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PALAGRUŽA – THE ISLAND OF DIOMEDES
SUMMARY EXCAVATION REPORT 2002-2008

The small archipelago of Palagruža, situated in the very centre of the Adriatic Sea, between Gargano and the central Dalmatian islands, has been in recent years the focus of systematic archaeological excavations mainly because in 1994 it was identified as the ancient Islands of Diomedes¹. After 1994, excavations on Palagruža were conducted in 1996 with the basic goal of finding the remains of St. Michael's church at the site of Salamadrija (VS 1228.00-02)², the main archaeological site on Velo (or Great) Palagruža (fig. 1)³. During these excavations two trenches V and Z 8 (each of 2 × 2 m) were excavated at the southeast edge of the large stone pavement, built for collecting rainwater in the second half of the 19th century AD (fig. 1 and 2). A great and important number of finds of prehistoric, Greek and early Roman date in the lowest layer (4050, see Table 1 for amounts of pottery) were excavated⁴. Although from 1873-1875 the site (60 m above sea level) has been considerably built over and suffered great damage after naval bombardment during the First World War and by later building activities, the discoveries in V and Z 8 gave hope that with new excavations more reliable evidence about the earliest occupation would be forthcoming⁵.

The excavations that took place in 2002-2008 have been published in a preliminary form in Croatian archaeological journals⁶. As for most of the readers of Hesperia

¹ KIRIGIN 1996, 19-25; KIRIGIN – ČAČE 1998, 63-110.

² The code number is from the Sites and monuments data base of central Dalmatian islands: see KIRIGIN – VUJNOVIĆ – ČAČE – GAFFNEY – PODOBNIKAR – STANČIĆ – BURMAZ 2006, 74-76, and map on 222.

³ KIRIGIN – KATUNARIĆ 2002, 297-324.

⁴ The graffiti from these two trenches have been published by Kirigin and Čače (see note 1).

⁵ The excavations are financed by the Ministry of Culture and the Ministry of Science, Education and Sports of the Republic of Croatia.

⁶ KIRIGIN 2003, 367-378; KIRIGIN – KATUNARIĆ – SKELAC 2004, 207-220; KIRIGIN – KATUNARIĆ – MIŠE 2005, 251-260; KIRIGIN – KATUNARIĆ – MIŠE 2006, 383-386; KIRIGIN – MIŠE – BARBARIĆ – POPOVIĆ in print; KIRIGIN – MIŠE – BARBARIĆ – POPOVIĆ in print.



Fig. 1. Aerial view of Salamandrija from the north.



Fig. 2. Sketch plan of Salamandrija site.

ría it is hard to find these journals, here we offer a summary report of six years field work⁷. Also we will present some preliminary observations of the excavated material and problems connected with them.

The report is divided into five parts:

- I. Excavations on the south slope of Salamandrija
- II. Excavations on the central part of Salamandrija (excluding the church of St. Michael dated to the second half of the 19th century AD)
- III. Excavation on the north slope of Salamandrija
- IV. Other sites on Palagruža
- V. Discussion

I. EXCAVATIONS ON THE SOUTH SLOPE OF SALAMANDRIJA

Systematic archaeological excavations on this part of Salamandrija plateau were undertaken in 1996, and from 2002-2007. During these campaigns, 9 trenches were completely excavated, covering a total of 36 m². The trenches were positioned south of the Roman fortress (see part II below) on a steep area. In the upper layers (5100 and 5240) in trenches U 6-7 and V 6-7 two adult human skeleton in a stretched position with heads facing west (Grave 1 and 2) and without grave goods were found. Below grave 2 in U-V 6 another grave (no. 4) in a contracted position was inserted into layer 5200. This one was also without grave construction and offerings. According to their stratigraphic position, the graves can be dated to the post-Roman period⁸. The excavations in trench U 6 and 7 were terminated at the level of the graves, but in trench V 6 below this grave were layers that yielded material which can be dated to the life span of the fortress (tiles, *amphorae*, fine and coarse wares). The same situation was documented in other trenches on the south slope in layers immediately below the surface.

In all excavated trenches two sterile layers: one with yellowish colour and other white with mortar (5300 and 5400), are below layers of the Late Roman Period. The same layers were found on Northern Slope of Salamandrija where more accurate stratigraphic data is documented (see below part III). These layers can be related to the time during the building of the fortress. Below these «construction» layers there is a relatively thick dark layers (4050) that yielded large amount of prehistoric, Greek, Hellenistic and Early Roman finds, mostly pottery (figs. 3, 4). In some areas at the very

⁷ In fact, only 4 months of efficient field work by a team of some ten archaeologists and students.

⁸ The bones of the skeletons will be given to specialist for further analysis.

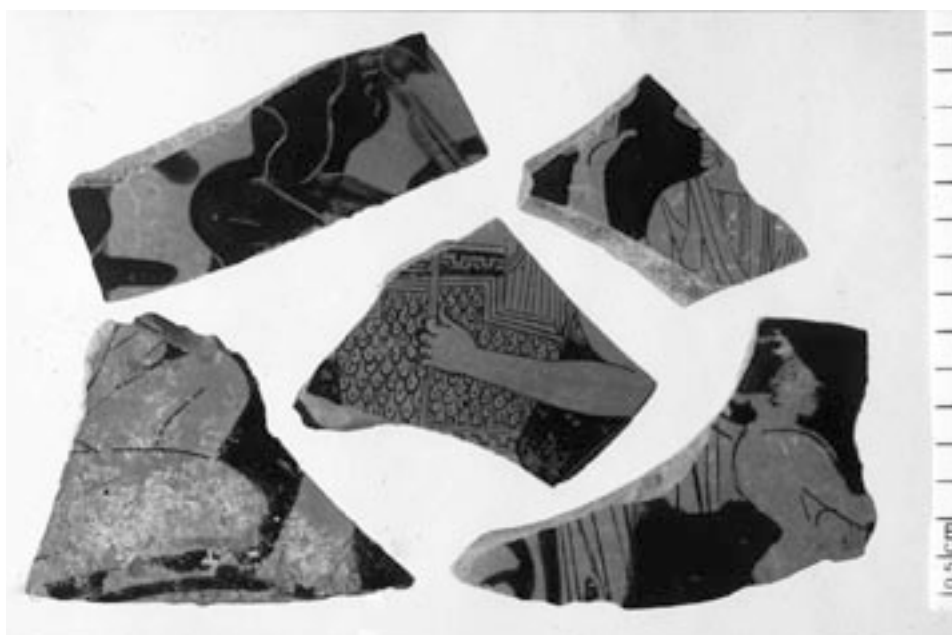


Fig. 3. Black and red figured fragments from trench Z 7, layer 4050 found in 2002.

