

Roman Quarry Klis Kosa near Salona

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ROMAN QUARRY KLIS KOSA NEAR SALONA

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Abstract

Gradina is an archeological site at Klis-Kosa, a few miles to the east of the ancient city of Salona, on the west slopes of Mosor mountain. On this site are preserved remains of ancient Roman dwellings and workshops of stonecutters in which they also had a shrine dedicated to Jupiter.

Keywords

Roman quarries, Mt. Mosor, Salona

Salona was the largest city and the capital of the Roman province of Dalmatia, with a continuity of settlements dating from the Bronze Age. It was the port of the Illyrian tribe he Delmatae. In the 1st century BC Salona supported Caesar in the war with Pompey, got the status of Roman colony and became the center of the province of Illyricum, later Dalmatia. The city is divided into three parts. The oldest is the central part, Urbs Vetus with the remains of the Forum, Capitolium, theatre. The city grew and new walls from the end of the 2nd century incorporated suburbs to the east and west of the old city core. Salona was at the peak of its development during the reign of Diocletian and his immediate successors, i.e., at the end of the 3rd and in the first half of the 4th century.

Christianity appeared during the 3rd century and was followed by persecutions under the Roman Emperor Diocletian. The city center moved from the Forum to the east at the end of the 4th century, when Christian complex with double basilicas, a baptistery and an episcopal palace was raised. Cemeteries Manastirine, Marusinac and Kapljuč developed around large basilicas dedicated to Christian martyrs, which were raised on pagan necropolises. The city fell to the Avars and Slavs around 640 AD. During the early Middle Ages (9th-11th c.), one of the centers of the Croatian principality and kingdom was developed around Salona.

In archaeological literature, the archaeological site at Klis-Kosa has been known since the late 19th century. It is located near the hamlet of Bralići (not UVODIĆ as is often claimed), on the north side of the “glen” called Korita, which runs from Mosor down to Klis Kosa in an east-west direction. (Fig. 1) The architectural complex is situated on several terraces that handle the steep sides of the

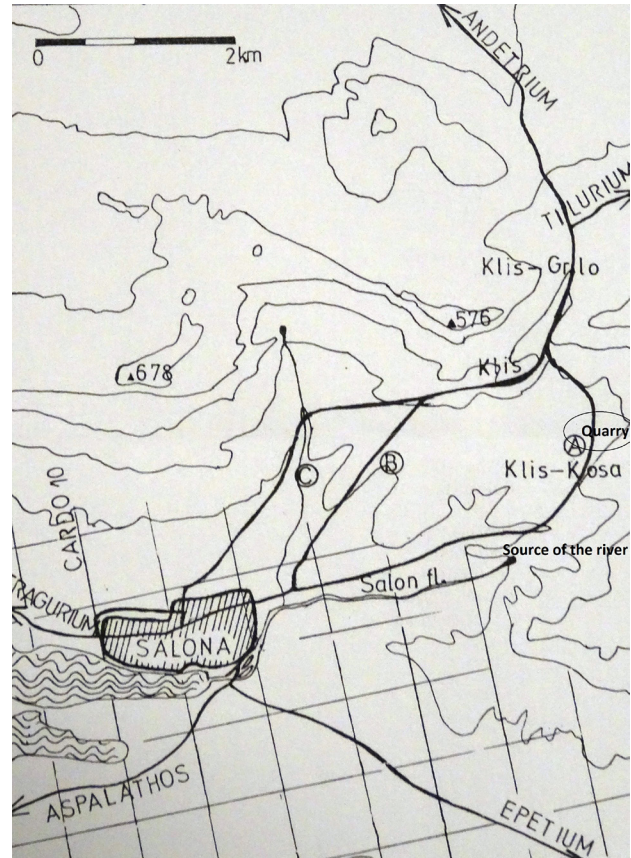


Fig. 1. Salona and the surrounding area - A, B, C: Roman roads to Klis (MILETIĆ 1993, 138)

“glen”. It occupies an area of about 1.5 to 2 hectares and dry stone walls once defined it on the south and partly on the west and east side. Some of the blocks in the walls are impressive in size, especially in the southeast corner. Within the complex there are visible small quadrangular buildings, door sills, architraves, and impressive steps cut into the rock on the west side. The north side ends with a cliff and on its west side there is an inscription inside the niche measuring about 1 x 1 meter:

I(ovi) O(ptimo) M(aximo)
SACRUM
L(ucius) EGNATIVS L(uci) F(ilius)
CN(ei) NEP(os) CN(ei) PRO(nepos)
TRO(omentina) CLEMEN(s)
DECVR(io) ET AVGV(r)

(Dedicated to Jupiter the best and the greatest, Lucius Egnatius son of Lucius, grandson of Gneus,



Fig. 2.
View onto the site from the south
(photo: I. Alduk)

great-grandson of Gneus, from the *Tromentina tribus*, Clemens, city councillor and priest)¹.

