3rd century BCE is supported by the result of the compositional and microstructural analysis of selected samples (Miše et al. 2020). On the other hand, the Pharian community also imported pottery, especially fineware and amphorae, though a preliminary review by B. Kirigin suggests a small quantity of imports (Kirigin 2004: 137). Among these, the Attic, south Italian, central Mediterranean Agrinion group and the western north/central Adriatic red-figure, south-Italian gnathia, and black gloss pottery imports of different provenances have been recognized (Kirigin 2004: 154-162; Miše et al. 2020; Ugarković 2020; Ugarković et al. 2022). Even though the studies have not advanced so far as to discuss the characteristics and dynamic of imports and local products, it is clear that black gloss pottery is the commonest pottery class of fine tableware in the layers of Pharos from the 4th and 3rd centureis BCE (e.g. Ugarković et al. 2022). Aside from fineware, it has been suggested that the presumed local Pharian production included other classes, such as plainware and different types of coarseware, along with coarseware made without the potter's wheel as a continuation of the local Iron Age indigenous tradition that persists in Greek layers as well. Was our plate fragment also a product of a local ceramic workshop? Based on the current state of research, it is not possible to either confirm or reject the Pharian production of the ceramic artefact, at least on the simple basis of a macroscopic inspection. While this fact will remain sealed in many respects by the fragmentary nature of the artefact, it is, however, tempting and in many ways logical, considering e.g. some of the peculiar morphological traits and the hypothesized Pharian black gloss production, to follow that line of argument. However, an even more interesting question is when the graffito was applied, that is, if the vessel was initially used as common tableware and, after a partial of full defunctionalization of its original purpose at a later stage of this object's biography, repurposed and recontextualised via the application of meaningful ''decoration''? While it is difficult to make definite conclusions with regards to the provenance of the vessel, considering at least the manufacture of the graffito, its local Pharian origin is more than likely. Furthermore, the somewhat sketchy drawing, its nature and quality, as well as the nature of the incised line cut through fired clay instead of soft clay, allow us to suggest that the graffito was probably not a part of the original production of the vessel, but a later intervention. Moreover, it looks as if the wall of the plate might have been deliberately removed to leave just the central ''emblem'', as the edges look chipped. This would imply that the effort put into remaking this object included more than just adding a graffito. Therefore, it seems more than probable that we have to make a sharp distinction between the production of the vessel, associated with a potter and a ceramic workshop, and its later (re)use as the medium for the application of a figural graffito. These should be looked at as separate events in this object's biography, which could but need not be closely connected.

THE PHAROS GORGONEION AND ITS CULTURAL IMPLICATION IN THE (G)LOCAL COSMOS

Already at the very first glance at the figural graffito, the distinct facial morphology incised on the vessel floor, with its deep gaze and some of the hair falling down the right cheek, reminiscent of snakes, recalls the image of the Gorgon's/Medusa's head. The history and meaning of Medusa, an infamous figure of ancient Greek mythology, and its imagery, which was widespread in the Greek world from the Archaic to the Roman times, is more than clear. As one of the three sisters known as the Gorgons (Γοργόνες), humanoid female monsters (Stheno, the Mighty or Strong, Euryale, the Far Springer, and Medusa, the Queen), she was born to Ceto and Phorcys, primordial sea gods (Spyropoulos 2018: 34–38). Medusa,

the only mortal among them. Her fateful encounter with the Greek hero Perseus is the most notable of the many stories about the Gorgons and one of the oldest and most detailed myths (e.g. Hes. Theog. 287). Medusa is best known for her snakelike hair and her ability to turn whomever she looked at into stone, while her decapitated head became known as the Gorgon mask (γοργόνειο προσωπείο) or Gorgoneion/Gorgoneio (γοργόνειο) (Lazarou, Liritzis 2022: 47).

Over the ages, the image of Medusa and her symbolism attracted the attention of different kinds of writers, artists, and scholars. Numerous ancient sources present a diverse and comprehensive portrayal of this legendary creature, the Greek poets of the 8th century BCE (Homer and Hesiod) and the 6th-5th centuries BCE (Pindar) being among the earliest (for an overview of the work on the use of ancient sources see Lazarou, Liritzis 2022: 48, 49 and cited bibliography). Since the 18th century, modern scholars have been delving into the origins and symbolic significance of the Gorgon/Medusa, and the Gorgoneion, based on the interpretation of the myth from ancient sources and the known iconography (Lazarou, Liritzis 2022: 50-57 and cited bibliography). The origins of the artistic depictions of Medusa, whose sudden appearance and heyday occurred during the Greek Archaic period, with the earliest fully developed images created around the first quarter of the 7th century BCE, can be traced back to earlier legends and myths (Tejero 2021: 29). Moreover, the study of its diachronic presence in the Greek world posits a credible theory suggesting its origin in the prehistory, possibly rooted in the Neolithic and the Bronze Age in specific regions of Greece, encompassing both the mainland and the Aegean islands, with likely alterations typical of mythologies, indicating its endurance over successive generations into recorded history and a continuity into Late Antiquity (Lazarou 2019; Nilsson 2020; Lazarou, Liritzis 2022: 48, 56 58).

Be that as it may, the high popularity of Medusa in the Archaic, Classical and Hellenistic Greek cultural sphere as an inspiration for various forms of ancient art is clearly evidenced in the material record (e.g. sculpture, ceramic objects, metal utensils etc.), resulting in the Gorgoneion being considered the commonest representation of any Greek mythological creature (Floren 1977; Krauskopf, Dahlinger 1988; Spyropoulos 2018: 38; Tejero 2021). Moreover, a variety of archaeological evidence supports the presence of the Gorgon/Medusa and the Gorgoneion, with the evident enduring prevalence of the latter, in different activities of the ancient Greek world, subjected to wide social, cultural and ideological considerations (Baumbach 2011).

In that vein, portrayals of Medusa and the Gorgoneion on pottery are a well-documented practice in the Greek cultural sphere in Athens and beyond (Floren 1977; Lazarou, Liritzis 2022: 58). Even though it is also known in early Corinthian art, its earliest fully developed appearances on pottery are usually connected with the repertoire of Attic workshop(s) of the 7th and 6th centuries BCE (Tejero 2021: 29; Lazarou, Liritzis 2022: 52). There are numerous examples of painted or relief-made Gorgoneia on Greek pottery of different shapes, classes, and chronology, from the Archaic period to the Hellenistic period, with the Archaic examples being the most elaborate and commonest (Krauskopf, Dahlinger 1988; Stone 2015: 263–266; Lazarou, Liritzis 2022: 52). Like some other mythological creatures, the image of the Gorgon/Medusa underwent a dramatic artistic evolution over time, a visual transformation from ugly, grotesque, and scary to feminine and beautiful, which is richly illustrated on pottery (Karoglou 2018; Lazarou, Liritzis 2022: 51). In the Archaic period, Medusa was depicted as having a human female body, with snake hair and protruding tusks, often with wings, claws, and scales. Her scary appearance slowly transformed into that of a beautiful woman, which was not uniformly depicted in full-length representations and Gorgoneia. Medusa starts appearing with a more human physical manifestation – that of a beautiful woman – around the middle of the 5th century BC (Schefold 1988: 101, 102), while visually appealing portrayals of her beheading become common only in the 4th century BCE (Serfontein 1991; Wilk 2000; Lazarou, Liritzis 2022: 85). By the end of that century, full-length depictions of Medusa have largely vanished, yet the Gorgon mask persists as a widely recognized symbol throughout the Hellenistic period (Fürtwangler 1886-1890; Lazarou, Liritzis 2022: 54). The emergence of the "beautiful" type of Medusa in ancient Greece is thought to coincide with the advent of the philosophical notions of aesthetics by the pre-Socratics (Lazarou, Liritzis 2022: 58). During this period, artisans began creating representations characterized by harmonious forms, aspiring to establish an idealized and revered standard.

A more in-depth comparison between the ''Pharian'' face and the known Greek tradition of depicting different figural and mythological images on pottery indicates that the interpretation of the depiction as a possible portrayal of a

Gorgoneion is the most plausible hypothesis (although other eye amulets could have also provided a model, e.g. from Kerameikos, Knigge, Tancke 2006: no. 546, pl. 110). This comes as no surprise, as the Gorgon and Gorgoneia certainly stand out as one of the commonest and longest-lasting models in both the artistic and symbolic senses in the ancient Greek world. In general, when speaking of Gorgoneia on ancient Greek vessels, they are often depicted on their floors. While the tradition of this general practice can be traced to the Archaic period, as said above, the presence of such a motif in the interior of the bottom of open vessels (e.g. Attic eye-cups etc.), as on the specimen from Pharos, is also rooted in the same period. However, these archaic examples are painted and made in a manner that clearly differs from our example, with regards to both artistic and compositional traits of the whole image. A closer comparative inspection of the details of the preserved facial morphology reveals that the face from Pharos evidently exhibits characteristics closer to the beautiful Gorgoneion. The somewhat naturalistic rather than stylized eyes and the fangless mouth speak clearly in favour of the latter, which fits into the suggested typological chronology of the late 4th or the early 3rd century BCE. However, incised versions of Gorgoneia, to the best of my knowledge, have been undetected, making this one unique in that sense.

This is also the first occurrence of a Gorgoneion at the site of the ancient polis of Pharos, on Hvar Island, a region where imagery in this period can generally be considered rare.[3] That the image of the Gorgoneion and its use in arts and crafts was apparently no enigma to the Pharians is supported by another piece of recently procured evidence, a ceramic mould for the manufacture of relief appliqués (unpublished).[4] The mould depicts a female head, interpreted as an image presenting a Gorgoneion, also of the so-called beautiful type (for a comparison with the Hellenistic type of ''Medusa'' on medallion ware: Stone 2015: 264–266). Even though the knowledge of ceramic production in Pharos is still in its infancy, the above-mentioned mould, whether it was used for the production of medallion ware or/and other purposes, is certainly viewed in the light of local ceramic manufacture.

From the corpus of known graffiti on Greek and chronologically related pottery from Dalmatia (Čače et al. 2022; Radić, Borzić 2023: 11), only 16 short inscriptions and symbols, scratched onto ceramic surfaces, have been identified in Pharos, while several others have been found in the latest excavations (unpublished). These markings not only adorn tableware like skyphoi, bowls, and pitchers, but also the surfaces of various items such as amphorae, loom weights, lamps, supports within ceramic kilns, and pithoi (Migotti 1989: 27, br. 27, T. 4: 3; Jeličić Radonić, Rautar Plančić 1995: 7, 20, 63, 103, 111; Kirigin, Hayes, Leach 2002: 57–8, sl. 2, 61–2, br. 12; 245; 247, T. 4, C1, C5, D; T. VI B1; Kirigin 2006: 123, fig. 79; Čače et al. 2022; Korić, Ugarković 2022; Ugarković, Marohnić, in press). Even though regional textual graffiti are documented on fish plates too (from Issa: Jovanović 2023: 851, 852, 46.3), the only graffito from Dalmatia with figural depiction, besides the Pharian example discussed in this paper, is known from the Kopila necropolis of the local settlement on the nearby island of Korčula (Radić, Borzić 2023). It is a hunt scene engraved on a skyphos, of a possible Issean production, also interpreted as a later addition made by a local agent, with conceivable symbolic connotations (Radić, Borzić 2023).

Graffiti as marks share a common ground in the ultimate symbolic nature enforced by them. Furthermore, every graffito has the power of becoming highly personalized, as it is a reflection of a specific individual act, made with a clear intent in mind, for a purpose obvious to the maker. The one who incised this Gorgoneion was clearly following a model which was familiar to him/her and whose meaning was embedded in his/her consciousness. This model belonged to specifically Greek imagery, connected with the Greek mythology, religion, and culture, known to him from other contemporary sources. Still, what this depiction of the Gorgoneion could have meant to a contemporary viewer, and whether he/she was a Greek or an Adriatic native who lived in the Pharian polis, is hard to say with certainty. However, it is clear that the image must have been inscribed here because of the perceived properties of the Gorgoneion. It has been argued that the Gorgon

3 —— Figural images documented on ceramic objects from Pharos, discovered in the 5 year excavations of the Museum of Stari Grad, were presented during the exhibition Faces of Pharos (Popović 2016).

4 —— The mould was found in the 2023 rescue excavation conducted by the Institute of Archaeology and the Museum of Stari Grad in Vagonj Street.

mask had mostly a ritual use, and was used as an abominable object that exorcises evil (Lazarou, Liritzis 2022: 48, 54). Notwithstanding its destructive nature, the blood of Medusa was considered to be both harmful and healing (Dexter 2010: 29; Spyropoulos 2018: 36). Along with its decorative nature, the Gorgoneion as a symbol appears to possess apotropaic qualities, warding off evil influences, and while its form evolved over time, its fundamental essence, at least within the known cultural context, seems to have remained the same (Baumbach 2011). While the local production of the studied plate with graffito is plausible but not confirmable, except for the hypothesis that the application of the graffito was made and consumed locally, which seems more than logical, this speaks even more of the aspects of local cultural identity. The maker of the graffito and 'user' of the 'new' artefact is conceivably the same individual, from Pharos, who was familiar with the symbolism of the Gorgoneia and made his own adaptation of the image, possibly with apotropaic properties and perhaps of a votive or dedicative nature. The uniqueness of the graffito is a clear reflection of an individual act through which another demonstration of the Gorgoneion was given, reflecting a specific iconographic choice and artisan's characteristics in the way this image was presented, and thereby perhaps becoming a fragment of a Pharian and central Adriatic glocality manifested though different facets of cultural expression and embedded into aspects of the religious/spiritual sphere. Another piece of evidence, at least in the context of the Gorgon, could be used to support this argument. Among the seven personal names that are inscribed in stone monuments in Pharos, a female version of the common male name Γοργίλος, Γοργιλώ, stands out (Bechtel 1902:10; 1917: 111; Marohnić 2012: 152, 153; Marohnić in press). This could be connected to the name Gorgon (Γοργώ andΓοργών). While female name Γοργώ has been recorded in both Doric and Ionian Greek cities, the name Γοργιλώ is unique to Pharos and could be considered as one of the glocal traits of the Pharian community (Marohnić 2010: 152, 153; Marohnić in press). The context of our find does not unfortunately reveal more information on this culturally embedded practice, but it can be used, together with other mentioned evidence, as a tentative argument for the spreading and reinterpretation of the idea of the Gorgon in the central Adriatic in the advanced 4th and the early 3rd centuries BCE. While its manifestations changed stylistically though centuries and regions, the general core idea behind it seems not to have been lost for good though time and space.

CONCLUSIONS

The presented fragment of a ceramic artefact with a figural graffito is classified as black gloss fineware, of uncertain shape but possibly from a fish plate, whose stylistic and contextual analysis suggests a date of the advanced/late 4th or early 3rd centuries BCE. The graffito, whose motif and method of application do not fit with fish plate decoration or any other standard decorated pottery classes, was incised on the inner bottom of the vessel, while the presented image is interpreted as a Gorgoneion, a depiction of the Gorgon's head. The localized and personalized depiction of this feminine beast/figure is the first occurrence of the Gorgoneion in the polis of Pharos, where imagery is otherwise rare, but also the earliest material evidence connected to the Gorgon in Dalmatia. As such, it stands as a unique find among numerous pottery sherds associated with ancient Pharos, but also beyond, as it represents, to the best of my knowledge, the only known incised Gorgoneion. The distinctiveness of this mythical creature has been presented through many varied mythological accounts and representations within the ancient Greek world of the southeastern Mediterranean and the neighbouring regions, to which we can now, for the first time, add the central eastern Adriatic of the late 4th c. and the early 3rd centuries BCE. While the local manufacture of the vessel is possible but not confirmable, it is more than likely that the application of the graffito, clearly an additional repurposing with symbolic connotations, perhaps connected with apotropaic properties and of a votive/dedicative nature, is connected with Pharian agency. Even though we cannot be certain whether the graffito was made by a Greek or a local, it offers a new, insular manifestation of the Gorgoneion in the artistic sense, with a symbolism hidden behind the visual medium, and forming, with other elements, a fragment of a Pharian and central Adriatic glocality in the regional arena of multifaceted cultural expressions and, in this case, aspects of religious/spiritual beliefs.

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Antonela Barbir

MARINE RESOURCES IN GREEK COASTAL COMMUNITIES: THE CASE OF ADRIATIC PHAROS

Original scientific paper

Pharos is one of the oldest Greek colonies on the Croatian part of the eastern Adriatic, founded in the early 4th century BC. From 2021 to 2023, extensive rescue excavations took place in Stari Grad (Pharos), uncovering various sections of the ancient city and yielding a vast array of archaeological discoveries. This paper presents the first results of the archaeomalacological analysis conducted with the aim of enhancing our understanding of the exploitation of marine ecosystems, the significance of molluscs in the local diet, and the marine economy in Late Classical and Hellenistic Pharos. Notably, this marks the first archaeomalacological study conducted on intact layers documented within a Greek city along the Croatian Adriatic coastline[1]. The palaeoecological component of this study encompasses the quantity, distribution, and ecology of the collected species in Pharos and at contemporary sites on the eastern Adriatic coast. Furthermore, taphonomic analysis was employed to investigate the role of molluscs in the diet and the potential implications for Greek culinary practices. Lastly, emphasis was placed on exploring the potential contribution of select collected molluscs to the local economy, particularly within the fishing sector.

In summary, this research sheds new light on the historical dynamics of Pharos, providing insights into the ancient city's relationship with its marine surroundings and the significance of molluscs within its culture and economy. The findings not only contribute to our understanding of Hellenistic Pharos, but also add to the broader knowledge of ancient Greek colonies in the eastern Adriatic region.

KEY WORDS: **ARCHAEOMALACOLOGY, MOLLUSCS, TAPHONOMY, DIET, SEA EXPLOITATION, GREEK, PHAROS, DALMATIA**

1 —— To the best of my knowledge, there are currently no other comprehensive archaeomalacological analyses for the same period on the Croatian part of the eastern Adriatic.

INTRODUCTION

Life on islands and coasts has always involved a deep connection with the sea and its unique characteristics. Marine molluscs, as part of the marine ecosystem, have played an important role in Mediterranean societies (Morand 2020). However, the significance of the coastal zone and its resources varies among different societies and should not be overlooked in interpretations. The intertidal zone has provided food and raw material for ornaments and other purposes to these communities (see Szabo et al. 2014; Bar-Yosef Mayer 2016; Allen 2017). Archaeomalacology is no longer a new field of study, but in recent decades there has been increased activity, as shown by the expansion of the variety of methods used to answer research questions (Thomas 2015). The situation is somewhat different in the archaeomalacology of Greek sites along the eastern Adriatic coast, as only a few publications mention molluscs at different levels (Šešelj 2009; Jeličić Radonić 2009; Hernandez, 2017; Paladin et al. 2018; Ugarković 2019; Fiori 2021).

This study aims to shed light on the exploitation of sea by Greek settlers in the city of Pharos, located on the present-day Croatian island of Hvar in central Dalmatia. By examining the significance of marine molluscs in daily life, this research will also make comparisons with coastal communities during the same period. The study is guided by the following research questions:

What strategies were employed by communities in the eastern Adriatic for collecting molluscs and utilizing marine habitats?

What roles did molluscs play in the city of Pharos, especially in terms of culinary practices?

To what extent were molluscs involved in economic activities such as fishing?

Pharos is an immensely valuable monument of Greek presence on the coast of present-day Croatia (Kirigin 2004; Jeličić Radonić, Katić 2015; Popović, Devlahović 2018; Kirigin, Barbarić 2019). Founded in the 4th century BC on a marine route (Kirigin 2004), it serves as a gateway for understanding the relationship between ambitious seafarers and marine resources. Due to its historical and archaeological complexity, Pharos represents an ideal site for investigating various practices of mollusc exploitation. Examining these practices will greatly enhance our understanding of the daily lives of the inhabitants.

ARCHAEOMALACOLOGY OF GREEK SITES ON THE EASTERN ADRIATIC COAST

Remains of molluscs have so far been mentioned only at a few Greek sites on the eastern Adriatic, with even fewer sites undergoing archaeomalacological analysis. Such discoveries have been documented at three sites in central Dalmatia (Croatia), as well as two sites in southern Albania (Fig. 1).

One notable Greek polis on the eastern Adriatic coast is **Issa** (Vis), located on the island of Vis. As expected, numerous specimens of marine malacofauna were unearthed during research activities conducted in the coastal area. An initial examination of the selected marine malacofauna assemblage indicated that these species were easily accessible to the local community (Paladin et al. 2018). However, during the preliminary analysis, the separation of Greek and Roman contexts, as well as the distinction between funerary and residential functions, was not implemented. Consequently, the utility of this data is significantly limited. Another malacofauna assemblage was discovered in the eastern Issa necropolis (Ugarković 2019). The identified species, which are easily available today, were interpreted as having a symbolic role. For instance, crushed sea snails were found covering the bottom of a grave, while remains of marine malacofauna suggested the occurrence of funeral feasts. Moreover, several malacofauna specimens were found near the dead as grave goods. Taken together, these examples imply that marine malacofauna played various roles within the burial customs of Issa (Ugarković 2019: 153).

Another site where molluscs may have had a symbolic role is **Cape Ploča**, where the remains indicated the existence of a Hellenistic sanctuary (Šešelj 2012). This particular site has sparked interest due to the presence of diverse marine gastropod and bivalve species (Šešelj 2009). Although there is some uncertainty regarding the stratigraphy of the contexts in which these molluscs were discovered, this raises the possibility that they may have unintentionally reached the cultural layers. Nevertheless, it is undeniably clear that some of the malacofauna is indeed linked to the Hellenistic sanctuary (Šešelj 2009). The specific statistical representation of individual species is not explicitly provided, which makes it challenging to determine their exact significance. However, Šešelj (2009: 355) points

out that the majority of these species are edible and easily accessible, with only two species inhabiting greater depths.

Phoinike (Phoenice) and **Bouthroton** (Butrint), located in present-day Albania, are two ancient sites situated at the border of the Adriatic and Ionian Seas. Both cities existed for several centuries and share the commonality of later constructions destroying the earliest phases (Hernandez 2017; Fiori 2021). When comparing them to Pharos, the areas 5 and C4 from Phoinike were taken into consideration. Area 5 pertains to the Hellenistic stoa district, as well as a small church dating back to the 7th century AD (Fiori, 2021). Archaeomalacological finds are presented together (Fiori 2021), which requires caution when interpreting them. Moreover, the analysis of molluscs only includes the 2021 research season, so the results should be considered preliminary (Fiori 2021). Area C4 consists of the "House of Paintings", a Hellenistic residence dated to the 3rd–2nd centuries BC (Fiori 2021). In both areas, mollusc remains are scarce (A5–NISP: 8, C4–NISP: 6), with the banded dye-murex being the most prevalent taxon in both contexts.

In the city of Bouthroton (Butrint), which spans the time from the Archaic period to the Medieval period (Hernandez 2017; Fiori 2021), a modest archaeomalacological assemblage was unearthed. The malacofauna associated with the Hellenistic period originates from unit 1619 (late 4th–3rd century BC), consisting only of banded dye-murex and European cerith (NISP: 5) (Hernandez 2017). Additionally, area 4 (room 6) presents combined finds from the Hellenistic and Roman periods, exhibiting a greater diversity, albeit still a limited assemblage (NISP: 17) (Fiori 2021: Tab. 2: 166).

It is evident that archaeomalacological research on Greek sites along the eastern Adriatic coast is rather scarce. Out of the few documented mollusc studies, three sites can be classified as settlements, one as a settlement and necropolis, and another as a sanctuary. Locating a comparable site with well-preserved chronologically corresponding layers and with a statistically relevant archaeomalacological assemblage has proven to be a daunting task. This challenge stems from the fact that mollusc remains originate from mixed Hellenistic-Roman contexts (Issa, Phoinike), as well as sites with Hellenistic contexts but a limited number of mollusc remains (Bouthroton). In the absence of settlement-type sites for comparison, we also ventured to consider the sanctuary at Cape Ploča for evaluating species richness among the sites. Nevertheless, it should be acknowledged that this site holds limited comparative significance within the scope of this study.

CASE STUDY: PHAROS

The Greek colony of Pharos, which is now known as Stari Grad, is situated on the northern side of the island of Hvar in central Dalmatia (Fig. 1). This Greek *apoikia* was founded in 385/384 BC by settlers from the Cycladic island of Paros in the Aegean Sea, and stands as an early (if not the earliest) example of urban settlement in Croatia. The city was strategically located at the end of a protected bay near the largest piece of fertile land (*Chora Pharou*) on the island (see Kirigin 2004; Popović, Devlahović 2018; Kirigin, Barbarić 2019). While present-day Stari Grad lies along the coastline, it is hard to define the exact coastal boundaries of Pharos (see Kirigin 2004; Barbir 2014). During its peak in the 4th and 3rd centuries BC, this polis focused on agriculture and had its own ceramic production, a mint, and thriving trade, as evidenced by numerous archaeological discoveries (Kirigin 2004; Jeličić Radonić, Katić 2015). The city fell under Roman rule in the late 3rd century BC (Kirigin 2004).

The site of Pharos, regionally renowned for its architectural and other archaeological finds, has been the subject of only one study pertaining to archaeomalacology. This study focuses on a presumed purple-dye workshop[2] (Jeličić-Radonić 2009; Jeličić Radonić, Katić 2015). Within the Greek insula, which predates the mid-4th century BC, excavations revealed a cultural layer covering almost the entire surface of a room. This layer consists of numerous crushed marine gastropods and is situated above the floor of the Greek insula. The authors (Jeličić-Radonić 2009; Jeličić Radonić, Katić 2015) interpreted this context as a purple-dye workshop, likely established in the latter half of the 4th century BC. The layer, composed of crushed marine gastropods mixed with soil, reaches a thickness of approximately 20–25 cm. Despite significant fragmentation, the presence of species associated with purple-dye production, specifically the banded dye-murex (*Hexaplex*

2 —— The authors mention the use of molluscs for road leveling (Jeličić Radonić, Katić 2015). This practice has also been recorded in recent rescue excavations in Stari Grad. However, future studies will delve deeper into the use of molluscs in construction, exploring it more extensively.

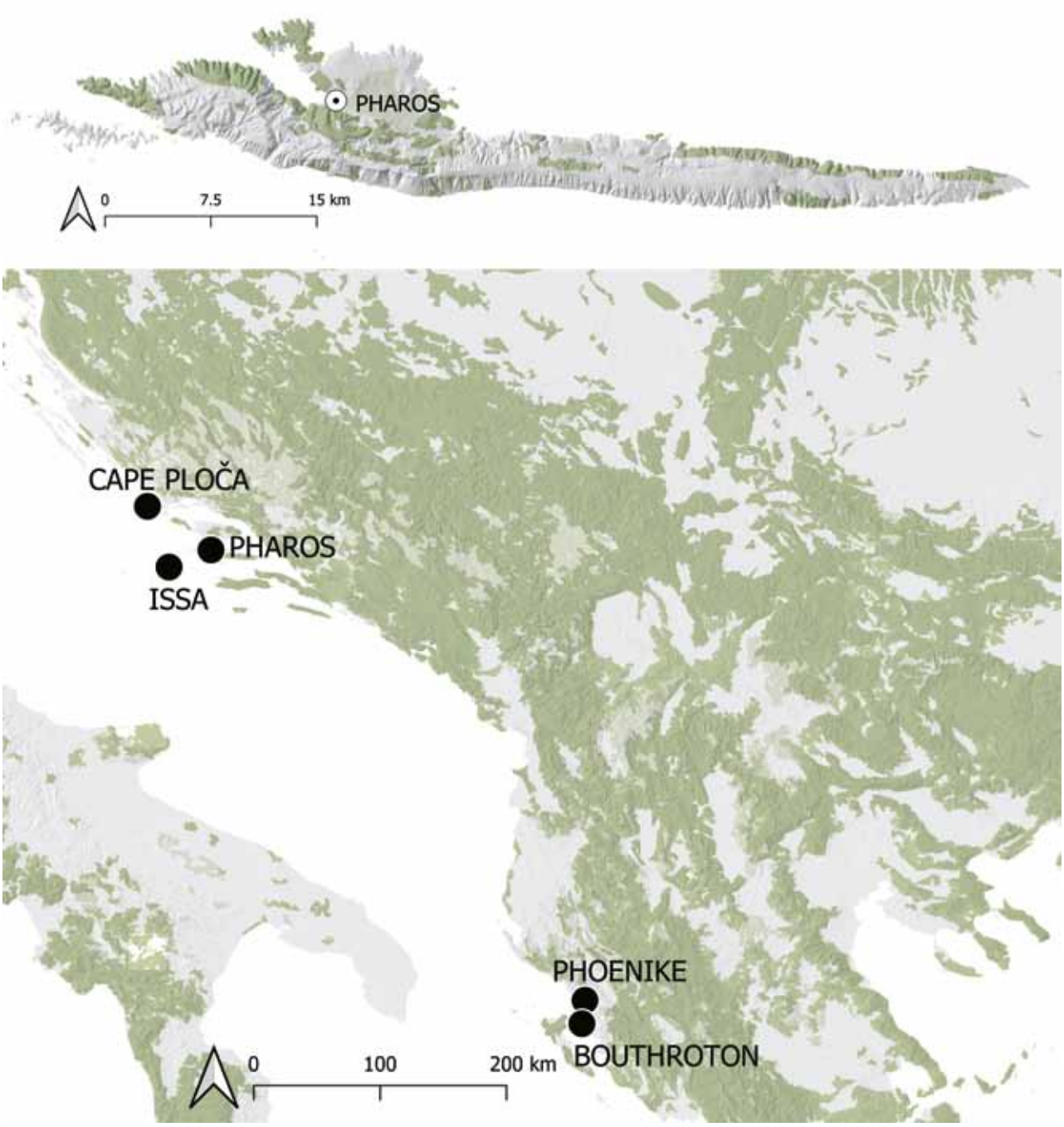

Fig. 1 — Map of Pharos and the mentioned Greek sites on the eastern Adriatic (base: QGIS version 3.22; computer processing: A. Barbir)

trunculus) and purple-dye murex (*Bolinus brandaris*), has been confirmed. The authors have identified the workshop based on the discovery of several polished pebbles exhibiting impact marks, which are interpreted as hand grinders used for extracting secretions from the gastropods (Jeličić-Radonić 2009; Jeličić Radonić, Katić 2015). As purple-dye production typically requires specific structures such as pools and drainage channels (Marín-Aguilera et al. 2018 and its literature), Jeličić Radonić and Katić (2015) note that such infrastructure has not yet been uncovered due to subsequent architectural constructions on the site.

MATERIAL AND METHODS

The subject of this study pertains to molluscs collected from Greek contexts, excluding from the analysis possible intrusions from later layers.

The archaeomalacological remains examined here have been gathered during the ongoing rescue archaeological excavations in the heart of Stari Grad (Pharos) that started in 2021. Given that the excavations are still in progress (as of the end of 2023) and the contexts under analysis are subject to ongoing scrutiny without a finalized interpretation, this study primarily focuses on the archaeomalacological analysis of contexts tentatively assigned to the Late Classical and Hellenistic periods of the city. Consequently, it is important to acknowledge that this analysis does not encompass the entirety of the collected malacofauna and should thus be regarded as preliminary in nature. For all instances, the analyzed contexts are tentatively interpreted as either streets or residential structures. The majority (74%) of the examined remains originate from the rescue excavations undertaken in the first half of 2023, while a smaller proportion (26%) stems from 2021.

The sampling methodology employed in this study entailed handpicking material from the trench. In certain instances, wet sieving techniques were additionally employed, utilizing screens with mesh sizes of 3 mm, 1 mm, and 0.3 mm. Prior to analysis, the collected material was subjected to initial preparatory measures which encompassed manual pre-sorting, weighing, and contextual data labelling.

Meticulous processing procedures were carried out on the molluscan specimens, with careful documentation of relevant data in an Excel database, that took into consideration the archaeological context, biological and ecological information, and taphonomic characteristics. Taxonomical determination was conducted by using personal reference collections and relevant references (Giannuzzi-Savelli et al. 1997; 1999; 2001; 2003). In cases where specimens exhibited noticeable damage, taxonomic determination was limited to the genus level. The taxonomic representation of the malacofaunal assemblage is expressed through the number of remains (NR) and the minimum number of individuals (MNI). The calculation of MNI was based on the anatomical elements specific to molluscs, employing the umbo for bivalves and the apices for marine gastropods.

Taphonomic changes were recorded after Claassen (1998). During the taphonomic analysis, special attention is devoted to traces of bioerosion. The primary objective behind the investigation of predator traces on molluscs was to ascertain whether the specimens were collected post-mortem. Additionally, meticulous examination of anthropic modifications, such as perforations and working marks, as well as traces of burning, aimed to enlighten us regarding human manipulation of these animals. In order to gather reliable information on the distribution and ecological preferences of marine molluscs, various references were consulted, including the works of Poppe and Goto (1991; 1993) and Peharda Uljević et al. (2022). Scientific names were updated according to the World Register of Marine Species (https://www.marinespecies.org). Coastal littoral zones were defined after Bakran-Petricioli (2007).

RESULTS

Taxonomic determination

During the rescue archaeological excavations, a total of 172 remains of mollusc shells (in terms of NR) were analyzed from Greek layers, corresponding to 155 individuals (in terms of MNI) (Tab. 1). The total weight of the analyzed assemblage of archaeomalacological finds is 3,5 kg. Out of the total number of molluscs, the majority belong to marine gastropods (62,6% in terms of %MNI), while bivalves constitute a significantly smaller proportion (37,4% in terms of %MNI).

A total of 19 species and one genus were identified. Among them, eight species and one genus belong to Bivalvia, while 11 species belong to Gastropoda. Among the bivalves, only two species stand out, collectively accounting for 71% of the total number of bivalve individuals (in terms of %MNI), namely the thorny oyster (*Spondylus gaederopus*) and the Mediterranean mussel (*Mytilus galloprovincialis*). Other bivalve species are poorly represented, with a slightly higher proportion of the edible oyster (*Ostrea edulis*).

Among marine gastropods, limpets stand out, particularly the species *Patella caerulea* (20,6% in terms of %MNI), followed by the European cerith (*Cerithium vulgatum*) (12,9% in terms of %MNI), and the banded dye-murex (*Hexaplex trunculus*) (10,3% in terms of %MNI). Other gastropod species have a representation below 5% in terms of %MNI. All the determined species of bivalves and gastropods are edible.

Taphonomic analysis

The deposition of mollusc shells underground has resulted in the dissolution of the shells of all the collected molluscs. Specifically, the analyzed

TAXA	NR	%NR	MNI	%MNI
BIVALVIA	**63**	**36.6**	**53**	**34.2**
Arca noae	2	1.2	2	1.3
Cerastoderma glaucum	2	1.2	2	1.3
Glycymeris sp.	2	1.2	2	1.3
Mytilus galloprovincialis	19	11.0	16	10.3
Ostrea edulis	7	4.1	6	3.9
Pecten jacobaeus	1	0.6	1	0.6
Pinna nobilis	2	1.2	2	1.3
Spondylus gaederopus	28	16.3	22	14.2
GASTROPODA	**109**	**63.4**	**100**	**65.8**
Bolinus brandaris	5	2.9	5	3.2
Bolma rugosa	7	4.1	7	4.5
Cerithium vulgatum	20	11.6	20	12.9
cf. *Tonna galea*	1	0.6	1	0.6
Hexaplex trunculus	23	13.4	16	10.3
Patella caerulea	32	18.6	32	20.6
Patella rustica	7	4.1	7	4.5
Patella ulyssiponensis	3	1.7	3	1.9
Phorcus articulatus	4	2.3	4	2.6
Phorcus mutabilis	1	0.6	1	0.6
Phorcus turbinatus	6	3.5	6	3.9
TOTAL	**172**	**100.0**	**155**	**100.0**

Table 1 — Taxonomic representation of species identified in Hellenistic layers in Pharos with the number of remains (NR), the relative number of remains (%NR), the minimum number of individuals (MNI), and the relative minimum number of individuals (%MNI) (made by: A. Barbir)

specimens were collected from *terra rossa*, mostly mildly acidic soil in which calcium carbonate ($CaCO_3$), the basic building element of molluscs, deteriorates. The dissolution of the shell can vary from colour loss to chalky surface of the shell, ultimately thinning it and promoting fragmentation (Claassen 1998: 60). In some cases, taphonomic modifications began even before the animals were collected from the sea. The focus here lies on bioerosion, abrasion, and encrustation.

Predator attacks leave bioerosive traces on the inner side of the operculum suggesting that most of the attacked molluscs did not survive the attack and that their shells were later collected empty. Traces of bioerosion (Tab. 2) were found on a total of 11% of the analyzed remains, with a slightly higher occurrence for bivalves (7.0%) compared to gastropods (4.1%). Bioerosion traces were recorded for the bivalves *A. noae* (1.2%), *O. edulis* (1.7 %), and *S. gaederopus* (4.1%). Bioerosion traces on gastropods were only observed for *C. vulgatum* (1.7%), *H. trunculus* (1.2%), *B. brandaris* (0.6%), and *P. caerulea* (0.6%).

Abrasion traces were recorded only on one specimen of the bivalve *Glycymeris* sp., indicating that this bivalve was collected from the intertidal zone, where the strong influence of waves on the shell caused the formation of abrasive marks.

Encrustation occurs on mollusc shells due to the presence of other organisms on their surface. Encrustation is much more common in bivalves, and this is also the case in Pharos. While encrustation is present in only one example of a limpet (0.6%), it is more prevalent in bivalves (5.2%). Traces are the most common on the shells of *S. gaederopus* (3.5%), followed by *O. edulis* (1.2%), and *M. galloprovincialis* (0.6%). It is assumed that all the individuals were alive when captured. The traces of encrustation do not coincide with the traces of bioerosion on the same individuals.

Anthropic activity is the most common taphonomic modification, accounting for 27.9%. This type of modification is more frequently observed among gastropods (17.4%) than among bivalves (10.5%). Modifications are most common for *S. gaederopus* (9.3%) and *P. caerulea* (8.7%). Traces indicating anthropic activities vary in terms of the types of activities and the species on which they are observed.

The results of the taphonomic analysis suggest that a smaller proportion of the analyzed mollusc samples was collected after the animal's death, and the most prevalent taphonomic modification was attributed to human activity. Nevertheless,

TAXA	NR	Bioerosion (%NR)	Encrustation (%NR)	Anthropic activity (%NR)
BIVALVIA	**63**	**7.0**	**5.2**	**10.5**
Arca noae	2	1.2	0.0	0.0
Cerastoderma glaucum	2	0.0	0.0	0.0
Glycymeris sp.	2	0.0	0.0	0.0
Mytilus galloprovincialis	19	0.0	0.6	0.0
Ostrea edulis	7	1.7	1.2	1.2
Pecten jacobaeus	1	0.0	0.0	0.0
Pinna nobilis	2	0.0	0.0	0.0
Spondylus gaederopus	28	4.1	3.5	9.3
GASTROPODA	**109**	**4.1**	**0.6**	**17.4**
Bolinus brandaris	4	0.6	0.0	1.2
Bolma rugosa	7	0.0	0.0	0.0
Cerithium vulgatum	20	1.7	0.0	3.5
cf. *Tonna galea*	1	0.0	0.0	0.0
Hexaplex trunculus	23	1.2	0.0	2.3
Patella caerulea	32	0.6	0.6	8.7
Patella rustica	7	0.0	0.0	1.2
Patella ulyssiponensis	3	0.0	0.0	0.6
Phorcus articulatus	4	0.0	0.0	0.0
Phorcus mutabilis	1	0.0	0.0	0.0
Phorcus turbinatus	6	0.0	0.0	0.0
TOTAL	**172**	**11.0**	**5.8**	**27.9**

Table 2 — The representation of taphonomic modifications in the archaeomalacological assemblage from Pharos, expressed as the relative representation of the number of remains (%NR) (made by: A. Barbir)

less than one third of the analyzed remains showed traces of anthropic activities, and the reasons for this lie, at least partially, in the higher degree of fragmentation due to the characteristics of the sediment in which they were found.

Mollusc habitat

Considering the habitat of the marine molluscs found in Pharos, it is evident that island communities mostly exploited the infralittoral zone (Fig. 2). Specifically, this zone contributes the highest number of collected species (NTAXA: 11), as well as the highest minimum number of individuals (MNI: 66). The taxa inhabiting this zone include the bivalves *Arca noae*, *Cerastoderma glaucum*, *Glycymeris* sp., *Mytilus galloprovincialis*, *Ostrea edulis*, *Pinna nobilis*, and *Spondylus gaederopus*. The identified gastropods inhabiting the infralittoral zone are *Bolinus brandaris*, *Bolma rugosa*, and *Tonna galea*.

The tidal, mediolittoral zone ranks second in terms of species richness (NTAXA: 6) and the minimum number of individuals (MNI: 53). The determined taxa from Pharos, characteristic of this zone, are exclusively gastropods, such as species from the genus *Patella* and *Phorcus*.

Due to the extreme conditions characterized by intensive temperature changes, humidity, salinity, and wave impacts in the mediolittoral, certain taxa migrate between the mediolitteral and infralittoral zones, feeding in the mediolittoral during high tide and retreating to the infralittoral during low tide (Bakran-Petricioli 2007). This category is the least represented in the archaeomalacological assemblage from Pharos in terms of biodiversity (NTAXA: 2) and number of individuals (MNI: 36). The gastropod species *H. trunculus* and *C. vulgatum* are present in this category.

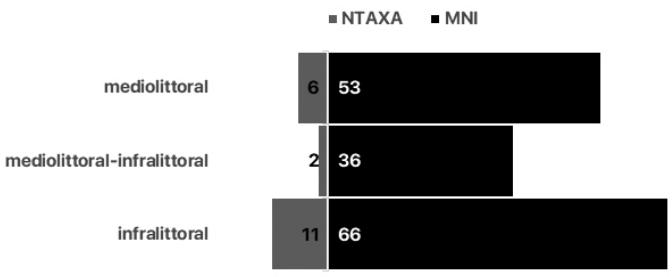

Fig. 2 — Representation of the number of species (NTAXA) and the minimum number of individuals (MNI) in marine habitats – the littoral zone (made by: A. Barbir)

DISCUSSION

Molluscs gathering strategies on the eastern Adriatic

The coast of the island of Hvar exhibits typical Dalmatian-type coast, with a characteristic corrosion-abrasive micro-relief consisting of scarps, small depressions, rocky features and similar (Bognar 1990). Most of the coast in central Dalmatia shares similar characteristics. This type of relief provides an ideal habitat for gastropods inhabiting the mediolittoral, such as limpets, top-snails, and European cerith. These species would be gathered along the coast at the low tide. At the transition from the mediolittoral to the infralittoral zone, seagrass meadows (e.g. *Posidonia oceanica*) often occur (Bakran-Petricioli 2007), harbouring various bivalves such as the spiny oyster, as well as gastropods like the banded dye-murex and purple dye-murex. Oysters and mussels tend to develop colonies on harder substrates. Additionally, these are the most common species found at Hellenistic sites in Dalmatia (Tab. 3).

On the other hand, the Albanian coast has a slightly different relief. The Albanian coast is a low-type coast, characterized by large sandy beaches, river deltas, lagoons, and similar features (Doka, Qiriazi 2022: 68). Bivalves are somewhat more common in Albanian sites, especially those that prefer the influx of sweet water in a marine environment, such as the spiny oyster, edible oyster, mussels, and those that prefer a softer substrate, such as the Venus clam, common cockle, and bittersweet clam. Gastropods are less represented, but species such as the purple dye-murex, banded dye-murex, European cerith, limpet, top-snail, and spotted pisania can be found (Tab. 3).

The Dalmatian sites show a slightly higher species diversity, with Issa being the most diverse (NTAXA: 23), followed by Cape Ploča (NTAXA: 21), and Pharos (NTAXA: 19). The diversity in the Albanian sites is slightly lower, with Bouthrotos having a higher diversity of bivalves (NTAXA: 11) compared to Phoinike (NTAXA: 4). When interpreting the results, the consolidation of Greek and Roman archaeomalacological assemblages should be considered in the case of Issa, so the number of species for Issa should be treated with caution, as well as for Phoinike.

None of the mentioned sites have a dominant species, which indicates a lack of specialization in collecting for food or any other activities. Ultimately, we can see similarities between the species exploited by (mostly) Greek communities and their adaptation to different types of coastlines in the eastern Adriatic.

SITES		**Pharos**	**Issa**	**cape Ploča**	**Phoinike**	**Bouthroton**
TYPE OF SITE		settlement	settlement, necropolis	sanctuary	settlement	settlement
Taxa	**Common name**					
Bivalvia						
Acanthocardia tuberculata	tuberculate cockle		+	+		
Arca noae	Noah's ark	+	+			
Atrina fragilis	fan mussel		+			
Cardiidae	cockle			+		
Cerastoderma glaucum	lagoon cockle	+	+			
Cerastoderma sp.	cockle					+
Flexopecten glaber	smooth scallop		+			
Glycymeris pilosa	pilose bittersweet		+	+		
Glycymeris sp.	bittersweet clams	+	+		+	
Lima lima	spiny fileclam			+		

Modiolus barbatus	the bearded horse mussel		+			
Mytilus galloprovincialis	Mediterranean mussel	+	+	+		
Mytilus sp.	mussel					+
Ostrea edulis	flat oyster	+				+
Ostrea sentina	crested oyster			+		
Pecten jacobaeus	Mediterranean scallop	+	+	+		
Pinna nobilis	noble pen shell	+	+			
Ruditapes decussatus	chequered carpet shell		+			
Spondylus gaederopus	spiny oyster	+	+	+	+	+
Veneridae	venus clams				+	+
Gastropoda						
Bolinus brandaris	spiny dye-murex	+	+	+		+
Bolma rugosa	spiny topsnailrough	+		+		
Cerithium alucastrum	spicate cerith		+	+		
Cerithium sp.	cerith		+	+		
Cerithium vuglatum	European cerith	+				+
cf. *Tonna galea*	giant tun			+		
Columbella rustica	dove shell	+				
Gibbula magus	the great top shell			+		
Hexplex trunculus	banded dye-murex	+	+	+	+	+
Mitra zonata	zoned mitre			+		
Naria spurca	dirty cowry		+			
Patella aspera	Azorean limpet		+			
Patella caerulea	Mediterranean limpet	+	+	+		
Patella rustica	Lusitanian limpet	+	+			
Patella sp.	limpet	+		+		
Patella ulyssipoensis	rough limpet			+		
Patella vulgata	common limpet					+
Phorcus articulatus	articulate monodont	+				
Phorcus mutabilis	mutable monodont	+	+	+		
Phorcus sp.	top-snail	+				
Phorcus turbinatus	turbinate monodont					+
Pisania striata	spotted pisania					+
Steromphala divaricata	divaricate gibbula			+		
Trochidae	top-snail		+			
References	Palomares, Pauly 2023	this paper	Paladin et al. 2018; Ugarković 2019	Šešelj 2009	Fiori 2021	Hernandez 2017; Fiori 2021

Table 3 — Presence of mollusc taxa on the Greek sites on the eastern Adriatic (made by: A. Barbir)

Molluscs in local cuisine

Classical works of Greek antiquity play a significant role in understanding the relationship between coastal Greek populations and marine food resources, particularly regarding marine molluscs. Marine molluscs were highly regarded as a food of high social status and were believed to have health-promoting properties (Voultsiadou, Vafidis 2007; Voultsiadou et al. 2010). The question arises regarding the role of molluscs in the diet of Greek colonies on the eastern Adriatic coast, particularly in Pharos.