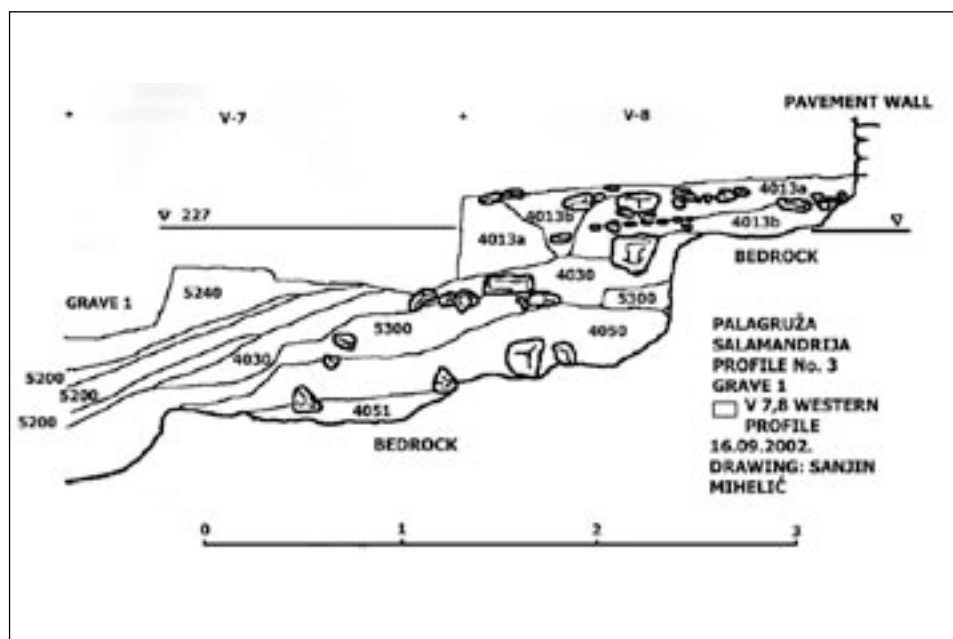


Fig. 4. West section of V 8 and 7.



Fig. 5. Joining fragments of a gaffito from V 7 and Z 8, layer 4050.

bottom there is a slightly lighter layer (4051)⁹. We can presume that layer 4050 presents re-deposition of the layer that primarily belonged to the life span of the Greek/Hellenistic/Early Roman sanctuary, but was removed together with much earlier prehistoric finds from the central plateau of Salamandrija to make room for the construction of the fortress. This abrupt dislocation of the artefacts can be confirmed by fragments that join and were separated by as much as m 2-3 from each other in the same layer (fig. 5). Among the pottery fragments there are some 200 with graffiti (several indicate the name of *Diomedes*, the majority being, unfortunately, just a letter or two or merely parts of letters)¹⁰. Within this layer also a few fragments of Hellenistic and Roman terracottas and lamps were found mixed with obsidian blades, flint tools and flakes, fragments of glass, gems, Greek, Hellenistic and Roman Republican coins, bronze hairpins, needles, *fibulae*, rings, dice and arrowheads¹¹, sea shells, animal and few fish bones.

Table 1 shows the number and the statistical relations among the pottery fragments found in layer 4050 on the south slope. It must be noted that among the Greek and Roman fine wares most of the fragments are very small in size and weight¹² and thus hard to identify properly. The same is true of tiles as the majority of

⁹ Later we have found that the difference in colour is caused by the bedrock which is yellow, soft and very irregular.

¹⁰ The graffiti from Palagruža will be published by A. Johnston, S. Čače and B. Kirigin in the forthcoming volume *The Greek graffiti from Dalmatia*.

¹¹ Some of these are published in reports mentioned in note 5.

¹² The calculations from V 7 and 8 and Z 7 and 8 have shown that an average fragment of prehistoric pottery weights 6 gr, Greek fine ware 2 gr, Roman fine ware 1 gr, Greek and Roman fine ware, 1,5 gr, coarse wares 3,5 gr and amphorae 21 gr.

2 × 2 m2	<i>p</i>	<i>gfw</i>	<i>r fw</i>	<i>g&r fw</i>	<i>cw</i>	<i>Amf</i>	<i>Tile</i>	<i>med/ mod</i>	<i>total</i>
V-6	382	341	73	231	89	6	83	0	1205
V-7	301	1300	274	498	396	57	252	0	3078
V-8	22	503	68	–	223	17	16	0	849
Z-6	621	1351	315	347	746	75	343	0	3798
Z-7	73	1969	864	426	624	41	522	1	4520
Z-8	57	1644	628	571	1105	96	789	1	4891
A-8	4	86	35	50	66	5	11	0	257
B-8	25	453	171	88	401	27	157	0	1322
A-9	16	200	88	58	166	49	107	0	684
B-9	9	107	42	128	66	16	229	0	597
SE corner Z-9	12	24	18	12	14	0	20	0	100
Total:	1522	7978	2576	2409	3896	389	2529	2	21301
%	7,15	37,45	12,09	11,31	18,29	1,83	11,87	0,01	

Table 1*. Total amount of pottery fragments in layer 4050 on South Slope Table 1 (p= Prehistoric; gfw= Greek fine ware; rfw= Roman fine ware; g&r fw= Greek and/or Roman fine ware; cw= Coarse (kitchen) ware; amf= *amphorae*; med/mod= Medieval/modern).

them are chopped-up flakes. The table clearly show the dominance of fine wares over coarse wares (61.66% : 18.29%)¹³.

II. EXCAVATIONS ON THE CENTRAL PART OF SALAMANDRIJA

(EXCLUDING THE CHURCH OF ST. MICHAEL DATED TO THE SECOND HALF OF THE 19TH CENTURY AD)

During the excavations in 1996 at the southwest of the remains of the church of St Michael in trench C 10 part of a massive wall (stones mixed with mortar) was found that was made with different mortar and in a different technique from the church walls. To see what this wall represents in 2002 trenches A-B 9 and 10 were opened. The excavations have shown that here we have an angle of a building with

* This is the revised table published by MIŠE 2006, 203-215, Tablica 1.

¹³ For cooking pottery from Palagruža see: MIŠE 2006, 203-215.

walls c. 1 m wide going towards north and west, with a wall in C 10 going to the east which seems to be curved. The very angle of the building is thicker by c. 50 cm making a square of c. 1,5 × 1,5 m. It was thought that this is most probably for reasons of stability, since it is at the top of the south slope, with walls of c. 1 m width. The excavations in trench A 10 (the interior of the building) revealed patches of a floor made of pressed grey soil. On top of this floor, next to a dry-stone wall (partly dug into the floor) irregular stone blocks enclosed the bones of an adult person¹⁴. Between these features mainly fragments of Late Roman *amphora* type 1 and 2, some tiles and tesserae were found. Below the floor level the bedrock is very shallow and irregular with small patches of dark soil. In one of them in A 10 a Roman Republican bronze coin from the 2nd century BC was found.