The inscription is clearly readable even though the rainwater flowing down the rock has partly damaged it, especially the letters in the last row. (Fig. 3) Judging solely by the dedicatory inscription to Jupiter and to some extent by parts of the architecture (*opus quadratum*), the complex was built at the beginning of the 1st century AD.² Although partly investigated some 30 years ago, a large building complex on the slopes of Mosor - Gradina or Oltarine³ at Klis Kosa - remains an enigma in terms of its content, organization, functioning, and the reason for its construction. Although this is often forgotten, F. Bulić knew of this site and the inscription was published in CIL III.⁴ Frane Buškariol re-introduced the site into scholarly literature starting with the research and documentation. (Fig. 2) To an extent, he explained the strategic role of this site as a place that could protect Salona in the event of an enemy breakthrough over Mosor mountain.⁵ Bearing in mind the other sites on the southwestern part of Mosor (Kapina, Kučinski doci) this assumption is possible.⁶ But

Buškariol repeatedly emphasized that at Gradina there was no prehistoric pottery. So later he rejected strategic function and left open the possibility that the complex had a sacred and/or residential character.⁷

Here we will try to go a step further and put Oltarine or Gradina in the context of the surrounding area. Partly and very briefly it was already done in terms of the function of one of the roads from Salona to Klis (over today's Klis Kosa) by the side of which the River Jadro rises and, which is more important, are the quarries on the Mosor mountain.⁸

In the archaeological literature we can find some special features of ancient (Roman) architecture in Salona.⁹ One of these special features is the usage of large blocks of local stone called *modrac* with or without use of lime mortar for construction of some buildings. Although these "megalithic" blocks, because of their functionality, are present in the architecture of Salona throughout its history, they are more common in the earlier constructions of the 1st century BC and the 1st century AD, or within the oldest part of the city (the so-called *Urbs Vetus*) and in the construction of the early burial plots (*hortus*, *hortoi*): *murazzo* of the burial plot called "in *horto Metrodori*" but also others, a complex of buildings north of the Forum, the bridge called "Five bridges", the oldest part of the city walls at *Porta Caesarea* and paved roads inside the gate, parts of the theater (Fig. 6),

1 English translation was made at the request of the editorial board.

2 BUŠKARIOL 1987, 30-31; PROTIĆ, BUŠKARIOL 1990, 142, There are even some medieval finds on this site, PROTIĆ, BUŠKARIOL 1990, 142.