Mollusc remains in Greek urban settlements along the eastern Adriatic coast, such as Issa (Paladin et al. 2018), Phoinike (Fiori 2021) and Bouthroton (Hernandez 2017; Fiori 2021), have primarily been interpreted as evidence of local population's dietary practices. Although the presence of edible species of marine molluscs can be considered as an indicator of diet, the taphonomic analysis is crucial for interpreting the mollusc remains in Pharos. While no modifications suggesting thermal processing (involving the use of fire) were found in the analyzed assemblage, attention was given to traces indicating intentional gathering and forced opening of shellfish.

The characteristic defence strategy of shellfish is to close their shell when they sense danger. By closing their shells, shellfish protect themselves from predators, including humans (Guderley, Tremblay 2016). When collecting shellfish, a closed shell typically indicated that the specimen is safe for consumption, while an open shell signals a diseased individual with the shell opening/closing reflex not functional. Soft tissues of the animal can be accessed for eating purposes through thermal processing (grilling, boiling), during which the reflex weakens after the animal's death, and the shell opens. If no thermal processing is used in meal preparation, shellfish can be consumed raw. When consuming raw meat or extracting meat before thermal processing, it is necessary to open the shell forcibly, leaving traces on shells. Fractures are typically U-shaped, most commonly on the ventral side, resulting from the insertion of a blade between two valves (Gruet 1993; Dupont 2010). Such damage has been recorded on oysters (*O. edulis*), and more frequently on spiny oysters (*S. gaederopus*) (Fig. 3).

As described by Galen, oysters were highly valued and in high demand due to their exceptionally tender meat. They were mostly consumed fresh, although others preferred them fried. The method of preparation also had implications for health (Voultsiadou et al. 2010). Apicius mentions popular recipes in Roman gastronomy that utilized flat oysters and spiny oysters, such as Baian stew (*Embractum Baianum*) (Carannante et al. 2014). Interestingly, the spiny oyster, which is abundant in Pharos and present in all the previously mentioned Greek sites in the eastern Adriatic, is not documented in classical Greek literature as part of the diet (Voultsiadous et al. 2010). Nonetheless, traces of forced shell opening attest to anthropic activities of meat extraction. Its potential use as a food source may indicate the dietary adaptation of Greek settlers in the Adriatic region.

Evidence of intentional gathering has been recorded for limpets, primarily *P. caerulea*, and, to a lesser extent, *P. rustica* and *P. ulyssiponensis* (Tab. 2). Limpets secure themselves on a rocky surface and carve out scars that match their shape, thus preventing dehydration during low tide and protecting themselves from predators (Crothers 2012). Due to their positioning, it is necessary to use a sharp, slender object to enter beneath the gastropod shell and lift it off the surface. This action results in damage to the shell edges. Sometimes the limpet is deeply embedded in its home scar, requiring it to be struck with a sharp object along the edge to release water before lifting it from the surface. Marginal damage (Fig. 3) has been found on Pharos' limpets, indicating this practice and their potential utilization as a food source. Limpets were part of the Greek cuisine (Lovano 2020), although there are many unknowns regarding their role in gastronomy, as Firth (2021) emphasizes, as they are often associated with starvation and survival, earning nicknames such as "famine food" or "poor food". On the other hand, the inclusion of limpets in the Greek cuisine is suggested by Aristophanes, who coined the term for a recipe that includes limpets, translated as (see Firth 2021 and the references cited therein):

> "*Limpets, oysters, salt fish,*
> *And a skate too a dish,*
> *Lampreys, with the remains*
> *Of sharp sauce and birds' brains,*
> *With honey so luscious,*
> *Plump blackbirds and thrushes,*
> *Cocks' combs and ring doves,*
> *Which each epicure loves,*
> *Also wood-pigeons blue,*
> *With juicy snipes too,*
> *And to close all, O rare!*
> *The wings of jugged hare!*"

Although we cannot assert with certainty that this dish was also prepared in Pharos, taphonomic modifications and the continuous representation of these gastropods support the idea that they were to some extent part of the local diet.

In case of spiral gastropods, extracting the meat is slightly more challenging, which is why they are often boiled before meat extraction. However, during the extraction process after boiling, shell damage can occur, albeit significantly less than if the individual was not boiled before meat extraction. Such damage is mainly found near the shell mouth and is present in very few individuals of the species *B. brandaris*, *H. trunculus*, and *C. vulgatum* (Tab. 2). A similar practice is suggested by Carannante et al. (2022) for *Murex* gastropods found in Hellenistic Berenike on the Red Sea in Egypt.

Fig. 3 — Anthropic modifications on spiny oyster *Spondylus gaederopus* (first row – left valve, second row – right valve) and on limpets Patella sp. (photo by: M. Korić)

Although there are no strong indicators such as taphonomic modifications, the possibility that other species were used in the cuisine of Greek Pharos should not be excluded. For example, mussels, which are currently one of the most exploited species for economic purposes, are also present in Greek written sources. Apparently, mussels did not appeal to everyone gastronomically. Athenaeus states that mussels are delicious food, but Xenocrates believed that they were too salty and that their taste needed to be enhanced with spices (Voultsiadou et al. 2020). Scallops (such as the Mediterranean scallop) were also highly valued as delicacies. Another delicacy is the noble pen shell (*P. nobilis*), where Xenocrates distinguishes individuals of smaller and medium sizes as having tastier and softer meat (Voultsiadou et al. 2010).

There is no doubt that a portion of the examined mollusc remains can be classified as food waste. However, the intriguing question arises as to whether marine molluscs were exclusively gathered for local gastronomic purposes or if, more likely, the archaeomalacological narrative portrays a more intricate scenario.

Molluscs as indicator of fishing activity

The Greeks, particularly those residing in coastal regions, held the art of fishing in high regard, much like other revered crafts. This sentiment was evident in the presence of professional fishermen (known as *halieis, aspalieis*) who supplied local communities with marine products. Alongside various fish species, certain molluscs, especially marine gastropods, were also part of their fishing practices (Lovano 2020). While fishing tools and techniques varied (Theodoropoulou 2011), this article will focus on the tools discovered in Pharos and the corresponding fishing techniques. The primary fishing tools employed were handheld hook and line (*aspalieutike*), with bait consisting of other fish, insects, feathers, as well as marine molluscs (Lovano 2020). The ensuing discussion will delve into the role of molluscs as both bait and intentional and/or unintentional catch during fishing.

In traditional fishing practices, the use of gastropods and bivalves as bait is well recognized (Milišić 1991; Bulić 2021; Duvančić 2021; 2022), with some fishermen showing a preference for their use (Bulić 2021; Duvančić 2021; 2022). However, there are differing opinions regarding the willingness of fish to consume gastropods due to their tough meat (Duvančić 2021; 2022). As noted by Lovano (2020), gastropods were historically used as bait by coastal populations in Greece, suggesting that some of the collected malacofauna from Pharos may have served this purpose. Evidence of fishing tools, specifically four bronze hooks, further implies fishing activity in the proximity of Pharos (Jeličić-Radonić 1996: 68). These findings point toward the practice of handline fishing. In this technique, a baited hook is cast to a specific location in the water, and the fishing line is then pulled to retrieve the hooked fish. Various materials can be used for the fishing line, which is typically connected to a hook with bait at one end. Anglers employing this technique have the flexibility to position the bait at varying depths or distances from the shore, depending on their preferences and the targeted fish species. The city of Pharos has yielded a range of mollusc taxa suitable for handline fishing, primarily intertidal gastropods like top-snails, limpets, spiny topsnailrough, spiny dye-murex, banded dye-murex, as well as infralittoral bivalves such as Noah's ark, bittersweet lams, lagoon cockle, Mediterranean mussel, and noble pen shell.

The molluscs found at the site may have been caught intentionally or unintentionally during fishing activities. Voultsiadou et al. (2010) discuss Aristotle's observations on scallops, where he noted their decline in Kaloni Bay due to excessive fishing. Fishermen in the area used a tool that scraped the seafloor, causing damage to scallop populations. Aristotle also mentioned that scallops had a tendency to escape by jumping out of the tool. In his work "History of Animals", Aristotle references the use of European cerith shells as bait for hunting muricids. These shells often housed hermit crabs and were used in *porphyra* workshops (Voultsiadou, Vafidis 2007).

While earlier studies suggested the presence of a purple dye workshop in Pharos (Jeličić Radonić 2009; Jeličić Radonić, Katić 2015), as well as the abundance of European cerith and banded dye-murex gastropods in the analyzed assemblage, the scarcity of finds and the lack of taphonomic modifications do not support the idea that European cerith was extensively used for hunting muricids or for the *porphyra* workshop in Pharos. However, evidence from the Roman site of Polentia (Mallorca) presented by Oliver (2015) shows intentional hunting of muricids and the use of European cerith as bait. Based on taphonomic indicators and the high frequency of drilled shells, including unfinished predator drilling, it was assumed that *C. vulgatum* individuals were intentionally exposed to predators *H. trunculus*, thus intentionally used as bait in the muricid gathering activity (Oliver 2015).

On the other hand, larger sea snails, such as muricids, could have been caught in nets during fishing (Duvančić 2022), making their way onto the tables of Greek settlers in Pharos and elsewhere.

CONCLUSION

During the extensive rescue excavation conducted in Pharos, mollusc remains were collected and subjected to analysis; this study presents the preliminary findings. Despite the limited sample size, the archaeomalacological analysis from this Greek city and the intact layers are a novelty for the eastern Adriatic coast of present-day Croatia. This study provides a more profound understanding of the role these animals played during the Late Classical and Hellenistic periods in Pharos. It also sheds new light on the daily life of the inhabitants and redefines the relationship between the local population and marine ecosystems.

Comparing these finds with contemporary Greek colonies in the eastern Adriatic region reveals a clear pattern of intertidal resource exploitation across all sites. It demonstrates the adaptive nature of the colonizers, considering the unique characteristics of the micro-locations within the Greek sites along the eastern Adriatic coast. The presence of fishing tools in Pharos, along with the ecological characteristics of certain mollusc species, suggests their usage as bait for fish and other molluscs in fishing activities. However, it is still uncertain if molluscs were used in fishing on an occasional or semi-professional basis.

The taphonomic analysis has proven to be particularly valuable in identifying remains that provide evidence of anthropic activities. Based on this analysis, we conclude that at least some of the analyzed molluscs were consumed as a food source. However, they likely played a supplementary rather than central role in the local cuisine.

Ultimately, the archaeomalacological analysis of molluscs from Greek sites along the eastern Adriatic coast enhances our understanding of the culture, diet, economy, and ecological conditions of Greek colonists in this region. This research raises the question of how a comprehensive analysis of all the mollusc remains collected from the Greek city of Pharos, as well as an archaeomalacological analysis of other Greek sites along the Adriatic coast, will reshape our understanding and expand our knowledge on this subject.

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OTHER EASTERN ADRIATIC AREAS

Paula Androić Gračanin, Ana Konestra, Fabian Welc

BEYOND THE HORIZON: A GLIMPSE INTO THE EVOLUTION OF THE LANDSCAPE IN THE NORTHERN PART OF RAB ISLAND OVER THE LAST TWO MILLENNIA BCE

Original scientific paper

This study analyses monumental Bronze Age and Iron Age sites – hillforts and tumuli – identified in the northern part of the island of Rab. The main objective of this paper is to thoroughly examine, reassess, and analyse the existing data along with the findings from recent interdisciplinary approaches to the area. The identified prehistoric monumental structures, dating to the regional Bronze and Iron Ages, are examined within the contemporary geographical contexts, scrutinizing the characteristics of their landscape placements. By exploring various aspects, an effort is made to understand why particular locations were chosen for their establishment. This is facilitated by the integration of a series of Geographic Information System (GIS) analyses to explore the relationships between movement, visibility, proximity, and interconnectedness. It clarifies how these factors come together to create a unique 'sense of place' in the topographical environment of the northern region of Rab Island.

KEY WORDS: **LANDSCAPE, NORTHEAST ADRIATIC, RAB ISLAND, BRONZE AGE, IRON AGE, PREHISTORIC MONUMENTAL ARCHITECTURE, TOPOGRAPHIC EMPLACEMENT, VIEWSHED ANALYSES**

INTRODUCTION

The arrangement of space is fundamental to archaeology, as it can reflect complex human-environmental or sociocultural interactions. Managing space holds multiple implications for human societies; it is where social, economic, and cultural practices meet (Hansen, Meyer 2021: 1–2). By adapting and utilizing features of a given space, the environment transforms into a landscape, wherein social practices are spatially materialized (as in Mlekuž, Črešnar 2019: 221–222; see also Brück, Goodman 1997: 1–2). This adaptation includes the creation of various places – dwelling, sepulchral, productive, ritualistic, etc. (Courbot-Dewerdt 2009: 13–15; see also Mlekuž, Črešnar 2019: 222; Brück, Goodman 1997: 2).

Strategically positioned within the landscape, prehistoric hillforts, alongside the supposed associated burial mounds, effectively alter and reconfigure the visual composition inherent to the terrain (Mlekuž, Črešnjar 2014: 201). This collective arrangement notably enhances the prominence of these features along the horizon. In spite of their general monumental and prominent presence in the landscapes of the northeastern Adriatic and its vicinity, there have been few local comprehensive, state-of-the-art studies of these types of prehistoric landscapes (such as Mihovilić 2013 and references therein; Glavaš 2014;

Čučković 2017; Forenbaher 2023). This scarcity of holistic-oriented research can primarily be attributed to the limited availability of precisely datable evidence resulting from the lack of systematic investigations. To better understand several aspects of the northeastern Adriatic regional Bronze and Iron Age, the northern part of Rab Island was chosen as a case study, specifically focusing on the northwestern part of the Kamenjak ridge and the overlooked Lopar Field, with its significant clustering of prehistoric monumental sites. Recent archaeological trench excavations, supported by non-invasive survey methods such as pedestrian surveys, aerial archaeology, and geophysical surveying, have provided invaluable insights into the prehistoric landscape in focus. This investigation and its elaboration go beyond specific sites, emphasizing the appropriation of the landscape itself. The way in which space was manipulated and subsequently arranged was addressed here with the aid of available data and its subsequent spatial analysis, paying attention to the diachronicity, which is tentatively indicated by available archaeological evidence.

Since excavation data is mostly missing, and the outreach of the applied non-invasive survey is limited (see e.g. Opitz, Herrmann 2018), the interpretational value of individual sites is thus far mostly at the descriptive level. Therefore, an attempt at analysing this diachronic development and spatial variability was conducted through addressing visibility, since such analyses can shed light on the social dimensions of landscapes, on the setting and interrelation of sites (Llobera 2007: 52–53), and on the control function of each (Ruestes Bitrià 2008).

As part of this broader investigation, this study aims to test hypotheses regarding the strategic positioning of fortified hilltops and tumuli, emphasizing their dominance in the field of vision and control over the surrounding landscape. Also, it seeks to evaluate the interconnectivity among these sites, paying special attention to their contemporaneous existence, when ascertained, and their spatial distribution. Subsequently, it endeavors to understand the clustering of sites in this part of the island throughout the last 2 millennia BCE. Finally, it delves into the concept of "reversed perspective" (as proposed by Čučković 2017), examining the sea-oriented viewpoint of all the analysed locations and their visibility from a maritime perspective.

THE STUDY AREA: THE LANDSCAPE OF THE NORTHERN PART OF RAB ISLAND

This paper focuses on the island of Rab, located in the Kvarner Bay, the northernmost bay of the eastern Adriatic Sea (Fig. 1a). Covering the area of 86.12 km^2 (Duplančić Leder et al. 2004), this midsized Croatian island lies in a northwest-southeast (Dinaric) direction, with a length of 22 km and a maximum width of 11 km. Together with 35 smaller islands, islets, small rocks, and rocks awash, it constitutes a compact, small homonymous archipelago. Located in the inner part of the Kvarner Bay, the island of Rab is separated from the mainland by the Velebit Channel and is closest to the mainland at the southeastern tip, approximately 2 km away. Its western coast and part of the northern coast, it is surrounded by the internal sea of Kvarnerić, which separates it from the islands of Cres and Lošinj. On the northeast side, the Rab archipelago is separated from the island of Krk by the Senjska Vrata channel, while the Grgur Channel delimits the archipelago from the east. In the south, Rab is separated from the island of Pag by the Pag Channel (Fig. 1a).

This paper centres on the northern segment of the island, specifically highlighting the Lower Flysch area of Lopar and the overlooking northwestern part of the Kamenjak ridge (see Fig. 1b). In a geomorphological context, this northern part of the island is characterized by the presence of flysch sediments from the Lower Paleogene and Middle Eocene periods – shallow marine clastic deposits that, in the geological past, functioned as a submerged accumulation area with synclinal formations (Lončar 2012). These flysch deposits hold significant importance as they provide a favourable substrate for arable soil (Miko et al. 2007).

In contrast, the extensive, rounded limestone ridge of Kamenjak, comprised of anticlinal structured rudist limestone (Rogić 1969), overlooks the Lopar area at its northernmost point. This specific stretch of the Kamenjak ridge, with an average elevation ranging from 100 to 130 meters ASL (above sea level), is currently distinguished by dry-stone walls and hosts a diverse range of low Mediterranean vegetation. In this wider zone of the

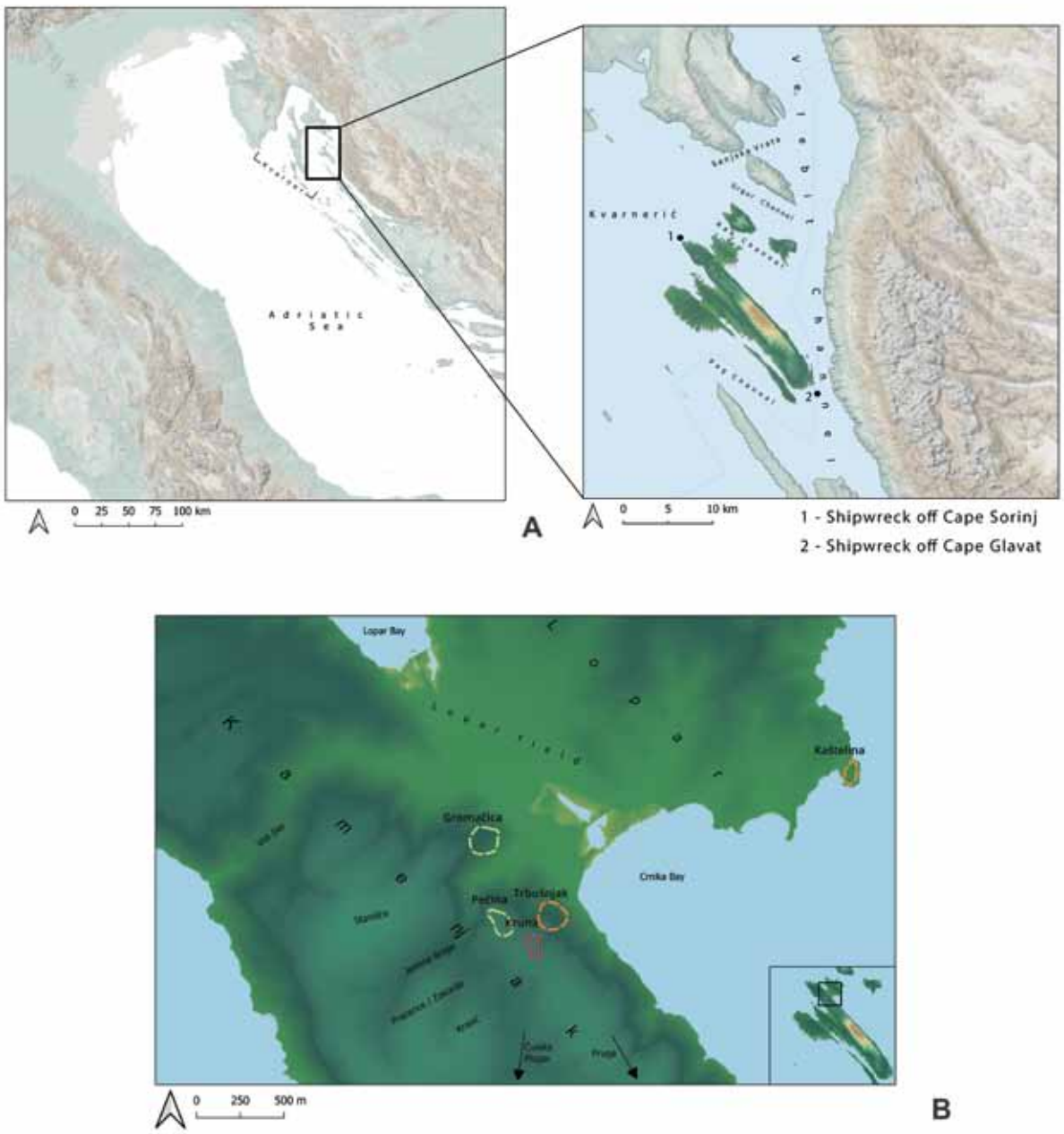

Fig. 1 – A: the position of Rab within the Adriatic and the inner Kvarner Bay, showcasing observable marine features; B: the study area with the evidenced approximate area of the sites and local toponymy (basemaps: NASA Shuttle Radar Topography Mission (SRTM) DEM, open access; DGU – State Geodetic Service, with permission; made by: A. Konestra)

Kamenjak ridge, there are several partially natural karstic ponds. It is plausible that this broader area served for centuries as a pasture for pastoral activities, as suggested by Perinić Lewis (2008).

Despite their distinct and contrasting natures, the two areas of the Lopar Field and the overlooking Kamenjak ridge coexisted in a harmonious and interconnected manner, as also evidenced in the last two millennia BCE.

MONUMENTAL SITES WITHIN THE LATE BRONZE AND IRON AGE LANDSCAPE OF THE NORTHERN PART OF RAB ISLAND

The monumental prehistoric structures of the island of Rab have been identified through extensive and intensive field surveys conducted since the mid-1980s (see Batović 1985; 1987; 2003;

Brusić 1990; Rizner 2012; Lipovac Vrkljan, Konestra 2013; Lipovac Vrkljan et al. 2014; Konestra et al. 2017) and only rarely to rescue excavations (see Matejčić 1968) or systematic excavations combined with non-invasive research methods (see Androić Gračanin et al. 2020). Building upon these findings, corroborated by the most recent follow-up surveys presented in this paper, it becomes evident that the spatial distribution of Bronze Age and Iron Age monumental structures on the island exhibits a notable concentration in its northern part, specifically in the area that is closely examined here: the Lopar Field and the overlooking northwestern part of the Kamenjak ridge (Fig. 1b). In fact, the unequivocal identification of hillforts remains limited elsewhere on the island, with only three confirmed hillfort sites: Košljen, situated in the southwestern part; Plogar, overlooking Supetarska Draga; and the promontory where the town of Rab is situated (Rizner 2012).

In regard to tumuli found elsewhere on the island, the situation mirrors this pattern; merely a few mounds have been identified in the southeastern part of the island, but they have never been excavated, so their archaeological potential remains largely unexplored (see Rizner 2012). Considering the recent endeavors in surveying prehistoric sites on the island (see Oštarić 2020), the reliability of data concerning other areas and sites remains uncertain due to the adoption of a populist perspective and the consequent absence of standardized methodology employed for data collection, documentation, and analysis. Therefore, the study area chosen here, while being spatially coherent, is also the only one where a variety of monuments with more secure archaeological indicators is available.

To date, three fortified prehistoric hillforts have been recognized along this section of the Kamenjak ridge, overlooking the Crnika cove. Proceeding from the north, these encompass the sites situated on the distinctive hilltops of Gromačica, Pećina, and Trbušnjak, alongside two separate and relatively distant clusters of tumuli, one positioned on Gromačica and the other on the Kruna plateau (Fig. 2). Furthermore, adjacent to the eastern perimeter of the Lopar Field and overlooking the Crnika cove, a hillfort settlement has been identified on the Stolac promontory, presumably accompanied by a flat necropolis (refer to Fig. 10).

While it remains challenging to ascertain the specific reason why this particular area of the island was extensively utilized during the last two millennia BC, it is conceivable that these monumental structures were strategically positioned in the landscape to manipulate its visual configuration, thereby altering the interconnections in the surrounding environment (see, for instance, Mlekuž, Črešnjar 2014; Čučković 2017; Mlekuž, Črešnjar 2019 and references therein).

Fig. 2 – Aerial view of the northwestern part of the Kamenjak ridge, view towards west, and the marked location of the site within the study area (photo: K. Rabiega – Archaeological topography of Rab Island)

Gromačica hillfort and tumuli

Located at the northwestern fringe of the Kamenjak ridge above the Lopar Field, at the most prominent height contour of the linguliform hilltop known as Gromačica (approximately 90 meters ASL), there existed a relatively small hillfort and several large tumuli in its immediate vicinity. At the top of Gromačica a large tumulus interpreted as cenotaph, or an observation point once supposedly stood (Matejčić 1968: 75). At least three other tumuli to the southeast of the top of Gromačica, observed adjacently on aerial photographs from 1968 (Fig. 3), each with a radius of approximately 10 meters, unfortunately endured significant destruction during the construction of a water reservoir in the area before their rescue excavation (see Matejčić 1968). As a result, these archaeological excavations primarily targeted a context characterized by significant disturbance, yet they also revealed several intact stone tomb chambers (Fig. 4). The excavations uncovered an extraordinary array of grave goods associated with seven distinct graves, with two additional ones identified but lacking accompanying grave goods. Based on the funerary inventory, the utilization of this necropolis can be dated between

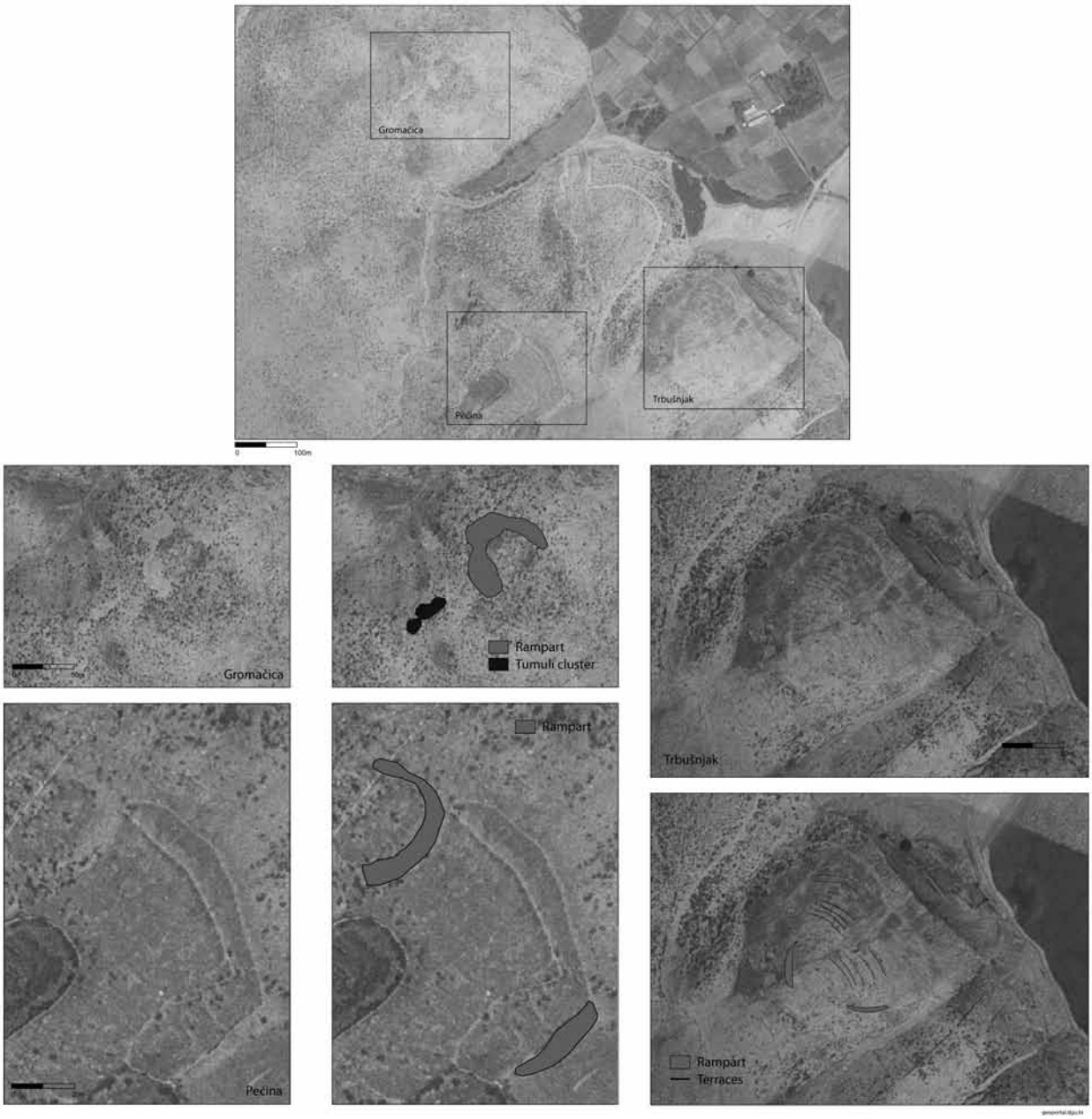

Fig. 3 – Aerial images of Gromačica, Pećina, and Trbušnjak hillfort, dated to 1968, with the interpretation of visible remains (base maps: Geoportal, https://geoportal.dgu.hr/; elaboration by: A. Konestra)

the end of the 10th c. to 8th century BCE (Blečić Kavur 2014: 164; 2021: 539). Approximately thirty meters northeast of the investigated tumuli lies a rather small hillfort. Its remains are discernible today in the form of scattered ramparts enclosing an area of 1000 m² (Fig. 5). The function of this site can only be speculated upon, as no archaeological excavations have been conducted here, given that the hillfort itself was not directly affected by the construction of the water reservoir. The collected diagnostic fragments of coarse pottery (Pl. 1) generally correspond to the standards of later prehistoric periods, including the Bronze and Iron Ages, in terms of their shapes and technological characteristics. Given that no chronologically sensitive fragments were encountered among the surface finds here, it can only be tentatively presumed that this hillfort was in use before or during the regional Early Iron Age.

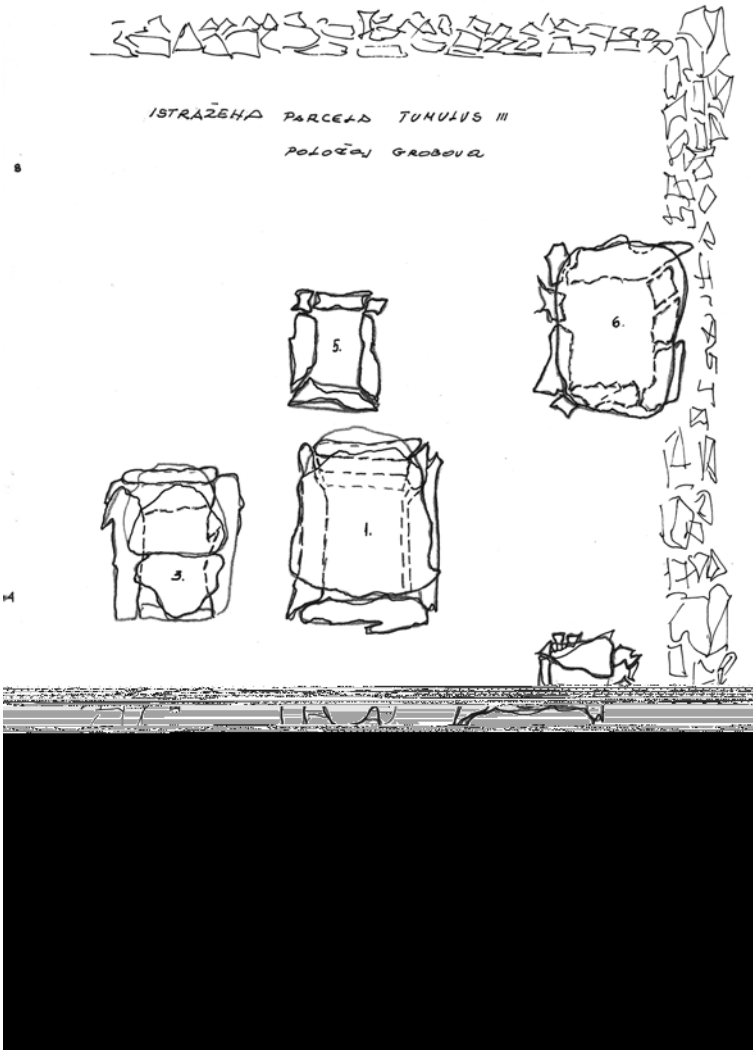

Fig. 4 – Ground plan of excavated graves on the Gromačica hillfort (author: R. Matejčić; courtesy of Maritime and History Museum of the Croatian Littoral, Rijeka, with permission)

Fig. 5 – Aerial photo of the Gromačica site captured from the south, showing the positions of the necropolis (closer) and the hillfort (further) (photo: G. Skelac – Archaeological topography of Rab Island)

Pećina hillfort

The elevated plateau of Pećina is situated approximately a hundred meters ASL, in the northern part of the limestone ridge of Kamenjak, protruding over the south part of the Lopar Field (Fig. 1b). The Pećina plateau is most easily accessible from its south side, from the ridge. Access from the eastern side is more challenging due to the 12 to 32-degree slope (Lončar 2012: 3–5). On the western side, and on the northern side at the base of the ridge, the area of Pećina is bordered by the Jamina ravine, where an occasional torrent flows, converging with other minor tributaries into the Crnika cove. At the highest point of the Jamina ravine, a few meters below the northern edge of the Pećina plateau, where now there is pedestrian access to Pećina, lies a 20-meter-long, simple cave channel known as Jamina. The speculated archaeological potential of this speleological feature has not been confirmed, although a solitary, small, highly weathered, most likely Bronze Age pottery fragment was discovered at the very entrance of the cave (Lipovac Vrkljan, Konestra 2013). On the other hand, the topography of the Pećina plateau clearly allowed for the occupation of two morphologically distinct and connected positions, one oriented towards the north and the Jamina ravine, and the other towards the south.

When Š. Batović first documented this site in 1987, he defined these two areas as the remains of the Bronze Age hillfort with the upper and the lower town (Batović 1987: 157). Even today, despite the dense coniferous vegetation enveloping Pećina, it is possible to identify several distinct prehistoric architectural elements at this location. These features can indeed be grouped into two different but physically connected units – the northwest (NW) and southeast (SE) plateaus, together occupying a total area of around 15000 m^2 (Fig. 3). Today, the rampart on the northwest (NW) plateau is the most clearly observable feature (Fig. 6). The massive, scattered dry-stone structure with a slightly horseshoe-shaped plan primarily encloses a smaller, levelled area oriented towards the Jamina ravine and the Crnika cove. It has recognizable extensions at the southern and partially northern edges of the smaller plateau, while its western side was not fortified as it is naturally protected by a cliff. Within the NW plateau, several other small dry-stone structures are noticeable, to date hardly identifiable due to the lack of systematic studies. Continuing southeastward, another dry-stone enclosure extends along the slope, enclosing the southeast (SE) plateau or the lower town, as defined by Batović (1987: 157). Here, further terracing towards the east is recognizable, along with other small dry-stone structures, also presumably of prehistoric origin. The dense coniferous vegetation covering the site makes aerial and systematic field

Fig. 6 – Aerial image of the upper part of the Pećina hillfort (photo: F. Welc – Archaeological topography of Rab Island)

surveys challenging, especially for documenting small finds. Therefore, at this stage of research, the dating of the hillfort at Pećina can only be approximate, relying on the results of the earliest field surveys, further supported by recent reconnaissance. Based on small surface finds, particularly fragments of triangularly thickened rim, ribbon handles, and wide annular handles (see also Batović 1987: 160–162), the hillfort at Pećina can be tentatively placed within the broad period of the regional Bronze Age, in all likelihood from the Middle Bronze Age onward (Pl. 1).

Trbušnjak hillfort

About 200 meters from Pećina, along the edge of the Kamenjak ridge, in the eastern direction, another prehistoric hillfort site is situated (Fig. 2). Separated from the rocky plateau by a natural (?) ditch, this hillfort on the Trbušnjak promontory extends from a narrow, flatter area on the top of the hill, elongating over a highly eroded, steep, yet terraced terrain that degrades in the southeast direction, towards the Crnika cove. Around the highest and most protruding contour line (108 meters ASL), there are traces of a poorly preserved rampart composed of neatly hewn stones of small dimensions, arranged in layers, but disrupted over time. The remains of a rampart are most clearly visible on the southwest and southeast side of the central plateau, where the remains of the rampart are 1.3 meters wide (Fig. 7).

Judging by the topography of the terrain, this ring of fortifications could not have enclosed an area larger than 600 m^2, pertaining to the central plateau of the hillfort. The natural (?) ditch surrounding it, along with other fortification elements that are only partially recognizable today but visible on aerial photos from 1968 (refer to Fig. 3), indicate that lower positions were also appropriated and enclosed sometime during the prehistoric occupation of Trbušnjak. At least ten terraces, increasing in surface area as they descend eastward down the steep slope of Kamenjak, can be noted today. Together with the central plateau they occupy a total area of approximately 21000 m^2 (Fig. 7).

Since its discovery, this site has been chronologically defined as an Iron Age hillfort with continuity through the final phase of the Liburnian culture and in antiquity and late antiquity (Batović 1987: 157, 165; Nedved, 1989: 33; Lipovac Vrkljan et al. 2014). Judging by the construction method, however, the described structures most probably belong to the prehistoric phase of the occupation of the Trbušnjak promontory. Again, detailed chronological determinations as a result of the most recent surveys are not possible, given that the majority of the collected surface archaeological material consists of eroded fragments of coarse pottery (Pl. 1) without clear chronological

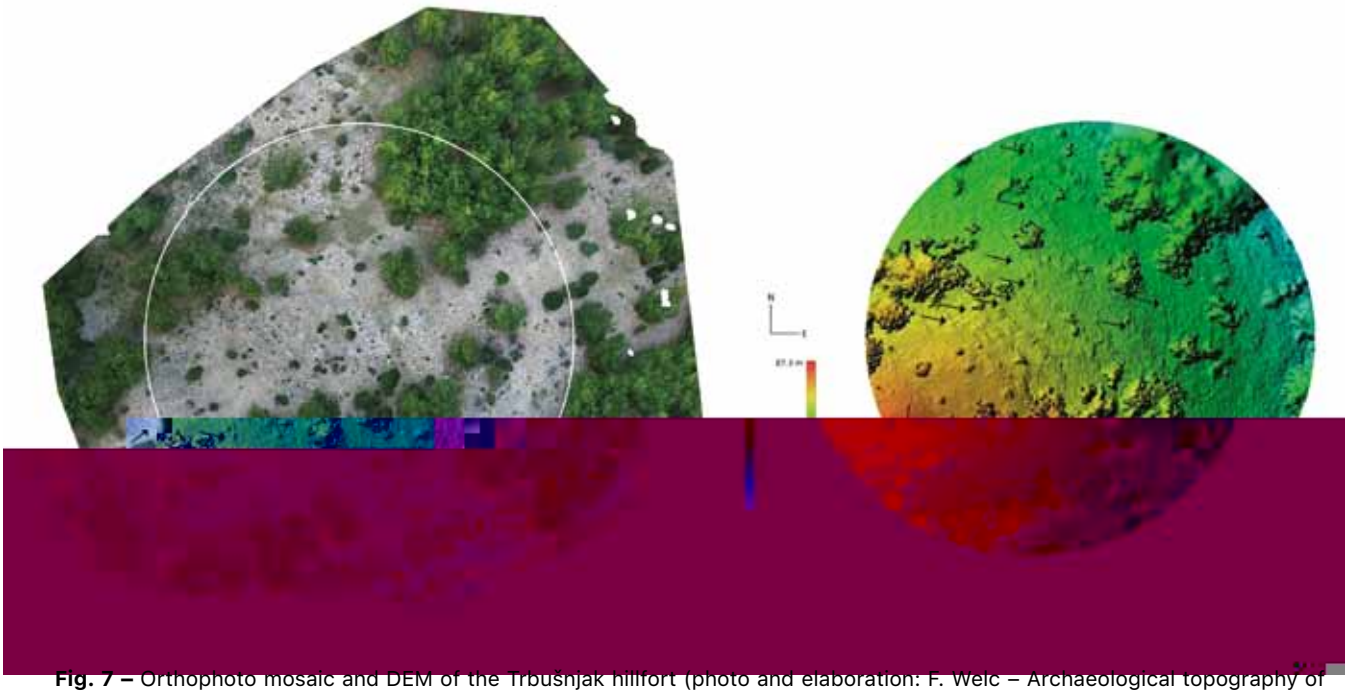

Fig. 7 – Orthophoto mosaic and DEM of the Trbušnjak hillfort (photo and elaboration: F. Welc – Archaeological topography of Rab Island)

indicators, but certainly not later than the Iron Age. In addition, a few fragments of amphorae walls and handles, conceivably belonging to Graeco-Italic or Lamboglia 2 types[1] (Pl. 1), might suggest dating in the last centuries BCE, while no materials of later date have thus far been collected. Interestingly, among the sites located on the Kamenjak ridge, Trbušnjak is the only one where presence of daub was ascertained (Pl. 1).

Kruna plateau

The toponym of Kruna defines another plateau situated at the northwestern part of the Kamenjak ridge (Fig. 2). Bounded by the Pećina and Trbušnjak to the north, steep escarpments overlooking the Crnika cove to the east, gentler terrain in the Fruga area to the south, and a somewhat steeper landscape in the Zakorde area to the west, the Kruna plateau is presently distinguished by dry-stone walls and enriched with a diverse array of low Mediterranean vegetation (Fig. 1b). Within the radius of approximately five hundred meters, several semi-natural karstic ponds can be found.

On the location of Stari Dolci, which is only to the south of the highest point on the Kruna plateau (126 meters ASL), several small clusters of conical stone mounds were found (Fig. 8), most of which are in all probability grave markings (Lipovac Vrkljan et al. 2014).

On several stone mounds, a central burial chamber is visible, having been looted. Scattered stone slabs, presumably burial covers, which are clearly displaced or lie near the mounds, are additional confirmation that these mounds were systematically disturbed at some earlier point. Finally, these presumptions are strongly supported by the discovery of grave goods in the vicinity of these clusters. The surface finds collected from the site (Fig. 9) have clear chronological characteristics, particularly items like a yellow bead with wavy lines or a cobalt blue bead adorned with parallel incisions, which can be dated to the 5th to 3rd century BCE (see Bakarić et al. 2006) (Fig. 9). Along with these, a fragment of a Baška-type fibula was also discovered, further corroborating this chronology. The retrieved part of this Baška-type fibula corresponds to the Baška 4 and 5 type fibulae, more precisely the so-called "silver horizon" of the 3rd century BCE, an era often associated with the extensive spread of luxurious Hellenistic cultural creativity (Blečić Kavur 2014: 45) (Fig. 9).

Fig. 8 – A photograph of one of the supposed burial mounds identified on the Kruna plateau (photo: A. Konestra)

1 —— Considering the fabric of the recovered sherds and the predominant circulation of only these two types of transport containers from the 4th to the 1st century BCE in the northeastern Adriatic (Glavaš et al. 2020), it is highly unlikely that we are dealing with other types of transport containers (see e.g. Borzić 2017; Radić Rossi 2017 for distribution of Corinth B amphorae).

Fig. 9 – Clustered surface finds collected at the Kruna plateau: 1. "Baška-type fibula"; 2. Amber bead; 3. Cobalt blue glass bead; 4. Transparent glass bead with yellow wavy line (photo and elaboration: A. Konestra – Archaeological topography of Rab Island)

Kaštelina on Stolac promontory

The occupation of Stolac, a 7000 m² promontory also known as Kaštelina (Fig. 10), located at the far eastern border of the Lopar Field and rising approximately 20 meters above sea level (refer to Fig. 1b), was initially documented in the 1980s (Batović 1987). Surface finds, primarily fragments of imported fine wares (Batović 1987: 156, Fig. 11; Mihovilić 2002: 505), suggested the use of this promontory, which was only partially enclosed at the time, between the 4th and the 1st century BCE. A repeated surface survey of the site and its vicinity in 2013 confirmed the earlier findings (Lipovac Vrkljan et al. 2014). Initially, the presence of surface artifacts suggested potential sporadic occupation of the promontory, but it was still uncertain whether it was a permanent settlement (see Androić Gračanin et al. 2020). However, the application of geophysical prospection techniques offered supporting evidence by revealing a series of rectangular structures tentatively interpreted as dwellings, accompanied by

Fig. 10 – Aerial image of the Stolac promontory – the Kaštelina site, taken from the southwest (photo: A. Konestra)

exterior round features. This provided conclusive proof of settlement activity (Konestra et al. 2019; Androić Gračanin et al. 2020: 454, Fig. 4).

Trench excavations, set close to the northwestern limit of the promontory, confirmed the geophysical results (Androić Gračanin et al. 2020). A small part of one rectangular dwelling unit was excavated together with its exterior. The excavations partly unearthed fire installations and contexts that are likely associated with food processing, positioned outside a single-room, above-ground, standalone dwelling. Many pieces of daub, traces of sill beam, and carbonized wooden planks (?), discovered resting on a sandstone wall foundation and within the enclosure of the dwelling, suggest the presence of a collapsed wooden structure (Androić Gračanin et al. 2020: 460). However, at the current stage of research, it cannot be determined whether this dwelling was built using post-pad construction or corner timbering, as key elements such as remains of charred wood joints were not found (see Dular 2008). Archaeological discoveries within the settlement context, particularly the finds of imported fine pottery, have restricted the presumed timeframe of habitation at Stolac promontory to the 4th and 3rd century BCE, a determination further supported by radiocarbon dating (Androić Gračanin et al. in press).

The presence of an Iron Age settlement at Stolac promontory is further supported by the discovery of grave artifacts, indicating a potential flat necropolis situated at the junction of the promontory with the mainland. "Outside the hillfort, on a sandstone slope which rises in terraces from the sea" (Brusić 1990: 231, our translation), stone grave slabs and parts of attire were discovered (Brusić 1990). These finds included a fragment of a Certosa fibula and several lead circular appliqués adorned with an inscribed cross, dating back to the 3rd c. BCE (Batović 1987; Brusić 1990). Additional evidence of settlement tradition in this area comes from the discovery of a double-spiral pin (see Batović 1987: 162–165; Brusić 1990: 232). This type of pin, characteristic of Hallstatt D in Central Europe (see Alexander 1964; Chmelo 2017; Grecko 2023), was supposedly also found near the supposed necropolis. However, the precise location of this necropolis has not yet been determined by recent research, likely due to significant landscape alterations in this sandy area of the island (Konestra et al. 2021).

METHODOLOGY

In order to better understand the landscape evolution of the northern part of Rab Island during the Bronze and Iron Ages, a visibility analysis was conducted from focal sites, i.e. from Gromačica, Trbušnjak, Pećina, Kruna, and Kaštelina. This analysis focused on the documented monumental archaeological sites, not only highlighting their spatial distribution but also exploring the interconnections between these sites and their respective landscapes.

The visibility analysis, facilitated by the Viewshed analysis plugin (Čučković 2016) within QGIS (ver. 3.28 Firenze), employed the NASA Shuttle Radar Topography Mission (SRTM) Version 3.0 Global 1 arc second (30 m resolution)[2] digital elevation model, post-reprojection.

Four viewpoints were established for each of the observed sites, as referenced by Ruestes Bitrià (2008) and Kulenović et al. (2021: 24). At Kaštelina, viewpoints were strategically positioned along the promontory edges. For the rest of the analysed hillforts, they were approximately situated on the remnants of the rampart. Furthermore, at the Kruna plateau, four viewpoints were positioned so they stand in between the burial pathway. Viewer heights were set at 2 meters for Kruna and Kaštelina, and at 6 meters for Gromačica, Trbušnjak, and Pećina, encompassing potential structural elevations (e.g. ramparts and tumuli) (see e.g. Kulenović et al. 2021: 25 and references therein).