In 2003 georadar survey showed that fortification walls exist to the west and north of the ones found in 2002. Therefore, we opened a surface of 36 m² towards the north and discovered that the east fortification wall extends in that direction, making a total length of 14 m, without reaching its north end (see below part III). Connected with this wall are two narrower walls that represent the interior arrangement of the fortification. All these walls are preserved mostly only as foundation mortar: in two places the main wall is covered with walls that formed the paved courtyard of the much later church (fig. 2, black lines over pink). The two interior walls that are c. 3 m apart have, like the exterior, traces of wall plaster. Here there were no traces of a floor, which was probably removed during later leveling. On the uneven bedrock, along the edges of the south wall and in the north half of the area there was a layer of soot with flat glass fragments and kitchen pottery that is typical of local Adriatic workshops of the 3rd/4th century or even a little later (fig. 6)¹⁵.

During the excavations in trenches A-B 15-17 three interior walls of the NW part of the fortification were found. The layers within the interior represent a fill of c. 1 m height that were formed in the second half of the 19th and in the 20th century.

Excavations in 2005 in trenches C-D 10 and 11 showed that the east fortification wall had a semicircular section here (3 m in diameter) built as an integral part of the building. It is preserved mostly only by foundation mortar with prints of stones that had been removed. West of this in parts of B – C 10 and 11 a pit for making lime

¹⁴ As most of the grave was under the stone pavement for collecting rainwater the rest of the grave was excavated in 2006 when the pavement was removed and later returned. The bones were heaped at the east part. In the west part of the grave a iron spearhead was found (fig. 10, 1), that can be dated in the Roman period (Cfr. RADMAN-LIWAJA 2004, 29, Pls. 5-6).

¹⁵ KIRIGIN 1998, 429-440.

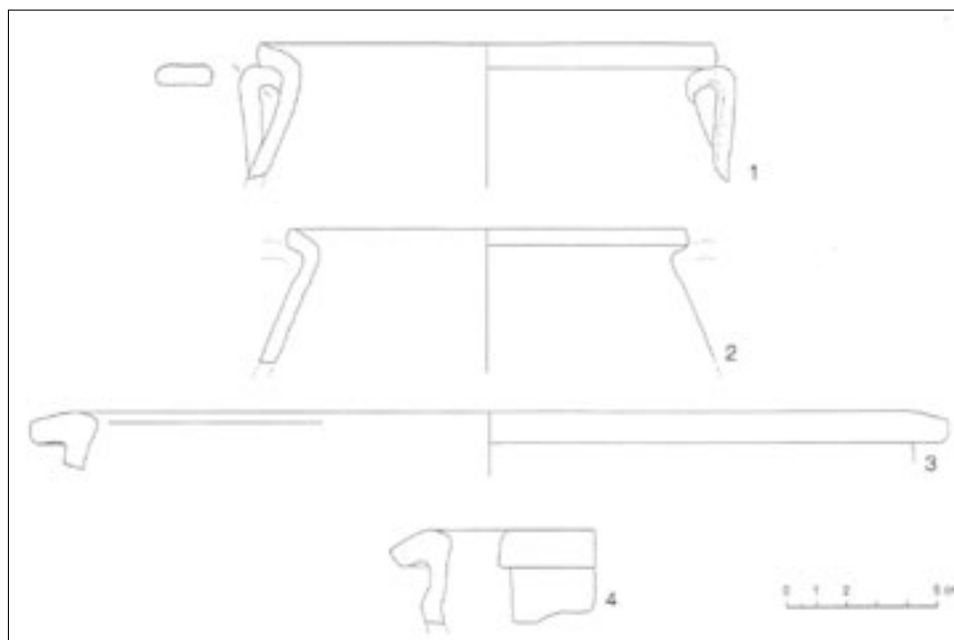


Fig. 6. Late Roman cooking pottery from the interior of the fortification found in 2003.

was sited, probably of 19th century AD date. Within the fill a tip of a clay lamp that could be of Early Medieval date was found (fig. 7)¹⁶. If correct, this would be the first Early Medieval find from Palagruža.

Although excavations in trenches C 12-14 from 1996 had unearthed the front face of St Michael's church together with the walls of the church's courtyard, further excavations in 2004 and 2005 revealed the remains of 3 pits cut into the bedrock (fig. 8). Over the biggest one, c. 2 × 2,5 m and c.1,2 m deep (fig. 8, a), runs the front wall of the church. To the west and north this pit has a hewn out shelf and to the south it seems that there was an entrance (fig. 8, a). It seems that the builders of the church did not notice its existence when they planned the church, and so, when starting to build the front wall foundation (fig. 8, d) they had to clear the pit so as to make a solid base. After this they filled the rest of the pit with loose soil. The other smaller rectangular pit (c. 70 × 50 × 15 cm) is to the northwest. On the west side of the pit is the pilaster-strip of the east fortification wall (fig. 8, b). The third one, oval

¹⁶ For similar examples see: PETRIĆ 1990, 173-179; PATTERSON – WHITHOUSE 1992, 87-195.



Fig. 7. Fragment of an Early Medieval clay lamp.

in shape (c. 100 × 70 × 80 cm), is eastwards (fig. 8, c). It was re-arranged after the church's destruction. Below some 20 cm a heap of bones of an adult person were found in this pit. All these pits were once below the church's paved courtyard. It is very hard to explain the function of these pits and to date them¹⁷.

In 2005 and 2008 we excavated parts of the south-west angle and of the west wall of the Roman fortification that are of similar construction to the south-east one (fig. 2). These are much less well preserved but sufficient to confirm that the south wall was some 19 m long.

As mentioned, during 2003 georadar survey was performed on the stone paved rain-water collector (c. 350 m²). This was undertaken because it was thought that a non-destructive method could indicate what we could expect to find under the pavement without removing it. The survey showed that next to the walls of the Roman fortification there are features that appear to be remains of some other (earlier?) architecture, possibly of Diomedes sanctuary. In 2005 and 2006 trenches T 13 and U 13-14 that cover the diagonal lines indicated by georadar were opened. Unfortunately, the diagonal lines appear to be bedrock layers that run in that direction, found not more than 20-30 cm below the pavement. In the south part of U 13 traces of interior wall of the fortification were found that are on the line with the wall found in A 13 (fig. 2). In the western part of U 13 in the same stratigraphic position

¹⁷ For the largest one with a shelf and possibly an entrance we considered whether it could be something like a prehistoric hut, as known in south Italy, or a cistern; but it is too small for habitation.

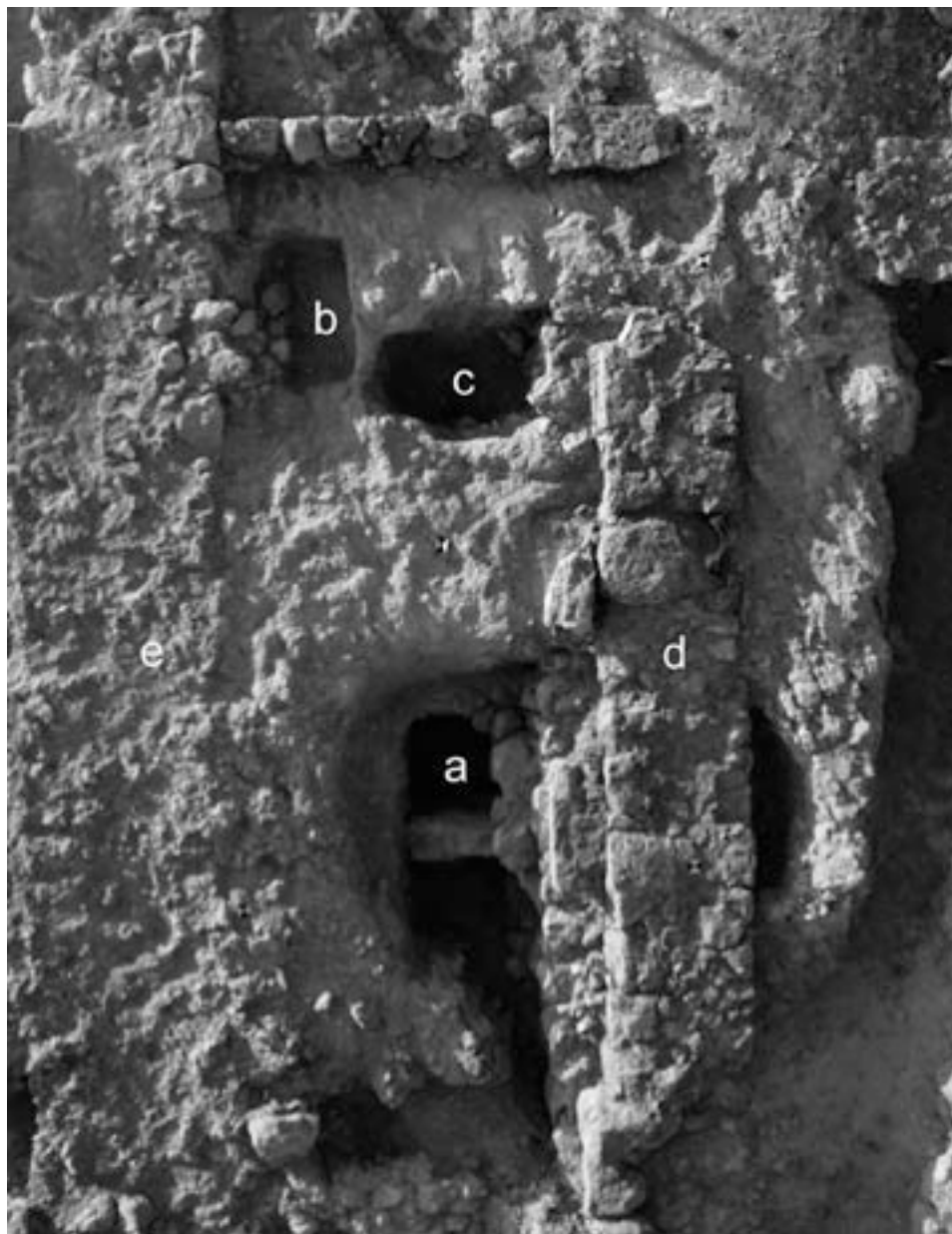


Fig. 8. Aerial view of pits (a-c), the front wall of St. Michael's church (d) and the west part of the Roman fortification wall (e).

as the wall, remains of a small circular construction of two rows of worked stones connected with hydraulic mortar were found. It looks like the function of this was to hold some wooden beam as its print was marked in the mortar. Maybe it could be that here we have traces of a water pump that was pumping water from the cistern situated at a lower level in the northwest corner within the fortification (fig. 2)¹⁸. Few interesting finds were excavated here: fragments of red and black coloured frescoes and plaster relief decoration.

III. EXCAVATION ON THE NORTH SLOPE OF SALAMANDRIJA

Excavation on this part of Salamandrija plateau began in 2006 with the idea of revealing the actual size of the Roman fortress and to study the stratigraphic sequence on this side of Salamandrija¹⁹. Trenches A-B 18 and C 17- 19 (fig. 2) covered the presumed location of the northeast angle of the fortification. The excavations showed that here the northeast angle and walls of the fortress are much better preserved than elsewhere. The corner of the fortress, along with the 5 m section of the north wall covered with plaster, is preserved to the height of approximately 1 m. The angle is also strengthened as those on the south side.

Additional trenches were excavated in 2007. Results in trenches A-C 19 (fig. 2), added some new problems regarding site formation processes. Upper layers contained finds from various site occupation periods that are mixed together with prehistoric, Greek, Roman republican and Late Roman finds, together with modern artefacts. Below these layers a large amount of loose stones were found which form some kind of a fill, right next to the outer side of the wall. The nature of this fill was not possible to explain at the time. Layers below the fill show the same characteristics as the lowest layer on the southern slope of Salamandrija (layers 4050), with finds from the Late Eneolithic/Early Bronze age (Cetina culture pottery, flint and obsidian) mixed with those from the period of the existence of the Diomedes sanctuary.

¹⁸ This NW part of the Roman fortress is badly preserved with many later repairs of walls. In the second half of the 19th century another cistern was dug here that is still in function. The stone pavement for collecting rainwater was built to supply this cistern.

¹⁹ In 1992 and in 1993 survey and test excavation on the north slope of Salamandrija had revealed a considerable number of mostly prehistoric and Roman artefacts. Greek pottery finds were not so numerous but were very indicative as they were the first Greek finds to be found on the island (see FORENBAHER – GAFFNEY – HAYES – KAISER – KRIGIN – LEACH – VUJNOVIĆ 1994, 44-45). As this north side is not as steep as the south slope, it was thought that here we would have a better insight into the site formation process.



Fig. 9. Finds from excavations in 2006: 1. Iron spearhead from grave 3; 2. Black gloss *kalos* graffito from C 19, layer 9300; 3. golden wind up wire (ring ?) from C 19, layer 9800; 4. Iron ring from A 9, layer 4056; 5. Multicoloured glass from C 19, layer 9710; 6. Multicoloured glass from C 19, layer 9710; 7. Obsidian blade from C 19, layer 9100; 8. Lamp fragment of a person with a large *phallus*, from, C 18, layer 9240; 9. Bronze base of a small altar(?) from C 9, layer 650.