For each viewpoint, the viewshed was computed across three distance intervals, adhering to Higuchi's index of visibility/non-visibility and incorporating contemporary experimental assessments of visual recognition (Higuchi 1983: 6–24; Fábrega-Álvarez, Parcero-Oubiña 2019; Kulenović et al. 2021: 24–26). In determining these distances, considerations were made for the bands utilized in the analysis of the Bojnik hillfort in northern Dalmatia, due to shared geomorphological characteristics (see Kulenović et al. 2021: 24–26). Modifications were implemented to customize the chosen distances according to the dimensions of the sites. The distance bands, in the ranges of 0 – 870, 870 – 5870, and 5870 – 10870 meters, define areas of foreground, middle distance, and background, respectively (Fig. 11). These delineations are based on the potential for human recognition (Kulenović et al.

2 — https://doi.org/10.5067/MEaSUREs/SRTM/SRTMGL30.002

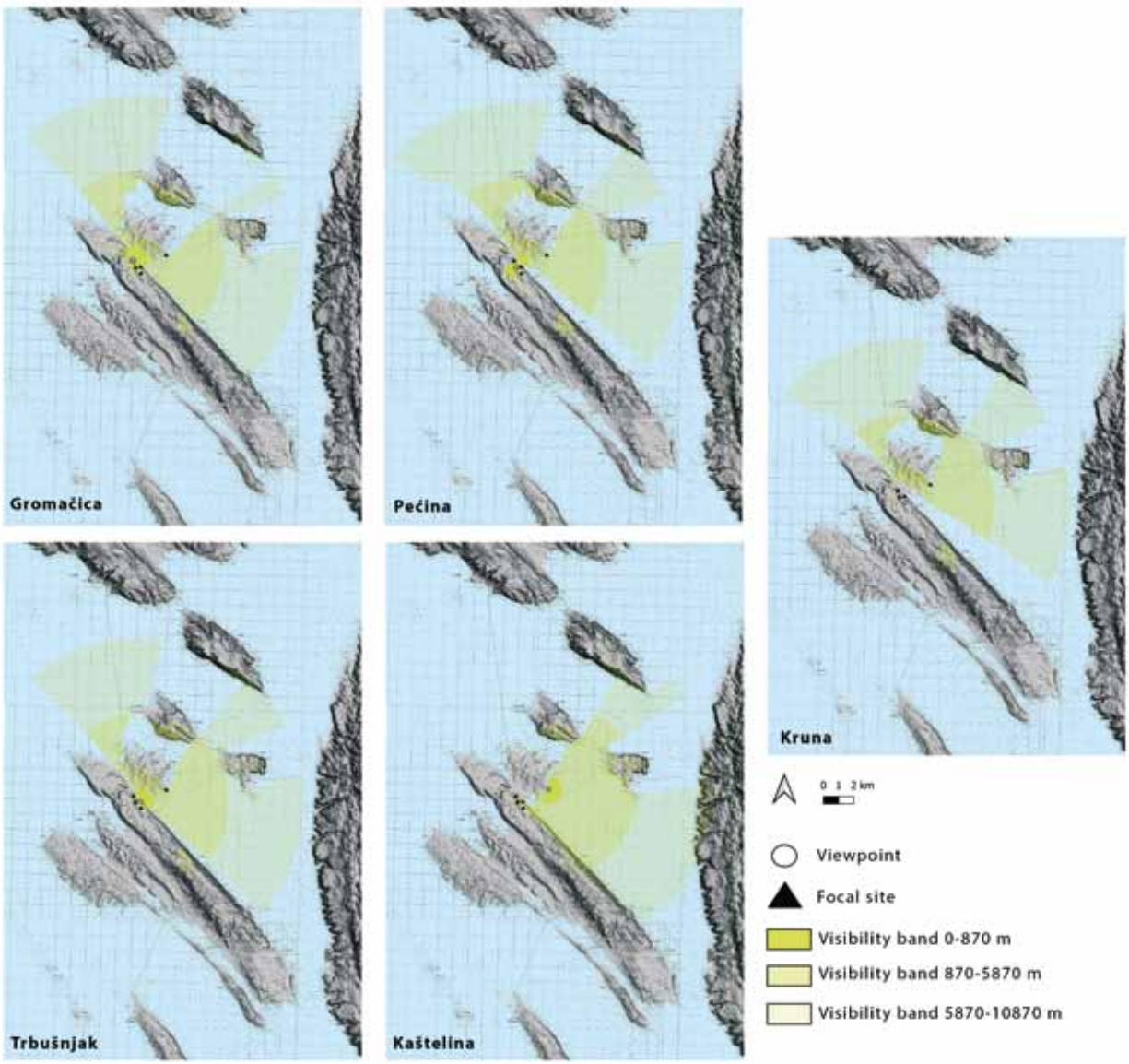

Fig. 11 – Viewshed analyses (base maps: Geoportal DGU, topographical map and NASA Shuttle Radar Topography Mission (SRTM) DEM, open access; elaboration: P. Androić Gračanin)

2021: 25–26; Fábrega-Álvarez, Parcero-Oubiña, 2019: 63) when observed from ground level. For "reversed observation," the distance is set at the middle band (Fig. 12). In the foreground, one can observe intricate details of objects and engage other senses, such as hearing. Moving to the middle distance, individual details become less distinguishable, and the influence of haze or mist becomes apparent. In the background, objects lose their distinctiveness, blending into a uniform two-dimensional backdrop (as proposed by Higuchi 1983; Wheatley, Gillings 2000: 13–15). Subsequently, the viewsheds obtained from each viewpoint were integrated to yield a cumulative viewshed for each site and visibility band.

Finally, in accordance with the navigation directives outlined in the contemporary nautical pilot guide (Gržetić (ed.) 1989), a collective sum of 9 chosen viewpoints have been situated along the three primary maritime routes leading towards the Rab Channel and consequently towards Crnika cove as well (refer to Fig. 1a). Sea depth and local conditions were taken into account when choosing the position of the selected viewpoints on the sea. These observation points were positioned at the entry points to the Rab Channel from Kvarnerić, the Grgur Channel, and the Velebit Channel. At each of these entry locations, three points were established, with the observer's elevation set at 1.6 meters, while the visibility band was set to middle distance.

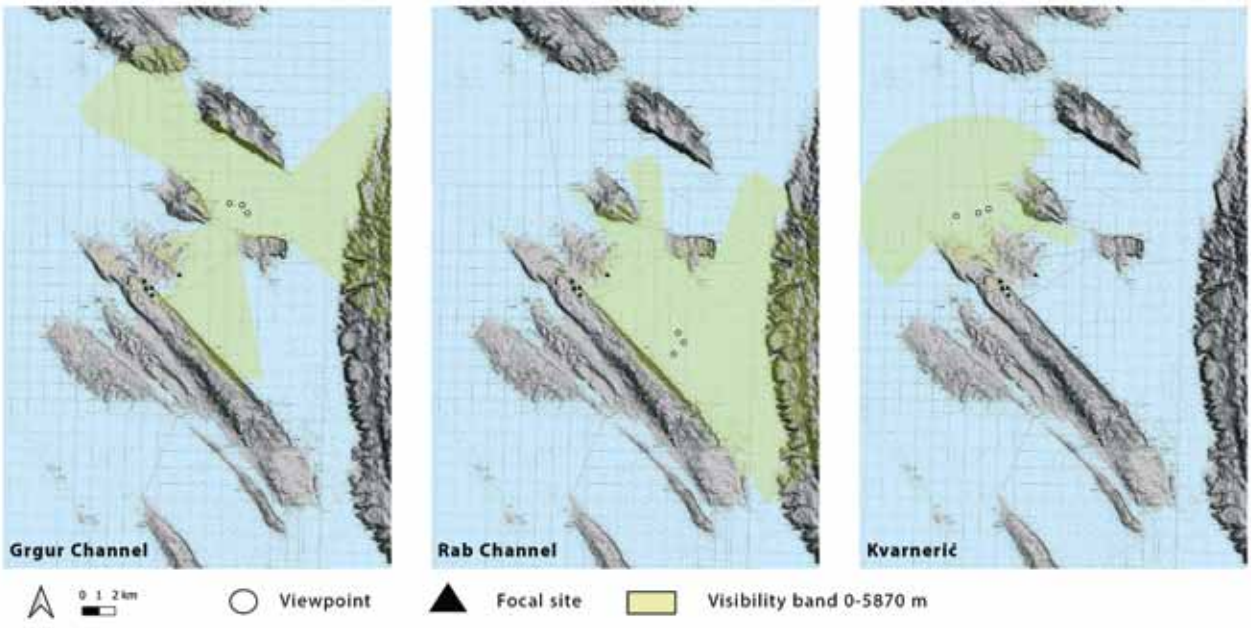

Fig. 12 – Viewshed analyses (base maps: Geoportal DGU, topographical map and NASA Shuttle Radar Topography Mission (SRTM) DEM, open access; elaboration: P. Androić Gračanin)

It is important to highlight that our visibility analysis did not include objective obstacles pertaining to sea visibility, such as atmospheric conditions including atmospheric aerosols, nor did it consider seasonal variations as indicated by Mauro and Durastante (2020). However, it should be emphasized that object visibility is related to the contrast between the object and its background (Mauro, Durastante 2020: 8–9). This implies that objects at sea stand out better, due to their significant differentiation from the background. Additionally, the visibility of larger objects surpasses the parameters outlined in our visibility analysis (following the reasoning of Fábrega-Álvarez, Parcero-Oubiña 2019; see also Mauro, Durastante 2020: 12, Fig. 4).

RESULTS

The visual analysis conducted in the northern region of Rab Island served multiple key objectives, as outlined in the introduction. Firstly, it aimed to validate the prevailing hypothesis regarding the strategic positioning of fortified hilltop and tumuli sites, emphasizing their visual dominance and control over the surrounding terrain. Secondly, it sought to assess the interconnectivity between these sites, with particular emphasis on their contemporaneity and spatial distribution. Finally, the examination explored the notion of "reversed viewshed," (Čučković 2017) exploring the sea-oriented perspective of all the scrutinized sites and their visibility from a maritime perspective.

From the site of Gromačica (Fig. 11), where four viewpoints were strategically positioned along the ramparts of what was probably a small outpost, several prominent features of the surrounding landscape become apparent. Most prominent within the foreground sight are stretches of the Lopar Field, encompassing the territories of neighboring hillforts such as Pećine and Trbušnjak, along with the immediate vicinity of the site itself, including the sepulchral area on Gromačica and the natural entrance to the Lopar Field via Veliki Der, now traversed by the sole arterial road servicing the Lopar region (refer to Fig. 1b). Within the intermediate visual range or the middle-distance range of Gromačica, in addition to the previously mentioned sites, there is a site located on the Stolac promontory – the hillfort of Kaštelina, as well as the broader area of the Kruna plateau, where burial mounds are situated. Within this same visual range from Gromačica, it is possible to see the entrance to the Rab Channel from the internal sea of Kvarnerić, as well as a section of the Rab Channel bordered by the island of Rab and the island of Goli, but not the Grgur Channel. Furthermore, within this range, communication

is possible with almost the entire southwestern coast of the island of Grgur, which is, unfortunately, still archaeologically poorly explored. In the broadest field of vision or the so-called background, the ramparts of the hillfort at Gromačica visually encompass a slightly wider strip of the internal sea of Kvarnerić towards the island of Krk, as well as a larger portion of the Rab Channel, yet the Grgur Channel remains visually inaccessible. Additionally, within this extensive field of view, Gromačica does not communicate with other parts of the island of Rab, as it is visually isolated from them by the Kamenjak ridge.

Regarding the visibility from the hillfort of Pećina (Fig. 11), its narrowest field of view encompasses the sites of Gromačica, Trbušnjak, and Kruna. The closest visually detectable radius of Pećina includes only a small portion of the Lopar Field, specifically the area in its immediate vicinity. The intermediate circle of visibility is almost identical to that from Gromačica, with the exception of the more rugged terrain in the hinterland of Pećina, as well as pastures south of the hillfort at Trbušnjak. Maritime control in this field is limited to the Rab Channel, specifically the part surrounding the Lopar Peninsula. Unlike Gromačica, Trbušnjak can better monitor maritime routes, especially the Grgur Channel, which is visually accessible in this case. Similarly to the Pećina site in its immediate vicinity, Trbušnjak has clear visual communication with all the referenced sites on Kamenjak, the central part of the Lopar Field, and the larger portion of the Kruna plateau. In the intermediate field, its visual communication towards the sea, including the Kaštelina site, is identical to that from Pećina, except that it cannot visually communicate with the hinterland, or any other eastern part of the Kamenjak ridge, and thus with the rest of the island. As for the farthest field of view, the visibility from Trbušnjak is again nearly identical to that from Pećina, with the exception that this field of view includes the central part of the Kamenjak ridge, notably the area of the largest concentration of karstic ponds.

The Kruna plateau (Fig. 11), i.e. Stari Dolci, where tumuli were discovered, has direct visual contact only with the immediate vicinity and, interestingly, with the Pećina site. In the intermediate field of visibility, Kruna communicates with both Gromačica and Kaštelina, but Trbušnjak is entirely beyond the scope of visibility from this location. From this viewpoint(s), it is also possible to monitor activities in the strip of the Rab Channel surrounding the Lopar Peninsula, as well as the exposed side of Lopar, including the Kaštelina site. Interestingly, the position of Kruna also provides generally good oversight of navigational routes, i.e., all the possible approaches to the Rab Channel.

Within the narrowest circle of visibility, Kaštelina at the Stolac promontory is clearly oriented towards the coastal strip surrounding it (Fig. 11). In the intermediate field of visibility, it communicates with all the focal sites and, as expected, with the southern part of the Rab Channel. Given its position, it is not surprising that Kaštelina has unobstructed communication with the steep slopes of Kamenjak, exposed to the sea. In the broadest field, Kaštelina visually communicates with the coastal areas of the Velebit littoral, including the positions of several well-known hillfort sites of Gradina (Starigrad near Senj) and Gradina (Donja Klada) (see Glavaš 2014).

DISCUSSION

When analysing the cumulative viewsheds, which reveal visibility from all the surveyed sites, our observations will be divided into two main sections, addressing observations from both terrestrial and maritime perspectives. Initially, we will focus on observations from terrestrial viewpoints. With the exception of the Kaštelina hillfort, all the examined sites offer unobstructed surveillance of the broader Lopar area, particularly the fertile region of the Lopar Field (Fig. 11). However, no discernible evolution or significant positional changes over the covered time period were noted in this context. Regarding the surveillance of potential grazing areas, which are tentatively assumed to be situated within the wider hinterland of the observed sites, particularly along the Kamenjak ridge, the Gromačica site appears to offer the most prominent observation point, with clear visibility northwest and southeast. Nevertheless, Pećine also possesses favorable surveillance capabilities, while Trbušnjak is somewhat limited to its immediate surroundings, along with the sites of Stari Dolci on the Kruna plateau. Surprisingly, the Kaštelina site overlooks a significant number of presumed pastures on Kamenjak. Notably, all the sites under scrutiny provide a comprehensive view of an area approximately 5 km distant from the group of sites on Kamenjak, within the central part of the ridge, where a cluster of semi-natural ponds and springs is located. However, due to the absence of archaeological research in this area, it remains uncertain whether this observational advantage was ever utilized.

In terms of monitoring terrestrial pathways, all the sites effectively control the presumed ridgeway connecting the Fruga plateau with our sites of interest (Fig. 11) (see Konestra et al. 2023). Notably, the Kruna site stands out in this regard, positioned along the presumed ridgeway and surrounded by imposing burial mounds, indicating a strong sense of community affiliation (see Mlekuž, Črešnjar 2014: 208).

On the other hand, the Gromačica site holds a strategically advantageous position for observing the passage through Veli Der. Conversely, the other sites can only detect movement once it has entered the Lopar Field. It is important to highlight that all the focal sites are isolated from the rest of the island by the Kamenjak ridge, precluding direct visual communication with other potential contemporaneous sites, natural resource areas, or pedestrian routes beyond this area.

When focusing on the observed sea or seascape, it becomes apparent that the cumulative viewshed is consistently oriented towards the sea, particularly the Rab Channel, as indicated by all surveyed sites (Fig. 11). The dominance of the seascape, evident even without meticulous analysis, highlights the inherent maritime orientation of all the studied sites. The cumulative viewsheds suggest the possibility of continuous control of the local sea routes, as all maritime routes leading to the central part of the Rab Channel can be monitored. This notion gains support from the presence of two important local sea routes passing through the area (see Gržetić (ed.) 1989: 146–149). The significance of these maritime paths is emphasized by the discovery of two shipwrecks – one dating back to the 3rd century BCE and the other from the 2nd to the 1st century BCE. These shipwrecks were found near the promontories of Sorinj (in the northwestern part of the island) and Glavat (in the southeastern part of the island), respectively (refer to Fig. 1a). Also, there are numerous finds of submerged amphorae scattered across the Velebit Channel (Dautova-Ruševljan 1975; Miholjek 2007; Glavaš et al. 2020), corroborating the importance of this sea route.

When considering optimal anchorage locations, two larger coves stand out because of their advantages in this context: the Lopar cove, situated on the northwest part of the Lopar Peninsula, and the Crnika cove, which is surrounded by all the discussed sites. The Crnika cove surpasses the Lopar cove, as it is better sheltered from winds (Gržetić (ed.) 1989: 146–148); also, the potential preference for this cove can be inferred from the cumulative viewshed analysis. Even the widest visibility belt from the sites located on prominent hilltops on the eastern side of the Kamenjak promontory does not visually cover access to the Lopar cove, especially not from the west.

However, stronger argumentation regarding the viewpoint that considers the discussed monumental structures as primarily oriented towards the sea would require additional research. The current state of research suggests the absence of any simultaneous surveillance points at the far northern end of the island which would monitor maritime routes approaching the Lopar Peninsula from the west, or on the eastern shores of the neighboring island of Grgur, which still lacks thorough archaeological investigation. Such additional insights would illuminate not only this maritime route but also potential (visual) communication corridors with the southern side of the island, which currently eludes us.

Regarding Kaštelina, current research suggests its function was closely tied to the sea, possibly even as an outpost surveilling the Crnika cove. Moreover, Kaštelina likely served as a prominent visual landmark and a possible hub within maritime communication networks, symbolizing a conscious decision to prioritize proximity to the sea – an enduring motif in Adriatic historical contexts (see Parica 2021). This highlights the transitional character of Kaštelina, indicative of evolving priorities shifting from dominance to connectivity and openness. Furthermore, this stands in contrast to enduring settlements such as Trbušnjak, which was likely occupied for a more extended period.

By altering the perspective of observation or examining the sites from a maritime point of view, several conclusions can be drawn (Fig. 12). Approaching the Rab Channel or the Crnika cove, toward which all the focal sites are oriented, from the northern direction of Kvarnerić, all the hillfort sites on the Kamenjak promontory are observable, with the obvious exception of the Kaštelina hillfort situated on the Stolac promontory on the opposite side of the Lopar Peninsula. From the Grgur Channel, all the focal sites except Gromačica are visible, whereas the Velebit Channel has a view of all the sites. This further confirms the maritime orientation of the studied sites.

CONCLUSION

The hillforts and tumuli highlighted in this analysis, like other similar prehistoric monumental structures of their time, were undoubtedly constructed to be conspicuous. They served as

specific reference points for observing the surrounding landscape, as noted by Hamilton and Manley (2001: 10), while also operating optimally when they were themselves being observed by others (Hamilton, Manley 2001: 31). This aspect has been unequivocally confirmed through the conducted viewshed analyses elaborated here. Specifically, concerning the monumental structures dating back to various period spans within the last two millennia BCE in the northern part of Rab Island, it is undeniable that the landscape they predominantly overlook is tightly connected to the sea. Nevertheless, the visual control of inland areas, mostly pastureland, is also prominent, almost indicating that these sites played a bridging role between the two worlds. This highlights the interaction of activities conducted by their dwellers and builders. Should a more coherent chronological framework be constructed, the identified differences and shifts within the visual landscape of these sites might also be interpreted from a stronger diachronic perspective in the future.

The presented prehistoric landscape may have a tentative chronological setting, but it is the sense of permanency attached to it that perhaps has more importance within this context (see Llobera 2007: 52). It is crucial to acknowledge that modelling the visual impact of archaeological sites can only provide a partial understanding of their significance (see also Llobera 2012). Still, this limitation is inherent in many archaeological studies, particularly those focusing on prehistoric eras. The true value of analysing visibility emerges when it is integrated with the actual archaeological evidence (Čučković 2017: 527–528), because only then it can offer a glimpse, as partial as it may be, into the man-landscape relationships of past societies.

The clustering of hillforts in northern Rab reflects the interconnectedness of the local landscape with the way of life adapted to it. These structures were strategically positioned to assert influence and facilitate communication within the community, highlighting a pragmatic response to the natural environment. This emphasis on visibility underscores the enduring significance of these sites in shaping the historical and social fabric of the region. A role that they lost when faced with the onset of new, globalizing forces, which changed not only the social fabric but primarily the landscape fabric of the region from the end of the 1st millennium BCE.

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INTERNET SOURCES

NASA Shuttle Radar Topography Mission (SRTM) –https://doi.org/10.5067/MEaSUREs/SRTM/SRTMGL30.002 (06 July 2023)

Geoportal DGU – https://geoportal.dgu.hr/ (06 July 2023)

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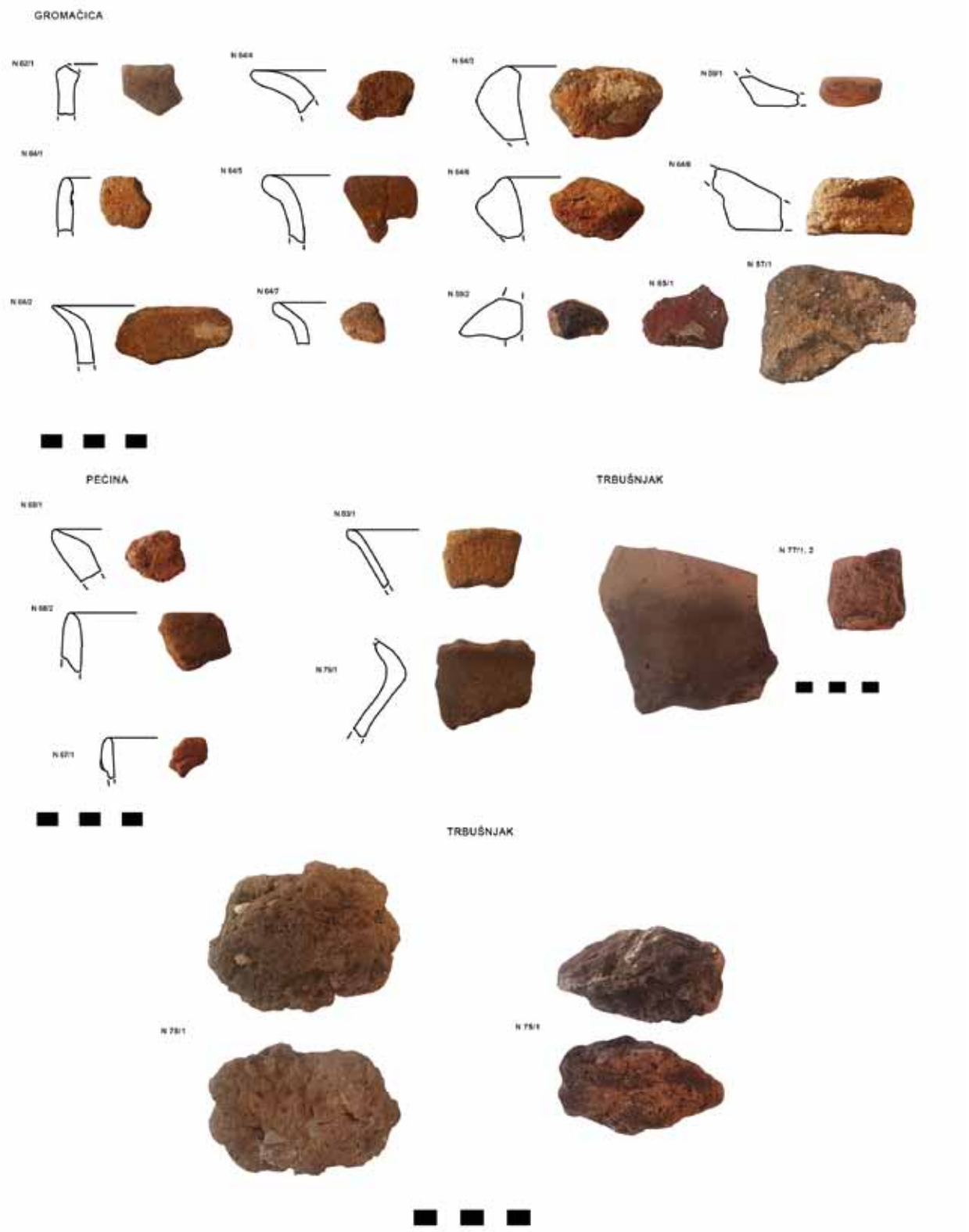

Pl. 1 – Diagnostic pottery sherds from Gromačica, Pećina and Trbušnjak, and fragments of daub from Trbušnjak (drawings and photos: A. Konestra)

Pio Domines Peter

FROM COINAGE TO CONNECTIVITY: SOME NOTES ON GREEK-ILLYRIAN COINS FROM SENJ (NORTHERN ADRIATIC)

Original scientific paper

This paper presents new data on three previously unknown specimens of Greek-Illyrian coins discovered on Kuk, a protohistoric hillfort site in Senj. Two can be attributed to issues of the Illyrian King Ballaios, while one is an Issaean bronze of the volute crater/grape cluster type. In addition to general data about the coin findspot, circumstances of the find, and analysis of the numismatic features, the paper also addresses some questions about the movement and spreading of these coins in the context of Adriatic maritime connectivity and trade networks in the last centuries BCE. Based on current distribution maps, the Ballaios and Issaean coins from Senj, as some of the westernmost finds thus far, confirm their regional reach towards the northern Adriatic.

KEY WORDS: **GREEK-ILLYRIAN COINAGE, HELLENISTIC COINS, ISSA, BALLAIOS, SENJ, MARITIME NETWORK**

A NOTE ON THE SITE AND CIRCUMSTANCES OF THE FIND

Recent work carried out on the systematic documentation of numerous museum and private numismatic collections has significantly improved the current knowledge about the earliest coinage in the area of the eastern Adriatic and its hinterland (Ilkić 2016; Ilkić, Kožul 2017; e.g. Ilkić, Šešelj 2017; 2018; Čelhar, Ilkić 2019; Paškvan, Visonà 2020). As a contribution to the subject, this paper analyses three coin specimens presently kept within the private property of Z. Dominez from Buje. According to the owner, he originally discovered them as surface finds, along with some other material, on Kuk, a hillfort site near the town of Senj, and kept them to this day.[1] Regarding the data on the circumstances of the find, the group of coins singled out and presented here could be defined as a „cumulative site find" (for an explanation of the term cf. Ujes Morgan 2012: 119–122).

1 — Z. Dominez from Buje, shared useful information about the circumstances of the find. As far as he remembers, he discovered them, somewhere between 1965 and 1970. With an amateur interest in archaeology, he occasionally visited the site of Kuk, especially „after strong rains, which would wash the eroded (cultural) layers and leave different (archaeological) objects highly visible on the surface". For the purpose of this paper, three Greek-Illyrian coins have been singled out, although his small collection also includes one Carthaginian specimen (Tanit/horse type), one bronze specimen from Apulia-Salapia (horse/dolphin type), and and a few Roman and medieval coins found mostly in Senj. According to the owner, all the coins from Kuk discovered as single, surface finds on different positions on the southern and southwestern slopes. He also collected some „interesting sherds of black pottery," but later misplaced them. He has kept the coins to this day, wishing to donate them to the local town museum in Senj, which will hopefully come about. I would like to thank Z. Dominez for his insights on coins and his permission to analyse and publish them. I am also grateful to V. Kramberger and K. Narloch for their help and assistance with the literature.

Kuk is a hill positioned approximately 2 km northeast of the center of present-day Senj. In archaeological literature, it stands out as a notable hillfort site from the prehistoric and protohistoric period (A. Glavičić 1966: 391–393; M. Glavičić 1993: 81–82; 1994: 45; Glavaš 2010; Lipovac Vrkljan et al. 2016: 196–198). The position is naturally protected by steep rocks and inclines on the northwest and southwest sides (Fig. 1). Collapsed drystone wall structures indicate that the slopes were probably terraced due to the steep terrain morphology. Despite its relatively small size, visibility analyses indicated that the Kuk hillfort provided visual connections with other prehistoric hillforts on Velebit Mountain. This could imply it had a prominent status in late prehistoric settlement hierarchies (Glavaš 2014: 12, 19). Rising 160 meters above sea level, the hillfort is a very convenient point for visual surveillance, encompassing the expanse of present-day Senj, particularly the inlet of Senjska Draga and the protected bay which probably encroached more extensively into land in the past. Additionally, it overlooks the wider Northern Velebit area and the Velebit Channel towards the south.

Even though all the current data indicates high archaeological potential, no excavations on the site have been carried out thus far. Therefore, the general hypothesis that the earliest traces of habitation on the Kuk hillfort date back to the Late Bronze Age is still not supported by archaeological evidence (A. Glavičić 1966: 391–393). Intensive activity during the Late Iron Age is evidenced by an abundance of surface material, predominantly amphorae, and a smaller number of fineware, mostly of Hellenistic provenance. The numismatic record of the site consists of eight specimens; aside from those aforementioned, kept in a private collection (Z. Dominez; 7 spec.), there is one Carthaginian coin of Tanit-horse type from the late 3rd c. BCE, found as a single find on the western slopes in the 1970s and already published (Dukat, Glavičić 1975: 170). It is assumed that the hillfort's significance gradually waned with the Roman expansion on the eastern Adriatic, as the focal point of urban development shifted to the area at the foot of the hillfort, closer to the port, where the Roman municipium of *Senia* was established (cf. M. Glavičić 1993: 83–85).

Fig. 1 – Kuk hillfort (photo: P. Domines Peter)

The earliest coinage in the wider Senj area is traceable to the middle of the 3rd c. BCE. Among the published coins kept in the collection of Senj City Museum and documented in the old numismatic collection of the Senj Gymnasium, there are coins from Carthage, Numidia, Egypt, Greek-Illyrian mints, and the Roman Republic. These coins fit in the earliest depiction of coinage across the broader Velebit region (Dubolnić Glavan, Glavaš 2011; Šešelj, Ilkić 2014). Carthaginian coins are among the most common finds on numerous Late Iron Age hillforts of northern Dalmatia and Lika (cf. Ilkić 2017: 154; Dubolnić Glavan, Glavaš 2011: 102–104). Alongside the aforementioned specimen from the Kuk hillfort (for a recent photo see Šešelj, Ilkić 2014: 46), it cannot be excluded that another Carthaginian specimen, mistakenly determined as Panormus (Sicily), was found in the inner center of present-day Senj, near the site of Štela (Dukat, Glavičić 1975: 170–171). Apulian (Teate) and Numidian coins have been recorded on the Nehaj hill in Senj (Dukat, Glavičić 1975: 171), (for recent photo see Šešelj, Ilkić 2014: 48) (fig. 2). The Gradina hillfort in Starigrad is the origin of more than 10 pre-imperial coins, including nine Numidian bronzes and a poorly preserved specimen from Ptolemaic Egypt (Dukat et al. 1984: 54). Roman Republic coinage has been registered in Senj, Sveti Juraj, and Stolac (Dukat, Glavičić 1975: 171–172; Dukat et al. 1984: 49; cf. Bilić 2015: 62, 104). Among the Greek-Illyrian coinage (for definition and overview see Bilić 2020), there are two drachmas of Apollonia and Dyrrhachium found in Senj (Dukat, Glavičić 1975: 171). Private collections, some of which are no longer traceable, make mention of other specimens of Greek and Roman republican coinage, but without precise data regarding their location and circumstances of the find (cf. Krajač 1956: 17–19).

NUMISMATIC FEATURES

Coins of Ballaios

Based on their stylistic characteristics, two coins from the Kuk hillfort can undoubtedly be attributed to the issue of the Illyrian King Ballaios. Although they significantly differ in terms of preservation, the typical iconography is discernible, featuring a male ruler's head on the obverse and the figure of Artemis with a legend on the reverse. Both specimens are made of a copper alloy and belong to the so-called Risan type (Brunšmid 1998: 90–94; Ciołek 2021: 83).

Fig. 2 – Pre-Roman coin findspots in the area of present-day Senj: 1. Kuk hillfort, 2. Štela site, 3. Nehaj hill (photo and modified by: P. Domines Peter)

The first specimen (AE, 16.7 mm, 3.05g, 5h), with the obverse depicting the ruler's head turned to the left and the reverse showing Artemis walking with a torch and two spears to the left, is especially well-preserved (Fig. 3).[2] The flan has even edges and a slightly rounded profile towards the obverse side. The exceptional portrait features stand out on the obverse and, combined with the legend on the reverse, emphasize the ruler's distinctive individuality. The realistic large head of Ballaios occupies the whole surface of the planchet. It is characterized by short curly hair, deep-set round eyes, a straight nose with high cheekbones, and a broad neck. The reverse prominently displays a large figure of the goddess stepping left, dressed in a short tunic, probably holding a torch in her left hand and two spears in her right. Only a few letters (ΒΑΛ?) on the right side are readable. The specimen can be identified as Brunšmid's Risan type (Brunšmid 1998: 94, no. 23–26), Marović IIA Risan type (Marović 1988: 84), or type R. IV/2 according to the latest typology by R. Ciołek (Ciołek 2021: 83).

The state of preservation of the second specimen (AE, 15.9 mm, 1.77g, 9h) is incomparably worse (Fig. 4). The obverse suggests the portrait of a king with a recognizable hairstyle,turned to the right in this case. The reverse depicts Artemis facing left, holding a torch, with her right foot slightly raised. The legend is not legible, but it seems that spears are mising. It is not possible to precisely determine the subtype but it also belongs to the Risan mint (Brunšmid 1998: 90–91, no. 1–6; Marović IIB Risan type (Marović 1988: 84), Ciołek's R. V/4? (Ciołek 2021: 83)).

Fig. 3 – Ballaios (AE, 16.7 mm, 3.05g, 5h) – ruler's head left / Artemis left holding two spears (photo: P. Domines Peter)

Fig. 4 – Ballaios (AE, 15.9 mm, 1.77g, 9h) – ruler's head right / Artemis left holding a torch (photo: P. Domines Peter)

2 —— Although the original patina is well preserved and the depictions are more or less readable, it is partially the result of later attemps of cleaning and oil treatment of coins by the owner.

In the total absence of historical records, coins stand as the exclusive evidence attesting to the rule of the mysterious King Ballaios. It is assumed that he governed over a significant territory and issued coinage from two mints located in Pharos on the island of Hvar and in Rhizon in Boka Kotorska Bay (Šašel Kos 2007: 128; Ciołek 2021: 67–70). Therefore, Brunšmid suggested a distinction between the so-called Pharos type (without a royal title) and the so-called Risan type (with a royal title) (Brunšmid 1998: 88–90). However, while numerous specimens have been documented in Pharos (cf. Jeličić Radonić, Goricke-Lukić, Mirnik 2017: 132–143), the total number is significantly smaller and nearly incomparable to Risan, where the quantity of Ballaios coins (cca. 7000 spec.) far surpasses those from all individual sites on the Adriatic (Dyczek 2019: 198). More than five hundred individual finds were discovered during the systematic excavations conducted by Polish archaeologists in the Carine area in the period from 2001 to 2009 (Ciołek 2011: 73–74), while a particularly important find was an exceptional hoard, unearthed in 2010, which contained a total of 4656 coins of Ballaios (Ciołek 2011). The hoard was found in a ceramic jar buried beneath the floor of a residential building covered with an ash layer believed to be the result of the burning of wooden roof structures (Ciołek 2010: 7–8; Dyczek 2010: 45). Radiocarbon dating of burned wood provided the following results: 270–210 BCE, 250–190 BCE, 255–195 BCE, and 245–185 BCE, with a margin of error of ±30 years (Dyczek et al. 2012: 98).[3] Most researchers previously placed Ballaios' reign in the period around 168–135 BCE (Evans 1880: 291–292; Brunšmid 1998: 88; Dukat, Mirnik 2008: 55–58; Šašel Kos 2007: 125), after the defeat of Gentius in the Roman-Illyrian wars (Marović 1988: 85; Brunšmid 1998: 88), or in a slightly earlier period, from 195 to 175 BCE (cf. Šašel Kos 2007: 127). However, the archaeological context of the mentioned hoard in Risan shed a completely new light on the existing narratives. Based on the results of radicarbon dating, Polish archaeologists proposed a new chronology for Ballaios' reign, placing it between 260/250 and 230 BCE (Ciołek 2011: 86–92; Dyczek et al. 2012: 97–99; Dyczek 2020: 431). This sets Ballaios' reign in the period before the First Illyrian War. The significant quantity of bronze coinage, minted mostly in a single denomination, points to the high intensity of coin production and the extended period of Ballaios' rule.[4] A number of quite different portraits characterizing the Risan type with the royal title could perhaps indicate that this type of coins was still minted in some period after Ballaios' rule (cf. Jeličić Radonić, Goricke-Lukić, Mirnik 2017: 193–194, 197). In the latest typology by R. Ciołek, Pharos and Risan are joined by two additional principal types: „Illyrian" and „transitional". While the „transitional" type encompasses iconographic characteristics of Risan-type reverse and Pharos-type legend, the „Illyrian" type consists of coins characterised by deteriorating quality and stylized features, previously often called "barbarized" (cf. Brunšmid 1998: no 27; Dragićević 2016: 118), which were probably produced in the royal mint by much less skilled craftsmen who replaced earlier Greek masters (Ciołek 2021: 25). Along with silver coinage, excavations in Risan revealed the first known examples of silver-plated *subaerates*, which were probably produced in a short time using the same dies as for the bronzes (Ciołek 2021: 27-29; similarly suggested earlier by Marović 1988: 93). The typological, metrological, and stylistic features of Ballaios' coinage have been extensively discussed in relevant literature (Brunšmid 1998: 88–97; Gorini 1984: 43–49; Marović 1988: 231–234; Šašel-Kos 2007; Ciołek 2011; Dyczek 2019; Dyczek 2020; Mirnik, Kapetanić 2019), with particular attention given to the depiction of Artemis, which might have had a privileged social and religious significance within the kingdom of Ballaios (Dyczek 2014: 105; for maritime aspects of Artemis cf. Kirigin 2016: 150–151).

The distribution of Ballaios' coins could be traced along the entire Adriatic and over a wider area – from Montenegro to Istria and northern Italy, with some specimens recorded in Sardinia, southern Banat, Hungary, and Slovakia (for latest distribution data cf. Ilkić, Šešelj 2017: 286–287; Ciołek 2011: 314–332; see Visonà 2017: 200, f. 26 and references there; Mirnik, Kapetanić 2019: 37–46), although the reasons for such a widespread distribution cannot be adequately explained. In general, the quantity of Ballaios' coinage in the eastern Adriatic and its hinterland has significantly increased in recent years, notably by documenting numerous unpublished finds from private

3 — Recent excavations on the Risan acropolis brought to light a mould for casting coins (Łajtar 2021: 98).

4 — Very small bronzes discovered in Risan in the same cultural layers as Ballaios' mints led R. Ciołek to assume that it was a smaller denomination which concurrently circulated on the city territory. One specimen of those tiny coins was found attached to an amphora stopper (Ciołek 2021: 63).

or museum collections. In Northern Dalmatia, 23 unknown specimens originating from 10 indigenous hillfort sites have recently been published (Ilkić, Šešelj 2017: 286–287) (Fig. 6). Seven sites in Herzegovina with 54 Ballaios' coins, more than half of which are from Ošanjići near Stolac, could indicate a significant influx of coinage towards the hinterland of central and southern Dalmatia (Dragićević 2022: 39).[5]

The Issaean coin of the volute crater / grape cluster type

One specimen discovered on the Kuk hillfort can be confidently identified as a coin of Issa, a Syracusan colony on the island of Vis. The coin is made of a copper alloy, it is well-preserved, with some surface impurities that could suggest that the coin was never cleaned or treated (Fig. 5). In the typology of Issaean coinage, it can be classified as the "volute crater/grape cluster" type (Brunšmid 1998: 78, no. 30; Visonà 2017: 207; Ciołek 2011: 158, type VIII). The obverse prominently features a meticulously crafted depiction of a heart-shaped volute crater with a wide mouth flanked by volute handles. The form and decoration of the vessel body, with a profiled conical foot and vertical fluting that seems to extend to the crater's shoulder, are especially emphasized. Above the crater, the Greek ethnic IΣ is displayed. On the reverse, a twig with a bunch of grapes is shown, bordered by two vine leaves. Similar to the reverse, the figuration of small details like individual grape grains, and leaf shapes, demonstrates a refined artistic mastery in mold shaping.

According to Visonà, the issue of Issaean bronze coins of the volute crater/grape cluster type may have been entirely overstruck on the Syracusan litrae of Hieron II, with a diameter of about 20 mm, featuring the head of Poseidon / a trident, minted between 269 and 240 BCE (Visonà 2017: 207). Based on that, Visonà suggests that the Issaean overstrikes might be placed somewhat later, in the second half of the 3rd c. BCE, perhaps between 220 and 210, or towards the end of the 3rd c. BCE. His hypothesis is additionally supported by similarities with Roman and Carthaginian overstrikes (Visonà 2017: 207). The coin blank with rounded edges and the slightly eccentric and displaced figures of the reverse indicate that the specimen from Senj is probably an overstrike. Given the total number of known specimens, which, according to available data, are no more than 20, it seems that this issue was struck in small quantities. Brunšmid mentions 17 specimens of this type, seven of which are from the Zanella collection on Vis (Brunšmid 1998: 78), while Visonà increases the total number by adding three new specimens: one from the Archaeological Museum in Zagreb (AMZ) and two from the Vatican Library (VL) (Visonà 2017: 218–221). He also presents data on one specimen of the same type which was part of lot 585 sold at the auction of LHS Numismatik AG in Zürich (23–24 April 2007), but its great condition could indicate it originated from some old collection (Visonà 2017: 96, f.11). Except for those probably found on Vis (Zanella coll.), the exact findspots for other specimens are unknown. In that regard, it seems that the coin from Senj is the first one found outside the island of Vis.

With a diameter of 19.4 mm, the specimen from Senj fits within the module range (19–21 mm) documented in other examples of this type (Senj 19.4 mm; VL 20 mm, 20.5 mm; AMZ 20.3 mm; Zanella coll. 19–21 mm; LHS 20 mm). Their weight usually varies between 5.76 and 6.28 g (Senj 5.10 g; VL 6.28 g; 6.20 g; AMZ: 5.76 g; LHS 5,23g) (Visonà 2017: 218–221; Brunšmid 1998: 78). The issue was likely struck in a single denomination, probably involving one obverse die and two reverse dies (Paškvan, Visonà 2021: 139). Variations are only noticeable in the die axes orientations (Senj: 12 h; VL: 1h, 8 h; AMZ: 9h; LHS 12h).

In the general typology and chronology of Issaean coinage, the issue of the volute crater/grape cluster type marks a break from the previous tradition of depicting deities and animals and introduces a new iconographic theme based on Dionysian motifs like the kantharos, the bunch of grapes, or Dionysus himself. Furthermore, the depiction of the vessel, which can be confidently identified as a volute crater (often mistakenly described as an amphora), is very specific to Issaean monetary iconography and appears for the first and only time in this issue. The crater, a vessel used for mixing wine and water and consuming the mixture, together with the bunch of grapes, holds strong symbolic significance in the Hellenistic world and is most commonly associated with the god Dionysus (Florenzano 1999:

5 —— The recent discovery of a Ballaios' coin by a metal detectorist near Gospić is thus far the first known evidence of distribution in the Lika region thus far (personal communication, June 2023).

Fig. 5 – Issaean coin (AE, 19,4 mm, 5.10g, 12 h), volute crater / grape cluster (photo: P. Domines Peter)

37–48; cf. Paškvan 2005: 199–206; Ignatiadou 2014; Visonà 2017: 208). The same motifs can be traced on a series of silver and bronze Greek coins from the 5th c. BCE, such as those from Thebes in Boeotia (Head, Poole 1884 (=*BMC Central Greece*), 69, 72, 74, 92, 95, 98, 111–112), Thasos (Poole 1877 (=*BMC Tauric Chersonese*), 53-58); Breitenstein, Schwabacher 1943: 1029–1032), or Corcyra (Gardner 1883 (=*BMC Thessaly to Aetolia*), 130–131)). The clearly emphasized details of the crater may indicate the existence of an actual object that served as a model. In some details, the depiction of the crater on the Issaean coin is even similar to the marble craters from Macedonia from the 4th c. BCE which are characterized by arranged fluting on the body (Ignatidou 2014: 58, pl. VII). However, like the later representation of the kantharos, the motif of the crater cannot be reliably related to the repertoire of vessels that are known to have been produced by a local Issaean workshop that likely began working in the mid-3rd c. BCE (Miše 2013: 126).[6] On the other hand, if we assume that the model was adopted from a similar foreign issue, then the bronzes of Corcyra depicting the volute crater and a bunch of grapes, which belong to the 4th c. BCE (Gardner 1883 (=*BMC Thessaly to Aetolia*), 121; Breitenstein, Schwabacher 1943: 165), represent the closest iconographic parallel.[7]

The inauguration of new issues based on imagery with pronounced Dionysian symbolism points to a strongly developed cult of Dionysus in Issa. The appearance of such motifs can be linked to the intensive development of viticulture and the wine industry, which, at least from the 3rd c. BCE, played an increasingly significant role in the prosperity of the Issaean economy (for the Dionysius cult and the wine industry in Issa cf. Paškvan 2005; Kirigin, Katunarić, Šešelj 2005; Ugarković 2016: 82–83; Paškvan, Visonà 2020: 139–140). It seems that the growth and expansion of the sphere of Issaean influence in the second half of the 3rd c. BCE was partly effected by the events in the Second Illyrian War that weakened the role of Pharos as the closest rival on the regional market (Kirigin 2018: 397). Alongside the distribution of the acclaimed wine – perhaps a major export commodity, which even reached remote Mediterranean markets (Kirigin, Katunarić, Šešelj 2005: 10) – an equally important export product was ceramic ware from local Issaean workshops. Different types of locally produced Gnathia-style fineware were quickly embraced by the neighboring islands and coastal communities in the central Dalmatian region. In this context, the iconography of the crater and kantharos on silver and bronze coins could also be seen as an „advertisement" of the most important products – pottery and wine

6 —— Based on the available data, large craters (such as bell-shaped and volute craters), which were the characteristic type of vessel in the initial and middle phase of Gnathia production in southern Italy in the mid-to second half of the 4th c. BCE, were not represented in the later repertoire of local Issaean Gnathia-style ware (cf. Miše 2013; 2015).

7 —— There were contacts between Issa and Corcyra during the 3rd and 2nd c. BCE. Silver and bronze coins from Korkyra, which made up a large part of the coinage structure in the Adriatic region in the same period, have been recorded in Issa (Paškvan, Visonà 2020: 142; for Corinthian type B amphorae produced in Corcyra cf. Miše, Quinn 2022: 224). The aforementioned Korkyra coin of the volute crater/cluster type may have had a similar promotional meaning in the Korkyrean wine trade. If the Issaeans used it as an inspiration for their own mints, it is logical to assume they had already been familiar with it and its unique iconography.