Some interesting finds come from these trenches: a shiny black gloss fragment of an Attic plastic vase with a *kalos* type graffito ($[\sigma \kappa \alpha \lambda \omicron]$ and $[\alpha \nu \iota \text{ c.3 } \alpha \lambda]$; final letter l or d, not n), a small golden ring and two multicoloured glass (Phoenician?) fragments – the first to be found on Palagruža –, obsidian, and a lamp fragment with a person with a large *phallus* (fig. 9, no. 2, 3, 5, 6, 7 and 8). Other finds from these trenches show that the same type of artefacts appear here as on the south slope but in smaller numbers (except prehistoric ones! Compare Table 1 and 2) and with more coarse ware and *amphorae*. This fact points to the possibility that the area with more intensive sanctuary activities was closer to the south, than to the north slope.

Among the finds the first completely preserved Greek graffito from Palagruža was found in B 19, layer 9010: ΣΟΛΕΙΟΣ ΑΝΕΘΕΚΕ (fig. 10. 1) to which we will



Fig. 10. Finds from excavations in 2007: 1. Base of a Attic *kylix* with graffito ΣΟΛΕΙΟΣ ΑΝΕΘΕΚΕ from B 19, layer 9010; 2. Rim of an Hellenistic bowl with graffito in two lines: ...ΛΙ ΔΩ... / ...ΜΗΔ... from A 19, layer 9390; 3. Fragment of a tile (?) with graffito: ...Ε(?)ΔΜΙ(Υ?)ΝΑ...(?) from A 19, layer 9710; 4. Knidian (?) relief ware from B 19, layer 9100; 5. Protome of a head of a goat (?) from B 19, layer 9030.

return later. Beside that, a partially preserved graffito written in two rows on a late Hellenistic gray vessel was found: ...ΛΙ ΔΩ... / ...ΜΗΔ..., (fig. 10, 2) obviously indicating that somebody was making an offering to Diomedes.

In Table 2 we present the number of pottery fragments found in six trenches of 2 × 2 meter on the north slope in layers corresponding or related to layer 4050 (south slope):

The stratigraphic sequence on the north slope was not fully understood until additional trenches were excavated during the 2007 and 2008 campaigns. Trenches V 17-20 (14m²) (fig. 2) were excavated below the stone pavement for collecting rain water. It was thought that the pavement could have prevented the secondary

2 × 2 m ²	p	gfw	r fw	g&r fw	cw	amf	tile	med/mod	total
TOTAL	233	414	77	62	349	216	1188	3	1908
%	12.21%	21.70%	4.04%	3.25%	18.29%	11.32%	62.26%	0.16%	

Table 2. (p= Prehistory; gfw= Greek fine ware; rfw= Roman fine ware; g&r fw= Greek and/or Roman fine ware; cw= Coarse (kitchen) ware; amf= amphorae; med/mod= Medieval/Modern).

interventions into the lower layers during late 19th and the 20th century. Trenches covered both sides of the north fortification wall together with a substantial portion of the upper north slope.

The following conclusions were made:

1. The stratigraphic sequence on the inner southern side of the fortification wall (trench V 17) shows that the activities for the preparation of the plateau for building the stone pavement in the second half of 19th century have destroyed the remaining layers of the Roman fortress. The bedrock was very close to surface.
2. The stratigraphic sequence on the north side of the fortification wall (trenches V 18-20) shows that:
 - a. Presumptions about the nature of the lowest layers on the south slope have been confirmed here on the north slope too. The preparation of the plateau for the construction of the Roman fortress was carried out in a way that the whole area was cleared of any earlier architecture. All the artefacts from the sanctuary, together with existing soil, were dumped on both slopes of Salamandrija plateau, thus forming layers 4050 (southern slope, fig. 4) and 9251, 9250, 9710 and 9300 (north slope, fig. 11). On the north slope there is a layer that consists only of lime plaster that was once the cement material of walls (layer 13110). This layer could represent the recycling of the building material from older structures. It is, though, unclear whether this could be some structure related to the sanctuary, or some later structure but one still older than the fortress.
 - b. After the terrain had been cleared by the builders of the fortification, walls were built on the bedrock. Sometimes, bedrock was cut for the better fitting of the blocks of the fortification wall. Traces of this activity can be found on both slopes in layers of stone rubble that have just a few artefacts (layers 13010, 13020 and 13100 on north slope and 5300 on south slope). These are above the layers with artefacts from the sanctuary (9251) (fig. 11).
 - c. The area next to the north wall was levelled with a large amount of loose stones that were dumped at the top of the slope (layers 13000, 13200), and after that

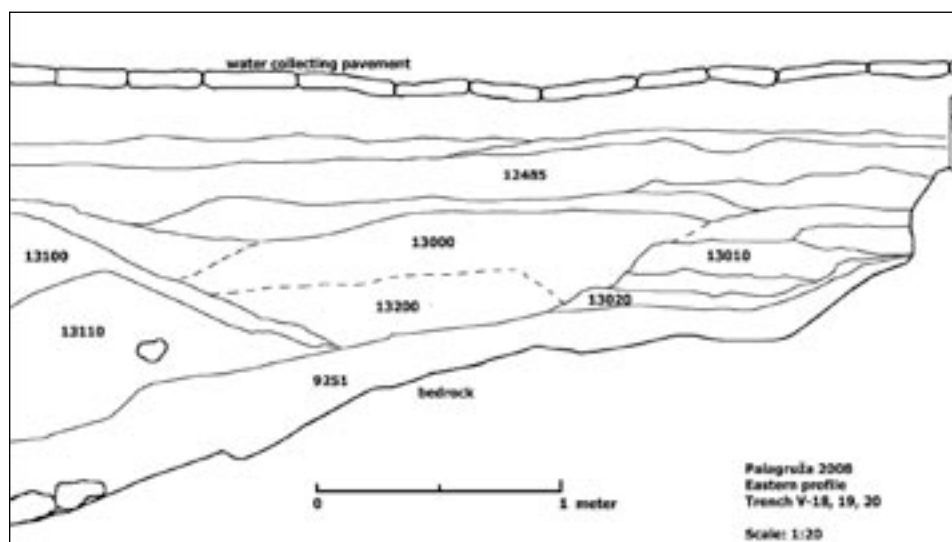


Fig. 11. East section of V 18-20.

levelled with additional soil. The outer wall has two phases of rough plastering, and both end above these layers of levelling.

- d.* Above this a layer was found (no. 12485 on fig. 12) that corresponds with the life-span of the fortress. It contained few Greek and early Roman fine wares (Table 3), two hellenistic coins, the bow of a Roman bronze fibula of the 1st/2nd century AD, and more numerous amphorae and cooking pots, diagnostic ones being of Late Roman date. One coin of Antoninus Pius (138-161. AD) was found in the layer 12720, which is related to 12485. Layer 12485 stretches alongside the wall, forming a passage or operative area to the north.
- e.* The rest of the layers were formed through the 19th century, with the preparation of site for the building of the water – collecting pavement.

2 × 2 m2	<i>p</i>	<i>gfw</i>	<i>r fw</i>	<i>g&r fw</i>	<i>Cw</i>	<i>amf</i>	<i>tile</i>	<i>med/mod</i>	<i>total</i>
V-18		2	8	12	65	50	13		150
V-19		11	15	17	124	133	31		331
V-20		2	3	12	81	67	3		168
TOTAL	0	15	26	41	270	250	47	0	649
%	0.00%	2.31%	4.01%	6.32%	41.60%	38.52%	7.24%	0.00%	

Table 3. Pottery finds from the layer 12485 (*p*= Prehistory; *gfw*= Greek fine ware; *r fw*= Roman fine ware; *g&r fw*= Greek and/or Roman fine ware; *cw*= Coarse (kitchen) ware; *amf*= amphorae; *med/mod*= Medieval/Modern).



Fig. 12. Black figured *lekythos* from C 18, layer 9251.

Apart from finds from 12485, we can point to a BF lekythos with Theseus or Heracles fighting a bull (fig. 12), dated to the end of the 6th century BC²⁰, found in layer 9251. Also a fragment of Early Neolithic Impresso pottery was found in this layer. It is the first one from Salamandrija.

IV. OTHER SITES ON PALAGRUŽA

1. Next to the known Early Neolithic site at Jankotova njiva (VS 1227.00)²¹ a fragment was found during survey in 2003 on the north slope below the Lighthouse²². These two sites are separated by some 800 m.

²⁰ We are grateful to A. Johnston for this identification. Also we thank him for doing most of the proof reading of our text.

²¹ FORENBAHER – GAFFNEY – HAYES – KAISER – KIRIGIN – LEACH – VUJNOVIĆ 1994, 37-37; KIRIGIN – KATUNARIĆ – SKELAC 2004, 208, 210.

²² KIRIGIN – KATUNARIĆ – MIŠE 2005, 256-257.



Fig. 13. Fragmented altar with Latin inscription.

2. During survey in 2002 of the known site of a Roman cistern (VS 1230.00), situated on the north slope between Salamandrija and Stora Vloka bay, the lower part of a small Roman altar was found. Due to weathering the inscription is hard to read. A possible reading could be: [...]... / VS S(or G)ENTI / VS / L(ibens) M(erito)²³ (fig. 13). Also a thick body fragment of a pithos/dolium was found here.

3. Another cistern was found in 2006 west of the Lighthouse and some 10 m north of the Meteorological station. It occupies an area of c. 5 × 5 m. The ruined walls, some 60 cm wide, built up against the cliff on the west, north and east side. The interior is covered with mortar in several layers. It seems that it could hold some 7000 liters of water, collected from the steep cliff above it. Test excavations in 2007 could not reveal the date of this cistern.

V. DISCUSSION

The discoveries on Palagruža have attracted much attention among scholars that deal with prehistory and antiquity. Although the excavations are not completed and the finds not analysed in detail we shall try to present some problems and current opinions in a chronological order.

²³ It is 19 × 15 × 13 cm in size. Local stone (?). We are grateful to Emilio Marin for the reading of this inscription.

1. *Early Neolithic*

The discovery of several sherds of Early Neolithic Impresso pottery in 1994, 2003, 2004 and 2008 have opened many questions regarding the spread of farming in the Adriatic and about the earliest navigation (paddling or sailing, or both?)²⁴. The question that still remains is from what part of the Adriatic these pots came to Palagruža, or were these pots made on the island²⁵? We also have no idea whether this was a temporary or a permanent habitation, and how long it existed.

Regarding navigation Farr has published a paper where she tries (with a good theoretical model but without sufficient familiarity with currents, drifts, winds, sailing seasons, weather conditions and weather forecasting in the Adriatic) to reconstruct how people crossed the Adriatic²⁶. Be it as it may, people were travelling across the Adriatic via Palagruža as early as 6000 BC.

In contrast with the neighbouring islands of Sušac and Tremiti on Palagruža there is no evidence of Middle and Late Neolithic finds²⁷.

2. *Late Copper/Early Bronze Age*

During the final Copper Age and Early Bronze Age very intriguing activities took place at Palagruža. Records of these activities are extracted almost exclusively from the redeposited layers that are found over bedrock on the slopes. Since no undisturbed layers dating to this period have so far been found, and it seems very unlikely that there will be any, all the information that we have comes from the bulk of finds. The repertoire of pottery sherds in forms and decoration mostly reflect the early phase of Cetina pottery, while there are some finds corresponding to the classic Cetina repertoire²⁸. Other finds complement the pottery. Numerous flaked stone artefacts, arrowheads and few wrist-guards all reflect Bell Beaker tradition, to which Cetina culture is related. The majority of these are made out of chert which could be obtained from Molo Palagruža²⁹. Abundance of chert has been confirmed lately even on Velo Palagruža. We should also mention almost two dozen obsidian bladelets found so far, some of which originate from Lipari. Ongoing analysis will determine the origin of the rest.

The nature of the site occupation during this period is very hard to explain.

²⁴ BASS 1998, 165-190; FORENBAHER 1999, 521-530; FORENBAHER – KAISER 2005, 7-23; FORENBAHER – MIRACLE 2005, 361-378.

²⁵ There is good quality clay on Palagruža, but the problem of water and wood is an obstacle, since we know little about the island's environment some 8000 years ago.

²⁶ FARR 2006, 85-99. We also have no proof that obsidian on Palagruža is from the Neolithic period. It looks to be more from the Late Copper/Early Bronze Age as all the prehistoric finds from Salamandrija are of this date.

²⁷ For more details see: FORENBAHER *in print*.

²⁸ FORENBAHER *in print*; HEYD 2007, 96.

²⁹ KAISER – FORENBAHER 1999, 316.

Whether there was a permanent or just seasonal occupation, or even some kind of sacred place with cairn or a tumulus, we cannot tell for certain. It is nevertheless sure that during the period of the final Copper Age Palagruža presented a very important point for the communities of Early Cetina culture. This was just an added value to the importance of Palagruža as the keypoint for the Adriatic maritime interconnections.