(Paškvan, Visonà 2020: 140). Through the concentration of finds of Issaean coins and pottery – with the correlation being particularly well attested at the Grad site and the nearby Nakovana cave on the Pelješac peninsula (Pamić, Visonà 2019: 66) – it is possible to trace the sphere of Issaean regional interests, which seems to have primarily encompassed the market of central and south Dalmatia, with an expanding focus on trade with the continental hinterland (Kirigin et al. 2005; Paškvan, Visonà 2020: 134; for recent Issaean coin finds in Herzegovina see Dragićević 2016; 2022: 35). On the other hand, according to the current state of research, Issaean bronzes reached numerous indigenous coastal and inland sites in northern Dalmatia and southeastern Lika (Fig. 6), where their presence is usually interpreted as an indicator of trade interactions between the Issaeans and the local inhabitants (Visonà 2017: 196; Ilkić, Šešelj 2017; Ilkić 2018). Registered Issaean specimens from northern Dalmatia come from the sites of Podgrađe (Benkovac), Budim (Posedarje), Plavno, Bribir, Trojan (Stabanj), Nin, Zadar, Starigrad Paklenica (the map from Paškvan, Visonà 2020: 134).[8] On the island of Pag, there are finds from the Gradac hillfort near Smokvica, with two specimens of the "head of Athena / goat" type (Ilkić, Kožul 2017: 89–96), and from Novalja, with an old find of one Issaean bronze of the "female head (Hera?) / dolphin" type (Brunšmid 1998: 73). In southeastern Lika, recent finds have been recorded at the hillforts of Cvituša in Lovinac, Gradina near the southern edge of Gubavčevo Polje, and Gradina above Dobroselo (Ilkić 2018: 57–66). Therefore, the specimen from Senj presented here, as the westernmost find of an Issaean coin on the Adriatic thus far, expands current distribution maps. However, it seems that this is not the only Issaean coin found in Senj. As already correctly stated by Visonà, it is quite possible that the specimen held in the old collection of the Senj Gymnasium,

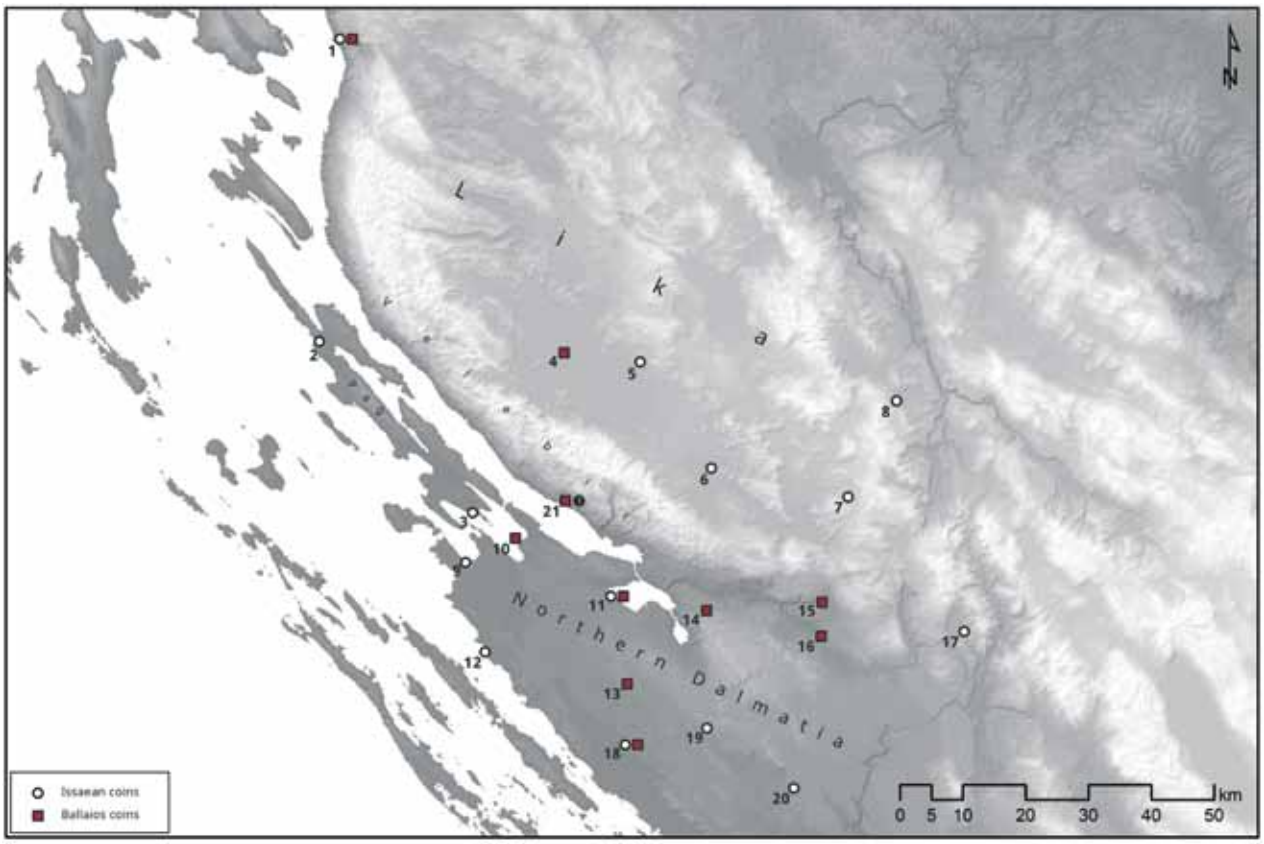

Fig. 6 – Distribution map of Issaean and Ballaios' coins in Northern Adriatic, Northern Dalmatia, and Lika: 1. Senj (Kuk), 2. Novalja, 3. Smokvica (Gradac), 4. Gospić area, 5. Lika region, 6. Lovinac (Cvituša), 7. Gubavčevo Polje (Gradina), 8. Dobroselo (Gradina), 9. Nin, 10. Ljubač, 11. Posedarje (Budim), 12. Zadar, 13. Nadin, 14. Kruševo (Cvijina Gradina), 15. Smokovac, 16. Prndelji, 17. Plavno, 18. Stabanj (Trojan), 19. Podgrađe, 20. Bribir; 21. Starigrad Paklenica (Sv. Trojica) (after Brunšmid 1998: 73; Ilkić, Šešelj 2017; Ilkić 2018; Paškvan, Visonà 2021: 134; base: EU DEM v1.1, made by: P. Domines Peter)

8 —— Although this is stated by Paškvan and Visonà (2020: 134), some authors (Ilkić, Vučić 2022: 192, f. 4) argue that no Issaean coins have been recorded in the Starigrad Paklenica area thus far.

described by F. Kenner as "AE 4" with "head of Pallas r. / horse trotting" and the legend IΣ, and attributed to Amphipolis, actually represents an Issaean coin of the "head of Athena / stag" type (Visonà 2017: 195). The specimen originated from „the area of Senj or the neighboring Kvarner islands" (Kenner 1865: 124).

The Adriatic maritime trade network in the last centuries BCE: a model for coin movement and spreading?

Numismatic and pottery evidence suggests that, during the last centuries BCE, the indigenous community in Senj was integrated into the wider regional and Mediterranean network of maritime connections and trade activities (Glavaš et al. 2020: 274; Glavaš 2010: 8–10). The strategic position at the foot of the Vratnik pass, near the port and the closest route connecting the continental hinterland and the sub-Velebit coast (Glavaš 2010), probably had a crucial impact on the economy and prosperity of local settlement which transform into a important trading hub. The transit role was probably built upon the reception and further distribution of various goods that arrived by sea routes and went on to the markets of hinterland communities on the well-established road through Senjska Draga and via the Vratnik pass, as well as *vice versa*.[9] In general, the evidence of pre-Roman (sometimes categorically defined as „Hellenistic" or „pre-imperial") coinage in the Senj area fits into the same timeframe of the 3rd to 1st c. BCE, along with the finds of other Hellenistic imports, such as amphorae and fineware (Glavaš et al. 2020: 277). Furthermore, the available spatial data on coin findspots from the Senj area correlates well with the concentration of Hellenistic pottery, thus far attested on three major sites – the Kuk hillfort, Nehaj, and the Štela site (Fig. 7).[10]

The finds of Issaean and Ballaios' coins in Senj confirm their regional distribution towards the northern Adriatic. Although there is no reason to doubt that their occurrence in Senj, as well as their movement along the Adriatic, was facilitated by a maritime network, there are still many gaps regarding that model of their spreading. The pattern of concentration of pre-Roman coinage in important port centers is already well attested by finds in Zadar (Kramberger 2020), Budim near Posedarje (cf. Ilkić 2016; Ilkić, Šešelj 2017), or Ljubač (cf. Ilkić 2017), and particularly by numismatic evidence from Diomedes' sanctuary on Cape Ploče, where Greek-Illyrian and other Hellenistic coins were discovered as votive offerings (Šešelj 2010: 311–315; Šešelj, Ilkić 2014: 49–50; 2015: 428–431). The coins presented here belong to the period of the 3rd c. BCE, when both the Illyrian kingdom of Ballaios and Issa strongly benefited from maritime activities, whether related to piracy (Ujes 1999: 203–217; Dyczek 2011: 162–167; Dyczek 2020: 431) or the distribution of local pottery and wine (Kirigin et al.2005: 10).[11] In comparison to the Issaean wine industry, the large quantity of G-I and other types of Hellenistic amphorae discovered at Risan imply that the Illyrian kingdom was not excluded from the wider Adriatic trade of amphorae-borne commodities (Dyczek 2012).

Amphorae, as ceramic containers designed to transport goods, are often regarded as a primary archaeological source for understanding maritime trade and commerce on the Adriatic during the Hellenistic period (cf. Kirigin 1994; Kirigin et al. 2005; Kirigin 2018; Lindhagen 2009; Cipriano, Mazzocchin 2017; Miše, Quinn 2022). Recently published data on numerous finds of late Hellenistic/early Roman amphorae of Greco-Italic (G-I) and Lamboglia 2 (LA 2) types from various sub-Velebit terrestrial (hillfort) and underwater findspots point to the conclusion that the indigenous inhabitants of the Velebit littoral participated in foodstuffs trade and were interested in acquiring amphorae and amphora-borne commodities (Glavaš et al. 2020: 274). Previous indications were well confirmed by a recent surface survey of the Kuk hillfort (conducted by the author), which revealed an abundant quantity of surface finds in which more than 80% are amphorae sherds, primarily G-I, LA 2 forms, with different „transitional" forms between these two types registered as well. Such an enormous quantity of amphorae certainly confirms the highly receptive character of the indigenous settlement. Furthermore, it could imply

9 — A recent survey has also provided new data on an alternative path that directly connects the Kuk hillfort and the Vratnik pass (Glavaš 2010: 7).

10 — This potentially indicates a „multicentric" organisation of protohistoric settlements with thee different but related areas of activities. The surface material registered on the Nehaj hillfort is forthcoming. A few sherds of Hellenistic provenance from old excavations on the Štela site have been published recently (Konestra, Glavaš 2024: 30, 56-57).

11 — According to R. Ciołek, the scale of Illyrian piracy in this period and the notion of Ballaios as a pirate leader would explain the large amount of money needed to maintain troops, as well as the distribution of coins on both sides of the Adriatic (Ciołek 2021: 107-108).

that the regional trans-Velebit (re)distribution of wine (and/or other amphora-borne commodities) towards the continental markets had a significant value for local economy. However, although those types of amphorae (LA 2, G-I) have traditionally been interpreted as serving for the storage and transport of wine (cf. Glavaš et al. 2020: 272), we still have to be careful while analysing amphora finds – such as those from the Kuk hillfort or other Velebit sites – because of the complex relation between types, content, and provenance. Some recent studies on the subject indicate that the amphora distribution system was far more complex and included primary use, as well as (re)filing and reusing amphorae with various commodities, not necessarily only wine (e.g. raw clay from the Žirje shipwreck) (Bevan 2014: 392; Pecci et al. 2017; Miše, Quinn 2022: 11). Considering that the subjects of origins, provenance, or producer-customer interactions are much more difficult to study (Miše, Quinn 2022: 11), it seems that the direct linking of amphora finds exclusively to wine consumption could be misleading in some cases.[12] Ultimately, the intensive distribution of amphorae and amphorae-borne commodities, very likely in mixed cargoes of merchant ships, perhaps along with some Hellenistic fineware as a secondary cargo, or other trading products such as pithoi or volcanic millstones,[13] could provide an as-yet hypothetical model to explain the distribution of pre-Roman coinage. However, it is important to emphasize that a commercial organization of maritime trade in this period is nevertheless very far from being clearly understood; who it involved – Greek traders, foreign agents or intermediaries – and whether local maritime-oriented communities, such as the one in Senj, had a more active role, remain questions for further debates.

Despite the analysed coin, there is yet no evidence to confirm that Issaean merchants or their wine ever reached Senj. However, finds of potential Issaean fineware in the necropolis in *Nesactium* and Kastav (Mihovilić 2002: 507) could indicate that the northern Adriatic was not beyond their trading range. A recently published coin of Pharos, found somewhere in the territory of Prozor (near Otočac, Gacka region) (diam. 18 mm, weight 2.98 g), suggests that coins of Greek colonies in the Adriatic reached the territory of northern Lika (Ilkić 2018: 61). In that case, it seems logical to assume that the corridor through the Senj port and over the Vratnik pass played a key role in spreading the coins and other products towards the hinterland.

Given their occurrence in an indigenous context, it should be noted that the coins analysed here could have had a different function or meaning. One theory argues that a large amount of pre-Roman coinage from the area of northern Dalmatia and Lika, especially of North African provenance, was used as a „means of payment". Based on that, it is often claimed that there was a system of „monetary economy" adopted by indigenous communities in Liburnia (modern-day Northern Dalmatia) and/or Japodia (modern-day Lika) which used money in everyday transactions (Šešelj, Ilkić 2014; Dubolnić Glavan, Glavaš 2014; Cesarik, Kramberger 2018; see remarks by Visonà 2018 and discussion by Bilić 2019). However, the occurrence of Issaean and Ballaios' coins in this area is statistically still rare and sporadic. Accordingly, Visonà argues it is unlikely that such coins of small intrinsic value had a major role in monetary transactions and payments of local goods and services by Greek traders (Visonà 2017: 197). Therefore, while discussing the function of these coins in Senj, in an indigenous context that was nevertheless far outside their „primary" monetary zone (central to south Dalmatia), we should consider other possible meanings whereby such coins could in fact have represented exotic objects, war booty, trading gifts, or just symbolic artifacts with no monetary function attached (Luley 2008: 182–187; Visona 2017: 197). In the case of Issaean bronzes of volute crater /grape cluster type, very distinctive iconography and limited dispersion could additionally point to some „special purpose", perhaps adopted in a particular sphere of exchange between Greeks and local inhabitants.

12 — The large quantity of amphorae could imply that the local merchants in Senj acted as an intermediary and used amphorae from various suppliers to distribute them to the hinterland market.

13 — Fragments of imported pithoi and volcanic millstones were recorded among the surface finds on the Kuk site (for pithoi on the Adriatic see remarks by Kirigin 2012; 2017; for millstone finds see Radić Rossi 2017: 16; Borzić, Radić 2021: 353–354).

Fig. 7 – Hellenistic/Late Republican pottery and coin findspots in the area of Senj (base: Geoportal DGU, DOF 2021; made by: P. Domines Peter)

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INTERNET SOURCES

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TRADITIONS AND NOVELTIES IN THE FUNERARY CUSTOMS OF THE EASTERN ADRIATIC COMMUNITIES AT NADIN AND KOPILA DURING THE 2ND AND 1ST CENTURIES BC

Original scientific paper

The implementation of two research projects, one at the Liburnian settlement and necropolis of Nadin (Department of Archaeology at the University of Zadar, Department of Anthropology at the University of Maine) and the other at the necropolis of the Kopila settlement on the island of Korčula (Department of Archaeology at the University of Zadar, Center for Culture Vela Luka, and the Museum of Ancient Glass in Zadar), enabled the parallel inspection and comparison of numerous aspects of life of the two communities which developed in separate regional frameworks, in times of increasingly intensive prehistoric "global" connections. To illustrate this, the focus was put on two multiple-burial tombs, Tomb 105 from Nadin and Tomb 4 from the Kopila necropolis, which had approximately the same duration during the 2nd and 1st centuries BC.

KEY WORDS: **NADIN, KOPILA, DALMATIA, EASTERN ADRIATIC, LATE IRON AGE, BURIAL CUSTOMS**

INTRODUCTION

The last two centuries BC were a period of highly emphasized dynamics of historical events and thus significant cultural perturbations (acculturation and transformation) that took place not only in the Adriatic but also in a much wider European area. In Dalmatia, however, they are still somewhat difficult to follow archaeologically, largely due to a lack of contextual information and research on the settlements and necropolises of the local indigenous communities. When searching for more finely defined chronological changes during the Late Iron Age, there is the problem of long-period successive burials within a single tomb, as they often disturb the original stratigraphic relationships within an archaeological complex. Another problem lies in the fact that very few intact burials have been documented to date. This work presents the discoveries of two such tombs from two different cultural environments from the last two centuries BC. The intent is to demonstrate how two geographically separated Late Iron Age eastern Adriatic communities behaved in terms of grave ritual and material culture.

This study centers on the North Dalmatian Liburnian community from Nadin and the South Dalmatian Illyrian / Pleirean (?) community from Kopila on the island of Korčula (Fig. 1). Both sites have been the focus of scientific research, which produced data concerning their chronologies, spatial organization, economic strategies, and material and spiritual culture of the communities living in them (for Nadin: Batović, Chapman 1987a; 1987b; Chapman et al. 1996; Čelhar, Zaro

Fig. 1 – Geographical position of Nadin (above; photo: M. Grgurić) and Kopila (below; photo: M. Vuković) hillforts, base map: Google Earth (made by: I. Borzić)

2016; 2017; 2018; 2023a; 2023b; 2023c; Borzić et al. 2018; Zaro, Čelhar 2018; Zaro et al. 2020; Toyne et al. 2021; Knežić 2022; Čelhar et al. 2023; Knežić et al. 2023; for Kopila: Radić, Borzić 2017: 35–58; Borzić 2022).

As is often the case, the majority of work thus far has been done in the necropolises of these two hillfort settlements. At Nadin, the necropolis can be traced back to the Late Bronze Age and continues into Late Antiquity (Batović, Čondić 2005; Kukoč 2005; 2006; 2009; Rajić Šikanjić 2006; Kukoč, Čelhar 2010; 2019; Anterić et al. 2011a; 2011b; Batović, Batović 2013; Čelhar, Kukoč 2014; Marijanović et al. 2014; Čelhar 2016; Loewen et al. 2021; Čelhar, Zaro 2023b; 2023c). Its Iron Age strata reflect a regular spatial organization divided into grave plots hitherto unknown in the Liburnian area (Fig. 2). This kind of thing has been recorded in a number of similar sites, but only later, with the arrival of the Romans. Another notable

Fig. 2 – Nadin, necropolis (photo: D. Vujević)

characteristic is the progressive monumentalization of individual burial units over time, especially in the last two centuries BC (Kukoč, Čelhar 2019).

In contrast to the case of Nadin, the archaeological material accidentally excavated and deposited in the Museum of Dubrovnik in the late 19th century gives only a hint of the existence of Kopila's Early Iron Age necropolis (Radić 2003).[1] On the other hand, its Late Iron Age necropolis (the late 4th–1st centuries BC) has been confirmed and partially excavated in recent years (Radić, Borzić 2017: 49–58; Borzić 2022) (Fig. 3). It is organized into two nuclei composed of a large number of interconnected and irregularly shaped oval grave plots with a monumentally built outer ring, a stone embankment, and a centrally positioned deep burial space. Its form and appearance is suggestive of direct traditional connections with Bronze Age stone mounds – but modified, that is, monumentalized (Radić, Borzić 2017: 49–55; Borzić 2022). Research has shown that such tombs, presumed to be family tombs, were used many times, generally speaking, from the end of the 4th to the end of the 1st century BC. The specificity of the spatial organization and the monumentality of the performance of this necropolis make it a unique phenomenon thus far in the Adriatic. However, it is evident that very similar, although less monumental, phenomena have now been documented in the recently discovered Early and Late Iron Age necropolises in Zakotorac on the neighbouring Pelješac Peninsula (Perkić et al. 2021: 85, Fig. 2), and, for example, in Grebine in Mrljanovci near Ljubuški (Rašić 2022: 361–363). This suggests that we should expect to discover other more or less monumentally constructed necropolis areas, at least in the southern Adriatic.

GRAVE 105 FROM NADIN AND GRAVE 4 FROM KOPILA

As emphasized earlier, the intent of this work is to compare the funeral customs, and by extension the cultural affiliations, of two important Eastern Adriatic communities in specific moments of protohistory. For this purpose, we have

Fig. 3 – Kopila, necropolis (photo: M. Vuković)

1 —— For some of these finds, especially the complete Corinthian vessels from the end of the 7th and the first half of the 6th century, there is a possibility that they do not come from Kopila, but are part of the Cypriot collection which reached the museum at the same time.

singled out two tombs from these necropolises from approximately the same period, the 2nd and 1st century BC (Čelhar, Ugarković 2021: 312–314; Borzić 2022a: T. 1). Individual and more broadly dated types of jewellery and attire may cast some doubt on the chronological determination, like double pins of type IIIa in Kopila (according to Vasić 1982: 232–234, 236–238) or Certosa fibulae Ic and Id in the case of Nadin (Teržan 1976: 319–320, 382). However, the vast majority of grave finds and items can be dated to the last two centuries BC, like the predominance of grey glazed plain and relief pottery variants associated with the burial ritual. Also, we should emphasize the apparent absence of Gnathia pottery,[2] which was commonly present in the tombs of the 4th and 3rd centuries BC, both at Nadin (Batović, Batović 2013; Matković 2015; Čelhar et al. 2023) and at Kopila (cf. Radić et al. 2017; Borzić 2022b).

Although we are not able to determine more precisely the initial use of these tombs in the frame of the 2nd century BC, the historical context of their final period at Nadin is indicated by the appearance of early North Italic sigillata and thin-walled pottery from the last quarter of the 1st century BC, which are absent from the necropolis at Kopila.

The Nadin case is presented by Tomb 105, which was located on the southern edge of the necropolis (Fig. 4). Visually, it is characterized by a very regular rectangular shape (dimensions: 2,93 x 4,30 m), with sides built of vertically placed monumental stone blocks of varied roughness.

Fig. 4 – Nadin, Tomb 105 (photo: M. Grgurić)

2 —— The allegation about the absence of Gnathia pottery in Tomb 105 is not refuted by the fact that its upper layer contained only three small sherds of south Italian Gnathia vessels from the 4th/3rd c. BC and two whole vessels made under its certain influence, a kantharoid skyphos with carelessly executed incised grooves and metopes, technically made much closer to 2nd c. BC Dalmatian grey glazed pottery than to the south Italian model, and a deep bowl, morphologically and decoratively simpler than its closest analogies from the Messapian workshops from the 4th c. BC. More about these vessels will be said in the ongoing integral publication about Tomb 105.

The aforementioned architectural concept of the Nadin necropolis originated in the Early Iron Age (approx. from the 7th century BC onwards), when similarly shaped and positioned blocks formed more or less regular rectangular enclosures around a single grave or occasionally several graves (2 or 4), most often constructed in the form of a stone cist (Kukoč, Čelhar 2019). Other tombs that were somewhat chronologically and architecturally analogous to Tomb 105, but often with a longer continuity of burials (from the 4th century BC onwards; cf. Batović, Batović 2013), were also recorded in at least 8 other cases in the Nadin necropolis, but all have been devastated by various subsequent activities since ancient times. Consequently, Tomb 105 represents the only intact unit of this type, not only within the framework of the Nadin necropolis, but also within broader Liburnia (cf. Gradina in Dragišić, tombs 20, 22, and 24: Brusić 2000a: 11; Miše 2017: 86, 96;[3] Velika Mrdakovica: Brusić 2000b: 8–9; Brajković 2014: 8, 21; 2018: 37–41). Interestingly, the same construction technique, with fairly regular and monumental stone blocks, was recorded for the corresponding Iron Age residential architecture in the Nadin settlement (Čelhar, Zaro 2016; 2023a; 2023b; 2023c) (Fig. 5) and at some contemporaneous sites, like Asseria (Fadić et al. 2018), Jerebinjak (Čelhar, Zaro 2023a: Fig. 4), and Lergova Gradina. The two excavated structures in Lergova Gradina contained material associated with the 2nd and 1st century BC, the chronological range which is further confirmed by two radiocarbon dates (Ilkić, Čelhar 2018).

On the other hand, the example from Kopila, specifically Tomb 4, is also located on the extreme southern edge of Nucleus 1 of the necropolis (Fig. 6). In terms of spatial design, it generally follows other Kopila tombs that persisted from the middle/end of the 4th century BC to the end of the necropolis in the middle of the 1st century BC. Nevertheless, it seems that the outer ring (measuring 3,40 x 4,70 m) is more rustic, having been constructed of regular/irregular monumental stone blocks. Also, the central burial placement (1,73 x 1,90 m) is very shallow, which can be traced to its peripheral position and/or later dating (Borzić 2022a: 97).

Fig. 5 – Nadin – Gradina, Late Iron Age residential architecture (photo: G. Zaro)

3 —— It remains unclear how many of the 34 excavated tombs in 2001–2003 architecturally correspond to tombs 20, 22, and 24 from Dragišić or tomb 105 from Nadin. Miše (2017: 86) generally states that „some of them had preserved and regular side blocks", while the monographic publication of metal and glass objects from the mentioned graves by Glogović (2014) makes no mention of grave architecture at all.

Fig. 6 – Kopila, Tomb 4 (photo: I. Borzić)

In both cases, analysis of the archaeological deposits indicated that the graves were used on multiple occasions. In the case of Kopila, Tomb 4 served as the burial site for a minimum of 32 individuals of both sexes (15 men, 8 women, and 9 inconclusive). All were adults with the exception of one male teenager.[4] Given the excellent state of preservation, we were able to determine that the individuals were buried on their backs with the arms along the body. Women were placed with their heads toward the east and men with their heads toward the west. While pins and weapons (spearheads) were placed only with men, and fibulae and jewellery (earrings and necklaces of glass beads) only with women, pottery goods were placed with both (Fig. 7). Such a principle of "successive" opposite burial is nothing new in the South Dalmatian area because, along with some other tombs from Kopila (Borzić 2022a: 102), it has been recorded at the necropolis of Grebnice near Ukšić since the 7th century BC (Marijan 2001: 56, 123–130).

The Nadin case is much more complicated because anthropological analysis has identified the remains of a minimum of 228 individuals that include both sexes and all age groups.[5] Unfortunately, with the exception of a few individuals placed in the crouched position in the lowest layers (Fig. 8), it is not possible to address the original position of most burials in the tomb due to the apparent secondary relocation of human remains toward the edges of the tomb architecture (to free up space for new inhumations).

Similarly, it is not possible to attribute certain items of attire or jewellery to a particular sex and/or age group. The fragmentation of osteological material is further attributed to the fact that at one point during the 1st century BC a fire was lit inside the tomb, possibly for symbolic (ritual) and/or practical (hygienic) reasons, which archaeologically manifested as a clearly visible layer with more or less burnt osteological and other archaeological material (Fig. 9).

4 —— Although it was originally thought that 13 people were buried in the tomb (Radovčić 2017: 130–131), new analyses of teeth suggest a much larger number (Marić et al. 2022: 52–53).

5 —— The minimum number of individuals is based on the presence of petrosal portions of temporal bones (228 left-side and 208 right-side petrous portions). The analyses were made by Kenneth C. Nystrom (SUNY New Paltz).

Fig. 7 – Kopila, Tomb 4 (photo: I. Borzić)

Fig. 8 – Nadin, Tomb 105, individual in crouched position (photo: M. Čelhar)

Fig. 9 – Nadin, Tomb 105, burnt layer (photo: M. Grgurić)

MATERIAL CULTURE

Pottery

We will try to compare visible manifestations of the grave ritual and the accompanying findings that answer questions about the cultural affiliation of and influences on the Nadin and Kopila communities in the last two centuries BC. In both cases, an extremely large amount of pottery can be seen at the level of the entire tomb. This phenomenon has been observed throughout the eastern Adriatic, most likely as a result of increasingly Greek-Hellenistic influences since the 5th/4th century BC (Miše 2017: 95–96). Almost as a rule, Graeco-Hellenistic forms of vessels intended for the presentation and drinking of liquid (wine) predominate among these types of deposits. Nevertheless, it is interesting to see how the observed communities demonstrate certain preferences in this regard.

Generally speaking, the ceramic assemblages in all the tombs from Kopila are typologically relatively uniform, with skyphos as the dominant form, followed by significantly smaller numbers of kantharoi, gutti, and unguentariae, with only a few examples of olpes and oinochoes (Borzić 2017; 2022b). The position of vessels in tombs is mostly limited to the narrowest sides, adjacent to the heads or feet of the deceased. Tomb 4 follows this scenario, but its assemblage is even more uniform and more or less restricted to the appearance of only two or three types of vessels. The state of preservation of this tomb made it possible to determine that at least two consumption vessels were placed next to the head of each individual regardless of sex: a paired biconical or thorn kantharos and a gutus (Radić et al. 2017: 180–183) (Fig. 10).

On the other hand, it is difficult to draw more secure conclusions about the typology of ceramic items and their positions inside specific tombs at the Nadin Late Iron Age necropolis, since Tomb 105, as pointed out earlier, is currently the only intact tomb of its type in the entire area of Liburnia. Nevertheless, the displaced material from stratigraphically disturbed and devastated tombs (Batović, Batović 2013; Matković 2015) shows that it can still be representative. In contrast to the record at Kopila, pottery from Tomb 105 has a much wider typological repertoire, recorded over the entire area

Fig. 10 – Kopila, Tomb 4, pottery assemblage (photos: I. Borzić, P. Iglić; made by: M. Čelhar)

of the grave,[6] with one dominant form. Apart from single or few unguentariae, biconical kantharoi, skyphoi, gutti, bowls, and about twenty relief bowls, the most represented forms (min. 120) are large vessels intended for the preparation/mixing of wine, specifically Hellenistic relief craters (Fig. 11). It is worth mentioning that a very similar type of vessel, the North Italian sigillated relief chalice, continued to be placed in the Nadin tomb during the last quarter of the 1st century BC. It must be pointed out that Tomb 105 included vessels of the local Liburnian Iron Age tradition, which was not the case in the Kopilian necropolis, with the exception of isolated examples of local ceramics in the children's tombs 1 and 7.

Fig. 11 – Nadin, Tomb 105, pottery assemblages (photo: M. Grgurić; photo and drawing by: L. Bogdanić; made by: M. Čelhar)

6 —— Despite the fact that pottery goods were recorded over the entire area of the tomb, it must be emphasized that the larger forms, the more completely preserved relief craters, were mostly located along the edges of the burial space. It is also difficult to conclude whether such a general dispersion of pottery goods is the result of intention or coincidence caused by multiple interventions in grave content during the times of its use.

The tomb assemblages from Nadin and Kopila also provide an opportunity to examine the pottery through the prism of their workshop origins. In this case, too, the Nadin material from Tomb 105 and from the entire necropolis dated to the last two centuries BC shows a spatially broader origin that stems all the way from the Aegean production region (Ephesian relief pottery) or from Italian workshops (black and grey glazed and later sigillata products) (for trends in ceramic material imports to Nadin from the Early Iron Age to late antiquity, see: Čelhar et al. 2023). Nevertheless, as expected, the products of the Eastern Adriatic Hellenistic workshops significantly predominate in the Nadin and Kopila cases.[7] In the context of the latter, there are documented forms of plain grey and brown glazed pottery from neighbouring Issa or nearby Central Dalmatian workshops (Siculi?) (for further information, see: Miše, 2015: 58–59; Ugarković 2019: 100–105; Lipovac Vrkljan et al. 2018: 1), which either intensively exported a particular portion of their repertoire toward Liburnia (grey glazed plain and relief pottery)[8] (for relief pottery, see: Brusić 1999; Čargo, Kamenjarin 2022) or, considering the considerable demand, somehow stimulated the local production of similar wares (Brusić 1999). In this sense, it is interesting to note that, despite the two consumer communities having at least roughly the same area of origin of the predominant ceramic items, there is a clear distinction between the preferred forms. In fact, among the material from Kopila, either from the necropolis or from the settlement, only one fragment of Hellenistic relief pottery has been recovered, but notably not of the Dalmatian type (Borzić 2022b). On the other hand, it is well-represented in the context of the necropolis at Nadin, as well as throughout Liburnia. To date, there is no clear explanation for these preferences, but the differences may relate to the manner of funeral feasts/rituals and/or a matter of fashion.

Finally, we should address the number of vessels within each tomb. The total of more than 200 relatively fragmented[9] but generally whole vessels in Tomb 105 sounds truly imposing, but it is important to note that at least 228 individuals were buried in it. Therefore, despite the fact that it is not possible to know how many vessels may have been buried with each individual, the overall number of vessels is approximately equal to the overall number of individuals. In the case of Tomb 4 at Kopila, this relationship is somewhat different. The fact that kantharoi and gutti were recorded next to each head automatically makes the vessel-to-person ratio twice as high. It is difficult to say whether this is an established practice, especially since Kopila includes cases with ratios closer to 1:1, specifically within children's grave 1, in which at least 108 children of neonatal age were buried (Radovčić 2017: 127–128). Other comparisons can be made with the necropolis in Dragišić, where grave 31/2003 had the same ratio of 1:1. On the other hand, in graves 21/2002 and 30/2003, the vessel-to-person ratio is quite high, reaching 10:1 or more (Miše 2017: 95). Of course, we should bear in mind that the units in question are devastated, which can significantly affect the final results.

Weapons

The appearance of weapons in graves also reflects the grave ritual, that is, the rite of transition of the deceased from the world of the living to the world of the dead. As already pointed out, the appearance of weapons, especially spears, with male individuals in the entire Central and South Dalmatia was a regular occurrence since the Early Iron Age (Čović 1987: 454, 458; Marijan 2001: 51–53, 60–61, 70, 81, 94; Blečić Kavur, Miličević-Capek 2011: 52–65; Perkić et al. 2021: 93–94); the continuation of this tradition is later observed in all tombs with adults from Kopila. Tomb 3 of Nucleus 1 and Tomb 1 of Nucleus 2 (Radić 2017: 96–97; Radić et al. 2017: 172–173, cat. no. 3: 27; Borzić 2022: 102, Fig. 12) contained bronze helmets of the Illyrian type together with offensive weapons. Tomb 4 contained exclusively offensive weapons, such as spearheads with a tubular socket for the shaft and an elongated leaf-shaped head with a prominent midrib (Radić et al. 2017: 190–192, cat. no. 4: 40–46) (Fig. 12). Unfortunately, the state of preservation did not permit a determination of the total number of goods of this

7 — All other contemporaneous material from other Kopila tombs also belongs to the same workshop centres, so in addition to grey and brown glazed pottery, there are also late manifestations of Isseian Gnathia type and brown and red glazed Hellenistic pottery. See: Borzić 2017; 2022b.

8 — The highlighted information about a part of the inventory of the Dalmatian Hellenistic workshops is particularly emphasized because, as far as we know for now, the Iseian ergasterias did not export the simultaneously produced late manifestations of local ceramics of the Gnathia type to Liburnia (Matković 2015; Miše 2017; Govorčin, Borzić 2018).

9 — It is difficult to say with certainty whether the vessels were intentionally broken when they were placed in the tomb, or whether their fragmentation is the result of multiple interventions on its contents, which may be why there are also completely preserved specimens. A similar situation was recorded at Kopila, in contrast to other devastated Late Iron Age tombs, for example in the Nadin or Dragišić necropolises, where the completeness of the vessels is significantly lower than in the two mentioned examples (for Dragišić see: Miše 2017).

Fig. 12 – Kopila, Tomb 4, spears (photo: I. Borzić)

type in the grave, but the number of more complete and amorphous iron fragments and their arrangement in the tomb testify that it was most certainly a common good for every male deceased.

In contrast, tomb 105 from Nadin, as well as earlier Iron Age burial contexts from Northern Dalmatia, show that the Liburnians did not engage in this practice. It seems unlikely that they used no weapons at all. It is more likely that weapons were not an identity prerogative connected to the transition to the afterlife, or perhaps there was a practical reason for the Liburnian communities not to withdraw weapons from circulation. However, the potential symbolism of a male warrior may be represented by trapezoidal belt buckles with a central spear/arrow motif (Nadin type), since there were as many as 40 specimens in tomb 105 (Čelhar, Ugarković 2021). Few finds of offensive weapons of Roman typology (two javelin butts; cf. Šeparović 2003: T. 3: 3–4) were found at the very top of the tomb; their quantity in relation to the number of deceased does not change anything significant in this regard.

Attire

Attire and jewellery from Nadin and Kopila show similarities and differences in how items were worn (fashion affinities) and in what cultural circles met the need for them. For instance, belt buckles were not recorded in tomb 4 or elsewhere in the Kopila necropolis, yet, as mentioned previously, they are numerous in the Nadin grave inventory, where nearly every fourth individual seems to have owned one. It is assumed that they were primarily men's costume items (Čelhar, Ugarković 2021: 311, 316–317), especially given the large number of types with a central representation of a spear/arrow (Fig. 13) – a specific Liburnian feature, judging by the quantity and concentration of finds.

In the Kopila community, on the other hand, men's costumes, in addition to weapons, are marked with pins. The pins[10] from Tomb 4 (Radić et al. 2017: 184–187, cat. no. 4: 17–22) (Fig. 14) occur in large numbers throughout the territory of the western, central, and southern Balkans, as well as the central and south-eastern Adriatic coast, and are part of the long-period traditional indigenous costume (Vasić 1982: 232–234, 236–238; Blečić Kavur, Miličević-Capek 2011: 40, Perkić et al. 2021: 96). They are a common costume item in the Kopila community and are also found in other burial complexes in the necropolis (Radić et al. 2017: 168–169, cat. no. 3: 13 Borzić 2022a: 99, note 24, 102, note 32, Fig. 11c). The Gostilje (Vele Ledine) necropolis, with predominantly single burials, confirms the characteristic role of pins in men's clothing. Although pins are sometimes associated with women's clothing (Basler 1969; 12, 24–25, T. II: 10: 6–8), they predominantly accompany male burials as different variants of double pins (Basler 1969: 12, 14, 19–21, 24–25, 28–31, 39–43, T. II: 9: 1, VI: 27: 4, 6, VII: 28: 10, VIII: 34: 7, IX: 35: 3, 36: 6, XXI: 105: 5, XXIII: 120: 5, XXV: 126: 8; for the Budva necropolis see: Marković 2012, 25, T.11: 5.1–3). Conversely, in Liburnia, and thus also in Nadin, pins do not represent such a characteristic and recognizable part of the costume/attire during the Late Iron Age. Fewer than 10 silver, bronze, and bone pins, hairpins, and sewing needles of heterogeneous types and variants were found in tomb 105, mostly in the context of the second half of the 1st century BC.

10 —— The IIIa group of double pins, after the typology of Rastko Vasić (1982: 232–234, 236–238), or so-called omega pins, and pins with hammered and rolled-up heads or so-called Schlaufennadeln pins after the typology of Kilian-Dirlmeier (1984: 281–283, T. 112: 4872–4893, T. 113: 4894–4903).

Fig. 13 – Nadin, belt buckle of the Nadin type (photo: I. Čondić)

Fig. 14 – Kopila, Tomb 4, double pins of type IIIa (photo: P. Iglić)

In the Liburnian region, the costume items that stand out in terms of quantity and variety are the fibulae. An impressive number of over 700 specimens has been documented in tomb 105. Strictly statistically speaking, it is slightly more than 3 fibulae per deceased. Given the smaller number of deceased in grave 4 in Kopila and the association of fibulae exclusively with women's attire, the finds numbering over 10 fibulae are also not negligible, although it is still a much smaller ratio (approximately one fibula per individual) when compared to the Nadin burial context. A greater number of fibulae could indicate a different style of clothing, and potentially multi-layered garments; however, such a repertoire may simply represent funeral arrangements where most or all of the possessions of the deceased are attached to clothing. Given the impossibility of associating each fibula with a particular costume, any further discussion on the topic would only be speculation.

Typologically, and thus in terms of the production centres and cultural milieus from which they come, the differences between the two areas are distinct and unambiguous. The only types of fibulae documented in both tombs correspond to the north Italic and north Adriatic types (Almgren 65 (Demetz 1999: 27–38, Lists I–II, T. 1–6, Maps 1–5) and Picugi types (Guštin 1987: 51–53, Fig. 12; 1991: 38–39; Blečić Kavur 2015: 217, 219, Fig. 78),[11] associated with the end of the 2nd and 1st centuries BC, which corresponds with new cultural circumstances and an increasingly pronounced Roman presence in the area. Taking into consideration the geographical position and other historical circumstances, it is not surprising that this influence was more pronounced in Liburnia. This is also confirmed by the greater typological diversity and quantity of the Italic types of fibulae recovered from Nadin (for example, Nova Vas, different variants of the Nauheim fibula, Gorica, the Alesia fibulae, etc.; see in general: Demetz 1999). Of course, this is also partly due to the shorter use of grave 4 in Kopila, so some types detected at Nadin should not be expected here (like the differ-

11 —— Jezerine-type fibulae (Demetz 1999: 99–105, liste XVI, T. 25–26, karte 29–31) are the only other common type that appears in both necropolises; in the case of Kopila, they are not in tomb 4, presented here, but in tomb 3 (see: Radić et al. 2017: 168, cat. no. 3: 11).

ent early Aucissa types/variants that are extremely well represented in grave 105, or some eastern Alpine types such as Almgren 18, Idrija, Almgren 2, Tierkopf etc.; Feugère 1985; Demetz 1999).

Quantitatively, the most convincingly represented types in both tombs belong to the so-called fibulae of the middle La Tène construction, accepted through indirect influences from the La Tène cultural milieu. However, the variants that appear do not coincide, but point to local/regional peculiarities and connections with different cultural areas: Nadin communities are primarily connected with the upper Adriatic, Iapodian, and the south-eastern Alpine territories,[12] while the closest analogues for Kopila fibulae can mostly be found in neighbouring areas, especially Bosnia and Herzegovina.[13]

Interestingly, different variants of lancelot fibulae (IA and III after Popović 1994) were discovered in grave 105 in Nadin (Čelhar, Ugarković 2021: 310). Their origin and distribution are related primarily to the western and central Balkans but can be found in a wider region depending on the variant. The Nadin find represents the westernmost point of their distribution. The Hellenistic centres of the central and southern part of the eastern Adriatic and indigenous centres in the hinterland, especially Herzegovina, where they are found in greater quantity, delineate the most probable distribution networks through which these fibulae reached the Nadin community. However, this type has not been recorded on the Kopila necropolis, including tomb 4.

Tomb 105 from Nadin is characterized by the presence of a large number of fibulae (about 40 specimens) typical for Liburnian costumes: the regional, youngest variants of fibulae of the Certosa type (Certosa Ic and Id; Teržan 1976: 319–320, 382, Fig. 20.) and the Liburnian plate fibula (Batović 1958; 1974: 192–205) (Fig. 15). A majority of them are made of silver; the frequent use of silver in the Late Iron Age is usually explained as a consequence of the widespread expansion of Hellenistic fashion. Silver is

Fig. 15 – Nadin, Tomb 105, Liburnian plate fibula (photo: M. Grgurić; drawing: I. Čondić)

12 —— Apart from the Picugi type fibulae, which are the most numerous, this context is particularly marked by the Beletov Vrt type fibulae (Božič 1998: 149, 152, Abb. 14, 20, Liste 6; Dizdar, Božič: 2010, 153–156, 158, T.1: 1–2; Drnić, Tonc 2014: 185–190, 205–206, T. 1); their local variant is supposed to have developed in local Iapodian (Drnić, Tonc 2014, 188–190, Map 1) and maybe even Liburnian workshops, considering the large number found in Nadin. Although fibulae of the Beletov Vrt type are also mentioned in the inventory of tombs 3 and 4 in Kopila (Radić 2017: 87; Radić et al. 2017: cat. no. 3: 9–10, 4: 10–12; Borzić 2022a: 97), it is a question of wrong determination, just like the identically determined find from Narona (Manenica 2017: 345, Fig. 1). So far, this type of fibula has not been documented further south than the Liburnian area.

13 —— For example, for fibulae with the figure-of-eight decoration on the foot see: Marić 2017: 92–98, Map 10.

also widely used in South Dalmatia, as evidenced by finds from the Kopila necropolis, including the previously mentioned fibulae with the figure-of-eight decoration on the foot from grave 4 (Radić et al. 2017: 182, cat. no. 4: 8a–d).

Jewellery

The general expansion of the dominant and luxurious Hellenistic cultural creativity in this period is especially evident in jewellery. The basic trends and stylistic tendencies are visible on the jewellery from both tombs, in both imported and regionally adapted and processed jewellery items, which is especially noticeable for the production of silver earrings. However, the types of earrings in the observed tombs do not match, with the Nadin tomb showing a significant typological heterogeneity, including some earrings that are considered characteristic of Liburnian decorative or artistic creations (the horseshoe-shaped and boat-shaped earrings, for example; see: Batović 1960: 403–409; 1974: 209–215, 229).

A general characteristic of the Late Iron Age in the wider area is the more pronounced presence of necklaces made of glass beads in grave contexts, especially with respect to jewellery made of amber, which was dominant in earlier periods. In contrast to all tombs investigated on Kopila thus far, tomb 4 is characterized by the absence of amber finds. Tomb 4 is also the only one that does not contain older burials from the late 4th and 3rd centuries BC (cf. Borzić 2022a: T. 1). Amber finds are also extremely poorly represented in tomb 105 in Nadin, with only a few specimens, some of which were probably part of other jewellery items (earrings?). Of course, it should be taken into account that a fire was lit in the tomb at one point, which could have affected the preservation of amber objects.

On the other hand, hundreds of glass beads were recorded in both tombs. Small monochrome glass beads of different shapes and colours occur in large quantities in both tombs; due to their wide distribution, it is difficult to determine their chronology and provenance. The provenance of most other glass beads can be associated with the eastern Mediterranean, although for some types, especially the eye beads (Fig. 16), there is a possibility that their production, apparently originating in the eastern Mediterranean, had expanded over time to several regions of Europe (Eterović Borzić 2017; Eterović Borzić, Borzić 2022). Despite the partial overlap of widely distributed types of glass beads, there are differences in the typological repertoire of observed tombs, probably suggesting different routes and trade networks by which these goods arrived in these areas and/or fashion preferences.

The glass repertoire of Nadin is also characterized by a small number of beads whose production is related to the La Tène, Celtic world (ring beads of the types 23 and 23a after the typology of Haevernick (1960: 69–71; see also: Venclova 1990: 140–141). Their appearance distinguishes the Nadin community not only from the Kopila community, but also from other eastern Adriatic communities, given that such material has not been recorded in that area so far. Their presence, as well as the presence of some belts (an astragal belt segment and a bronze belt characterised by profiled rod-shaped segments; see: Filipović, Mladenović 2017: 164–168; Dizdar 2018: 20–22) characteristic of the La Tène world and hitherto unknown in the eastern Adriatic, confirms the more pronounced (in)direct orientation and connection of the Nadin or North Dal-

Fig. 16 – Selection of glass eye beads from Nadin, Tomb 105 (left; photo: M. Čelhar), and Kopila, Tomb 4 (right; photo: P. Iglić)

matian area with the northern Italian and southeastern Alpine production and distribution centres.