3. Greek and Early Roman

As mentioned above, most of the finds found on Salamandrija come from the Greek period, most of these are fine ware pottery (typical sanctuary offerings), and most of them are found on the south slope. At the central part of the site no architectural features that could belong to the shrine of Diomedes have been found; the pits on the east side of the Roman fortification, gave no answers regarding function and date (fig. 8). The georadar survey over the stone pavement for collecting rainwater, although indicating some man-made features, was proven wrong by additional excavation. The excavations under the pavement have shown that the bedrock is very near the surface, rather soft in structure and irregular. Sporadic finds of Greek and Early Roman artefacts on the bedrock (i.e. frescoes, decorated plaster, *tesserae*, fine pottery, coins) may indicate that there was a building on this central area before the fortress was built, possibly one from the Greek/Hellenistic and another one from the Early Roman period.

Pottery

During the 2008 field season all the Greek and Hellenistic fine pottery from layer 4050 on the south slope was brought back to Palagruža to be classified, together with the pottery from the collections of Jadranko Oreb from Vela Luka on Korčula island and from the Lighthouse, collected by the employees. It was the first time that we could see all the material together. The fragments were first marked by square number and with abbreviations of the collections. After that we tried to see if we could put pieces together. Unfortunately, this did not happen for at least 95% of the assemblage as most of the fragments are too small; but it was also unsuccessful with bigger fragments and the graffiti; we merely found a scrap with a letter O that fits the Attic black figured *kylix* fragment with ...ENOXI... (fig. 5) interpreted in 2002 by A. Johnston most plausibly as ἀνέθηκε]εν ο Ἐί[ος and to be from the beginning of the 5th century BC³⁰.

Except for *kylix* handles and Gnathia fragments there was no time to study the rest of the assemblage in more detail. At the moment we can say that figured fragments are not so numerous, maybe not more than 100 (c. 1% of the whole). There are far fewer black- than red-figured ones, two or three head-vases, and only one

³⁰ See KIRIGIN 2003, 374.

white-ground piece, a bobbin (or a yo-yo) and one *rhyton*. These seem to be all Attic. Most of the diagnostic fragments belong to drinking vessels (*kylikes*, *skyphoi*, bowls). At present, it looks like the earliest pottery is from the late 6th century BC, the majority being from the 5th / early 4th Century BC. Hellenistic and Early Roman pottery is less numerous. Most of the fragments have black gloss varying in quality; there would seem to be five or six fabrics. Additional research could indicate the original sites where these fragments were made. This can help in reconstructing the ports where ships visited or started their voyage. The few fragments with floral or geometric decoration show local Adriatic origin that is not yet sufficiently understood. Also there are only a few mould-made relief bowls³¹.

There are 59 *kylix* handle fragments of which 13 join; one handle joining up from V 8 and Z 6 indicates the forcible destruction of the original deposit.

Gnathia pottery is represented with 450 fragments. The fragments are very small, the majority belonging to walls of vessels. Some 78 fragments of *skyphoi* were identified. They all seem to be of south Italian origin with lustrous black gloss. Some of the fragments with painted decoration belong to the Knudsen group traditionally dated to late 4th and early 3rd century B.C. Other shapes are very rare: 5 fragments of different plates, 3 fragments of different bowls, 2 fragments of different mugs and 1 of an *oinochoe*. Next to these there are three rim fragments of *kantharoi* that have the distinctive West Slope decoration with incised branch and leaves painted in white.

Classification of pottery is still in progress, but it appears that most of the pottery that was offered at the shrine is lost forever, most probably at the time when the Roman fortification was built, and with the help of erosion down the steep south slope.

Coins

Some sixty coins were discovered during excavations. At present only fifteen of them have been cleaned and identified: bronzes from *Kerkyra* (3rd century BC), *Dyrrhachion* (3rd-1st century BC), Brindisi (200-89 BC), *Teatra* in Apulia (end of the 3rd century BC), Issa (3rd century BC), *Pharos* (4th century BC) *Heracleia* in Lucania (silver c. 380-281 BC), *Syracuse* (second half of the 4th century BC), two from *Neapolis* (one silver from 325- 241 BC, one bronze from 3rd century BC) and four bronze coins of the Roman Republic (all from the 2nd century BC), a Roman aes (beginning of the 1st century (?) – all from layer 4050, and one bronze of Licinius (?) from B 8 layer 8120 (early 4th century AD)³² –. However, it is too early to make any conclusions before all the coins are cleaned and analysed.

³¹ Some of this material is published, see: MIŠE – ŠEŠELI in print.

³² The coins will be dealt in more detail by Maja Bonačić Mandinić from the Archaeological Museum at Split. We are grateful for her help.

Greek navigation in the Adriatic

The problem of Greek navigation in the Adriatic and the importance of Palagruža to Greek sailors are treated in more detail elsewhere³³. In that paper the authors have argued that navigation with trading boats, due to specific weather conditions, was done during the warmer part of the year. They also have shown that it was possible to sail at night with the help of stars and that tacking (zig-zag sailing) was used when sailing against the wind. Palagruža being almost half way between *Kerkyra* and Adria or Spina was a crucial landmark for Greek sailors when sailing the open sea. To sail back and forth from *Kerkyra* to the North Adriatic was much safer and faster when sailing on open sea. On their voyages, they could have been using some kind of a pilot book or a map. The graffiti testify that the visitors to the shrine of Diomedes were literate. Words like *soteria*, *euploia*, *sunnautai*, and personal names like *Aristokrates*, *Simos*, *Soleios* reflect this clearly. *SOLEIOS ANETHEKE* is inscribed on the base of an Attic short-stemmed *kylix* of c. 500 BC (fig. 10, 1). According to A. Johnston «This is indeed very interesting, as it must be the same man, Soleios, who is known at Adria by an owner's inscription, *SOLEIO EMI*, on an Attic cup of similar date, c. 500 BC.³⁴ The script is almost certainly Aeginetan».³⁵

According to the authors the first Greek sailors who explored the Adriatic could not have done so without the help of locals who were well informed about the problems of navigation. This is possible as contacts between the two Adriatic coasts were made and maintained much earlier than when the Greeks first showed interest in this part of the Mediterranean.

4. Late Roman

Although much more study of the Roman finds is needed, the excavations seem to indicate that there could be a period of abandonment of the site after the 1st/2nd AD. The layout of the Roman fortification is square in shape (c. 19 × 19 m), slightly inclined towards east with strengthened angles and plastered facade. The interior walls have corresponding pilaster-strips on the east outside face (fig. 8, e and b). We still cannot be sure when this Roman fortification was built. At first we thought that it could be a part of the *reconquista Iustiniana* when the Adriatic was well fortified³⁶, and that there are similarities with the much better preserved fortification on the nearby island of Svetac that is dated to the period of Justinian³⁷. But the cooking pottery from the interior of the fortification at Salamandrija is to be dated prior to Justinian, (fig. 6)

³³ KIRIGIN – JOHNSTON – VUČETIĆ – LUŠIĆ in print.

³⁴ COLONNA 1974, 6, tav. I, f.

³⁵ For more on the activities of Soleios see: JOHNSTON in print.

³⁶ GOLDSTEIN 1992.

³⁷ KIRIGIN – MILOŠEVIĆ 1981, 45-51. There have been no excavations at this site. The fortress is c. 19 × 9,5 m with walls 99-108 cm wide and some 5 m high. Two mushroom shaped windows are preserved. The cistern (c. 4,8 × 3 m) is within the SE part. Only a fragment of a roof tile was found during survey.

indicating that it could be an earlier building. On the other hand, the finds from layer 12485 on the north slope (defined as a pedestrian area formed after the fortification was built) that include a few artefacts of the Greek/Hellenistic period and some from the 1st/2nd AD, mixed together with more numerous *amphora* fragments, some obviously of the 5th/6th century AD, may indicate a later date. Also, we are not sure if the semicircular space on the southwest part of the fortification is a tower or something else (part of a bath – *thermae*?)³⁸. Semicircular towers are attested on fortresses from the period of Diocletian³⁹. Be that as it may the fortification/lighthouse (?) functioned in the Late Roman period. In the 17th century AD we hear that a noble family from the island of Hvar built a small tower on Palagruža to protect it from pirate raids⁴⁰. This could mean that the Roman fortification was in ruins by the time.

5. *Early Medieval*

It seems that after 6th/7th century AD Palagruža was again abandoned. The first sign of some kind of reoccupation is represented by the clay lamp (fig. 7) that can be dated between the 9th and 11th century AD⁴¹. No finds are recorded until the 16th/17th century AD, only a small painted pottery fragment found in D 10. These sporadic finds clearly indicate that on Palagruža there was no permanent occupation during the Middle Ages. Palagruža is often drawn on medieval nautical maps, and at least from the 16th century it was regularly visited by fisherman from the islands of Vis and Hvar, but not until the Austrian empire built the Lighthouse in 1875 did Palagruža have any permanent inhabitants.

In conclusion we may say that next to some additional excavations on Salamandrija that will enable the presentation of the archaeological remains, much more time is needed for the study of the artefacts and their Adriatic context. Forenbaher noted that remote islands are in focus when intensive contacts with distant regions occur. This happened on Palagruža in the Early Neolithic and in Late Copper/Early Bronze Age. The Greek Late Archaic to Late Roman period and the Industrial period (lighthouse) also confirm that Palagruža is a landmark when crucial changes in history occur.

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³⁸ During survey on Salamandrija we have found circular bricks that could be from a hypocaust, together with large pieces of thick hydraulic mortar. Mosaic white tesserae have been found in all trenches. Also a bronze coin of Constantine II (337-361 AD) was found here in 1993.

³⁹ REDDÉ 1995, 91-124.

⁴⁰ KOVAČIĆ 1997, 41-42. The tower was demolished in 1664. No traces of this tower were found.

⁴¹ See note 15.

APPENDIX

LIST OF GRAFFITI PUBLISHED IN CROATIAN JOURNALS (NOTE 5 ABOVE).

OTHERS ARE TREATED IN SOME DETAIL IN THE TEXT ABOVE.

1. Black gloss *skyphos*(?) rim, from V 7, layer 4050: τηνδεπ[| περραιο[| αλλα σωτη[| δι.:[. 4th century BC (?). Published: «Opuscula Archaeologica» 27, 2003, 374. Fig. 14, 1
2. Attic, foot; rather small and thick foot, black on top. Plastic vase (?), from Z 6, layer 4054: Ζιμοσ[. Published: «Opuscula Archaeologica» 28, 2004, 216. Fig. 14, 2.
3. Open shape. Non-Attic wall. Rouletting inside, from Z 7, layer 4050:]ρατο.[|]η' αυ[. ? letter after o. Published: «Opuscula Archaeologica» 28, 2004, 219. Fig. 14, 3.
4. Black gloss fragment with letters in two rows. Only letter A with a sloping bar can be read, from B 8, layer 8140. Published: «Vjesnik za arheologiju i povijest dalmatinsku» 98, 2005, 254-256. Fig. 14, 4.
5. Black gloss Attic *phiale* (?) with concave rim, from A 8, layer 8150:].ται πα[|]ονα[. Published: «Vjesnik za arheologiju i povijest dalmatinsku» 98, 2005, 254-256. Fig. 14, 5.
6. Two non joining Attic RF *kylix* (eye cup), from B 8, layer 8120:]ωι Δι[and]δει[. Published: «Vjesnik za arheologiju i povijest dalmatinsku» 98, Split 2005, 254-256. Fig. 14, 6.
7. Attic (?) black gloss bowl near foot ring, from B 8, layer 8120:].πλο[. Published: «Vjesnik za arheologiju i povijest dalmatinsku» 98, 2005, 254-256. Fig. 14, 7.

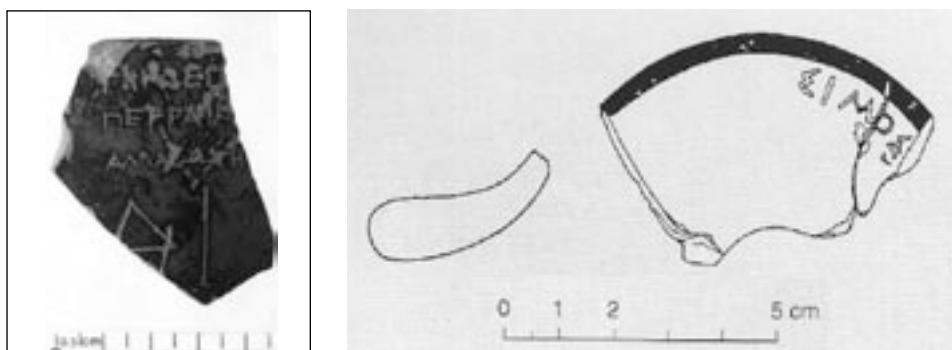


Fig. 14. Greek graffiti from Palagruža (see Appendix).



Fig. 14.3.



Fig. 14.4.



Fig. 14.5.



Fig. 14.6.

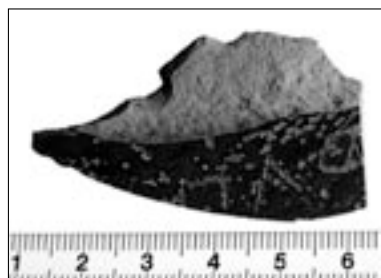


Fig. 14.6.

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