Apart from the previously mentioned items, jewellery included various finger rings made of bronze or iron (also silver, in the case of Nadin), sometimes with a glass gem. Items such as bracelets, pendants, and many others were found in grave 105, but not in grave 4, although they are known from other graves at the Kopila necropolis. Although important, decoratively interesting, and indisputably elements of a more luxurious costume, it is unclear how standard or indispensable they were, especially in comparison with some previously mentioned items like fibulae and belts in the Liburnian case, or fibulae, pins, and weapons in the case of Kopila. If we look, for example, at the bracelets in grave 105, of which more than 20 specimens were found (although it is difficult to determine the exact number due to their fragmentation), as many as 8 pieces of the same type[14] were found together, intertwined right next to the edge of the tomb (Fig. 17). It is thus conceivable that they were worn together, that is, by a single individual (presumably a female). Considering the above, and in relation to the number of individuals in the tomb, it does not seem as though they were an overly common jewellery item.

CONCLUDING REMARKS

Details of grave customs and archaeological material recorded in the two tombs presented here allow us to draw some conclusions related to the associated communities of Nadin and Kopila. Firstly, it is clear that both communities exhibited a degree of continuity with their own earlier traditions during the last two centuries BC. This is seen in grave architecture, which was present with its basic concept in Nadin from the 7th century BC and in Kopila at least from the middle of the 4th century BC. It is also apparent in the burial practice, including "successive" opposite burials in the case of Kopila and individuals in the lowest/oldest layers placed in the crouched position in the case of Nadin. Also, it is interesting to note that the spatial-organizational plans of the necropolises appear to be

Fig. 17 – Nadin, Tomb 105, bracelets (photo: M. Čelhar)

14 —— In the mentioned case, we are talking about ornamented bronze band bracelets with separated ends, the closest analogues of which are known precisely from Nadin, from the neighboring so-called Hellenistic grave 1 (Batović, Batović 2013: 24, T.XXII: 87–88).

unique in their narrower and wider cultural circles. Cultural continuity based on local tradition is also noticeable in some details of the grave ritual. Among these is the presence of weapons in the graves in Kopila and their absence in the Nadin graves, which is an already recognized trait of the South Adriatic or Liburnian Iron Age cultural circle. It is no less important to emphasize the appearance and continuity of some characteristic regional forms of attire, as well as their role in it.

Considering the currents of history and civilization, it should be expected that Hellenistic and Roman cultural creativity and quality would have a greater and greater effect on all aspects of life of these two communities. Among other things, this can be seen in the grave ritual observed here and the inventory related to it, indicating that Nadin and Kopila were familiar with and involved in the affairs of the wider world; over time, this led to an ever greater similarity between them. The above can be supported by a few details mentioned earlier, such as the introduction of new motifs and techniques and the more intensive use of silver in the manufacture of jewellery and clothing items. On the other hand, a notable thing would last throughout the Late Iron Age: the initial appearance and use of significant quantities of pottery as part of the burial ritual, now clearly and recognizably structured, and primarily oriented toward the Greek-Hellenistic symposiastic character. The participation of both communities in the same contemporary regional trade framework can be seen in the pottery inventory, dominated by the products of the Dalmatian Hellenistic workshops, whose production during the last two centuries BC was focused on grey-glazed ware. Yet the reasons for distinct preferences for certain forms, as evidenced by the burial ritual of both communities, remain unclear.

Although there is no difference in the origin of ceramics, there are clearly differences among other material items in the observed tombs, especially jewellery and clothing items. The Nadin community is primarily oriented towards the Iapodian area of Caput Adriae and its hinterland, while the Kopila community, as expected, shows stronger ties with the western and central Balkans. However, by the 1st century BC, even these differences diminish, which is likely a result of the increasingly influential Roman presence along the entire eastern Adriatic coast. This is particularly evident for the associated characteristic elements of costume and jewellery, whose distribution covers a much wider area, including the territories of both communities observed here. It seems logical that this process was more noticeable in the case of Nadin. As a representative of the Liburnian historical trajectory, Nadin must have had a much closer and more intense connection with the Roman element than the South Adriatic community at Kopila, which apparently met its end in a conflict with Romans during the conquests of 35–33 BC (App., Ill. 16). This can also be seen from the fact that, from the middle of the 1st century BC, the Italic ceramic and metal material in Nadin becomes even more diverse and dominant, suggesting the complete integration of the eastern Adriatic into the Roman world. But apart from material culture, it is interesting to note that both local communities were gradually infiltrated by aspects of Roman spiritual culture like, for example, the gradual acceptance of the cremation rite. This is recorded at Nadin in the upper layer of Tomb 105, which had a large amount of fragmented bones, some unburnt and some with different degrees of burning. In case of Kopila, a typical Roman cremation burial in an urn dated to the middle of the 1st century BC was recorded at the top of Tomb 7 (Borzić 2022a: 97–99; Eterović Borzić, Borzić 2022).

In general, the presented features of grave ritual and the grave inventories of two contemporaneous tombs of relatively distant communities in the north and south of Dalmatia vividly show the fluidity of their cultural and ethnological features, which are certainly dependent on the historical circumstances in which they developed. Many of the elements presented here support the conclusion that both tombs are representative examples of their cultural spheres during the 2nd and 1st centuries BC, but there is certainly space for even deeper insights into the lives of both communities and their relationships to local traditions and external influences.

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Domagoj Perkić, Marko Dizdar, Hrvoje Potrebica

SILVER HINGED FIBULAE FROM THE ZAKOTORAC CEMETERY (PELJEŠAC PENINSULA): CULTURAL CONNECTIVITY BETWEEN THE SOUTHERN PART OF THE EASTERN ADRIATIC COAST AND THE CENTRAL BALKANS

Original scientific paper

In the area of Zakotorac, a village in the central part of the Pelješac peninsula in the southern Croatia, there are ongoing systematic excavations at the necropolis of the Gomile site with stone mounds and dry wall structures. Aside from mound 1, the dry wall structure marked as grave 1 contained the remains of seventeen dead, with numerous items of weaponry, costume, jewellery, toiletries, and pottery dated to the end of 5th and 4th centuries BC. The costume items include not only different forms of bronze fibulae and pins, but also silver hinged fibulae, represented by two basic forms. The fibulae with star-shaped protrusions on the bow belong to group Vb, a widely distributed group that appeared at sites in the southern part of the eastern Adriatic coast and its hinterland during the late 5th and 4th centuries BC, first as imports and later maybe as products of local workshops. Two hinged fibulae have a trapezoidal foot and belong to a group of fibulae that has been recorded in the greatest numbers at sites in Herzegovina. The new finds of silver hinged fibulae of both types in the Zakotorac cemetery, probably women's costume items, point to the cultural connectivity between the southern part of the eastern Adriatic coast and the Central Balkans during the late 5th and 4th centuries BC.

KEY WORDS: **SILVER HINGED FIBULAE, ZAKOTORAC, STONE BURIAL MOUNDS, IRON AGE, WOMEN'S COSTUME, CULTURAL CONNECTIVITY, CENTRAL BALKANS**

INTRODUCTION

In the central part of the Pelješac peninsula, which is located in the southern part of the Adriatic coast in Croatia, there is the village of Zakotorac (Donja Banda, Orebić Municipality), lying along a natural communication line linking the western and eastern parts of the peninsula (Fig. 1). The small karst field (*polje*) is dominated by the hill of Kotorac. On the top of the hill there is a prehistoric hillfort with a necropolis on its southwestern base, at the site of Gomile, where excavations began in 2020. The necropolis includes at least 27 mounds, on an area of about 130 x 80 m (Perkić et al. 2021: 83–86, Maps 1–3, Figs. 1–2). The necropolis consists of stone mounds, some with structures in the shape of two or three concentric rings made of larger stone blocks. The added dry wall structures between the mounds or next to them were also used for burials. These stone structures are also built of composite stones and one of their parts rests on stone mounds, i.e. they were subsequently added to them.

Fig. 1 — Position of the Zakotorac – Gomile cemetery on the Pelješac peninsula (made by: D. Perkić)

Two rectangular structures, lying in an east – west direction on the southern side of mound ZKG 1[1] on the eastern edge of the necropolis, were explored in 2020. The smaller one, measuring 240 x 140 cm, contained a bronze Illyrian helmet of type III A-2a (Perkić et al. 2021: 86–87, Figs. 3–5). On its eastern side there was a larger dry wall structure measuring 305 x 180 cm with a depth of around 100 cm. It was built of larger stones; on the northern side, it leans on a vertical rock. Inside, there was a small rectangular structure: grave 1 (Fig. 2-3). On the surface of the tomb there was a layer of small stones with occasional potsherds; under it, there was a layer of small and large stones and some soil, which contained more numerous potsherds and metal objects. Underneath there

1 — ZKG 1 = Zakotorac gomila 1 / Zakotorac mound 1.

were stone slabs covering dark grey loose soil that was bordered by large stones. The interior size of grave 1 was 230 x 120 cm (Perkić et al. 2021: 87–89, Figs. 6–8). Along the western side, weapons were lying on the bottom of the grave (spears, battle knife?), while most ceramic vessels were on the northern side. Along the entire length of the grave, the remains of the dead were accompanied by costume items (fibulae, pins) and jewellery (bracelets, rings, tendrils, pendants, saltaleones, beads), a bronze tweezers from a toilet set, and stone spindle-whorls (Fig. 2). Based on the finds, primarily the different forms of fibulae and pins, grave 1 was dated to the 4th century BC, as confirmed by the finds of ceramic vessels (Perkić et al. 2021: 89–98, Figs. 9–14).[2]

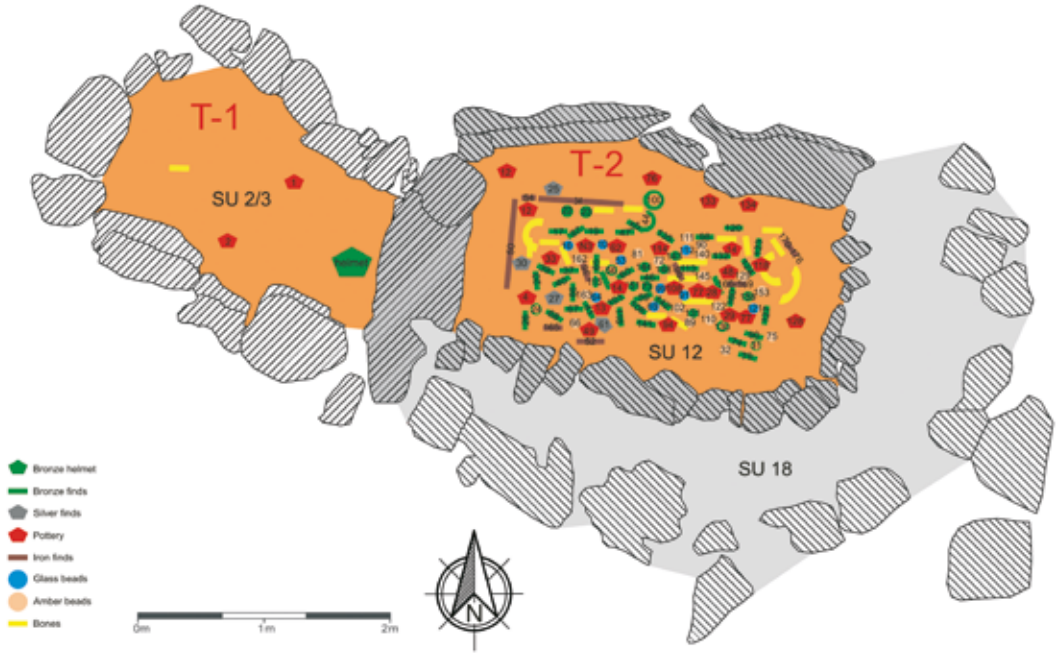

Fig. 2 — Position of finds and anthropological remains in trenches T-1 and T-2 (grave 1) (made by: M. Vuković; design by: D. Perkić)

Fig. 3 — Zakotorac – Gomile, grave 1 after excavation (photo: D. Perkić)

2 —— Descriptions of all other finds with illustrations and analogies are preliminary published in: Perkić et al. 2021.

The excavations could not define any complete inhumation burials in their anatomical positions (Fig. 2). The discovery of skulls in different parts of the grave might indicate that the bodies were oriented differently (Marijan 2001: 122–124). It will be impossible to establish whether the bodies were laid one above another or if the burial of each body involved the removal of the other(s). Because of the position and number of bones, but also the large number and variety of finds, it was assumed that the burial contained a large number of deceased. The bioarchaeological analysis of the osteological remains confirmed that grave 1 contained at least seventeen deceased: nine adults and eight children.[3] Two teeth from different individuals were radiocarbon (^{14}C) dated.[4] One sample was dated to 380–170 BC and the other to 980–810 BC.[5] The upper range of the younger sample (the 4th century BC) corresponds to the finds, but there is no correspondence for the other sample, which may point to the existence of older graves in the necropolis.

The current results of the excavations at the Zakotorac – Gomile necropolis offer new insights into the funerary customs of the prehistoric communities living in the southern part of the eastern Adriatic in Croatia. The oldest burial in grave 1 seems to be the one of a man with weaponry and ceramic vessels of Greek provenance. Later, probably during one or two generations in the 4th century BC, the grave received the other bodies, perhaps members of the extended family (Perkić et al. 2021: 98–99). Such burials of several bodies in the same grave have been documented in the southern part of the eastern Adriatic in Croatia and its hinterlands in the Iron Age (Marić 1976: 102; Marijan 1986: 23; Čović 1987a: 457–458, 469–470, 477; Marijan 2001: 34, 91, 134), including the results of recent excavations at the Kopila necropolis near Blato on the island of Korčula (Radovčić 2017: 134–136; Borzić 2022: 96–97, Tab. 1).

SILVER HINGED FIBULAE FROM GRAVE 1

The finds important for the dating of grave 1 are not only ceramic vessels, but also costume and jewellery items, which also point to the cultural contacts established by the communities living on Pelješac at the end of the Early Iron Age. Most costume and jewellery items were found in the lower part of grave 1 (Perkić et al. 2021: 94, Fig. 11) together with human remains and ceramic vessels (Fig. 2), while only a few metal objects were found in the upper layers of the funerary structure, including a silver hinged fibula (Fig. 7: 1). These finds probably ended up in the upper parts of the grave when the tomb was reused for subsequent burials. Costume items include bronze and silver fibulae of several different types. The bronze fibulae are of the proto-Certosa type, the Baška type, and a single-loop bow fibula with a symmetrical trapezoidal foot. However, the most remarkable finds are six silver hinged fibulae of two basic types. Four hinged fibulae with five star-shaped protrusions on the bow are associated with group Vb after the typological classification proposed by R. Vasić (1985; 1999).

Fig. 4 — Zakotorac – Gomile, grave 1, silver hinged fibula of group Vb *in situ* (photo: M. Dizdar)

3 — The bioarchaeological analysis was carried out in the laboratory of the Anthropological Centre of the Croatian Academy of Sciences and Arts under the guidance of academician Mario Šlaus and Željka Bedić, Ph. D. One of the adults was certainly a woman (30–45 years old) and two were men (30–45 and 25–35 years old). The gender of the others could not be determined, but it is assumed that one person was over 45 years old.

4 — Radiocarbon dating was done in the Isotoptech laboratory Zrt, No. 18/C Bem tér, Debrecen, Hungary.

5 — DeA-28727, I/2582/3, Zakotorac U3, Conventional ^{14}C age (yrs BP) (1 sigma) 2201 ± 32, Calibrated calendar age (cal AD/BC) (2 sigma) BC 380 – 170. DeA-28728, I/2582/4, Zakotorac U13, Conventional ^{14}C age (yrs BP) (1 sigma) 2743 ± 35, Calibrated calendar age (cal AD/BC) (2 sigma) BC 980 – 810.

They differ in terms of states of preservation and some structural details (**Fig. 5; 7: 1**). Two hinged fibulae, representing a pair, have a decorated trapezoidal foot (**Fig. 7: 2–3**) and are singled out as Zakotorac-type fibulae (Perkić et al. 2021: 94–95, Figs. 11–12).

SILVER HINGED FIBULAE OF GROUP Vb

The four silver hinged fibulae of group Vb from the Zakotorac cemetery showing the same basic typological characteristics, but also some differences (Fig. 5: 1–3; 7: 1). Three fibulae have five star-shaped protrusions with six prongs on the bow of rounded cross-section, while the fourth one (Fig. 7: 1) has five double prongs (in the shape of millwheels). On each side of the star-shaped protrusions there is a narrow and ribbed ring-shaped expansion. The protrusions on the best-preserved fibula (Fig. 4; 5: 2) are placed further away from one another, while the protrusions on two other fibulae are closer together (Fig. 5: 1, 3). One fibula has a poorly preserved head and foot (Fig. 5: 1). The fourth fibula (Fig. 7: 1) has larger and dense star-shaped protrusions on the bow; its head and foot are also preserved only in the upper part. The common characteristic of the fibulae is not only the number of protrusions on the bow, but also the decorated head in the shape of a palmette. Three fibulae – most notably the best-preserved one (Fig. 5: 2) – have the motif of a double ring or ring-and-dot on the upper part along the rim, while the lower half has consecutive motifs of semicircular grooves with a dot. In the middle of the upper part there is again the motif of a double ring-and-dot, which has another dot on each side. It seems that the head of the second fibula had a similar decoration (Fig. 5: 3), so these fibulae were probably worn in pairs. Similar head decorations can be seen on the third fibula, which has a narrow transverse rib on top like the previous fibula, with circle motifs and the start of the palmette below (Fig. 5: 1). The lower half of the head has narrow vertical grooves. Two fibulae include preserved parts of bronze pins that were attached to the head with a bronze rivet.

The fibulae foot of T-shaped was in the form of a stylized snake's head. The upper part of two preserved feet (Fig. 5: 2-3) has two cylindrical protrusions with larger hemispherical heads at the top; at the bottom, there is another cylindrical protrusion with a hemispherical head on top. Between the hemispherical heads of one fibula there is a preserved narrow reinforcement with a transverse-grooved rib in the middle (Fig. 5: 2). The back of the feet is bent at the bottom for the pin slot. Grave 1 also contained some silver objects that were probably parts of fibulae of this type, or maybe even belonged to the poorly preserved fibulae – hemispherical heads as part of the foot and a narrow triangular part (maybe from the foot) having two rows of tiny depressions in the middle and ending with a panel at the narrower bent end.

Hinged fibulae were analysed in detail on several occasions by R. Vasić, who presented the history of research and pointed out that it was a complex group of fibulae with five basic types and variants distinguished by their shape and the number of protrusions on the bow. They could be made of gold, silver, bronze, and iron. This form of fibulae was created in the second half of the 6th century BC on the territory of Macedonia under the influence of Asia Minor; they spread from there during the late 5th and the 4th century BC across the Central and Western Balkans, all the way to the eastern Adriatic coast and the south-eastern Carpathian Basin. Their main characteristics are the hinge connecting the head to the pin, the head shaped more or less like a stylized palmette, and the foot decorated like a stylized animal (snake) head (Vasić 1985; 1999).

Hinged fibulae of group Vb are characterized by five or six regularly spaced star-shaped protrusions on the bow. This type of protrusion first occurs at the end of the 5th and in the first decades of the 4th century BC (Vasić 1985: 141–143; 1999: 114). It is the most numerous and widespread group of hinged fibulae, discovered at sites from Thessaly to the Danube and the southern part of the eastern Adriatic coast with its hinterland. The fibulae are mostly made of silver, then of bronze,[6] and rarely of gold or iron. The silver fibulae have an especially richly decorated head and foot, while the bronze ones are decorated more modestly. They are between 3 and more than 10 cm long. The basic shape is represented by fibulae with a semi-circular bow with five star-shaped protrusions which can be

6 — Bronze hinged fibulae of group Vb, recently discovered at the Nakovana cemetery, were analysed in detail by O. Mladenović (2019). They are rarer in the southern part of the eastern Adriatic coast and its hinterlands: Glogovik: Pušić 1962: 78, Pl. XI: 7; Momišići: Velimirović-Žižić 1966: 197, Fig. 25a etc.

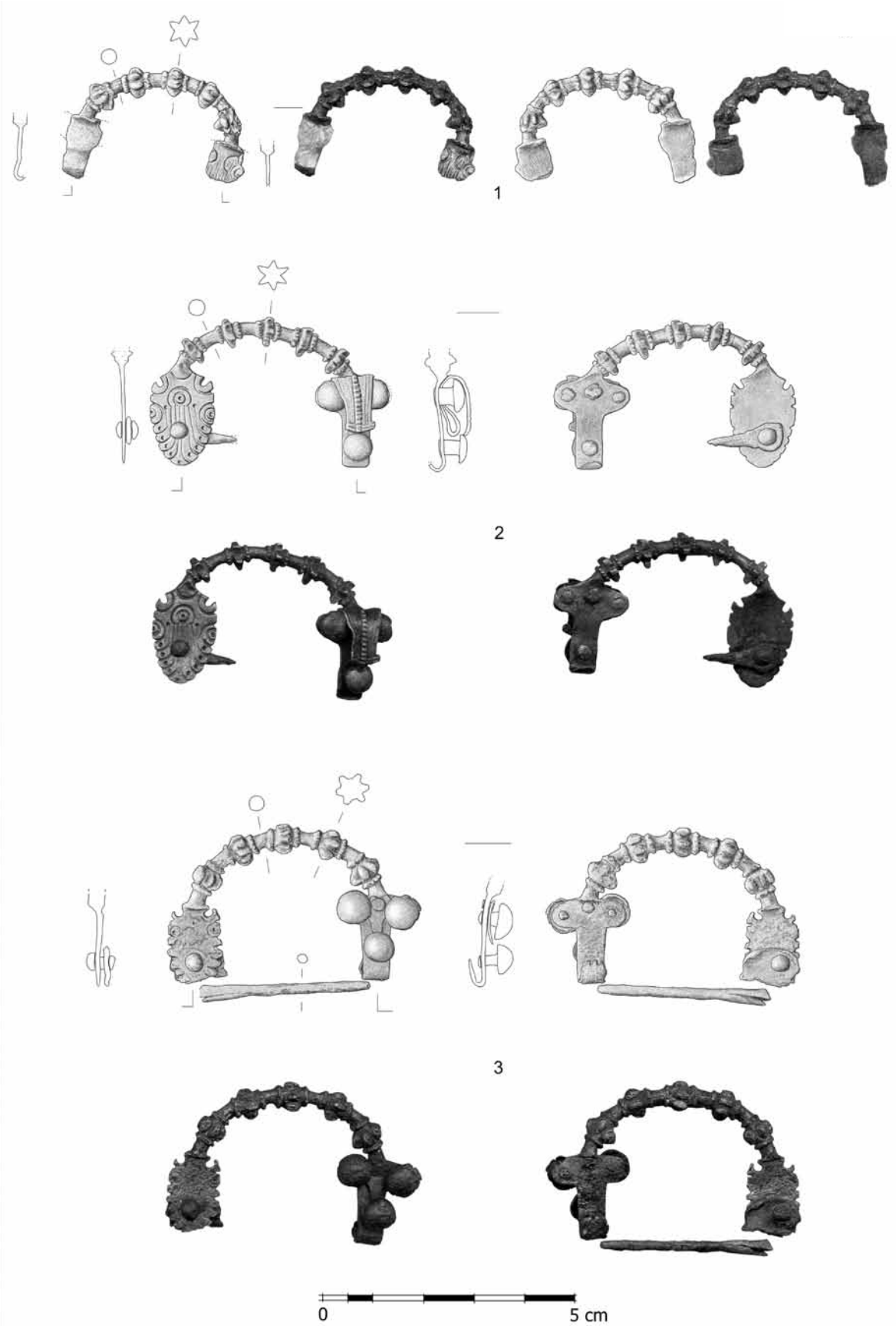

Fig. 5 — Zakotorac – Gomile, grave 1, silver hinged fibulae of group Vb (drawing: M. Perkić; photo and made by: D. Perkić)

of different shapes; the head is in the shape of a palmette with a pin fixed with a rivet in the lower part; the decorated foot has the form of a stylized snake head and its upper part has cylindrical protrusions with a hemispherical top, looking like snake eyes (Vasić 1985: 135–148, Fig. 4; 6; 1999: 109–116, Pl. 53: 967–56: 1066; 69; Mladenović 2019: 358, Map 2). The fibulae of group Vb, especially the silver ones, were very often worn in pairs or in ensembles of four fibulae (Vasić 1999: 113), as maybe in grave 1 at the Zakotorac cemetery, while the bronze ones could be worn singly or with hinged fibulae from another group. These fibulae have been dated to the 5th and 4th centuries BC, with the oldest finds from Macedonia dated to the end of the 6th and the beginning of the 5th centuries BC. They spread further north and west from the end of the 5th century BC and have been most often dated to the 4th century BC: they are considered evidence of influence from the south, while younger finds could already have been produced in local workshops (Vasić 1988: 172; 1999: 113).

R. Vasić emphasizes that the hinged fibulae of group Vb at sites in the southern part of the eastern Adriatic coast and in Herzegovina appeared at the end of the 5th and the beginning of the 4th century BC, and remained in use until the 2nd century BC, as shown by the finds from the Vele Ledine cemetery in Gostilj (Vasić 1999: 114). Š. Batović dated them to phases IV and V of the Delmataean culture of the Iron Age, i.e. from the 5th to the 3rd century BC (Batović 1986: 36, 44, 46, Fig. 8: 8, 11; 11: 3), while B. Čović dated them to phase 5 of the Central Dalmatian group, i.e. to the 4th century BC (Čović 1987a: 458, Pl. L: 27), which would correspond to phase Vb on Glasinac (Čović 1987b: 633, Pl. LXV: 5). B. Marijan dated the fibulae of group Vb to phase 5 of the Early Iron Age in the southern Adriatic, i.e. to the 5th and especially the 4th century BC (Marijan 2001: 123, Fig. 19).

New finds of silver hinged fibulae from the Zakotorac cemetery will be analysed with other fibulae of this form from the southern part of the eastern Adriatic coast with its hinterland. The finds of hinged fibulae from this area were already described in detail by P. Lisičar, who listed all the finds known at the time, dating the fibulae from Blato and Cavtat to the 4th century BC (Lisičar 1963: 32–35, Fig. 5; 1966: 32, 41–42, Fig. 8). The finds of the silver fibulae of group Vb closest to Zakotorac come from the Kopila necropolis near Blato on the island of Korčula. Two silver fibulae known from earlier were believed to come from Hvar. Their feet and star-shaped protrusions are like those on the preserved fibulae from Zakotorac, and one foot has a reinforcement with a rib. This fibula has a completely preserved head in the form of a palmette, and one of the fibulae from grave 1 in Zakotorac may have had the same head (Lisičar 1963: 27, 29–30, Fig. 2; 1966: 32; Vasić 1985: 137; Batović 1986: 36, Fig. 8:

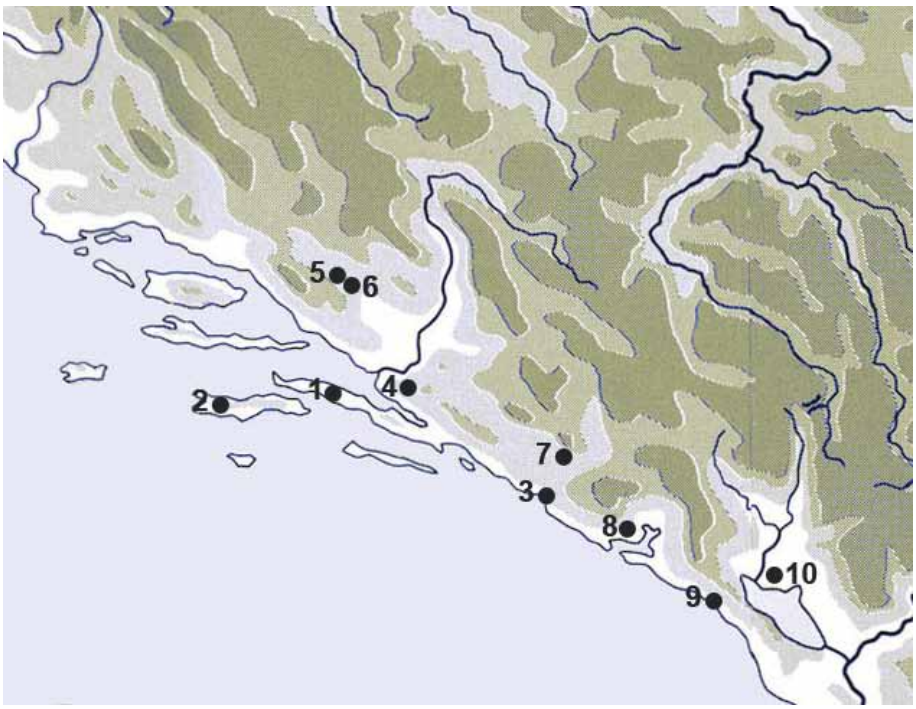

Fig. 6 — Distribution of the silver hinged fibulae of group Vb at the eastern Adriatic coast and hinterland: 1 Zakotorac – Gomile; 2 Blato – Kopila; 3 Cavtat; 4 Gradac near Neum; 5 Gorica; 6 Ružići; 7 Ukšići – Grebnice; 8 Glogovik; 9 Budva; 10 Gostilj – Vele Ledine (made by: M. Dizdar)

11). More recent excavations of the Kopila necropolis near Blato on Korčula found a large number of silver hinged fibulae of group Vb. Tomb 3 of Nucleus 1, dated to the period from the 3rd to the middle of the 1st century BC, with at least 22 bodies, seems to have contained eight of these fibulae, while a total of ten is mentioned for the necropolis. The fibulae were poorly preserved and dated to the 3rd and 2nd century BC (Radić 2017: 85–86; Radić et al. 2017: 166, cat. no. 3: 8a–g). The richly furnished tomb 1 of Nucleus 2, also with several bodies, contained five silver fibulae of group Vb. It is believed that their pin was repaired by replacing the silver one with a bronze one (Borzić 2022: 102, Fig. 11e), and the head pin seems to have been attached with an iron rivet. The palmette on the head with a V-decoration on top and ring-and-dot decorations looks like the fibula from cremation grave 1 of tumulus LVIII from Rusanović on Glasinac (Benac, Čović 1957: 23, Pl. XXXXVI: 11). Another two silver fibulae of group Vb come from Cavtat; one corresponds to the earlier finds from Kopila, while the other is poorly preserved; they are probably finds from destroyed graves (Lisičar 1963: 27, 30–31, Fig. 3; 1966: 32, Fig. 1; Vasić 1985: 137; Batović 1988: 65, Fig. 9: 9–10).

A large number of silver hinged fibulae of group Vb was found in the region of Herzegovina. As many as 17, most of them having only the preserved bow with star-shaped protrusions, come from destroyed grave(s) from the site of Gradac near Neum. Two fibulae have a preserved head in the form of a palmette with a V-motif on top, like the fibulae from Kopila, and one fibula has no such motif. It has been noticed that fibulae mostly come in pairs and differ in details such as the shape of the star-shaped protrusions and the decoration on the bow between them, or the decoration of the head. They are considered to be the products of local workshops, dated to the end of the 4th and the 3rd century BC (Marijan 1989: 42–44, 47–48, Pl. IV). The sanctuary in Gorica included four fibulae of group Vb (Truhelka 1902: 25, Fig. 40; Lisičar 1963: 33, Fig. 6f; Vasić 1985: 137; Batović 1986: 36, 44, Fig. 8: 8; 11: 3) with heads similar to the fibulae from the Kopila necropolis. Three more fibulae were found at the site of Ružići near Gorica (Čurčić 1909: 98, Pl. XVIII: 13; XIX: 10–11; Vasić 1985: 138, mentions 4 fibulae; Nadbath 2004: 66, Pl. 13: 5–7). The necropolis of Ukšići – Grebnice in eastern Herzegovina included a fibula of group Vb assumed to come from tomb 3 of tumulus 1 (Marijan 2001: 123, Fig. 29).

Silver hinged fibulae of group Vb have also been found further south, at sites in Montenegro. The stone mound excavated at Glogovik near Herceg Novi contained not only a bronze fibula, but also a silver fibula of group Vb with a preserved snake foot (Pušić 1962: 78–79, Pl. XI: 8; Vasić 1985: 137). Three fibulae come from Budva, two of them with a large palmette head and snake foot (Vasić 1985: 137, 143, Fig. 7). Important finds come from the Vele Ledine necropolis in Gostilj, north of Lake Skadar, where such fibulae were found in two graves (Vasić 1985: 137). Grave 22 was a richly furnished burial of an older woman and included three fibulae on the right side of her chest and two on the left side. Two fibulae have five star-shaped protrusions each, and three have four each. The fibulae have large palmette heads and snake feet; the pin was made of bronze. The grave contained a coin of King Gentius and another coin, perhaps from Korkyra, dating the grave possibly to the end of the first and the beginning of the second quarter of the 2nd century BC, which seems to be confirmed by other finds in the grave (Basler 1969: 27, Pl. V: 22/7–11). Grave 77 was also a burial of an older woman, who had five silver hinged fibulae, four of group IIa and one of group Vb, on the left side of her chest (Basler 1969: 36, Pl. XVII: 77/3).

HINGED FIBULAE OF THE ZAKOTORAC TYPE

Considering their shape, size, and decorating motifs, the two silver hinged fibulae from grave 1 in Zakotorac represented a pair, and one fibula is better preserved (Fig. 7: 2–3) (Perkić et al. 2021: 94, Fig. 12). The fibulae have a bow with a semicircular outline and rectangular cross-section, decorated on the front with a motif of five ring-and-dots connected by tangents. The head is oval and decorated on the front, along each of the longer edges, with three grooves shaped like hooks, or like a simplified palmette motif. In the lower part there is the hinge hole. The tall and slightly trapezoidal expanded foot is saddle-shaped or concave at the top, ending with a knob. The edges of the foot are decorated with a tremolo decoration made of a series of tiny V-shaped depressions. The same decoration is set on the foot in two horizontal lines, dividing it into three fields with three ring-and-dots each (the lower two series) and two (the upper series) connected by tangents. The back of the foot is bent for the slot of the pin, seemingly made of bronze. It is indicated by the remains of the hinge rivet on the head of the more poorly preserved fibula, which has the rest of a narrow bronze panel on the back.

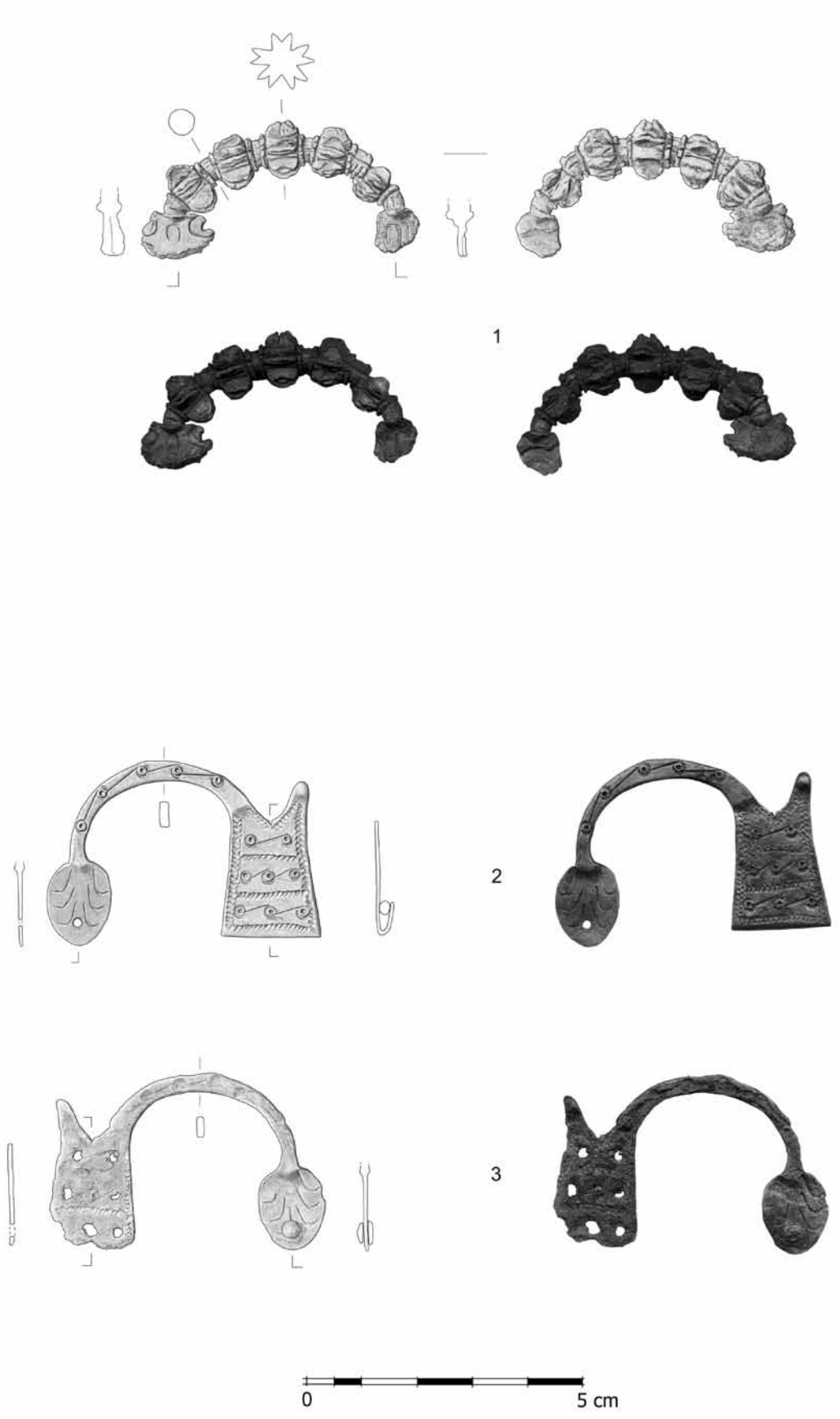

Fig. 7 — Zakotorac – Gomile, grave 1, silver hinged fibulae of group Vb and with rectangular foot (drawing: M. Perkić; photo and made by: D Perkić)

In the description of hinged fibulae with star-shaped protrusions, these fibulae were recognized as a distinct form by P. Lisičar, who pointed out that they appear at sites in Herzegovina (Lisičar 1963: 32–35, Fig. 5; 1966: 32, 41–42, Fig. 8). Hinged fibulae of this kind were the subject of several papers by R. Vasić, who believed they combined two types of fibula – the Novi Pazar and hinged fibulae. The shape and decorations of the head are used to distinguish particular variants: with a simple oval head, with a palmette head, or with a stylized snake head (Vasić 1985: 124, n. 17; 1987: 52–53, Pl. 5). It was pointed out that their greatest numbers were found at sites in Herzegovina, but they were also recorded in the Central Balkans, all the way to the Danube. They measure between 5 and 7 cm in length. Considering their differences, especially in the shape of the head, these fibulae are assumed to originate from different workshops and dated to the period from the second half of the 5th to mid-4th century BC (Vasić 1987: 52–53, App. 1; 1999: 86–87, Pl. 67B; Vasić, Dmitrović 2008: 13–15, Pl. IV; Vasić 2014: 208, 211, Fig. 3: 5–6; 2022: 295, Fig. 1–2). Š. Batović dated these fibulae to phases IV and V of the Delmataean Iron Age culture, from the 5th to the 3rd century BC (Batović 1986: 36, 44, 46, Fig. 8: 6; 11: 1), while B. Čović dated them to phase 5 of the Central Dalmatian group (Čović 1987a: 458, Pl. L: 26), or to phase Glasinac Va (Čović 1987b: 631, Fig. 36: 34). B. Marijan considered these fibulae to be a variant of Novi Pazar fibulae, as a younger form with a hinge. He pointed out that they were characteristic of the end of phase 5 in the south Adriatic (as in tomb 3 of tumulus I in the barrow cemetery of Ukšići – Grebnice; Kačanj) and dated them to the second half of the 4th century BC, remarking that they could be younger too (Marijan 2001: 87–88, Fig. 19: 6–7, Pl. 6: 1). Similar thoughts can be found in the analysis of Novi Pazar fibulae, or their variant from southern Herzegovina, with hinged fibulae as a younger form that persists until the beginning of the 4th century BC (Blečić Kavur, Miličević-Capek 2011: 42–43, Fig. 6). Analysing finds from the Romanian Danube region, A. Rustoiu pointed out that hinged fibulae with a rectangular foot were most numerous in Herzegovina, but that they were found in other areas too, with another notable concentration in the Iron Gates region (Rustoiu 2013: 2–4, 11–12, Fig. 3).

Therefore, it is a very heterogeneous group of silver and bronze fibulae, unifying two important forms of fibulae in the Central and Western Balkans from the 5th and the beginning of the 4th century BC: it inherited the shape and decoration of the bow and foot from the Novi Pazar fibulae, and the shape of head and the hinge joining the head with the pin from the group of hinged fibulae. New finds of silver hinged fibulae of this form from the Zakotorac cemetery will be associated with the finds of these unique fibulae which are still most numerous at sites in the hinterland of the southern part of the eastern Adriatic.

The sanctuary in Gorica included three silver fibulae with a decorated round-sectioned bow. The head is palmette-shaped, with the remains of the iron pin, while the foot is tall and rectangular. Its longer sides are decorated with a tremolo ornament. The upper part has two connected double ring-and-dot motifs, the middle has two such motifs connected with a tangent, and the lower part has three (Truhelka 1902: 25, Fig. 39; Batović 1973: 71–72, Fig. 10: 9; 1986: 36, 44, Fig. 8: 6; 11: 1; Vasić 1987: 52, Fig. 5: 1; 1999: 86). A silver fibula of this type comes from the site of Rudište near the village of Kačanj, where a tomb with at least eleven bodies included numerous items of weaponry, costume and jewellery items, and ceramic vessels. The fibula is decorated along the square-sectioned bow. The head is oval and decorated with ring-and-dot motifs. The foot is slightly trapezoidal and widened, ending with a knob on top; it is similar to the Novi Pazar type and to the fibulae from Zakotorac. There is a tremolo decoration along the edges; the same decoration divides the foot into three horizontal fields. Each of the lower two is decorated with three ring-and-dot motifs connected by tangents, while the upper field contains two double hemispherical lines. The tomb included silver fibulae and a bronze fibula of the Novi Pazar type. The tomb was dated to the period from the middle of the 5th to the middle of the 4th century BC (Marić 1976: 107, Pl. II: 3; Vasić 1987: 52, Fig. 5: 5; Marijan 2001: 88, Fig. 19: 7; Vasić 1999: 86). A silver hinged fibula was found in tomb 2 of tumulus 1 in the necropolis of Ukšići – Grebnice. The square-sectioned bow has two narrow transverse ribs at the end, towards the palmette-shaped head. The low square foot has a prominent pointed terminal (Marijan 2001: 30, 87–88, Fig. 19: 6, Pl. 6: 1). In another necropolis near Ukšić, at the site of Grudine, a silver hinged fibula was found in tomb 2 of tumulus I, which was older than another more recent tomb. It contained several bodies and was richly furnished with costume items and ceramic vessels. The fibula has a high round-sectioned bow decorated with two series of double garlands, touching at the top and separated by a line. At the end of the bow, towards the foot, there is a series of transverse grooves. The head is oval, with two circles in the upper part and a palmette motif in the

lower part; it seems to represent a snake's head. The foot is tall and slightly trapezoidal and wider in the lower part, while the upper part is saddle-shaped with a prominent pointed terminal. There is a tremolo decoration along the edges; the surface of the foot has another tremolo decoration, dividing it into three fields. There are five circles in the upper field, three in the lower, and two double garlands in the middle. The tomb was dated to the period from the 5th to the beginning of the 4th century BC (Atanacković-Salčić 1977: 29, Pl. II: 1; Vasić 1999: 86; Marijan 2001: 23).

Aside from the sites in Herzegovina, silver hinged fibulae with a rectangular or trapezoidal foot are known from some other sites in the Central Balkans. A chance find from the barrow cemetery of Guča – Grotnica in western Serbia is a silver fibula with a massive round-sectioned bow that is decorated with a series of tiny depressions on top and on the side. At the end, towards the foot, the bow is decorated with a group of narrow transverse grooves. The head is fan-shaped; it is decorated with two series of oblique lines making a simplified palmette motif, and has the hole for the hinge at the bottom. The foot is almost square, with a concave upper side. Along the edges there is a double tremolo decoration made of short double incisions and containing horizontal rows made of short horizontal or oblique incisions (Vasić 1999: 86–87, Pl. 43: 656; Vasić, Dmitrović 2008: 12, Pl. II: 1; IV: 1; Vasić 2014: 208, 211, Fig. 3: 6; 2022: 295, Fig. 1). A silver hinged fibula, also with a massive bow, comes from the fortified settlement of Hisar in southern Serbia. The round-sectioned bow is decorated with narrow longitudinal grooves and seems to be ribbed, while a group of transverse grooves goes towards each end of the bow. The head is oval with two ring-and-dot motifs in the upper part, separated by a V-shaped groove that has three narrow oblique grooves going towards both longer edges; in other words, the head is decorated with a simplified snake's head motif, similarly to one of the fibulae from Ukšići. Near the bottom of the head there is the hole for the hinge. The foot is concave in the upper part and ends with a knob. Along the edges of the foot there is a double series of tremolo decorations, and the central part is divided by the same motif into two fields: the upper one has three hemispheres and the lower one has four hammered hemispheres with a semicircular groove above each one (Stojić 2007: 181, Fig. 30–31; Vasić, Dmitrović 2008: 14–15, Pl. IV: 2; Vasić 2014: 208, Fig. 3: 5; 2022: 295, Fig. 2). The fibulae from Guča and Hisar, as products of local workshops, were dated on the basis of foot motifs and palmette shapes to the second half of the 5th century BC (Vasić, Dmitrović 2008: 15) and the last quarter of the 5th century BC (Vasić 2022: 295). Another silver hinged fibula comes from the Mati necropolis in northern Albania. The fibula has a high bow and an oval head decorated with two circles in the upper part. The tall trapezoidal foot is concave on the upper part and ends with a knob. The foot is decorated with a circle motif (Islami, Ceka 1964: 104, Pl. XIV: 13; Vasić 1999: 86).

Silver hinged fibulae of this form are also known from sites in southwestern Romania. One fibula from an unknown site, probably from somewhere in Oltenia, has a decorated palmette-shaped oval head. Its massive round-sectioned bow is decorated with narrow longitudinal grooves; each end of the bow has a group of transverse grooves. The rectangular foot is concave in the upper part and ends with a sphere. Along the edges there is a tremolo decoration dividing the foot into two fields, each decorated with three hammered hemispheres (Bader 1983: 118, Pl. 37: 372; Rustoiu 2013: 12, n. 5). Another silver fibula with a similarly decorated bow comes from an unknown site in Banat. The oval head has two preserved hammered hemispheres; the rectangular foot ends with a protrusion with a sphere on top (Bader 1983: 118, Pl. 37: 374; Rustoiu 2013: 12, n. 4). A fibula from the site of Ostrovu Mare is decorated much more modestly. The almost triangular head has three hammered hemispheres; the foot has two horizontal series of three hemispheres each. The upper side of the foot is pronouncedly concave (Bader 1983: 118, Pl. 37: 373). These finds were dated by T. Bader to the 6th and 5th centuries BC (Bader 1983: 118).

The spatially closest parallel to the Zakotorac fibulae is the bronze fibula found in Stari Grad on the island of Hvar. The fibula has an oval head decorated with four ring-and-dot motifs, while the bow probably has a round cross-section. The tall trapezoidal foot is decorated with two horizontal series of three ring-and-dot motifs each, and has another three motifs at the top. The head and foot are additionally decorated with a tremolo V-decoration at the top (Jeličić Radonić 1995: 68, cat. no. 22). An inhumation grave that was a later burial in a tumulus at the site of Radimlja near Stolac contained two decorated bronze bracelets and a double pin, but also three bronze fibulae with differently shaped heads, feet, and bows, and different decoration motifs. Two fibulae have a round-sectioned bow and one has a square-sectioned bow decorated with groups of two vertical lines separated by a single oblique line connecting them. Two fibulae have an undecorated oval head and the third one has a palmette head. This fibula has a tall rectangular foot decorated with three horizontal series of three ring-and-dot motifs

connected by tangents; there are two ring-and-dot motifs at the top. The second fibula has a trapezoidal foot with two series of two tangent-connected ring-and-dot motifs each, while the longer sides have a tremolo decoration. The third fibula has a tremolo decoration along the edges of the foot; the decoration is wider along the upper and lower edges. The tremolo decoration horizontally sections the foot into two fields, each with three ring-and-dot motifs (Truhelka 1895: 514, Fig. 23–25; Batović 1973: 71–72, Fig. 12: 6; Vasić 1987: 52, Fig. 5: 2–4; 1999: 86). Three more bronze fibulae were recently found in the excavations of the stone burial mound at the Baćina – Grebine site near Ploče, together with numerous other metal, glass and ceramic finds dated to the 3rd century BC. One fibula has an oval head, and two in the shape of a palmette, while the high and trapezoidal foots are decorated (Kliškić, Radaljac 2014: Fig. on p. 683). Two bronze fibulae come from an unknown site, probably from some site/s located in the vicinity of Ljubuški in the western Herzegovina (today kept in the Archaeological Collection of the Franciscan Monastery in Humac, Ljubuški). The better preserved one has a tall and seemingly trapezoidal foot, decorated along its edges by a tremolo decoration that additionally sections the foot horizontally into three fields, each having between one and three ring-and-dots. The same motif decorates the oval foot; the high bow has a round cross-section. The second fibula has only a preserved round-sectioned bow. The fibulae were dated to phase 5 of the Central Dalmatian group, i.e. from mid-5th to mid-4th century BC (Odža 2009: 19–20, 50, Fig. 25–26, Pl. IV: 1–2; 2010: 183, Fig. 1). Tumulus XXXVII at the site of Gosinja Planina on Glasinac included a bronze fibula with a square-sectioned bow decorated with a zigzag tremolo line. As it goes towards the foot, the tremolo line changes into an edge decoration made in the same way; going towards the hinge at the other end, it changes into a straight line. The foot has a square shape; along three edges it is decorated with a tremolo decoration, while the panel is decorated with an X motif in the same way. It seems that the head was not specially shaped: the hinge rivet is attached to the slightly expanded bow terminal (Fiala 1897: 26, Fig. 50; Benac, Čović 1957: 9, Pl. IX: 10; Vasić 1987: 52, Fig. 5: 6; 1999: 86). A bronze fibula similar to the finds from Herzegovina comes from the site of Cicir in the River Mureş valley in Romania. The bow has an oval cross-section; the head is triangular and decorated with incisions that seem to represent a snake's head. The tall rectangular foot ends with a knob. There are two narrow grooves along each edge of the foot, which is decorated with four horizontal series of three hammered hemispheres each. The fibula was dated to the end of the 5th and the first half of the 4th century BC (Rustoiu 2013: 2, 4, Fig. 1).

A distinct group consists of bronze hinged fibulae with a smaller and undecorated foot. A destroyed grave or graves at the site of Gradac near Neum contained three poorly preserved bronze fibulae with an oval-sectioned bow. They were assumed to be the remains of hinged fibulae with an irregular square foot, and dated to the 5th and 4th centuries BC (Marijan 1989: 41, Pl. III: 2–4). A destroyed grave from the Gradešnica site in Pelagonia, dated to the end of the 7th and the beginning of the 6th century BC, included a bronze fibula with a round-sectioned bow and a small rectangular foot with an elevated terminal. At the other end of the bow there is a hinge hole and no specially emphasized head (Mikulčić 1966: 28, Fig. 18f; Vasić 1987: 52; 1999: 86–87, Pl. 43: 655). A similar fibula was found at the site of Burovac, but it had a narrow rib on the front, at the end of the bow towards the foot (Vasić 1999: 86-87, Pl. 43: 654). These two fibulae are believed to have had springs that were broken and repaired by connecting the bow with the pin by means of a hinge. They are considered local products, probably influenced by the older Marvinci-Gogoşu type of fibulae (Vasić 1999: 87; Vasić, Dmitrović 2008: 15).

As shown by the analysis of hinged fibulae with a rectangular or trapezoidal foot, virtually no two fibulae are the same, except for the pair from grave 1 in Zakotorac. Each fibula displays particular forms and particular bow, head, and foot decorating methods; notably, it is always only the front side that is decorated. Since different combinations of decorating forms and motifs have been recorded, it is currently impossible to distinguish particular variants, but there are some regularities, especially in the shape of head and foot.

It has been noticed that the silver and bronze hinged fibulae (Fig. 8) from sites in Herzegovina (Gorica, Radimlja, Ukšići – Grudine, an unknown site) and some others (Mati, Cicir), including the fibula from Stari Grad on Hvar and three fibulae from Baćina, usually have a tall rectangular or slightly expanded trapezoidal foot, comparable to the fibulae associated with the southern Herzegovina variant of the Novi Pazar type (Blečić Kavur, Miličević-Capek 2011: 42–43, Fig. 6). This seems to indicate that local workshops made fibulae of both types, probably even at the same time. On the other hand, certain silver fibulae have a rectangular foot ending with a knob, which brings them close to the fibulae of the Novi Pazar type (Kačanj, Ukšići – Grebnice, Guča, Hisar, Oltenia). The Zakotorac fibulae are

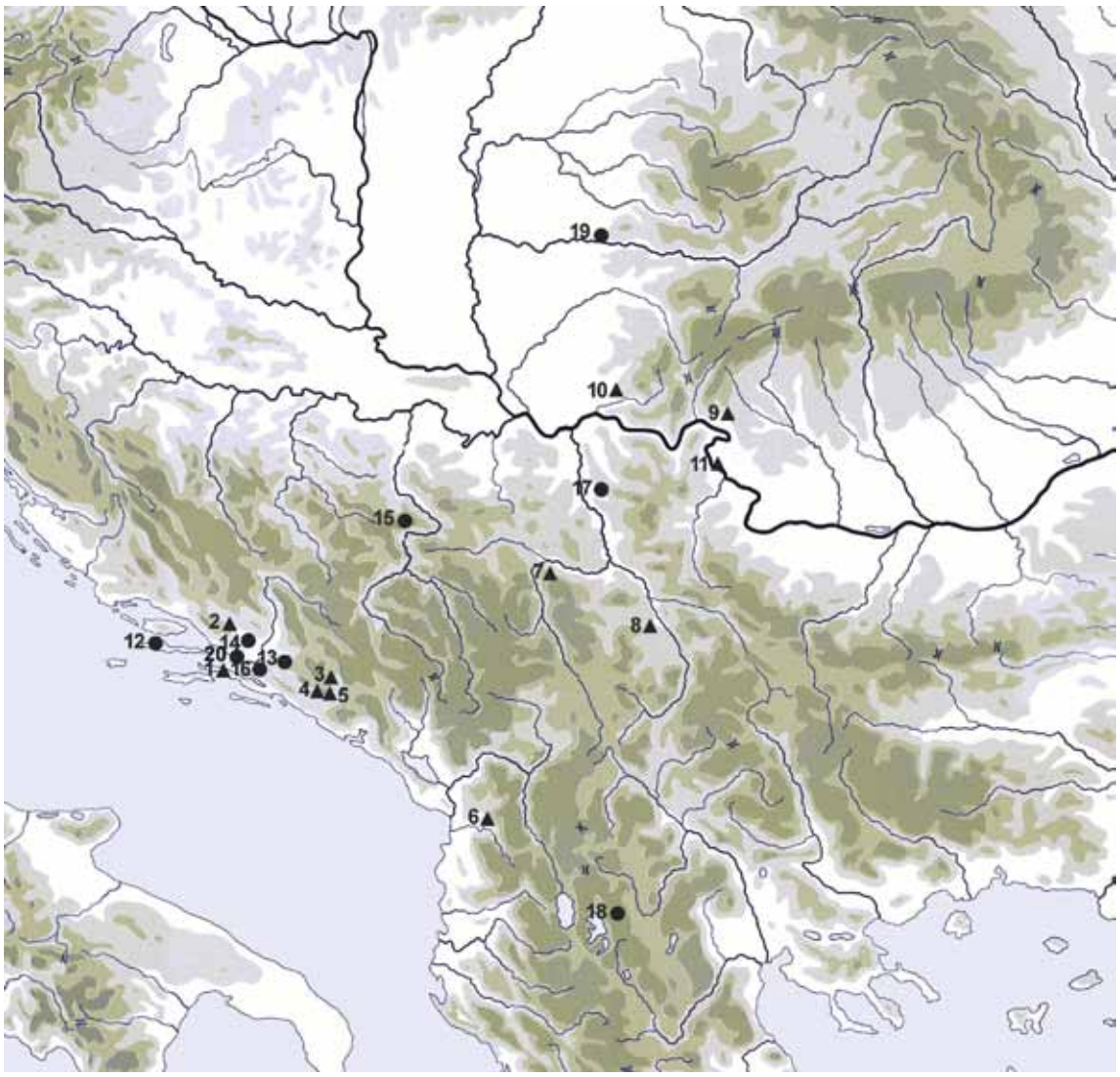

Fig. 8 — Distribution of the hinged fibulae of the Zakotorac type – ▲ Silver fibulae: 1 Zakotorac – Gomile; 2 Gorica; 3 Kačanj; 4 Ukšići – Grebnice; 5 Ukšići – Grudine; 6 Mati; 7 Guča – Grotnica; 8 Hisar; 9 Oltenia; 10 Banat; 11 Ostrovu Mare. ● Bronze fibulae: 12 Stari Grad; 13 Radimlja; 14 Unknown site; 15 Gosinja Planina; 16 Gradac near Neum; 17 Burovac; 18 Gradešnica; 19 Cicir; 20 Baćina – Grebine (made by: M. Dizdar)

somewhere between these two foot shaping methods. Considering the shape of the undecorated foot, a distinct group can include the fibulae from the sites of Gradac near Neum, Gradešnica, and Burovac; it is believed that the hinge of the last two was made after their spring was damaged (Vasić 1999: 87; Vasić, Dmitrović 2008: 15). The analysis of the fibula heads reveals several basic forms. The most frequent heads are oval and decorated with a simplified motif of a palmette or snake's head (Zakotorac, Stari Grad, Baćina, Kačanj, Radimlja, Ukšići – Grudine, unknown site, Hisar, Mati, Banat). The palmette motif, similar to the one on hinged fibulae of group Vb, can be seen on the heads of fibulae from Gorica and Oltenia, but also on the heads of D-shape fibulae from Radimlja, Guča, and Grebnica. The fibulae from Ostrovu Mare and Cicir have an almost triangular head.

As already pointed out by R. Vasić, the heads and especially the feet are usually decorated with complex compositions. Feet decorations of the Novi Pazar type fibulae share many similarities with hinged fibulae; their analysis concluded that the oldest decoration is the one with tremolo lines. Then, in the second half of the 5th century BC, there appear the motifs of ring-and-dot and short lines, while the third phase is characterized by more complex ornaments and an arrangement of motifs (circles,

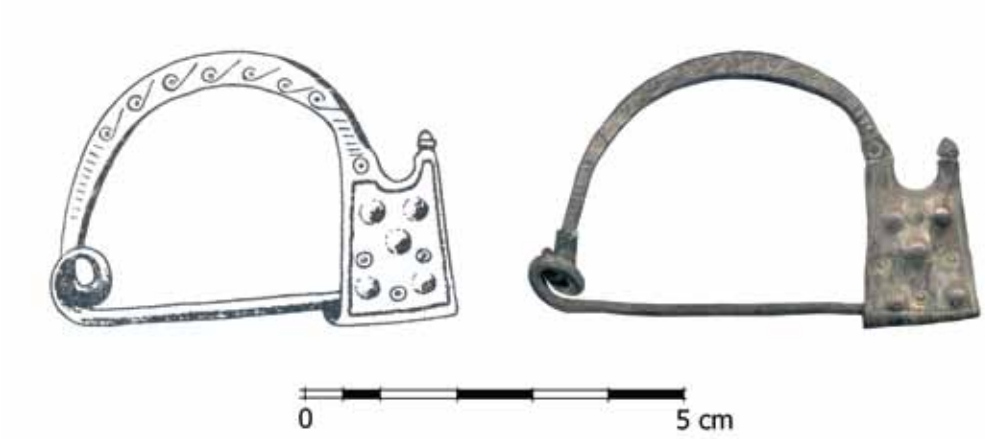

Fig. 9 — Silver fibula of the Novi Pazar type from Cavtat (after: Batović 1988; photo and made by: D. Perkić)

semicircles, dots, lines), usually in three horizontal rows. Still, it is pointed out that certain motifs can be long-lasting, which could have depended on the workshops where the fibulae were made (Vasić 1999: 80; Vasić, Dmitrović 2008: 14; Vasić 2022: 292–293). The ring-and-dot motifs connected by tangents, such as those on the feet of the Zakotorac fibulae, are also found on the fibulae from Gorica, Radimlja, and Kačanj. This motif is not characteristic of the fibulae of the Novi Pazar type, but it appears on the silver fibula from Sotin (Vasić 1999: 80, Pl. 59D: 2). Ring-and-dot motifs or just circles appear on the feet of fibulae from Stari Grad, Radimlja, unknown site, and Grudina.

The bow is usually undecorated, especially on the bronze fibulae from Herzegovina. The decoration of the Zakotorac fibulae has a direct parallel in the silver fibula of the Novi Pazar type from Cavtat (Fig. 9). This fibula also has a square-sectioned bow decorated with a ring-and-dot motif connected by tangents, but there is a difference: a group of transverse grooves on both sides of the bow. At the end of the bow, towards the foot, there is another ring-and-dot motif. The foot of the Cavtat fibula is decorated with five hammered hemispheres and three ring-and-dot motifs, and a tremolo decoration runs along its edges. The other end of the bow seems to be inserted into a sleeve continuing into a single-sided spring – that is, the spring and pin were made separately and then attached to the bow. The fibula was dated to the 5th century BC (Lisičar 1966: 32–33, Fig. 2; Batović 1988: 62, 65, Fig. 9: 12). On the other hand, some of the fibulae have a more massive bow, shaped and decorated like the Novi Pazar type fibulae (Kačanj, Guča, Hisar, Ukšići, Oltenia, Banat), which seems to indicate they were connected or at least partly contemporary.

Hinged fibulae with a rectangular or trapezoidal foot have exceptionally heterogeneous forms, which seems to indicate that they appeared in several areas at the same time, and that one (or several) of the workshops producing them was in eastern Herzegovina (Vasić, Dmitrović 2008: 15). R. Vasić also points out that the small number of finds of fibulae of this form leads to the conclusion that it was not a particularly popular form (Vasić, Dmitrović 2008: 15).

CONCLUSION

The current results of the excavations at the Gomile site near the village of Zakotorac on Pelješac indicate that it is an exceptional site that will significantly contribute to the knowledge of the Iron Age in the southern part of the east Adriatic in Croatia. It is a necropolis with stone mounds and added dry wall structures. One such tomb, added on the southern side of mound ZKG 1, contained grave 1 with at least seventeen bodies and numerous items of weaponry, clothing, jewellery, and ceramic vessels, probably reflecting the burials of one or two generations in the late 5th and 4th centuries BC (Perkić et al. 2021).

Standing out among the numerous costume items, six silver hinged fibulae are represented by two basic types. Four hinged fibulae belong to the widely distributed group Vb, while two fibulae can be associated with the group of hinged fibulae with a rectangular or trapezoidal foot. Since the

fibulae were not found next to a body, it can be assumed that they were worn by a richly equipped woman, or they could have been costume items of two women. Richly furnished women's graves in the Central Balkans and the Danube Basin in general often contain four hinged fibulae of group Vb, and the fibulae from grave 1 are noticeably different – that is, maybe it was only important to wear four fibulae of this group regardless of their differences. On the other hand, these fibulae could have been arranged in two pairs, and the two that are better preserved could have been one pair (Fig. 5: 2–3). However, the pair of fibulae with a trapezoidal foot is still a unique occurrence in the second group of the hinged fibulae from Zakotorac, especially because these fibulae were probably worn on both sides of the chest, considering the position/orientation of their heads (Fig. 7: 2–3).

The closest parallels for the hinged fibulae of group Vb have been found at sites in the southern Adriatic and its hinterlands, especially in the Kopila necropolis on Korčula and in Herzegovina. It is a distinctive group of fibulae, known over a wide area of the Central Balkans; it appeared "at the sites in the southern part of the eastern Adriatic coast and its hinterland from the end of the 5th century BC and during the 4th century BC, reaching its extreme south-western limit of distribution" (Fig. 6) (Vasić 1999: 102–117, Pl. 69 B; Mladenović 2019: 358, Map 2). The new finds of hinged fibulae of group Vb in the Zakotorac – Gomile cemetery, along with those already known, show differences in the shape and decoration of the head and foot, so it can be assumed that they were probably produced in workshops located in the areas of the southern Adriatic coast with its hinterland. Also, we should not rule out the possibility that different forms of hinged fibulae were produced in the same workshops, perhaps to the taste of the women who ordered them. Two fibulae with a slightly expanded and decorated trapezoidal foot can probably be considered products of a local workshop. The greatest number of fibulae of this type, each of them with certain peculiarities, has been recorded at sites in eastern Herzegovina (Fig. 8) and is considered a hybrid form combining the features of Novi Pazar fibulae and hinged fibulae. These fibulae, classified as the Zakotorac type, were dated to the period from mid-5th to mid-4th century BC (Vasić 1987: 52–53, App. 1; 1999: 86–87, Pl. 67B; Marijan 2001: 87–88, Fig. 19: 6–7; Rustoiu 2013: 2–4, Fig. 3).

The numerous finds from grave 1 at the Zakotorac – Gomile cemetery confirm that the communities who lived on the Pelješac peninsula during the late 5th and 4th centuries BC were incorporated in the cultural contacts and social communication of the neighbouring communities, especially those spread along the eastern Adriatic coast and across the Central Balkans. During the final phases of their development, the communities of the "southern Adriatic group" accepted some outside ideas through cultural transfers, especially from the Central Balkans, and transformed them into a characteristic material expression, which is reflected by the appearance of the south Herzegovina variant of the fibulae of the Novi Pazar type. This cultural connectivity is evidenced by the increasing appearance of outside forms of women's costume and jewellery items, especially those made of precious metals (silver). Intensive contacts of the south Adriatic group with the area of the Central Balkans are also indicated by other forms of fibulae originating from the Central Balkans which were found along the southern part of the eastern Adriatic coast and its hinterland during the 5th century BC. Such recognizable forms include the fibulae of the Arareva Gromila type, with younger variants lasting until the mid-5th century BC (Teržan 1987: 19, 24, Fig. 14; Vasić 1999: 96–98, Pl. 64B; Blečić Kavur, Miličević-Cašek 2011: 43–45, Fig. 8); another form is represented by the silver and bronze fibulae of the Novi Pazar type (Vasić 1987: 46–49; 1999: 77–80, Pl. 67A). Contacts with the Central Balkans continued in the late 5th and 4th centuries BC, as testified by the finds of silver hinged fibulae of both types in grave 1 at the Zakotorac – Gomile cemetery, which became an important part of the local visual code of women's costume and identity.

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GLOBAL AND LOCAL: HELLENISTIC AND ROMAN POTTERY FROM RAČA CAVE ON THE ISLAND OF LASTOVO

Original scientific paper

Despite its archaeological potential, most of the area of the island of Lastovo has been insufficiently excavated. One of the few researched sites on the island is Rača Cave, located in the southeastern part of the island. The first archaeological excavation was carried out in 1942. In the following decades, further archaeological campaigns took place in the cave, revealing diachronic activity at the site from the Late Neolithic to the early Roman period. Partial results of all the above-mentioned excavations were published in short articles by Antonio Mario Radmilli, Grga Novak and Branka Migotti. After a long break, the archaeological excavations in Rača Cave continued in 2021 as a result of cooperation between the Archaeological Museum in Zagreb and the University of Bristol as part of the Erasmus+ project called *Finds Stories: Addressing Mobility through People and Objects Biographies*. In addition to old finds, during the 2021 and 2022 excavations imported Greek, Hellenistic and Roman tableware and transport pottery was found, confirming the role of the island of Lastovo in the Adriatic and Mediterranean trade networks in Hellenistic and early Roman periods.

KEY WORDS: **LASTOVO, RAČA CAVE, HELLENISTIC AND ROMAN POTTERY, ADRIATIC AND MEDITERRANEAN TRADE NETWORKS**

THE ISLAND OF LASTOVO IN ANTIQUITY

The island of Lastovo is located in the eastern, Croatian part of the Adriatic, about 30 nautical miles off the Dalmatian coast. Its archipelago belongs to the group of southern Dalmatian islands, together with the nearby islands of Korčula, Mljet, Palagruža, and the Elaphites (Fig. 1). The island has about 47 km² and stretches in the east-west direction. The historical sources mention the ancient islanders as belonging to different historical tribes/communities – while Theopompus of Chios writes that the island was part of the Liburnian territory, literature also mentions the Illyrian population, more precisely the Ardiei and Plerei (Migotti 1987). Theopompus of Chios was also the first historian who recorded the earliest ancient name of the island, *Ládesta*, in his work *Philippica*, dating from the 4th century BC. The name *Ládesta* echoed through the centuries before it was mentioned again in the 6th century AD by Stephanus of Byzantium, who also referred to the inhabitants of Lastovo as *Ladestanós* (Migotti 1987). During the reign of the Roman Emperor Augustus, the island was given the name *Augusta Insula* (Della Casa et al. 2009). This was not

the only Roman name for Lastovo – in the *Tabula Peutingeriana* the island is mentioned as *[Insula] Ladestris*. In the literary sources of the Middle Ages, the following variants of the ancient island names are mentioned: Augusta, Lagusta, and Lagosta. The present name of the island and the settlement of the same name, in the form of Lastobon, are mentioned by Emperor Constantine VII Porphyrogenitus in his work *De administrando imperio*, which dates back to the 10th century (Jurica 2001; Della Casa et al. 2009).

Of course, the (pre)history of the island's population is much older than the one recorded in written sources. The oldest traces of the inhabitants of Lastovo were found in Rača Cave in the southeast of the island, which is described in more detail below. The earliest layers date from the later phase of the Neolithic, with pottery finds of the Hvar culture. This is followed by traces of cave use from the Copper Age, the Bronze Age, and finally the Iron Age, with numerous Hellenistic and Late Republican imports in the later phase. The rare finds confirm that the cave was also used during the Roman Imperial and early modern periods (Brkić Drnić, Drnić 2023).

Traces of prehistoric settlements from prehistory have also been found elsewhere on the island (Della Casa et al. 2009; Brkić Drnić, Drnić 2023). Although sherds of Greek and Hellenistic wares were at several sites on the island, including Red-figure pottery, Gnathia Ware, Hellenistic Black and Red Slipped Wares, no archaeological traces of permanent or temporary settlements of the Greek settlers have been discovered so far.

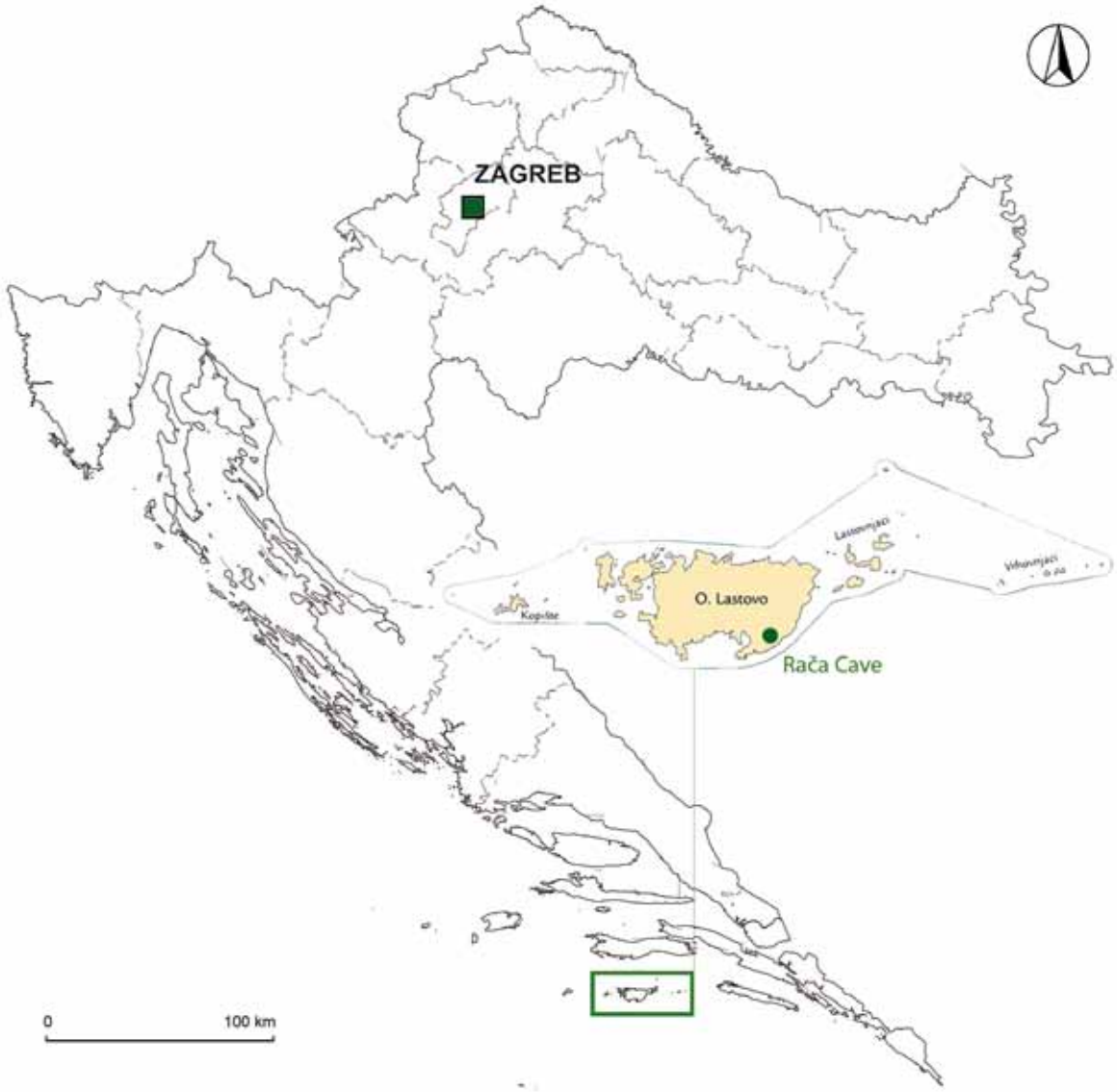

Fig. 1 – Position of the Lastovo archipelago (base map: karta-hrvatske.com.hr; modified by: I. Drnić)

The only proven Iron Age hillfort settlement was located on the Glavica hill above the present-day town of Lastovo. Finds from archaeological excavations at the site, and from private collections of surface finds, include pottery and metal finds of local provenance, as well as Greek or Hellenistic imports. Several objects, e.g. Lamboglia 2 *amphorae*, an Almgren 65 fibula, and a bronze coin from the middle of the 1st century BC, were found at this site, proving that the inhabitants of the hillfort had contacts with the Roman Republic from the 2nd century BC.

The largest Roman settlement found so far on the island of Lastovo is located in the present-day settlement of Ubli, in the western part of the island. During the archaeological excavations carried out by the Italian archaeologist Pietro Marconi in 1933, and later in the period from 1978 to 1983, the remains of ancient residential architecture were discovered, including luxurious buildings with mosaic floors and frescoes, facilities related to oil and wine production, as well as numerous sundry finds (Marconi 1936; Jeličić-Radonić 2001). The early Christian horizon is represented by the church (*basilica*) of St. Peter and objects of daily use, such as oil lamps with Christian symbols. Besides this Roman settlement of agricultural character, the remains of several *villae rusticae* and *villae maritimae* are scattered all over the island, for example in the Skrivena Luka bay (Jeličić-Radonić 2001; Della Casa et al. 2009).

HISTORY OF RESEARCH IN RAČA CAVE

Rača Cave is located in the southeastern part of the island, above the valley of Radaž Dol. It is positioned on the Rača Glava hill, 140 m above sea level, overlooking the Skrivena Luka bay and the famous Struga lighthouse. The cave is about 70 m long and divided into five chambers (Fig. 2-3). The entrance to the cave, located in its southwestern part, is quite narrow and short.

The first archaeological excavation in Rača Cave was carried out in 1942 during the Second World War by Antonio Mario Radmilli. The results of his excavations were published in several publications (Radmilli 1955; 1958; 1969; 1970). Only a decade after the first archaeological excavation, Grga Novak conducted a new excavation in 1953, which resulted in a short publication (Novak 1955). Both authors produced the general stratigraphy of their excavations with finds from the Neolithic, Bronze and Iron Ages, including Hellenistic and Roman imports. An important contribution to the archaeology of Rača Cave was made by Branka Migotti, who in 1987 published Hellenistic and Roman pottery finds collected during the excavations of Grga Novak (Migotti 1987). Recent archaeological excavations started in 2021 in the frame of the Erasmus+ project called *Finds Stories: Addressing Mobility through People and Object Biographies*.[1]

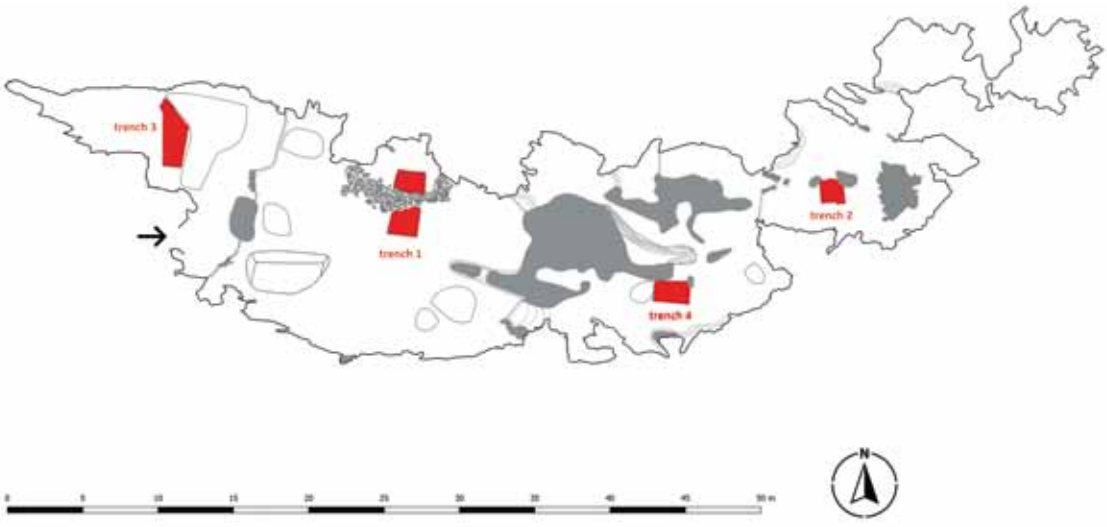

Fig. 2 – Map of Rača Cave with positions of trenches 1-4 (made by: M. Mađerić, K. P. Trimmis, I. Drnić)

1 — The excavations are conducted by the Archaeological Museum in Zagreb in collaboration with the Department of Anthropology and Archaeology of the University of Bristol, UK. The research was joined by the Department of Archaeology of the University of Pula in 2022 and the Department of Archaeology of the University of Ljubljana in 2023.

From prehistoric times to the present-day, people have used caves for a variety of purposes. Caves have been used for everyday activities, as shelters, pens or storage space, but due to their secret and secluded nature, they have also been used as places for rituals or even as cemeteries. Sometimes this distinction is clear to modern scholars, but in some cases the line between sacred and profane is difficult to discern in archaeological records. Most of these activities can be traced in the layers of Rača Cave.

During the 2021 campaign, a detailed surface investigation was carried out in the cave. Potsherds of local production and some Roman potsherds, including *amphorae*, were recovered. Two trenches were then excavated in 2021 and 2022, and two more were opened in 2023.

Trench 1 was located deep in the first chamber, in a position that could be considered as the twilight zone (Figs. 2-3). It contained the most complex stratigraphy excavated in recent research in the cave, with anthropic deposits 1.8 m thick. The oldest finds can be attributed to the so-called Hvar culture/pottery style of the Late Neolithic on the eastern Adriatic, indicating the cave has been used since the 5th millennium BC. This oldest anthropic layer was followed by a thick layer with the characteristic Nakovana-style ceramics, indicating intensive activity in the cave in the second half of the 4th millennium BC. Numerous fragments of typical pottery forms were found together with numerous pieces of lithic material, including blades, flakes, and a core, mainly made of Gargano chert, originating from the western Adriatic coast.[2] Further activities in the cave can be observed in the Late Copper and Early Bronze Ages (Cetina-style pottery), as well as in the Middle and Late Bronze Age (3rd and 2nd millennium BC), as evidenced by the presence of several diagnostic potsherds with a massive horizontal handle with two perforations etc. The importance of Rača Cave in the Late Bronze Age is confirmed by two bronze objects – a spearhead and a razor – found during Radmilli's excavation in 1942 (Radmilli 1955: Fig. 3).

The Iron Age (1st millennium BC) also witnessed rather intense activity, with numerous finds of locally produced pottery represented by large vessels, mostly coarse pots, but also smaller vessels, such as cups with high handles. Various other ceramic objects, such as fragments of sieves, portable hearths, and baking lids, as well as weights and spindle whorls, but also faunal remains and charred seeds, indicate that the members of the Late Iron Age community of Lastovo occasionally used Rača Cave as a shelter, possibly even as a stable for their animals, where they carried out everyday activities such as cooking, storing food, and spinning. We further hypothesise that the cave may have also served as a site of ritual at some point during the Late Iron Age, as the largest number of imported Hellenistic vessels was found in stratigraphic unit 13 in Trench 1, together with local pottery, including miniature drinking vessels (Fig. 4; Fig. 5b). Rare finds of imported Daunian and Corinthian pottery, as well as Hellenistic and early Roman ware, will be discussed in the following chapter.

Excavations in Trench 2, which was located in Chamber 3, revealed a simple stratigraphy of brownish-red cave sediment (Fig. 2). It contained only a few potsherds, animal bones, and shells, but interestingly, some human bones as well. Although there are only a few bones, they can be attributed to an infant and an adult. These bones were absolutely dated to the first half of the 3rd millennium BC using AMS radiocarbon dating.[3]

POTTERY ANALYSIS

The only surface find from the Late Roman period, dated to the 3rd and 4th centuries AD, is the fragment of a jug with a triangular rim and cylindrical neck (Pl. 1: 1). Although no analogues have been found so far, the technical characteristics of the fragment suggest that it is a North African *sigillata* object, most likely of the North Tunisian C production of the 3rd/4th century (more on *sigillata* jugs of North African production in: Carandini, Sagui 1981: 71–78). Of course, it is difficult to figure out the reasons for its appearance here, but the fact is that the island was inhabited in this period of Late Antiquity, and that Rača Cave is located near a bay that is exceptionally favourable in maritime terms and was certainly also frequented at the time obtained by the dating of the aforementioned *sigillata* vessel, because it could also have been the object of occasional chance visits. The

2 — The macroscopic and microscopic analyses of the flint from Rača Cave were carried out by Dr. Zlatko Perhoč and will be published soon.

3 — The samples were processed in the Bristol Radiocarbon Mass Spectometry Facility (BRAMS): 1. BRAMS-6335 R_Date (4146,27), 95.4 probability, 2875 (95.4%) 2626 calBCE: 2. BRAMS-6336 R_Date (4123,27), 95.4% probability, 2867 (27.5%) 2802 calBCE; 2772 (19,0%) 2714 calBCE; 2709 (48.9%) 2580 calBC.

Fig. 3 – Chamber 1 in Rača Cave (photo: K. P. Trimmis)

Fig. 4 – Trench 1 with stratigraphic unit (SU) 13 (photo: M. Mađerić)

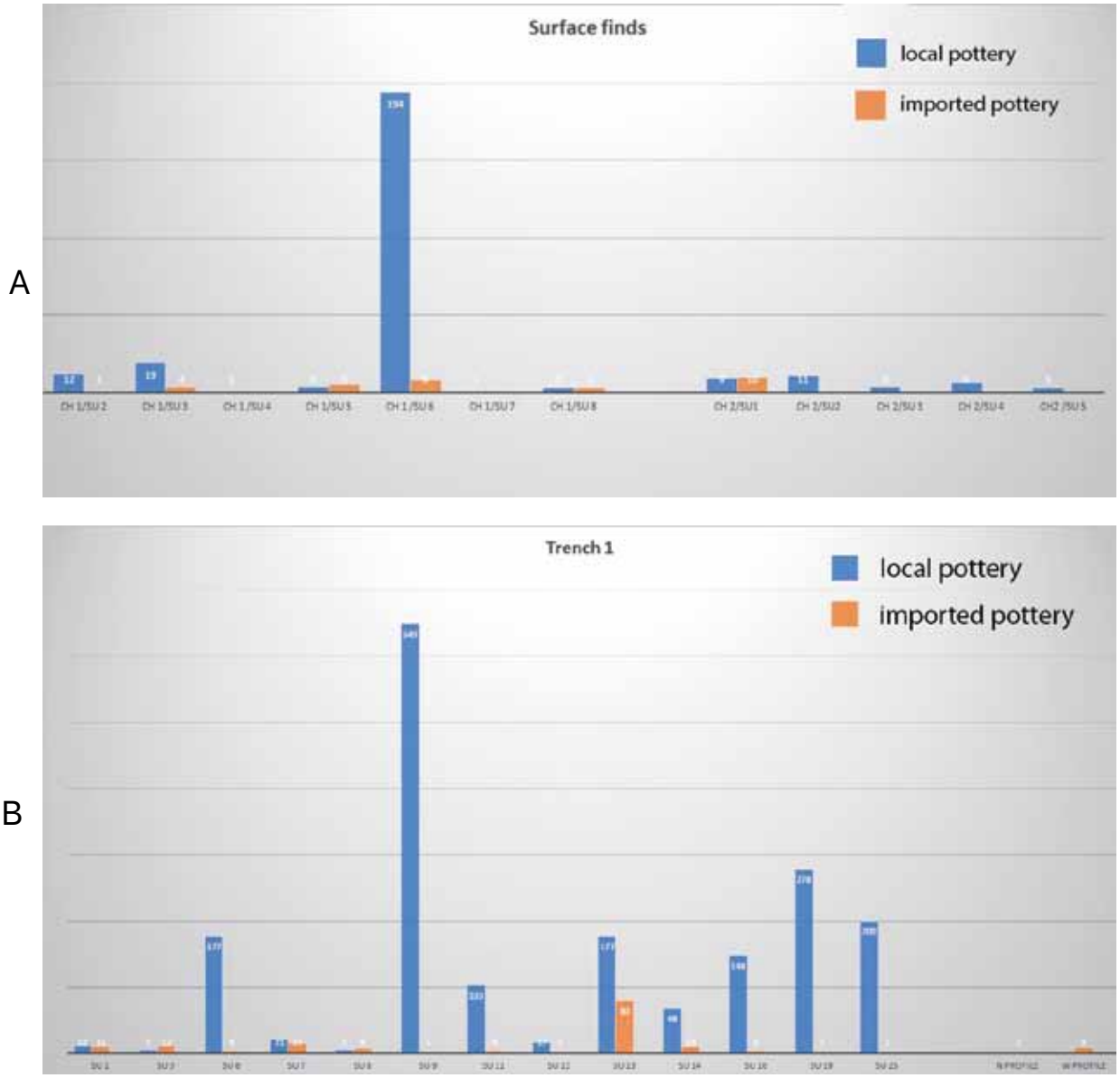

Fig. 5 – Statistics for the number of collected potsherds from: (A) cave surface survey (SU – survey unit); (B) stratigraphic unit (SU) 13 from Trench 1 (made by: K. Brkić Drnić, I. Drnić)

presence of already published finds of Eastern B *sigillata* of western Asia Minor production from the end of the 1st and the beginning of the 2nd century AD can be explained in a similar way (Migotti 1981: 147), as well as the fragments of north Italian *sigillata* of the 1st century AD, which have been recorded by recent research, but unfortunately are typologically indeterminable due to their poor state of preservation.

Among the mentioned recent finds of Hellenistic pottery, there are several groups of objects that should be particularly highlighted. In the context of the circulation of ceramic goods on the eastern Adriatic coast during the last two centuries BC, there was a significant discovery of several fragments of Eastern A *sigillata* (Pl. 1: 3, 4), which have dark red coating and can therefore be attributed to the Hellenistic production phase (Hayes 1985: 12–13). Both fragments belong to the flat bottoms of plates, but as there are no other morphological details, it is difficult to assign them to a specific type. However, considering the general distribution of this type of Cilician pottery in the Late Hellenistic period, the potsherds are most likely Hayes 3 or Hayes 4 type plates, dating from the 1st century BC (Hayes 1985: 14–17, Tav. I/7–12; Bes, Stone 2020: 655–656). In this sense, it is useful to recall that sherds of the Eastern A

sigillata have been recorded among the material from Rača (Migotti 1987: 146–147), which is why this particular cave, along with several other sites on the waterway of the eastern Adriatic, is regarded as a significant archaeological site for tracing the influx of this type of late Hellenistic material from the eastern Mediterranean to the Adriatic (Maggi 2006).

An approximately contemporaneous fragment, which should also be highlighted in terms of its typological and purpose affiliation, is the one that apparently belongs to the *Lagynoi* type vessels (Pl. 1: 2). The fragment, from the material found in Rača Cave, belongs to these smaller vessels for table or transport purposes, most probably for wine or perfumed liquids or balsams, morphologically characterized by high narrow necks and mostly biconical bodies. This type of tableware, produced in different techno-typological versions, originated in the Aegean/Eastern Mediterranean (Pergamon, Ephesus, Cyprus etc.) (Rotroff 2006: 82–84), but it seems that certain variants were also copied in the western part of the Mediterranean (De Mitri 2016: 105–114). The morphological details of the fragment from Rača Cave support its classification as De Mitri's type 2 of Aegean-East Mediterranean *lagynoi* (De Mitri 2016: 106, Fig. 1), while technically and decoratively it clearly corresponds to the so-called *Banded ware*, apparently originally created in Cyprus and characterised by the brown colour of the semi-transparent coating and the stripe decoration, in this case executed in red colour (De Mitri 2016: 105). The most intensive distribution of this type of tableware can be traced throughout the Mediterranean region during the 2nd and 1st centuries BC. A fragment from Rača Cave, together with several other finds from Budva (overview with literature by Ugarković, Waldner 2021: 166–167, fn 62), Risanj, Vis (Ugarković 2019: 103, Fig. 131, p. 253, 150a.1/SP 23; Kirigin 1986: 30, cat. no. 157), and Vlaška Mala at Pag (Radić Rossi 2005: 183) confirms their influx to the eastern Adriatic market (De Mitri 2016: 26–27, Fig. 4). It is interesting to note that the specimen from Lastovo, if we exclude the one from the shipwreck near Pag, of course, is the only one that comes from outside the burial context.

The discovery of ubiquitous *amphorae*, which are dominated, as expected, by those of the Lamboglia 2 type, the most common amphora type on the eastern Adriatic coast, should be associated with the same time period. The find that appears particularly valuable is an amphora sherd characterised by a high vertical rim with a cylindrical neck (Pl. 1: 5), morphologically closest to the Dressel 1 – Pascual 1 type (Peacock and Williams class 6) (Peacock, Williams 1991: 93–95; Bezeczky 1998: 232, Fig. 3: 6). This form originates from the production centres on the northeast Spanish coast, mainly in the Barcelona region, and there is also a hypothesis of production at Aspiran near Montpellier in France (Peacock, Williams 1991: 93; Bezeczky 1998: 232). Although finds of these wine *amphorae* have been recorded on archaeological sites in western Europe (more details on their occurrence in Peacock, Williams 1991: 94; Bezeczky 1998: 232), and a similar amphora type has been found in southern Pannonia (Brukner 1981: T. 160, 52; Bulat 1977: 35, T. 15, 2) and on the Black Sea (Zeest 1960: T. XXVII, 63B), no Dressel 1 – Pascual 1 potsherds have yet been found on the eastern Adriatic coast. The archaeological excavations in 2021 found sherds of Lamboglia 2 *amphorae* (Pl. 2: 1). This type of amphora is already known from the mainland sites of Kašćel and Lučica (Della Casa et al. 2009: 117, 122, Fig. 12) and from shipwrecks in Baški Rat (Radić Rossi 1993: 104–106; 2001: 230; Kirigin, Katunarić, Šešelj 2005: 14, Fig. 10) and Donji Školji II (Radić Rossi 1993: 107–111; 2001: 230; Kirigin, Katunarić, Šešelj 2005: 14, Fig. 10). In addition to the previously known production centres on the western Adriatic coast, the existence of local Dalmatian production (Cambi 1989: 321; Lindhagen 2009: 83–108) has recently been confirmed for Issa (Miše, Quinn 2022). Therefore, at present it is not possible to determine whether the Lamboglia 2 *amphorae* from Rača Cave originated from the western or eastern Adriatic coast.

As a special group of objects found in the same stratigraphic unit, we should highlight five closed forms of vessels with different technical characteristics, unfortunately only partially preserved. Among them, the first that needs to be mentioned is a fragment of a vessel with a light yellowish-green hue made of fired clay, which has no traces of coating or painting on its walls (Pl. 3: 3). Morphologically, it is characterized by a bag-shaped body that merges into a flat bottom, but the missing upper shoulder and rim prevent a more precise typological determination of the object. Preserved in this form, however, it is strongly reminiscent of *alabastroi*, which appeared in Corinthian pottery production from the middle of the 7th century BC (Amyx 1988: 438–439). If the material from Rača contained such an object, not older than the 6th century BC judging by its height, it would be quite attractive, but not entirely surprising, considering the fragment of a Corinthian *kotyle*, which will be discussed later, and

the general distribution of Corinthian products in this area, which could be described as central and southern Dalmatia, but also the obvious circulation of archaic pottery in Lastovo, which is supported by some earlier island finds in addition to those shown here (Della Casa et al. 2009: 123–124). The influx of the typologically very limited Corinthian repertoire is mainly restricted to small containers for the storage of scented oils and perfumes, so this *alabastron* would also fit into the same picture. However, it should again be pointed out that this is only one of the possibilities, and that the others come close to the typological determination of the next two examples.

In both cases we are dealing with partially preserved vessels with a pronounced elongation, in one case almost cylindrical with a slightly sloping shoulder and a transition to an obviously narrow neck, which cannot be described due to its absence (Pl. 2: 2), and in the other case slightly globular (Pl. 4: 1). The identity of the two specimens is also reflected in their flat bases, the differences being the poorly preserved brownish slip in the first case and the black slip in the second case, which can at best identify them as Hellenistic products. The closest analogous material in the literature also dates from this period, more precisely the 3rd and 2nd centuries BC; it has been determined as late Hellenistic black slipped *olpae*, specifically because of the missing or very discretely executed foot and the handle raised above the rim, a detail that unfortunately cannot be confirmed for the examples from Rača Cave, although the lower root of the handle has been preserved in one of the examples described. In general, this is a relatively popular form, the production of which is documented both in the eastern Aegean (Rotroff 1997: 128–129, Figs. 506, 507; Edwards 1975: 51, cat. nos. 207, 233) and in the central Mediterranean Ionian-Adriatic region (De Mitri, Mauro 2019: 288, Figs. 3/7, 8), and it most probably includes the examples from the island of Lastovo judging by the features of the fabrics.

It is certain that another potsherd belongs to the same group of closed vessel forms with a flat bottom, which differs from the previous ones by the conically shaped lower part of the body and by a specifically designed slip of light brown colour with a black limit band on the bottom (Pl. 3: 4).

In addition, the vessel, of which only a part has survived, as with the aforementioned specimens, stands out due to its elegant shape: an elongated, slightly bulbous body with an extremely sharp transition into an apparently conical neck (Pl. 3: 1). Here, too, the absence of the rim and bottom makes it hard to provide a more precise definition of the vessel type, but it is difficult to escape the impression of a very refined, graceful design of the vessel, to which the closest analogies in this sense are to be found in differently shaped *lekythoi*. It is not necessary to go particularly far and look for morphological examples in certainly older examples of Attic black-figured and red-figured *lekythoi*, but also in the so-called white *lekythoi* (on the development of *lekythoi*: Govi 1999: 149; Carter 1998: 664–666), whose successors can also be found in Hellenistic products of various pottery categories, that are technically much closer to the specimen from Lastovo (cf. the form of the so-called net-decorated *lekythoi*: Carter 1998: 668). Again, unfortunately, the slip that seems to be brownish in colour and has almost completely fallen off, and the possible additional decorations, prevent a more precise determination of the production and typology of the fragment.

Although it is difficult to make a suggestion on the basis of the preserved parameters, it is certain that the fragment of the slightly curved rim with the cylindrical neck also belongs to the *lekythoi* type of vessels of the 3rd century BC (cf. Rubinich 2006: 148, cat. no. 162).

A special group of objects is represented by several fragments of black-slipped plates (Pl. 4: 2, 4), one of which is characterized by a rouletted decoration (Pl. 4: 2), which appears on this type of pottery from the beginning of the 4th century BC (Sparks, Talcott 1970: 30; Rotroff 1997: 37–38). The specific sherd from the island of Lastovo is not easy to date, but based on the grey core and hard black slip, it probably belongs to the Italian black gloss pottery. A fragment of a juglet/pot with a slightly everted and thickened rim, apparently stuck with a handle of a shallow oval cross-section, also belongs to the black-slipped class of pottery (Pl. 4: 3). Such shaping of this vessel type was quite popular during the Greco-Hellenistic period in different technical categories of tableware (cf. Rotroff 1997: 133, cat. no. 543; 2006: 78–79, Form 4; Morel 1981: 352–355, Form 5330, 5335; Sparks, Talcott 1970: 72, cat. no. 2151–2220), but in the absence of other morphological details, it is rather difficult to determine the specific object more precisely, unless one takes into account the manufacturing characteristics to assume its southern Italian origin.

The group of Hellenistic Black Slipped Ware of presumably the same south Italian provenance includes two more potsherds – a *skyphos* rim fragment with a partially preserved handle (Pl. 4: 5) and a *kantharos* rim fragment with a fully preserved handle (Pl. 4: 6). The black slip of high quality is almost completely preserved on both sherds. Based on the simple shape of the rim and the oval cross-section of the handle, the *skyphos* can be typologically dated to the end of the 4th and the first third of the 3rd century BC (cf. Ugarković 2019a: 88, Fig. 108; 2019b: 48, cat. no. 90.7). In contrast to the *skyphos* and other sherds from Rača Cave, which are dated to the same period, the *kantharos* fragment is characterised by a small hole with a circular cross-section, which was created *post cocturam*.

A fragment of the base of a black slipped, possibly red-figure *skyphos* of the Attic type from the second half of the 4th century BC most probably belongs to the same production area (Pl. 5: 1) (Lippolis 1994: 246–250, Fig. 185; Yntema 2001: 187–188, Form K43b; generally about the *skyphos* type in Edwards 1975: 66, Form 311). Its uniqueness lies in the fact that it bears graffiti made *post cocturam* on the bottom, consisting of several relatively unclear symbols. At this point, the similarity with the execution of the Greek letters Ί (*Iota*) Ί (*Iota*) Θ (*Theta*) in general, but also on graffiti from other Greek vessels, is only mentioned as a possible reading (for Θ (*Theta*) cf. graffiti from the vessel from Kopila: Čače et al. 2022: 233). Even if the approximate reading is correct, it is difficult to fathom the meaning, which is certainly also numerical in nature. Be that as it may, this specimen joins the Greek graffiti from Lastovo, which appear on two Hellenistic vessel fragments from the transition from the 4th to the 3rd century BC from the Kašćel fortress (Della Casa et al. 2009: Figs. 14.5, 14.8; Čače et al. 2022: 237–238), but also the entire corpus of numerous graffiti found in Hellenistic and indigenous settlements, necropolises and sanctuaries of the eastern Adriatic coast (Čače et al. 2022). The same applies to the typological identification of this fragment, whose provenance and date point to products from southern Italy, which found their way to the eastern Adriatic with increasing intensity from the middle of the 4th century BC (similar material is known from Palagruža: Čače et al. 2022: 207, Pa180) and largely influenced the local eastern Adriatic production of Hellenistic pottery (cf. *skyphoi* of the same type from *Pharos*: Katić 2000: 53, 58. T. 3).

The curvature of the wall of another potsherd dating from the 4th century indicates that the fragment once was a part of a larger vessel, possibly a *krater* (Pl. 5: 2). Its importance is based on the fact that it has characteristic features of both Red-figure pottery and Gnathia Ware: a motif painted in the red-figure technique, which is not recognizable due to the small size of the fragment, and a painted decoration of white ivy leaves. This potsherd belongs to a subgroup of the Late Apulian red-figure pottery (D'Amicis 1996: 438–439; 2005: 164–171), the so-called "*tecnica mista per carattere ibrido tra la ceramica a figure rosse e quella sovraddipinta policroma nello stile di Gnathia"* (De Francesco 2004: 257–298; 2006: 620). The specimen from Rača Cave is the only known specimen of the "*tecnica mista*" pottery found on the eastern Adriatic coast so far.

During the archaeological excavations in 2021 eight potsherds of Gnathia Ware belonging to two different *skyphoi* were found. Both vessels belong to the Late Canosan group of the southern Italian Gnathia production. The first, dated to the first quarter of the 3rd century BC, with morphological features and decoration pointing to its attribution to the early phase of the Late Canosan group, was reconstructed from 7 fragments (Brkić Drnić 2023: 27) (Fig. 6; Pl. 6: 1). The *skyphos* is distinguished by a flat rim, a horizontal handle with an oval cross-section, and a hemispherical body. Its dark brown slip is almost completely preserved, as well as the painted decoration consisting of horizontal and oblique white and red lines and white dots, which is more elaborate on one side of the vessel (cf. Miše 2010: cat. nos. 52, 55; Ugarković 2019: cat. no. 180.13, p. 117).

Only one fragment of the other *skyphos* has survived – a potsherd of the body, characterised by black slip of high quality and decorated with a painted reddish-brown horizontal band followed by shallow narrow vertical grooves (Pl. 5: 3). Despite its small size, it certainly belongs to the most popular product of Gnathia Ware that was imported to the eastern Adriatic coast (Ugarković 2019: 79, Fig. 94). *Skyphoi* of this type, characterised by a body decorated with vertical grooves and dated to the 3rd century BC (Borzić 2017: 73), have also been found at other archaeological sites in southern Dalmatia (cf. Šešelj 2009: 59, 60; Ugarković 2019: cat. nos. 180.15, 180.16, 180.17, p. 118; Radić et al. 2017: cat. nos. 0/6, 2/2, 3/5, 3/6, 3/7, 6/4; Miše 2017: Fig. 3, p. 240).

Fig. 6 – Reconstructed *skyphos* from SU 13 in Trench 1 (photo: I. Krajcar)

Trade and exchange with the western Adriatic coast, which can be traced back to the Early Neolithic, continued in the Iron Age, as evidenced by the finds of Daunian matt-painted pottery. Imports of this popular pottery group were distributed to the eastern Adriatic coast from the 9th/8th to the 4th century BC (Čelhar, Borzić 2016: 72), and while Daunian matt-painted pottery has been found at numerous archaeological sites in Istria (Batović 1976: Map 5, 45–46; Yntema 1990: 256, Fig. 234; Mihovilić 2010: 46) and northern Dalmatia (Čelhar, Borzić 2016: 73, Map 2), it is rarely found in central and southern Dalmatia (Batović 1976: Map 5, 45–46; Yntema 1990: 242, Fig. 221; Petrić 1993: T. XCVI, 222). In addition to the already known potsherd from Rača Cave, which belongs to Daunian or Peucetian production (Petrić 1993: 218), more fragments of Daunian matt-painted pottery were found during recent excavations. All the fragments were made of refined orange clay and characterised by light beige surfaces with painted matt dark brown decoration. Unfortunately, due to the fragmentation and the lack of distinguishing features, it is not possible to date the potsherds precisely and assign them to a specific vessel type (Pl. 6: 3). However, two larger specimens could be recognized as fragments of the rim of *askoi*. The first, decorated with a wide horizontal band below the narrow everted rim, followed by two thin parallel vertical bands (Pl. 6: 4), seems to resemble the Daunian *askos* found in grave 3 of necropolis II at Picugi near Poreč (cf. Yntema 1990: 247, Fig. 226; Mihovilić 2010: 47, Fig. 2). The other fragment is also characterized by a wide horizontal dark brown band below the straight, everted rim, but due to the lack of specific morphological details it is difficult to find exact analogies (Pl. 6: 5).

The influx of imported pottery to the island of Lastovo during the Early Iron Age was not limited to products from the western Adriatic coast, but also included those from the Mediterranean, as evidenced by a fragment of a Corinthian miniature *kotyle* (Pl. 6: 2). Only a fragment of the rim of the entire vessel has survived, which is decorated with a painted dark brown zigzag pattern, followed by a wide reddish band surrounded by thin dark brown lines. The importance of this find lies in the fact that it represents the only Corinthian vessel of this type found on the territory of southern Dalmatia so far. Moreover, it comes from a clear archaeological context, which is not always the case with finds of Corinthian pottery on the eastern Adriatic coast, especially in Istria

(Šešelj 2009: 419–420; Čelhar, Borzić 2016: 77). Since miniature *kotylai* of Corinthian production have been found in various Greek sanctuaries (see Barfoed 2015) (Fig. 7), the presence of this extraordinary find in the cave could be related to ritual activities.

RAČA CAVE AS LATE IRON AGE RITUAL PLACE

Although the historical development of the communities that inhabited the island of Lastovo and its archipelago in prehistoric times has not yet been sufficiently researched, the available data confirm that the islanders were involved in all the relevant cultural flows that affected the Adriatic basin since the beginning of the 6th millennium BC, including the second half of the 1st millennium BC (or perhaps a bit earlier) and the spread of the Greek and later Roman civilization along to the eastern Adriatic coast. The connectivity of the community of Lastovo not only to the Adriatic communication network, but also to the Mediterranean, is confirmed by Greek and Hellenistic pottery imports during the Iron Age of the island. These objects were found in the hillfort on Glavica hill and in Rača Cave. A fragment of a Corinthian *kotyle* dated to the 7th/6th century BC indicates early contacts with Greek traders or colonists, which continued until the 2nd century BC when the eastern Adriatic coast entered the sphere of interest of the growing Roman Republic. The finds of Lamboglia 2 *amphorae* and early *terra sigillata* from Rača and Glavica hill confirm the contacts of the Late Iron Age community in Lastovo during this dynamic period as well.

On the other hand, there are no traces of Greek colonisation on the island, the process that was well known on the neighbouring islands of Vis and Hvar, so the finds of Hellenistic and early Roman pottery from Rača Cave should be interpreted in the indigenous cultural context. An important factor in the interpretation, of course, is the fact that the pottery was found in a cave. As we have already mentioned, caves were used for various profane and ritual activities throughout prehistory and history. Looking at the structure of the imported pottery, it is easy to conclude that it belongs to two groups – tableware and transport ware, with the tableware found in a highly fragmented state. Thus, if we combine the secluded nature of the cave with the structure of the imported pottery accompanied by the coarse pottery of local origin, including the miniature vessels, it is reasonable to assume that the first chamber of Rača Cave may have served as a place of ritual for the members of the Late Iron Age community (or communities) of the island at certain times.

This thesis could be corroborated by the existence of two other cave sites in southern Dalmatia that were interpreted in the same way – as Illyrian sanctuaries. The first is located in Spila near Nakovana on the Pelješac peninsula, where an intact sanctuary was organized around a stalagmite interpreted as a phallic symbol, and containing thousands of Hellenistic potsherds, mostly of fine pottery, dated from the mid-4th to the beginning of the 1st century BC (Forenbaher 2021; Forenbaher, Jones 2011; Forenbaher, Kaiser 2003; 2012). Vilina Cave, which is located in an inaccessible position above the source of the Ombla River in Rijeka Dubrovačka, could be placed in the same chronological frame. The site contained an abundance of fine Hellenistic pottery, including a fragment of a bust – a female head made of terracotta from the 4th century BC – as well as numerous miniature vessels of local origin (Perkić 2021; 2022). All these sites provide us with a valuable insight into the spiritual life of the indigenous communities of the Late Iron Age during the period of their interaction with Greek and later Roman civilization. Obviously, secluded places such as caves played an important role in the ritual practices of the indigenous communities of southern Dalmatia.

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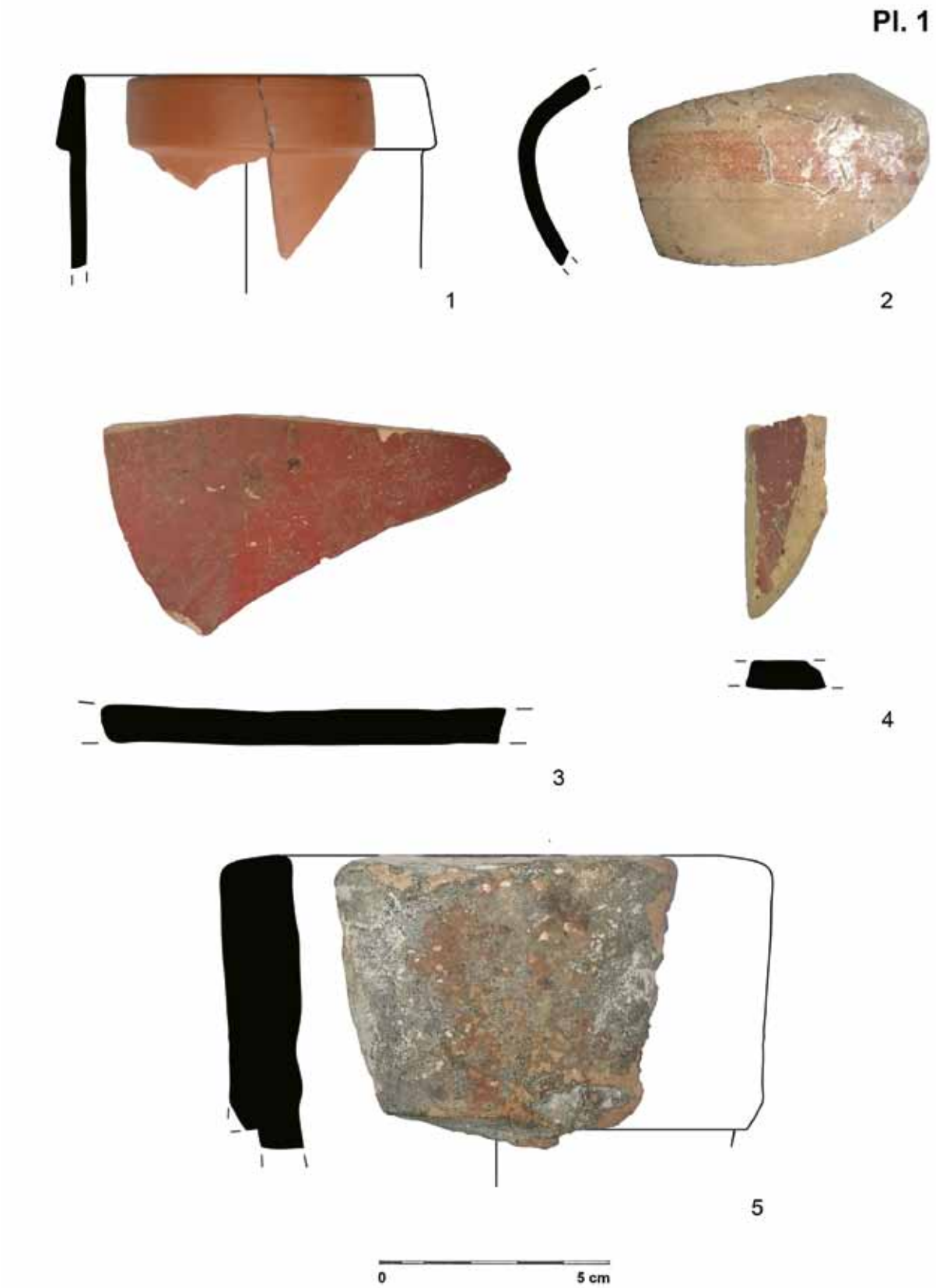
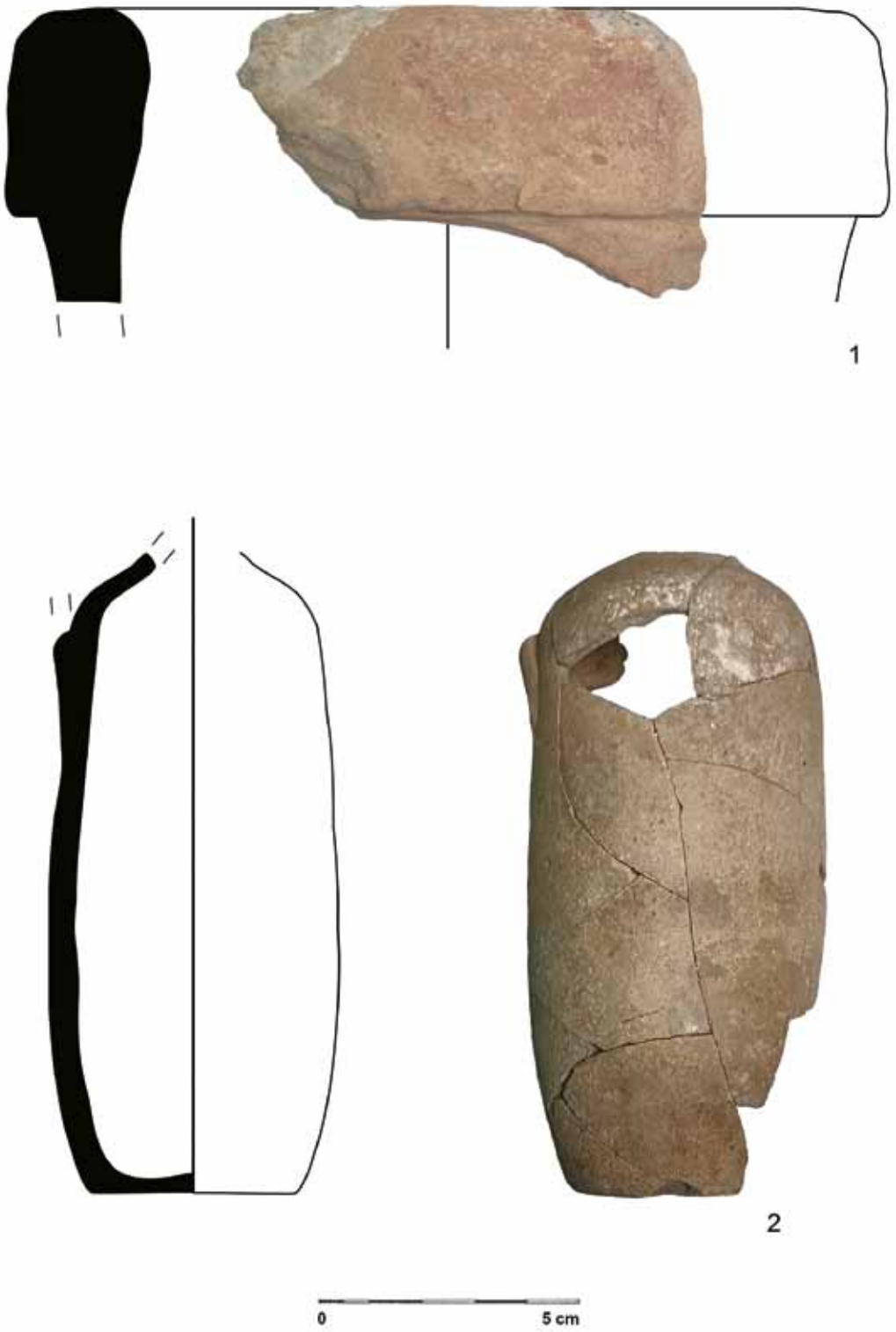
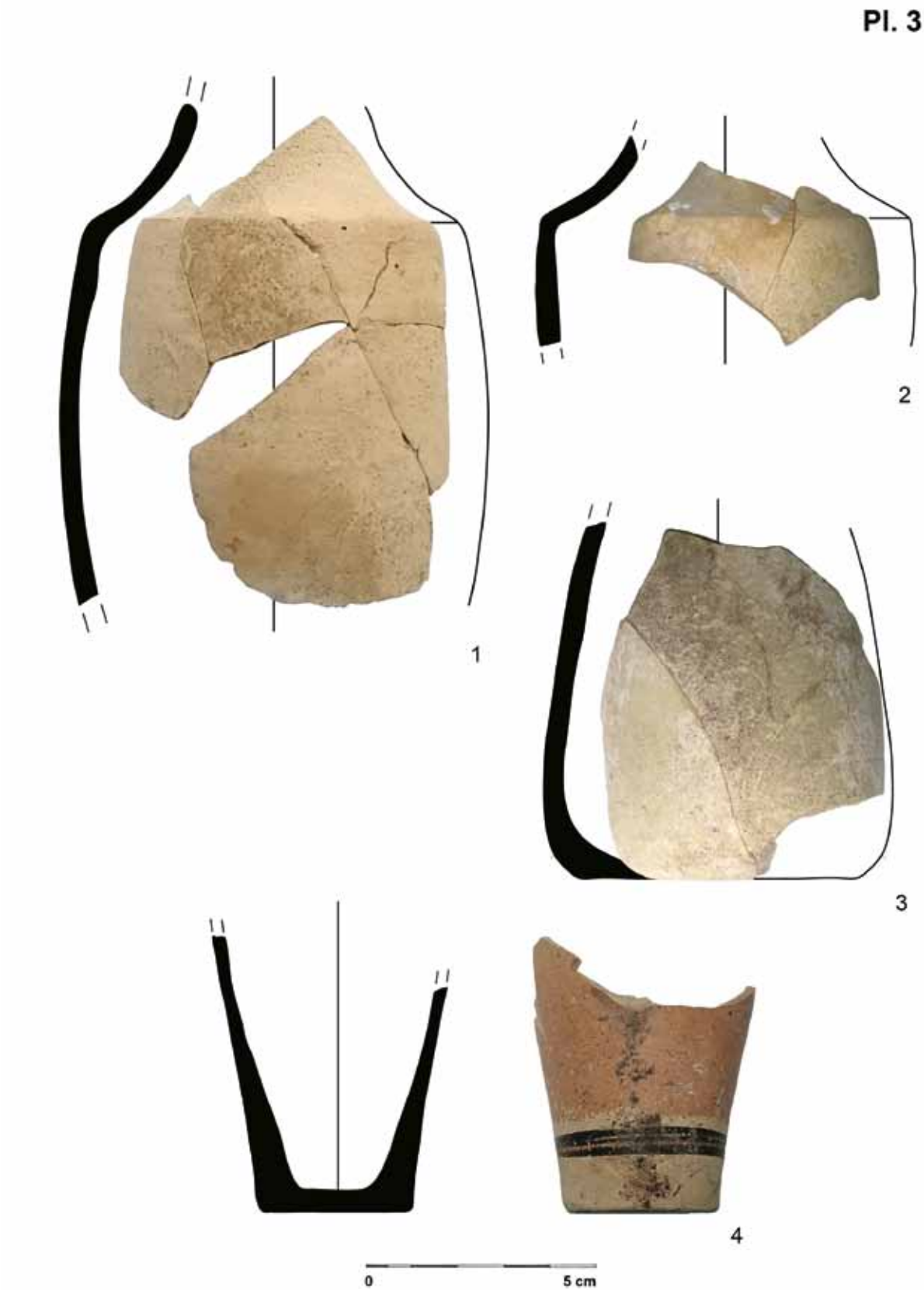


Pl. 1 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)

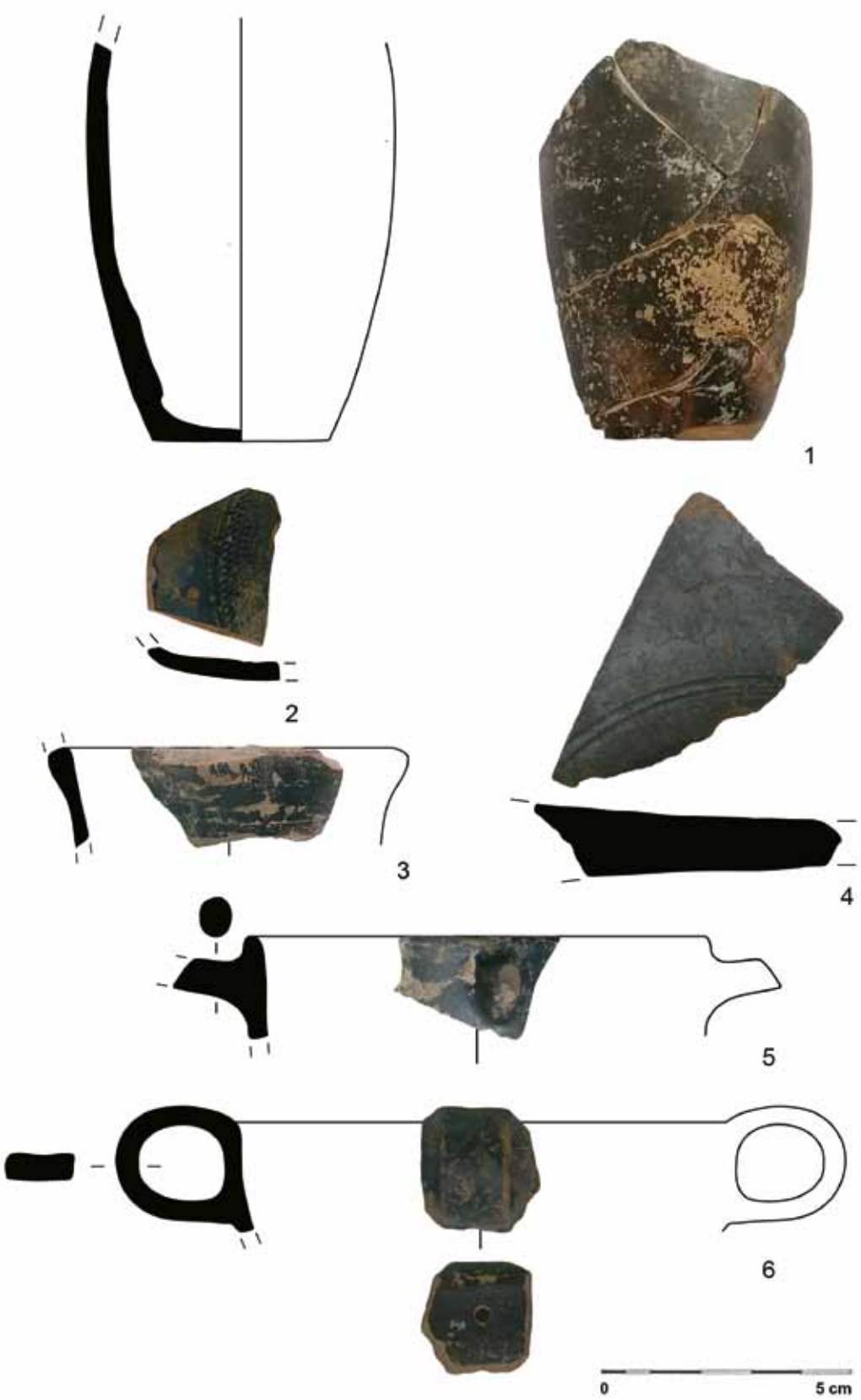
Pl. 2



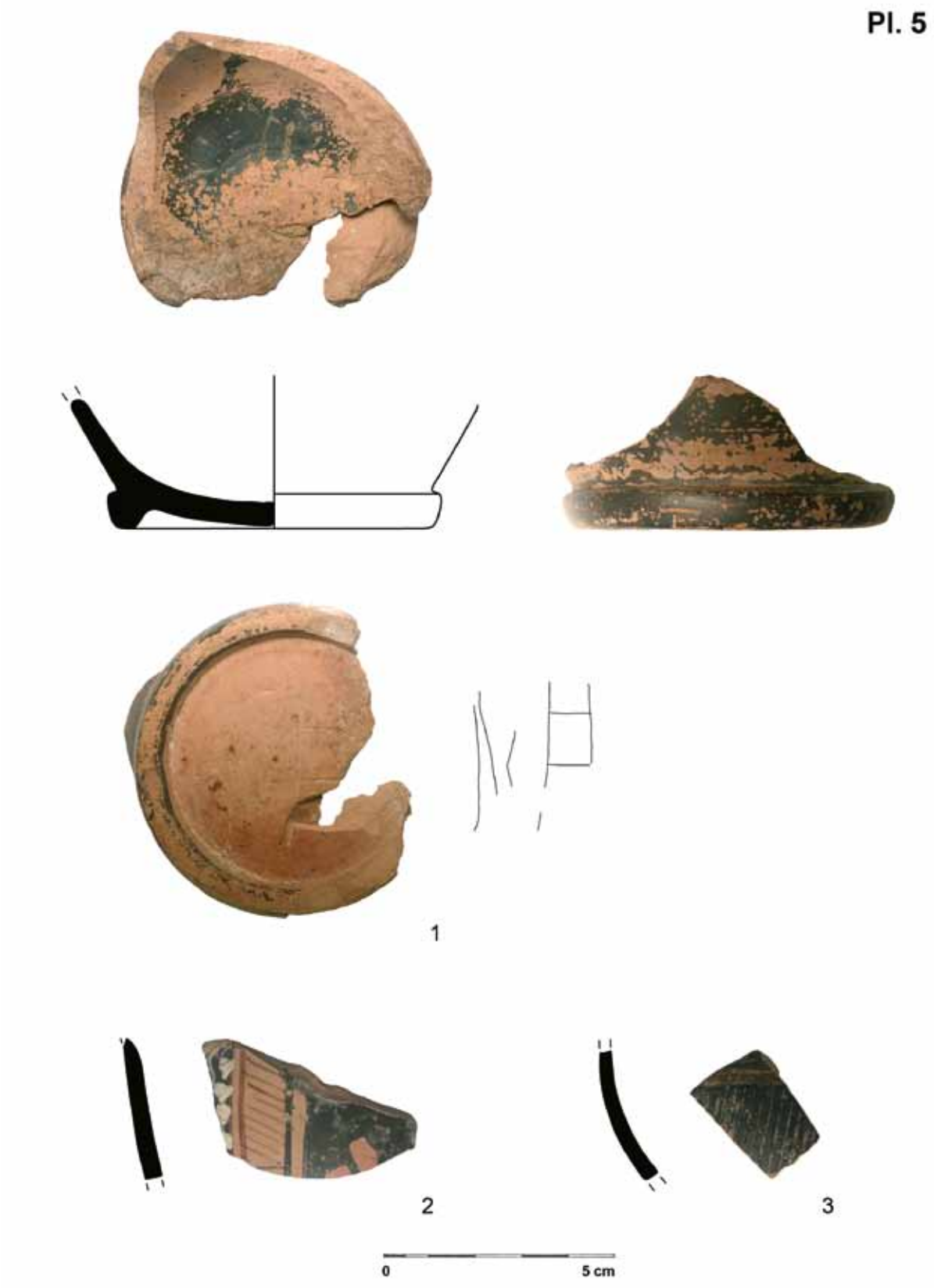
Pl. 2 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)



Pl. 3 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)



Pl. 4 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)



Pl. 5 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)

Pl. 6 – Pottery from Rača Cave (drawing and photo: K. Brkić Drnić, I. Drnić)

Taulant Rama, Eduard Shehi

THE BATTLE OF AÔI STENA (198 BC) AND TRACES OF FORTIFICATIONS IN THE TERRITORY

Original scientific paper

This study explores the archaeological and historical evidence surrounding the battle of Aôi Stena in 198 BC, focusing on the positioning and strategic significance of fortifications in the region. Drawing on insights from scholars such as Kromayer, De Sanctis, Walbank, Holleaux, and N. Hammond, the deployment of the Macedonian army and the events leading up to the confrontation with the Romans are analyzed. N. Hammond's interpretations of the battle's dynamics, including the positioning of defensive works and the successful Roman flanking maneuver, are examined in detail. The fortification of Çeka and its role in blocking the gorge, along with other structures identified in the region, are considered in light of their strategic advantages and historical context. Additionally, the reasons behind the Macedonians' selection of the defensive position within Aôi Stena are explored, highlighting the geographical considerations and potential awareness of mountain paths. This interdisciplinary approach, combining archaeological findings with historical records, provides fresh insights into ancient battles and topography, enriching our understanding of historical events and the evolving dynamics of control and defense over territory during different historical periods.

KEY WORDS: **WESTERN BALKANS, SECOND MACEDONIAN WAR, 198 BC, BATTLE OF AÔI STENA, FORTIFICATION OF ÇEKA**

The ancient history of the Western Balkans during the 3rd and 2nd centuries BC was characterized by conflicts between regional powers – namely, the Macedonian, Illyrian, and Epirus states – and the emerging Mediterranean power, the Roman Republic. Starting from the late 3rd century BC, the expansionist ambitions of the Roman Republic encountered resistance from the growing Illyrian Kingdom and the Macedonian Kingdom, resulting in several wars between them.

One of the events extensively studied by researchers is the Second Macedonian War. In 200 BC, the Roman campaign against Philip V led to the conquest of several cities and towns in southeastern Illyria, resulting in the destruction of Antipatrea's walls. The following year, Philip initiated a campaign to halt the Roman advance towards the east. However, the successful actions of the Roman forces extended their control deep into the region, reaching Dassaretia, a strategically advantageous position for future operations against Macedonia. Faced with the imminent threat of Roman advances and potential combined attacks from neighboring regions, Philip took the initiative and entered Epirus. In the early spring of 198 BC, Philip's army, commanded by Athenagoras, seized control of the "Antigonea Narrows". Subsequently, upon Philip's arrival, the army positioned

itself at Aôi Stena (Fig. 1, after Hammond 1966: fig. 2).

This is the site where one of the most significant battles took place. Livy vividly describes the Aôi Stena position with the following words (32.5.9–13):

"*... he* [Philip] *sent his entire foreign auxiliary force, plus whatever light-armed troops he possessed, all under Athenagoras, through Epirus into Chaonia to seize the gorge to Antigonea, which the Greeks call 'The Narrows.' A few days later he himself followed with the heavier troops. After a thorough inspection of the topography of the region, he concluded that the most opportune spot for a fortified encampment lay beside the River Aous. This flows in a constricted valley between two mountains, called respectively Meropus and Asnaus by the local population, and offers only a narrow pathway along the bank. Philip ordered Athenagoras to hold and fortify Asnaus with his light-armed troops while he himself encamped on Meropus. Where the cliff was sheer units of only a few armed men stood on guard; weaker spots he secured with ditches or a rampart or towers. A large battery of catapults was also deployed at appropriate points to keep the enemy at bay with projectiles. The king's tent was positioned on the most prominent hillock before the rampart so that he could, by his confidence, inspire terror in the enemy and hope in his own men.*" (Yardley 2017: 171, 173).

Meanwhile, Plutarch (*Flam*. 3) provides a different description of the Aôi Stena position, stating:

"*It* [the ground] *has no less natural strength than the Vale of Tempe, but is without the beautiful trees, green woods, agreeable haunts, and pleasant meadows which there abound. Great and lofty mountains on either side slope down and form a single very large and deep ravine, and through this the Apsus*[1] *dashes with a volume and speed which make it the equal of the Peneius. Its water covers all the rest of the ground at the foot of the mountains, but leaves a cut, precipitous*

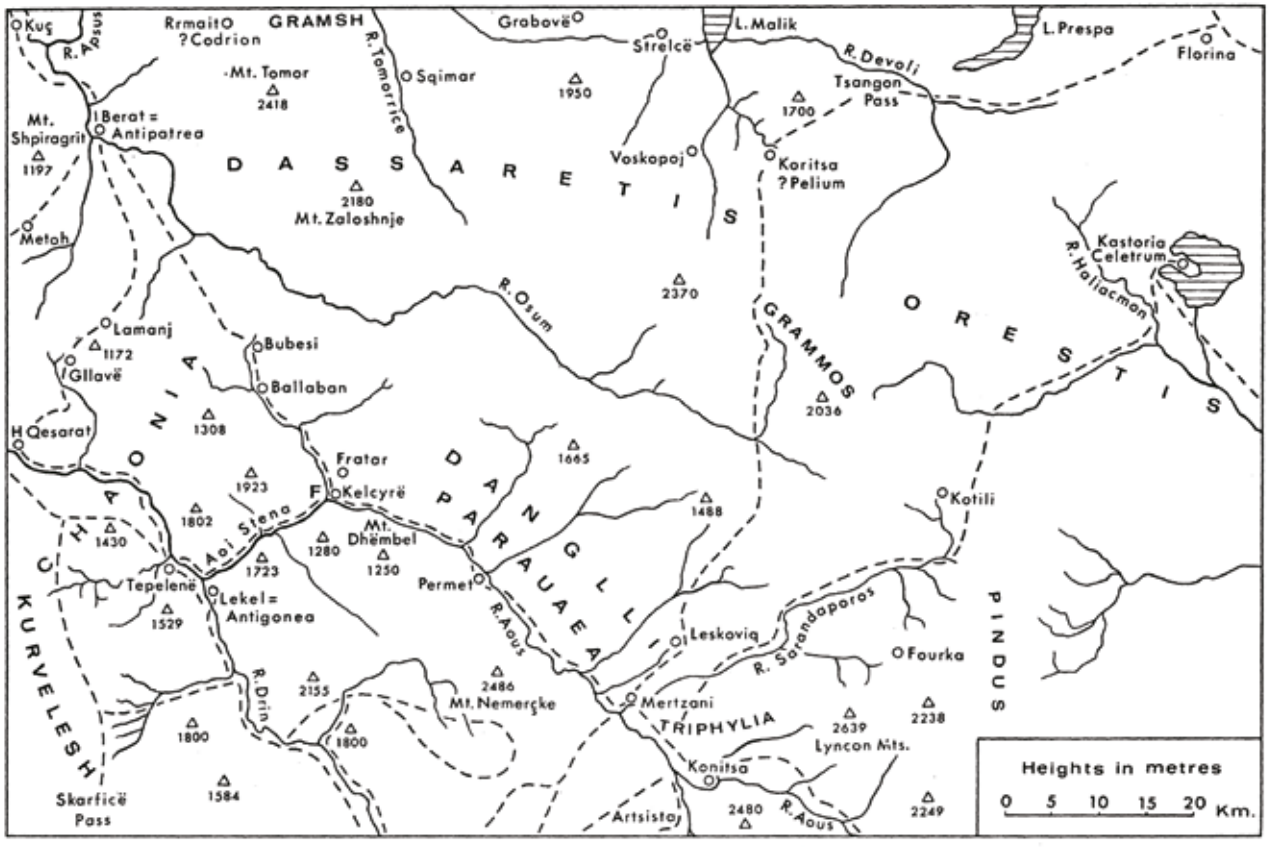


FIG. 2. MAP I: THE AOI STENA AND THE APPROACHES TO SOUTH-WEST MACEDONIA

Fig. 1 — Positioning of Aôi Stena (according to Hammond 1966)

1——A misnomer for Aoos.

and narrow, for a path along past its current; this path would not be easy for an army to traverse at any time, and when guarded, it would be utterly impassable." (Perrin 1921: 329).

Based on those details, different researchers have dedicated studies to it and analyzed the battle from several aspects, confronting the narratives of ancient sources with today's scholarly logic and new historical knowledge.

Kromayer says: "*Eine solche Stellung boten nun, wie der Erfolg gezeigt hat, in der Tat die erwähnten Engen des Aoos bei Antigonea, oberhalb des heutigen Tepeleni, wo der Fluss bei dem Dörfchen Klissura*[2] *das eben geschilderte offene Längstal verläfst und die ihn bisher begleitende Bergkette in einem etwa 17 Kilometer langen, engen, z. T. schluchtigen Quertale, das ebenfalls Klissura heifst, durchbricht*." (Kromayer 1907: 37).

De Sanctis says: "*Era a ogni modo, la posizione scelta dal re, una gola presso Antigonia (Tepeleni) in cui due montagne, l'Asnao da sinistra, il Meropo da destra, chiudevano l'Aoo*." He then goes on with the identification in note 117, stating that this gorge cannot be the one to the west of Klisura, as described by Leake, who was generally followed by Kromayer. It has to be set north of Aoos and Drynos, closer to Antigonea (Tepelena). And he identifies them with the same gorge through which the Illyrians went when entering Epiros in 230 BC (De Sanctis 1923: 60, note 117).

Walbank, who had visited Tepelena, set the location inside the Gorge of Mezhgoran, at the village of Dragot (Walbank 1959: 156).

Among them, the most detailed and widely accepted conclusions are those of N. Hammond, who positions the battle area within the Gorge of Mezhgoran (Fig. 2, after Hammond 1966: fig. 5). While these conclusions are well-founded, one crucial element that has often been overlooked in all of these studies, including N. Hammond's, is the detailed recognition of the terrain and the surviving traces of the fortified structures there. Our intention is to address this gap with our presentation.

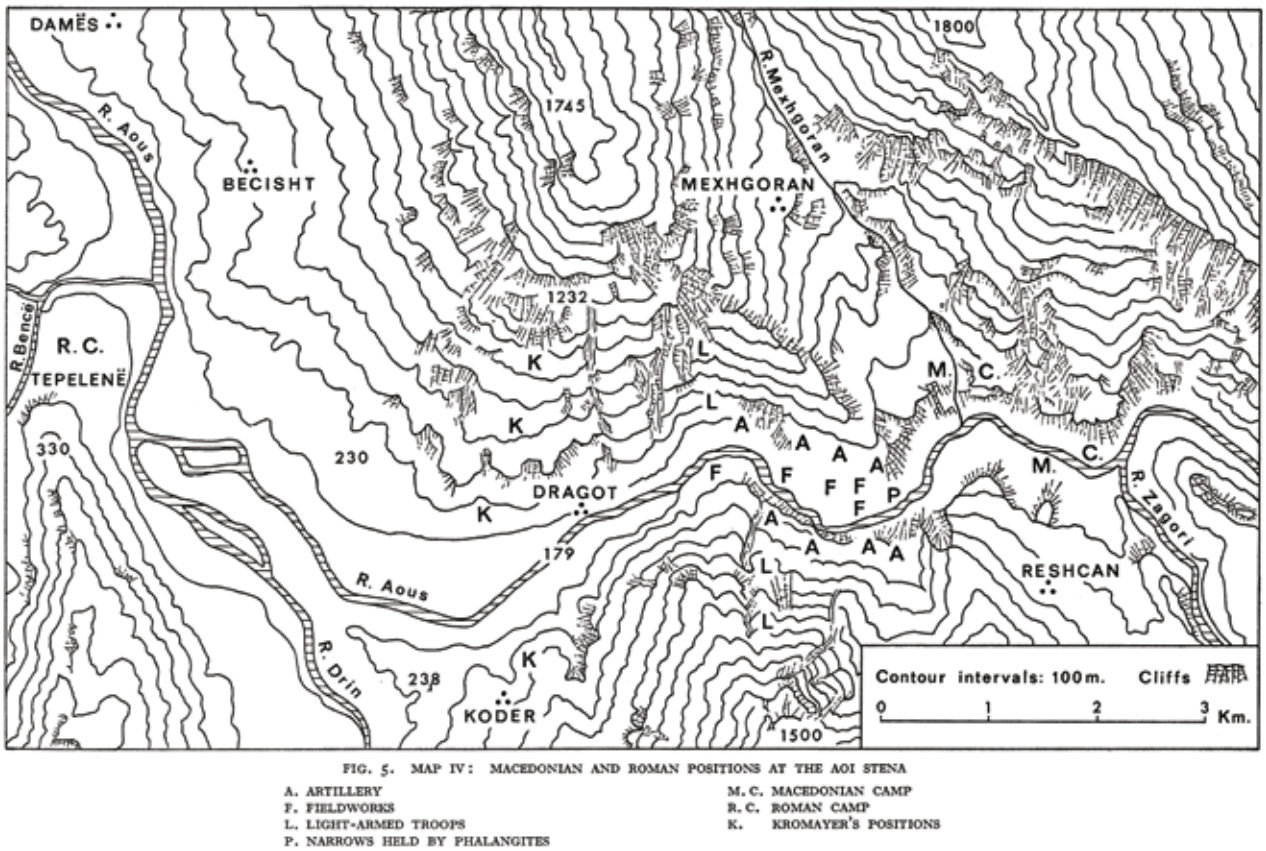


FIG. 5. MAP IV: MACEDONIAN AND ROMAN POSITIONS AT THE AOI STENA

A. ARTILLERY
F. FIELDWORKS
L. LIGHT-ARMED TROOPS
P. NARROWS HELD BY PHALANGITES
M. C. MACEDONIAN CAMP
R. C. ROMAN CAMP
K. KROMAYER'S POSITIONS

Fig. 2 — Positioning of military forces within Aôi Stena (according to Hammond 1966)

2—— Modern name: Këlcyra.

The valleys of the rivers Drinos and Vjosa constitute one of the most significant areas in Albania in terms of archaeological heritage. Years of archaeological research have unveiled a significant number of sites across all categories. The ongoing research projects in the region have not only studied the structures known for years but also made new discoveries. Our particular focus lies on one crucial geographical feature in this area: the Gorge of Mezhgoran (Fig. 3). This gorge was formed due to the powerful erosion caused by the River Vjosa in the Shëndelli-Lunxhëri-Bureto mountain ranges. Consequently, the gorge has created a highly convenient natural pathway that connects two valleys, running northwest to southeast and separated by imposing and impassable mountain ranges. This very gorge is referred to by ancient authors as Aôi Stena, the site where the battle between Philip V and the Roman legions took place.

Through extensive field observations, we have successfully identified several sites that could potentially be linked to the renowned history of the Aôi Stena battle. In this presentation, we will elucidate three distinct locations: a fortification situated on the mountain slope, a blocking wall constructed between the river and the slope, and structures with material culture artifacts discovered within the river meander.

THE FORTIFICATION ON THE MOUNTAIN SLOPE

This fortification is located on the summit of Shëndëli Mountain, at a site known as Çeka among the local residents (Fig. 4). The fortification was strategically positioned to align with the southeast-northwest orientation of the mountain ridge. Importantly, the ridge is characterized by steep slopes that are nearly impassable, providing the fortification with exceptional natural protection. The chosen position offers a clear and commanding view of the Vjosa valley, the Zagoria valley, the Mezhgoran streams, and Aôi Stena itself.

A narrow path remains preserved in the northern part of the mountain slope; no other traces of alternative routes leading to the fortification were observed. By following this path, one can reach a small plateau located in front of the southeastern tower (Fig. 5). Access to the fortification required passing beneath the tower. In the central part of the area enclosed by the fortification wall, there

Fig. 3 — Relief map of Mezhgoran Gorge (base map: ASIG data; modified by: E. Shehi)

Fig. 4 — Relief map of Çeka ridge (base map: ASIG data; modified by: E. Shehi)

Fig. 5 — Map of structures on the Çeka ridge (made by: T. Rama, E. Zharku)

is a highly steep rock massif. Within this territory, we have identified several structures that seem to have served non-military purposes. Additionally, a second tower was constructed at the northwestern end.

The builders of this fortification sought to utilize a terrain that provided exceptional natural protection, augmenting it with man-made structures. Consequently, the steep slopes harmoniously merge with the fortification elements created by human hands, resulting in an impregnable stronghold.

The fortification perimeter

We were able to trace the fortification wall for a length of 28.90 m (Fig. 6). It has an arched shape, extending from the northwest to the south. The remaining height of the wall varies from 0.50 m to 1.85 m.

On the southern side, we can follow the foundation of the wall until it meets the rock massif. This appears to be its endpoint, as there was no apparent reason or opportunity to continue further. The natural relief provided ample protection from this side.

On the northern and northwestern side, we can trace the foundation of the wall for approximately 20 m. However, the wall has suffered damage due to erosion. The line of stones is interrupted in a section where there is a pronounced slope in the terrain. It is not clear whether the fortification extended beyond this point and was destroyed over time, or if the relief was similar in antiquity, making it unnecessary to fortify that particular area.

In the southern part of the fortification wall, we believe we have identified an entrance. This entrance was created as a break in the fortification wall and is equipped with a corridor that opens at an angle of nearly 45° to the fortification wall. The stone blocks still in place indicate the presence of a corridor with a length of approximately 3 m and a width of 2.20 m.

The wall was constructed using roughly rectangular stone blocks which were well carved and assembled with dry bounding (Fig. 7). However, the sizes of the blocks vary, and there is no discernible pattern that can be taken as a basic model. The preserved rows of the wall suggest that the construction might not have been of the highest quality in its implementation. The placement of the stone blocks gives the impression of a hasty and careless execution, lacking attention to detail. It is evident that the vertical joints were not interlaced to provide stability to the wall. In some cases, the joints are in a straight line for two or three rows, significantly compromising the quality and durability of the wall.

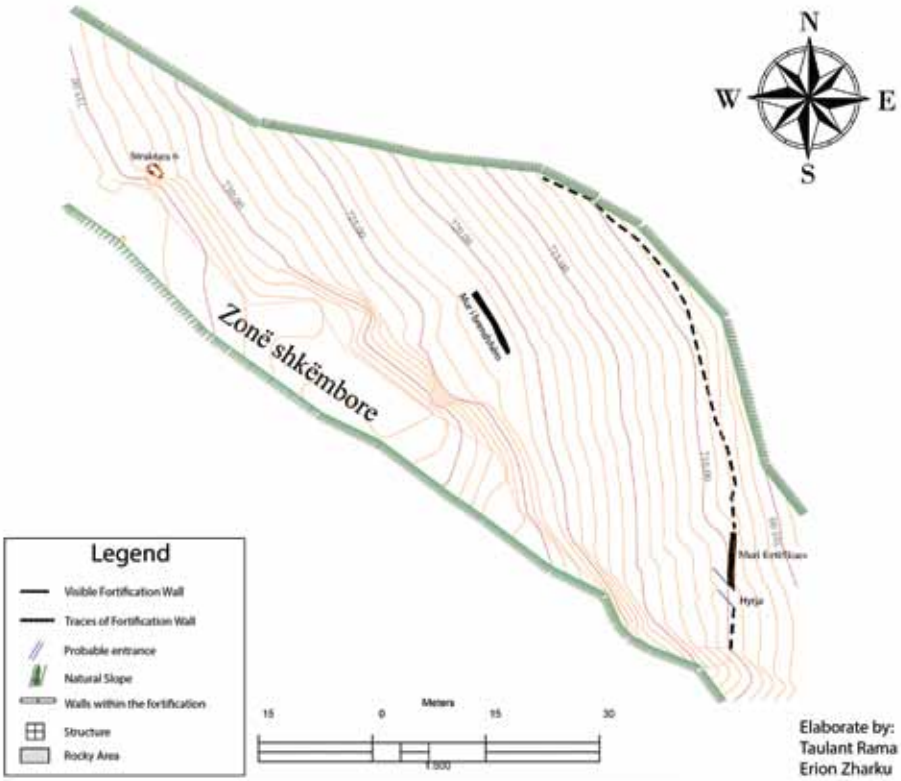


Fig. 6 — Detail of structures on the Çeka ridge (made by: T. Rama, E. Zharku)

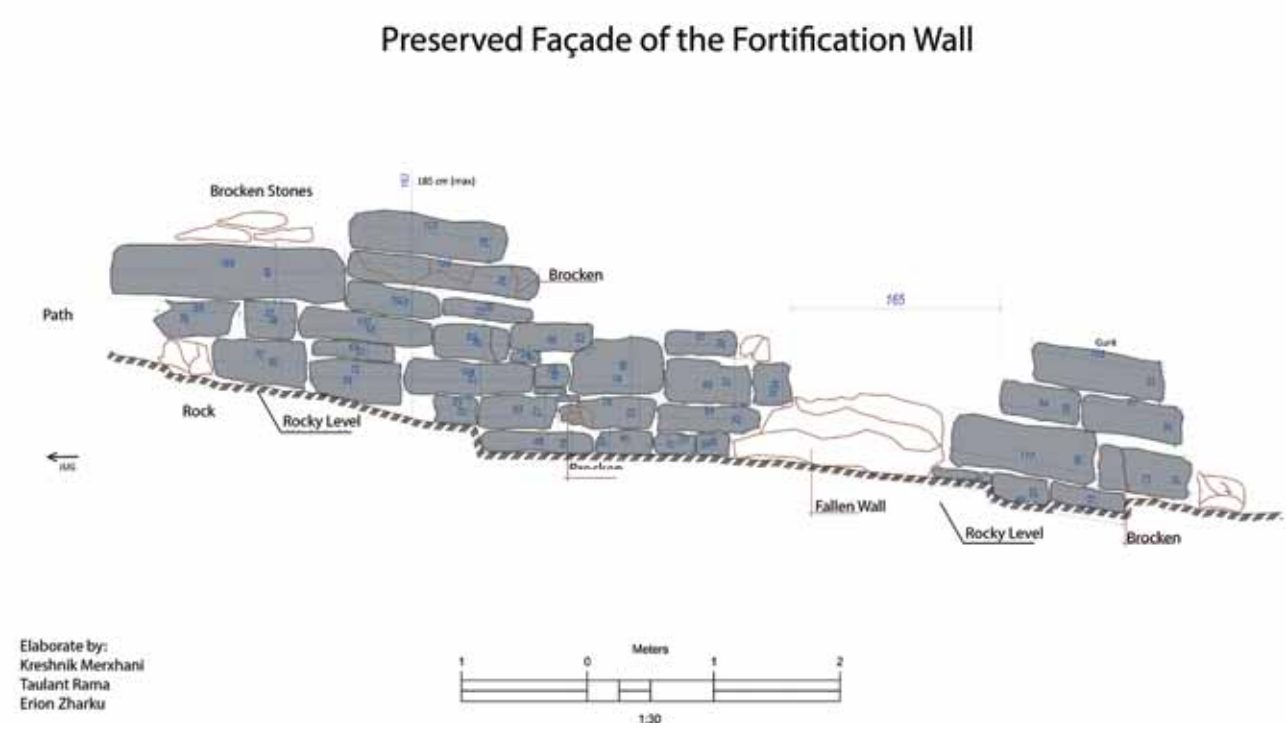


Fig. 7 — Front view of the fortification wall on the Çeka ridge (made by: K. Merxhani, T. Rama, E. Zharku)

Southeastern tower

The tower is situated on the southeastern flank of the mountain ridge, outside the line of the fortification wall and almost on the path leading to the crest of the mountain slope. The remains of the tower are located approximately 100 m southeast of the fortification wall, at an altitude of 680 m above sea level. It has a rectangular shape, measuring 5.25x6.25 m (Fig. 8). The tower lies in a southeast-northwest direction.

Its faces, constructed with conglomerate stone blocks of varying sizes, were skillfully carved, and the blocks were assembled using a dry bounding method. However, only three rows of stones are preserved on one side of the tower, and these stones are directly placed on the rock massif. This indicates that the building technique might not have been of high quality or executed with precision.

Northwestern tower

This tower is situated on the northwestern side of the ridge, within the fortification line, at a distance of approximately 500 m from it. The tower is positioned at a commanding point known locally as "Mulliri", located at an altitude of 790 m above sea level. It features a rectangular shape, lying in a southeast-northwest direction and measuring 5.90x6.60 m (Fig. 9).

The construction technique used for the tower involved two-sided raising with limestone blocks, similar to the rock massif, and with dry joints. These limestone blocks are generally carved, with a tendency to be rectangular, although not all of them appear to be finished. Currently, two rows of stones are still in place (Fig. 10). As observed for the previous tower, the stones used here also vary in size. It appears that the larger blocks were strategically placed near the corners, probably to enhance stability.

Between the two outer walls of the tower, there are noticeable empty spaces, leading us to believe that they were originally filled with smaller stones. This construction method indicates a practical approach, making efficient use of available materials. The incorporation of local limestone, combined with both larger and smaller stones, allowed for the construction of a sturdy structure despite variations in block sizes and finishing.

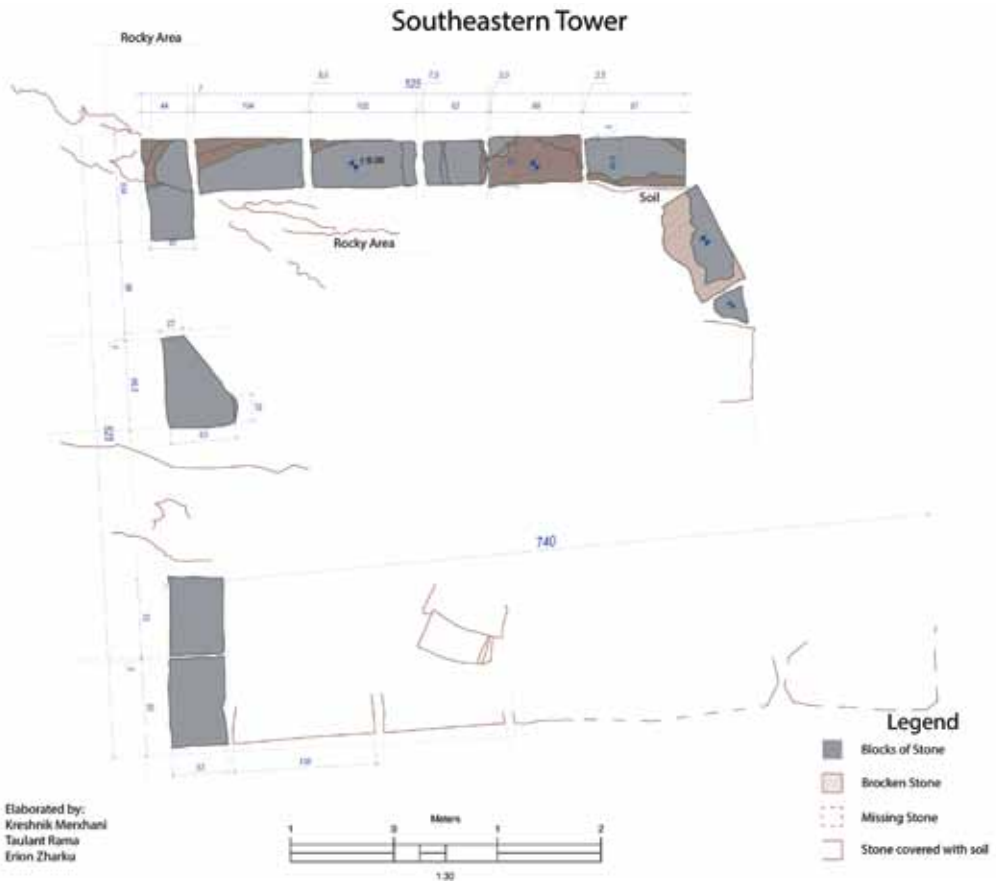


Fig. 8 — Floor plan of the southeast tower (made by: K. Merxhani, T. Rama, E. Zharku)

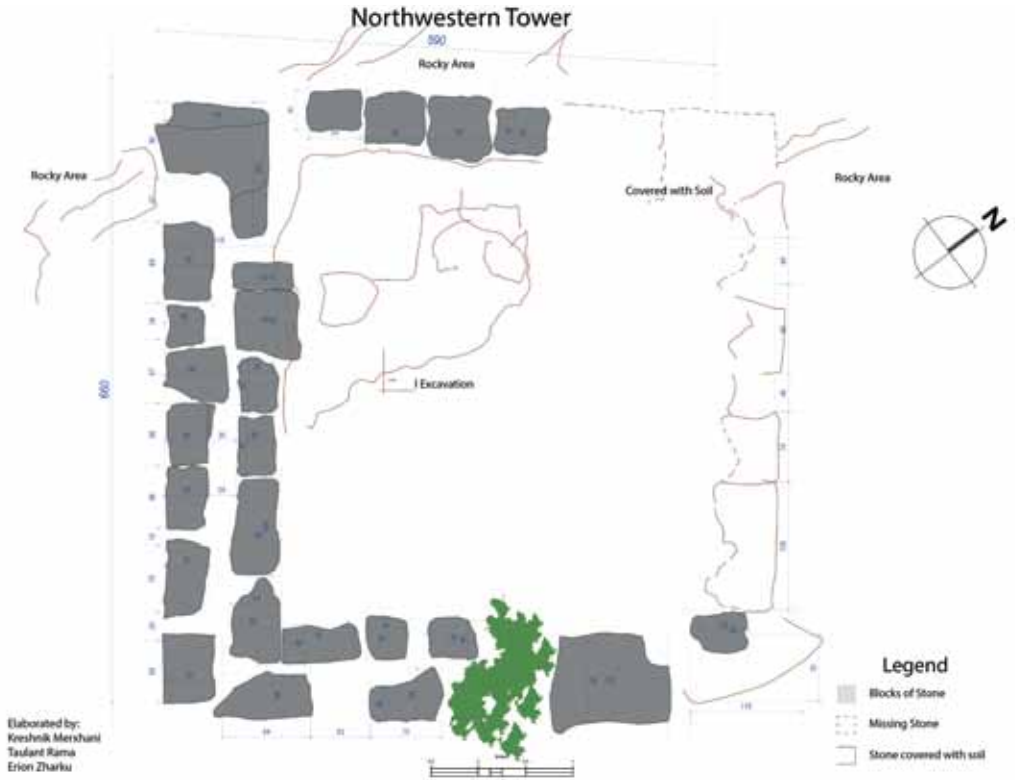


Fig. 9 — Floor plan of the northwest tower (made by: K. Merxhani, T. Rama, E. Zharku)

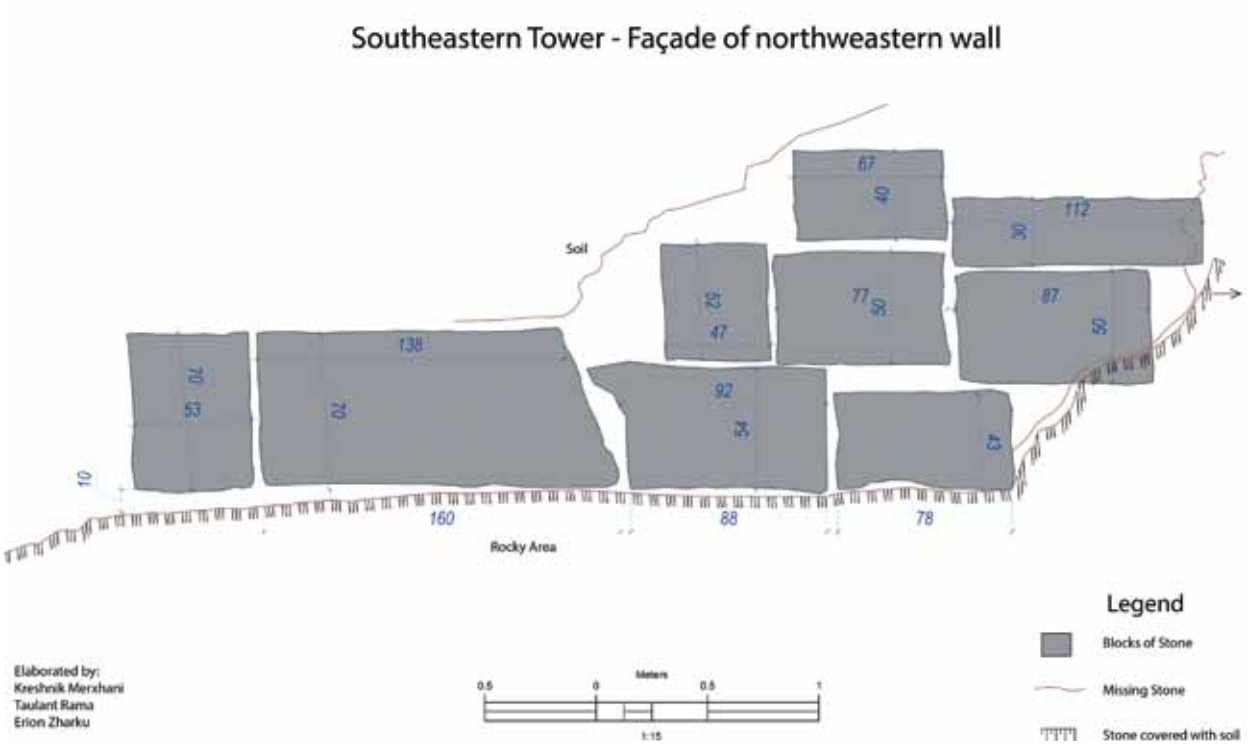


Fig. 10 — Northern view of the northwest tower (made by: K. Merxhani, T. Rama, E. Zharku)

Other traces of walls

Within the interior of the territory defined by the fortification perimeter, we have identified traces of several structures. Six of these structures appear to have had almost rectangular shapes, with varying dimensions: 1.89x2.54 m, 2.35x3.09 m, 2.33x2.87 m, 2.33x3.72 m, 2.29x2.63 m, and 1.07x2.06 m. However, the last visible structure has only one preserved straight wall, and its specific function cannot be clearly discerned. The limited visibility and state of preservation of these structures prevent us from forming a definitive opinion regarding their roles.

The first four rectangular structures were located in close proximity to the northwestern tower. The fifth structure was positioned approximately midway between the northwestern tower and the fortification wall. The sixth structure was situated to the northwest of the rocky area, closer to the fortification wall. Notably, we did not find any structures outside the fortification wall. Given this observation, it is plausible to surmise that these structures may have served as dwellings or barracks for the soldiers of the garrison that resided here. However, due to the uncertain condition and limited information, this remains speculative. Further investigation and analysis would be required to definitively ascertain the functions of these structures.

The archaeological material

The surface of the mountain ridge exhibits significant relief breaks caused by pronounced erosion. Consequently, the fragments of pottery found in this area, although not scarce in quantity, are typically highly fragmented. This makes it challenging to identify the morphology of the vessels and determine their chronological context. The pottery can be broadly categorized into two chronological periods. Some fragments can be tentatively dated to the period between the 4th and 1st centuries BC. Notably, during the survey, a ceramic weight was discovered within the fortification wall.

The majority of the finds belong to the Late Antiquity period. Additionally, scattered tiles were found throughout the site, also dating back to the Late Antiquity period. These tiles likely formed part of the structures present within the fortification perimeter during that time.

THE BLOCKING WALL

On the slope of Çeka Mountain, between the two slopes with the river flowing in between (Fig. 3–4) along the national road Tepelena-Përmet, a narrow area is formed, with a maximum width of 145 m. In this location, on the right side of the river, traces of an ancient wall have been identified

(Fig. 11). In modern times, this wall was utilized as a supporting base, with a section of the modern road built over it.

The ancient wall was constructed using rectangular stone blocks of various sizes, skillfully cut and with well-crafted faces, assembled with a dry bounding technique following an isodomic approach. The stone blocks come in different dimensions, ranging from 0.80x0.50 m to 1.85x0.35 m. The foundation of this wall is laid on bedrock, which was carefully cut and adapted to create a level base (Fig. 12).

The preserved length of this wall extends for 6.5 m, standing at a height of 2 m. Beyond this segment, its continuation is still visible but has suffered damage. Several blocks have fallen due to the challenging terrain where it was built, lack of maintenance, and the impact of River Vjosa floods.

THE FINDS IN THE RIVER'S MEANDER

The meander of the river, located on the left side of the stream near the village of Peshtan, has drawn our attention due to the presence of surface finds (Fig. 3–4).[3] The field created on this meander stretches from east to west. On the northern side, it is bordered by the River Vjosa, while on the eastern side, it is bordered by the Zagoria valley (Fig. 13). It extends over a length of 2000 m and has a width of 400 m.

Within this meander, we have identified five terrace levels. However, the best-preserved terrace is the fifth level, which is mainly composed of alluvial deposits with a conglomerate appearance. Its estimated age is around 17,000 years before the present (Koçi 2014: 300).

In the central part of the meander, a small hill rises, dominating the entire surrounding area and offering a commanding view in multiple directions. This hill's strategic position and prominence make it a noteworthy feature within the landscape.

In various sections of this meander, we have discovered several walls, each displaying distinctive construction techniques and materials (Fig. 14–15). The majority of these walls appear to be terracing walls, likely constructed to prevent land erosion and thus linked to agricultural purposes. They were built in accordance with the contour of the terrain to effectively preserve the landscape.

On the eastern side, we can observe the remnants of two square-shaped structures, which differ significantly from the terracing walls (Fig. 16a–b). These structures stand out not only due to their clear and massive walls but also because of the flat relief where they are situated. Their proximity to each other and their size suggest the possibility that they might be the remains of a fortified entrance.

The construction materials used in all the structures consist of stones sourced from the river and the surrounding rocky areas. These stones exhibit various shapes, with round and irregular shapes being prevalent, as they primarily comprise river shingle.

Another intriguing discovery pertains to information provided by local residents about the

Fig. 11 — Sections of the blocking wall (photo: T. Rama)

Fig. 12 — Sections of the blocking wall (photo: T. Rama)

3 —— In 2015, Taulant Rama, as a member of the Regional Directory of Culture in Gjirokaster, and Jake Morton from the University of Pennsylvania co-directed a survey of the region, identifying and documenting the following structures.

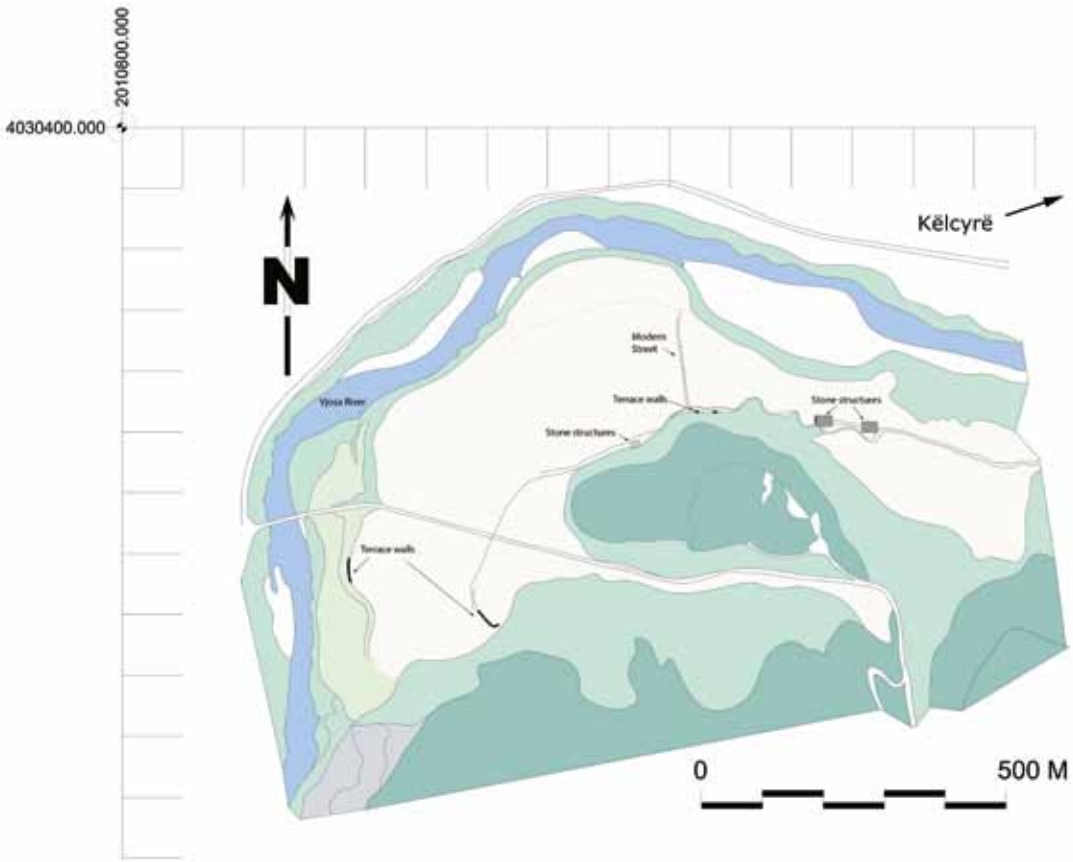


Fig. 13 — Meander survey in Peshtan (made by: T. Rama)

Fig. 14 — Terraced wall in the meander in Peshtan (photo: T. Rama)

Fig. 15 — Terraced wall in the meander in Peshtan (photo: T. Rama)

presence of graves in the area. Prior to 1990, during the construction of a road within this meander, a small hill known as "Kodra e Mogiles" was inadvertently damaged. The hill had a diameter of approximately 30 m and a height exceeding 2.50 m. During its demolition, the residents witnessed the revelation of six graves, which were constructed using slabs. Inside these graves, spearheads and helmets were found. Regrettably, it appears that these artifacts are now lost forever.

To the west of the small hill, there is a plain covered with numerous ceramic finds and fragmented bricks, generally dating back to antiquity. However, due to the continuous deposition of alluvium in this area over the years, it has been challenging to collect these artifacts and identify shapes that could provide chronological information. The objects that have sporadically been collected mainly consist of storage containers, such as pythoi sherds, and vessels sherds for everyday use.

Unfortunately, the best-preserved shapes primarily belong to the pythoi, for which a well-dated typology in Albania is yet to be established, making it difficult to pinpoint their specific chronology. Meanwhile, the brick fragments found in the area could potentially date back to the Roman Imperial Period.

ON THE IMPORTANCE OF FORTIFICATION SYSTEMS IN THIS AREA

Chronological aspects

First of all, we must emphasize that due to the absence of an intensive and long-term study on the terrain, a clear identification of the construction periods of each of the mentioned structures remains uncertain. However, they do offer some features that aid us in this direction.

The chronological periods to which the fortification on the mountain slope belongs can be defined based on a few ceramic finds and the construction technique. Some ceramic fragments are dated back to the 4th–1st centuries BC, while the majority of them and the tiles belong to Late Antiquity. The construction technique has often proven to be inconclusive for determining a narrow dating of the fortifications. As a result, we can infer a first phase of military presence here somewhere during the 4th–1st centuries BC. The minimal quantity of pottery finds suggests that this presence was relatively limited in time, in contrast to the extensive activity during Late Antiquity.

At this moment, we cannot definitively discern the chronology of every individual identified

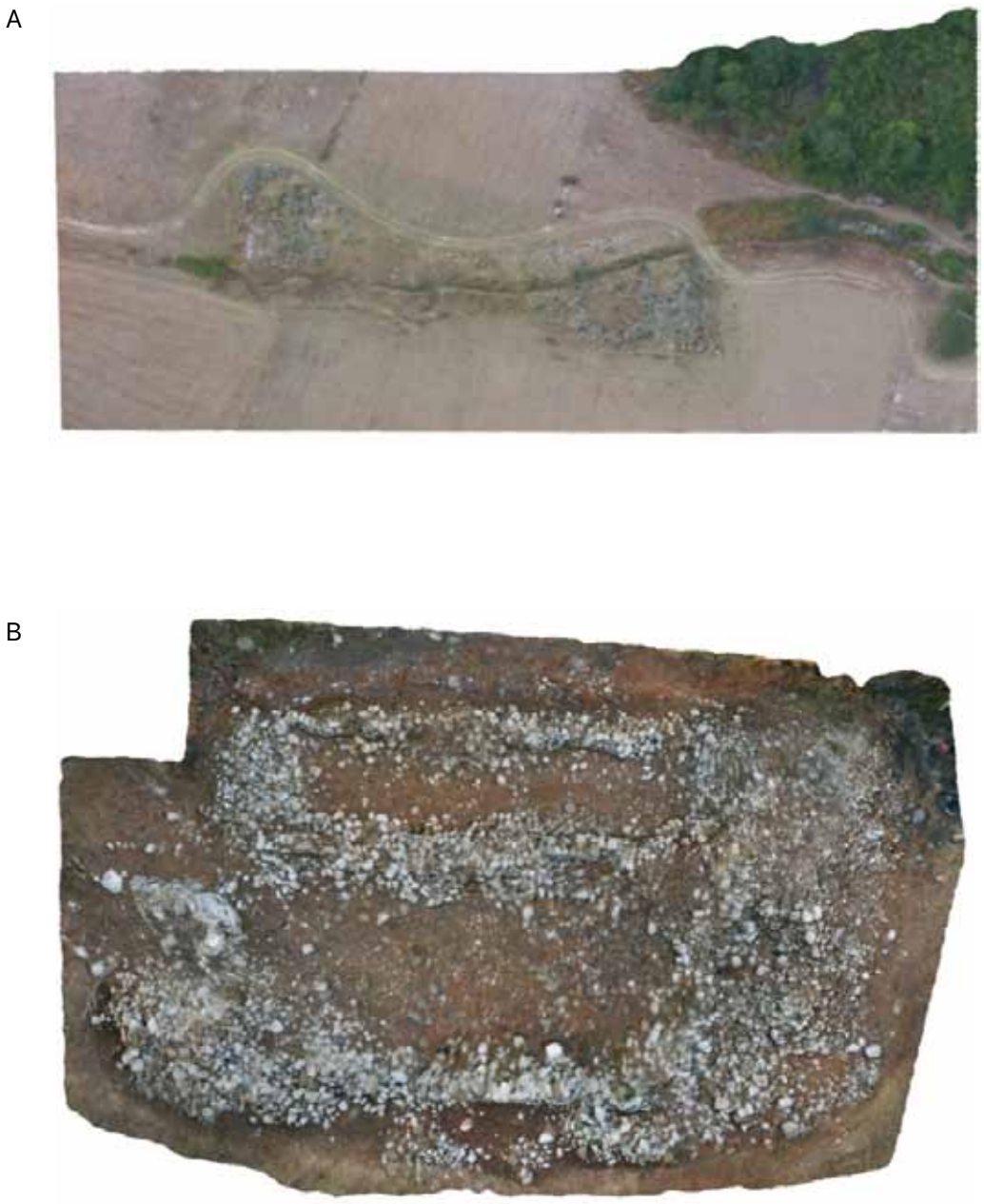


Fig. 16 — Close-up of adjacent structures (photo: T. Rama)

structure. We can rule out some as being ancient houses, but we cannot confidently determine if all the fortification elements were entirely built anew in antiquity and later repaired during Late Antiquity, or if only some of them underwent this process.

The blocking wall on the river bank was constructed using a typical isodomic technique, with blocks carefully cut and worked. The rock from which these stones were cut is the same as most of the fortification blocks on the mountainside, but the quality of the blocks in this wall is significantly

better. These characteristics strongly suggest an ancient origin for this structure.

The construction technique and the quality of materials used in the walls identified in the river meander are entirely different from those of the blocking wall and the fortifications on the mountainside. There are several possible reasons for this contrast. Firstly, some of these structures are clearly terracing walls, which cannot be associated with the building activity of 198 BC. The most probable structures that could be related to 198 BC are the "double towers", which might represent the foundations of a fortified entrance to the military camp. They would have been topped with wooden fences and moats.

These findings indicate that the area in this meander was utilized during different chronological periods, likely for agricultural purposes. However, the presence of soldiers' graves remains one of the most intriguing elements. Unfortunately, the loss of inventories in these graves poses a significant challenge in accurately dating and securely connecting them to the events of 198 BC.

The differing quality of each structure, in the wake of the battle of 198 BC, can be attributed to their distinct purposes. The blocking wall on the river bank was perceived as a military element that would be directly targeted by the opponent, necessitating a high quality construction. The fortification walls on the mountain slope were built on rocky ground and needed to be structurally secure, providing some level of protection.

Conversely, the structures in the meander of the river served a completely different purpose, and the reality of the terrain was much simpler. Having a base made of stones placed in the ground was sufficient, and wooden elements could be added on top to create a surrounding fence for a camp.

The strategic position

The primary importance of these two fortification systems is linked to their positions relative to the topography of the terrain. For any attacking army, there were two options: to pass through the gorges or to avoid them. However, in the latter case, they would have to march towards the northwest or the southeast, taking very long routes to circumvent the mountains. In both scenarios, the time needed for such a maneuver would present countless opportunities for the opposing party to act as they desired.

The fortification of Çeka

Across the entire basin, from the mountain peaks extending towards the Mezhgoran Gorge, the ridge where the fortification is situated may not be the highest, but it possesses two advantageous elements compared to the others.

First, there is an extension towards the southeast, resembling a wedge entering the mountain structure on the left stream of the Vjosa, while rising on its right side. This extension offers an incredible view from the top of the slope (Fig. 17). Towards the east, the view stretches continuously beyond the village of Luadh. Continuing on, there is a partial view between the mountain slopes above the village of Luadh, extending up to the Orthodox Monastery. This direction covers a practical distance of 4.11 km. Additionally, there are approximately 3 km in a straight line to Këlcyrë, which means the view dominates the greater part of the gorge on the eastern side. In the south-southeast direction, it encompasses a significant portion of the valley towards the village of Peshtan, spanning a distance of over 15 km as the crow flies.

On the western wing, the view angle is even more advantageous as there are no large slopes to obstruct it. From this perspective, the junction of the Vjosa and Drinos is practically under surveillance, and the adjacent valleys are visible. Moreover, there is a visual connection with the mountains beyond the Vjosa to the west, covering a distance of over 7 km as the crow flies. Heading north from here, one can observe almost the entire valley up to the village of Mezhgoran and beyond it, at an aerial distance of over 90 km.

Secondly, this ridge is lower than the surrounding ones, which makes it relatively easier to climb, but it still poses a challenge to attackers from below. It is due to these two crucial geomorphological factors that this mountain slope was chosen to be fortified.

The positions of towers at the Çeka fortification

After clarifying the position occupied by the fortification relative to the relief, it is important to understand the reasons behind the chosen placement of the defensive elements. At first glance, the way the structures are positioned may appear peculiar, with the southeast tower built outside the fortification wall and the northwest tower seemingly detached from the rest of the system.

However, the placement of the southeastern tower makes sense when considering the orien-

Fig. 17 — View from the Çeka fortification (base map: ASIG data; made by: E. Shehi)

tation of the path that ascends to the crest of the mountain slope. The natural trail leads directly to the position where the tower is located. The military architect deemed it necessary to position a tower at this specific place to keep the path under control. Even if the attackers managed to bypass the tower and head for the rampart, they would find themselves under fire from the soldiers on the rampart in front and the soldiers on the tower behind. Additionally, the position of the southeastern tower is the most advanced in relation to the valley and the gorge, providing it with a highly advantageous view.

We believe that the position of the northwestern tower served two functions simultaneously. Firstly, it allowed for even greater control over the territory, expanding the angle of view and enhancing the surveillance capabilities of the fortification. Secondly, it may have been conceived as the endpoint of the garrison's defense strategy. However, we find that it was almost impossible to take this fortification by force, considering the very steep terrain on which the entire fortification is built.

The blocking wall in the valley

In the case of the blocking wall, it is evident that we are dealing with a fortification line that completely sealed off movement through the gorge on the right side of the river. The decision to construct this wall on the right side of the river was influenced by the fact that the field created by the river meander came to an end precisely at that location. On the opposite side, the geomorphological position did not provide a natural crossing path. By controlling this wall, it became feasible to block all movement in the hinterland and restrict movement within the region.

Buildings in the meander of the river

Identifying the chronological terms of the walls in the river meander is more challenging. We must exclude from the discussion the terrace walls constructed with shingle stones. However, the remaining traces may potentially be associated with the events of the battle of 198 BC.

In the context of the battle, this meander would have been the ideal location to set up the Macedonian camp. The rest of the territory does not meet the necessary conditions for establishing a safe camp. The field below the Çeka slope is too open to attackers, making it unsuitable for setting up a camp. Furthermore, this area is positioned "extra muros" relative to the blocking wall on the river bank, meaning it is beyond the protective perimeter.

The slopes of the mountains are too steep to accommodate tents, and the Çeka slope itself

makes it implausible that Philip would have set up tents there, contradicting Livy's description. On the other hand, the meander to the left of the river flow, near the village of Peshtan, fulfills all the necessary security conditions for establishing a military camp. Firstly, it is situated in a bend of the river, which prevents communication with the western part of the left coast due to the rugged terrain, making it inaccessible for attackers.

The right side of the stream was under Macedonian control and completely secured by defensive structures. Additionally, this meander provided an excellent view of the field below the Çeka slope, enabling the Macedonians to have complete command of the situation with ease and safety. Moreover, it offered a clear view of the Mezhgoran stream valley and was in close proximity to the Zagore stream valley, making it strategically advantageous for the Macedonian camp.

Therefore, it is here that we identify the potential placement of the Macedonian camp. The two rectangular structures mentioned earlier could be related to probable elements of fortifications for the camp's defense. The artifacts from the soldier's graves have been lost, but their location may allow us to draw conclusions about the location of the Macedonian camp in this area.

The deployment of the Macedonian army in 198 BC

Among the researchers who have extensively studied the battle of Aôi Stena, such as Kromayer, De Sanctis, Walbank, Holleaux, and N. Hammond, it is the last that provides the most convincing interpretations regarding the positioning of the opposing armies. N. Hammond identifies the strait on both sides of the River Drinos as the mouth of Antigonea and precisely locates Aôi Stena at the Gorge of Mezhgoran (Hammond 1966: 45).[4] Furthermore, N. Hammond states that King Philip must have positioned himself in the northern part of the gorge, between the village of Dragot and Mezhgoran, as the only place with an opportunity and space to lay a path, mentioned by Plutarch (*Flam*. 3; Hammond 1966: 49).

In N. Hammond's detailed description of the battle, he places the Macedonian front just below the Çeka Ridge, at the narrowest part of the gorge, with defensive works near the river, artillery on the lower slopes, and lightly armed troops at the top of the slopes (Hammond 1966: Fig. 5, Map IV). According to him, Philip positioned general Athenagoras on the southern side, below Mount Asnau (identified with Mount Golik), while he stayed on the other side of the Vjosa from Mount Merop (identified with Mount Shëndëlli) (Hammond 1966: 39–54; Islami 1974: 300). The Macedonian camp was divided into two parts, one at the end of the Mezhgoran river valley, and the other in the meander near the village of Peshtan.

In the face of such a situation, the Roman attacks were unsuccessful. They achieved success only after discovering a secret path, revealed by a member of the Epirote party. This path allowed the Romans to pass behind the Macedonians' defenses, leading to their victory (Livy 32.5.8–13).

From the moment of the positioning of the Macedonian army at Aôi Stena to the stage of the development of the battles, more than 40 days passed (Hammond 1966: 51). During those days, the Macedonians had enough time to construct an effective defense system, including ditches, ramparts, and towers (Livy 32.5.9–11).

We cannot state with complete certainty whether the fortification of Çeka was built by Macedonian soldiers during the events of 198 BC or if it was a construction carried out by local tribes to maintain control over the territory. However, what we can be sure of is that the fortification's strategic position against the relief suggests that it was undoubtedly involved in the military activity of 198 BC and was likely under Macedonian control to block the gorge.

The quality of the construction of the walls does not match the high technical level seen in other fortifications in the area, which were built by local tribes over the centuries and could have even undergone reconstructions during Late Antiquity. Thus, there is a possibility that these structures, if not entirely, at least partially, were built by Macedonian soldiers for the purpose of the battle. The discovery of this fortification supports N. Hammond's identification of the front of the battle down the Çeka slope.

The position of the blocking wall, at the narrowest point below this slope, leads to a defense organization slightly different from that described by N. Hammond. The placement of the blocking wall allowed the Roman legions to gather in the widest part of the field below the slope of the Çeka, putting them within the range of the Macedonian mechanical artillery, which controlled both this mountain and the one on the left side of the

4 —— He also presents the opinions of other scholars before him and identifies the mistaken toponym references mentioned by Livy.

river. Moreover, the Romans would have to pass through a bottleneck before reaching the blocking wall at the edge of the river. This route, forced upon the Roman legions, was ideal for the Macedonians as it exposed the attackers from three sides and blocked them in the front. This positioning contradicts N. Hammond's opinion that there was a deployment of mechanical artillery and fieldworks in the field below the slope.

The traces discovered in the meander of the river near the village of Peshtan align with the positioning of one of the two Macedonian camps, as suggested by N. Hammond. Its location provided an ideal vantage point for security, territorial control, and a wide field of view. However, the unknown element is related to N. Hammond's opinion about the existence of a second Macedonian camp at the end of the Mezhgoran stream valley. Currently, there is no data on surface finds or discoveries from random excavations in this area. Therefore, this issue remains to be investigated in the future. Further research is needed to ascertain the presence or absence of a second camp in the Mezhgoran stream valley as proposed by N. Hammond.

These details of the positioning of the Macedonian defensive lines are crucial to understanding the events that unfolded during the confrontation in 198 BC. According to ancient authors, the Roman legions received assistance from local shepherds, influenced by Charops, who guided them through mountain paths, bypassing the gorge controlled by the Macedonians. N. Hammond determined the route of the Romans from the north, following the valley of Luftinja, crossing Shëndelli Mountain, and descending from the territory that now corresponds to the village of Mezhgoran. They struck the Macedonian army from behind and from the heights on the right side of the gorge (Hammond 1966: 52).

According to Plutarch, the Macedonian army immediately retreated in disarray (*Flam*. 5.1). Livy writes something similar, with even more commendatory remarks about the Romans (32.12.6–7). However, N. Hammond believes in a much more organized and cautious retreat (Hammond 1966: 52, note 38).

The fact that the Macedonians controlled the fortification of Çeka strongly refutes the notion that the Roman attack was entirely unexpected. It is highly unlikely that the Roman legionnaires could have descended on the right flank of the Macedonian army without being noticed. This flanking movement significantly altered the course of the battle, placing the Macedonians in a precarious position between two forces, ultimately leading to their defeat. However, the actual events likely did not unfold in the disorderly manner depicted by Plutarch and Livy, who, as N. Hammond rightfully notes, may have been biased in their narratives (Hammond 1966: 52, note 38).

The reasons for the selection of this position by the Macedonians

It is evident from the above descriptions that Aôi Stena as a whole provided a series of advantages for the Macedonian army in the anticipated battles with the Romans. However, a natural question arises: why was the defensive line positioned precisely in the middle of Aôi Stena rather than at its entrance or exit?

In fact, while positioning the defensive line at the entrance of the gorge would offer advantages against attackers due to the narrow valley and adjacent mountain slopes, it also presented a significant drawback. This deficiency can be explained by considering the individual positions of the fortification elements on the mountain slope. These elements not only controlled the entrance and exit of the gorge (from the west and east, respectively) but also had dominion over the two valleys formed by the Mezhgoran and Zagori streams, which are perpendicular to the gorge.

If the defensive line were placed at the entrance of the gorge, it would either leave the valleys created by these streams completely unprotected, or it would result in a delayed response to any alarm raised by the Macedonian soldiers stationed on the mountain slope tops. In essence, a middle position allowed the Macedonian army to maintain control over all the crucial points, enabling them to respond more effectively to any threats from both the entrance and exit of the gorge, as well as the perpendicular valleys, ensuring comprehensive protection of their territory.

Placing the defensive line at the exit of the gorge would have the advantage of utilizing the narrow relief, but it would create two major disadvantages:

Firstly, it would practically provide the attackers with the opportunity to exploit the fields created by the river's meanders, as well as the valleys of the Mezhgoran stream in the north and the Zagori stream in the south. This would make the defensive position more challenging, while granting the attackers more opportunities to maneuver and potentially find mountain paths to bypass the defense through the two stream valleys.

Secondly, the area near the exit of the gorge is so narrow that there are no other river mean-

ders suitable for placing military camps. Beyond the gorge, the field of Këlcyra begins.

For these strategic reasons, the Macedonian army chose to deploy in the indicated area within Aôi Stena. Along the entire length of the gorge, they practically had the ideal position to create an impassable protective barrier. Therefore, Philip's decision to position his forces there should be considered the right one, given the circumstances and advantages provided by the terrain.

However, this answer raises another question: was Philip aware of the existence of mountain paths when he settled precisely in this part of Aôi Stena? He was in alliance with Epirus, while Charops, who was part of the Epirote aristocracy, secretly collaborated with the Romans. Therefore, we are inclined to believe that Philip, likely informed by his Epirote allies, must have been aware of the existence of paths through the mountains. If Livy's description that the Romans traveled at night to climb the mountain is accurate, it should be taken as an indicator of the presence of Macedonian checkpoints scattered along the mountain paths.

Regarding the points raised above, we share the opinion that the Epirote allies likely informed Philip about the existence of the mountain paths. This crucial piece of information could have been one of the strong reasons behind the decision to place the camp in the middle of Aôi Stena. Examining the course of events before and after the lost battle, it appears that the Macedonian king did not fully trust the Epirote allies but took precautions to have backup plans for any situation. As a result, certain issues can be explained, such as:

1. Placing the army at a point that controlled all the possible crossings in the area.

2. The journey of the Romans at night, indicating the presence of Macedonian checkpoints on mountain paths.

3. After the flanking, the withdrawal towards the exit of Aôi Stena, in Këlcyra, where the army gathered. This suggests a possible fortification at that point, assuring Philip that he would not be attacked by the Romans.

4. Failure to pursue the Macedonians in retreat from the victorious Romans. According to the claims of Plutarch and Livy, there was a total breakdown and chaotic retreat, but then military logic would dictate pursuing the enemy, especially in a narrow gorge like Aôi Stena, which would likely lead to the capture or killing of the king himself. However, the absence of such pursuit indicates an organized withdrawal in a safe situation.

CONCLUSIONS

The archaeological findings from the field have allowed us to reopen a long-neglected debate concerning the ancient topography and the examination of the events in the battle of Aôi Stena. This reevaluation involves scrutinizing the data provided by ancient sources with a critical eye. The data from the field represent one of the rare instances where material heritage can be harmonized with history, providing fresh insights into the course of events.

Addressing such topics through field research is of utmost importance due to the opportunity it offers us to reassess our existing knowledge. By combining archaeological evidence with historical records, we can arrive at new interpretations, enriching our understanding of the past. This interdisciplinary approach enhances the credibility and accuracy of our historical narratives, providing a more comprehensive grasp of ancient battles and topography.

In this particular case, the significance of the discovered fortifications is closely tied to their geographical location, which served as a critical crossing point to be controlled during pivotal situations. This aspect also accounts for their disuse during the Pax Romana as they lost their value, and their subsequent revival in Late Antiquity, particularly in the case of the Çeka fortification. The resurgence of military garrisons is directly linked to the loss of imperial control over the territory, necessitating the fortification of key points like this mountain ridge.

Conversely, the situation is entirely different in the plain area of the meander in Peshtan, where its favorable agricultural position rendered it suitable for use during various periods of time.

In summary, the significance and use of these fortifications are intricately intertwined with their geographical context, reflecting the changing dynamics of control and defense of the territory during different historical periods.

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