3 Gradina - hillfort. Oltarine - great or large altars.

4 BULIĆ 1890, 150; BULIĆ 1903, 114; CIL III 1942.

5 BUŠKARIOL 1987, 178-179; BUŠKARIOL 1987a, 30-31; LONGAE SALONAE II, 4.

6 ALDUK 2013, 32.

7 PROTIĆ, BUŠKARIOL 1990, 142.

8 CAMBI 2000, 86.

9 RENDIĆ 1980.

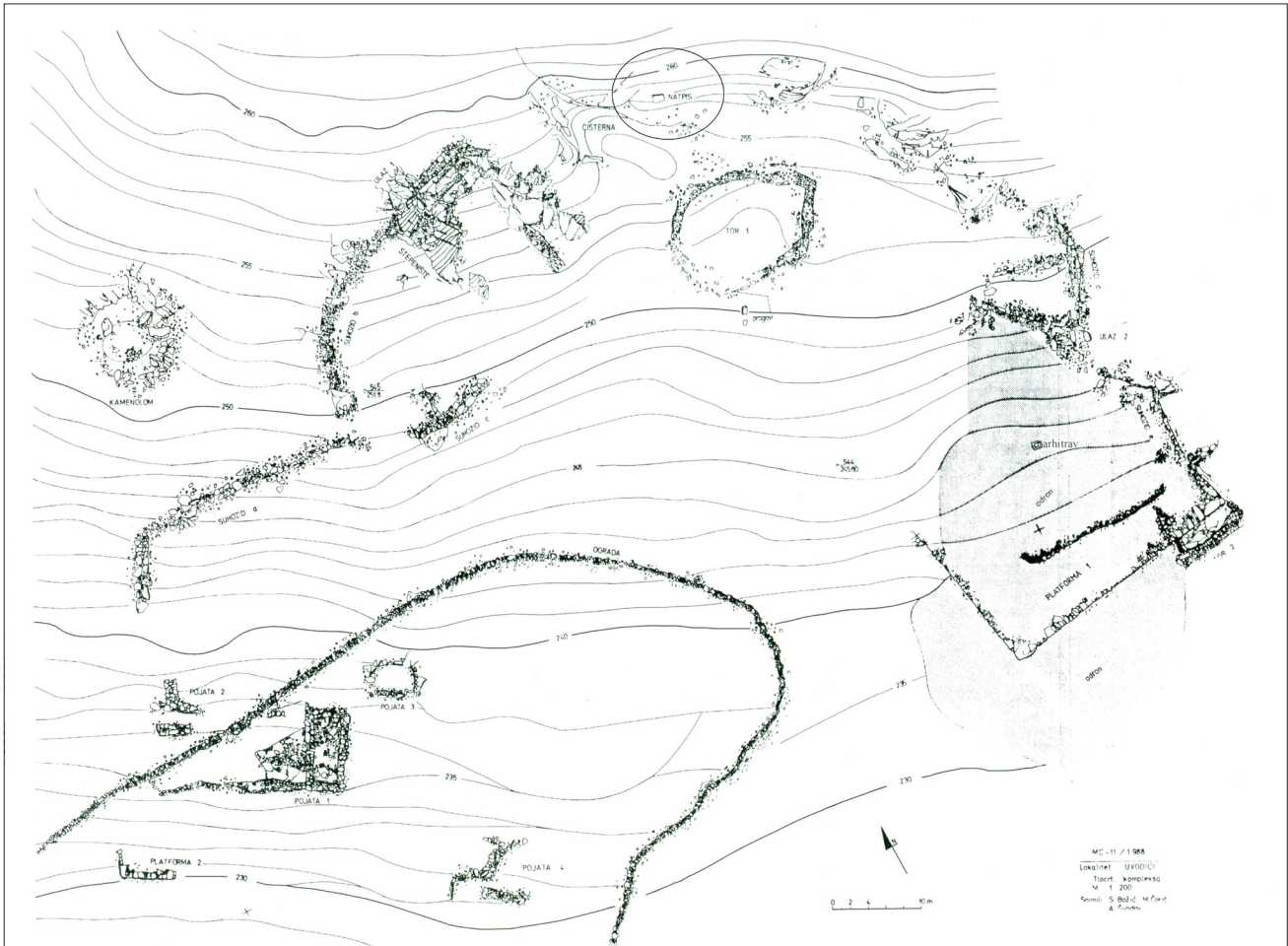


Fig. 3. Plan of the site (S. Božić, M. Čorić, A. Šundov)

parts of the Capitolium, parts of the city aqueduct.¹⁰ Such blocks can be easily extracted from the slopes of Mosor near Klis Kosa; alongside “ordinary” limestone, they are found on the surface and break off into regular shapes, most often in the form of elongated plates or blocks which then require minimal processing.¹¹ Inscription of L. E. CLEMENS dates back to the time when the largest number of the mentioned buildings were erected in Salona, in the construction of which such large blocks were used. Can we therefore assume that in this complex there are the remains of dwellings and workshops of stonecutters in which they also had a shrine dedicated to Jupiter? The stone blocks excavated there were used almost exclusively as building material because this stone is not suitable for architectural decoration. In support of this

10 RENDIĆ 1980, 92-96.

11 It is also possible that this kind of stone was extracted closer to the city i.e. somewhere on the slopes of Kozjak mountain, but still there are no remains to confirm this hypothesis.

hypothesis here are some facts, more or less convincing.

The remains of quarrying on the western edge of the complex in the 80s were interpreted as a small quarry.¹² The terraces of the complex, which are supported by large stone blocks, could also originate from the large amount of waste generated from the processing of stone. (Fig. 4) For some blocks of stone that are found all over the site (thresholds, architraves, ordinary blocks) we will have to determine whether they are parts of buildings or are semi-finished products (incomplete or damaged products). Of course, over the entire surface of the complex, particularly around the inscription, in several places there are the remnants of rock processing that we can see in other ancient quarries: step-shaped surfaces (Fig. 5), cuts, grooves and other traces of stone cutting. Although it is located directly below the inscription, the assumed water cistern probably had no cult function but served the residents of the complex. It is located very logically, at the bottom of a steep cliff and the surface of

12 LONGE SALONE II, 40.

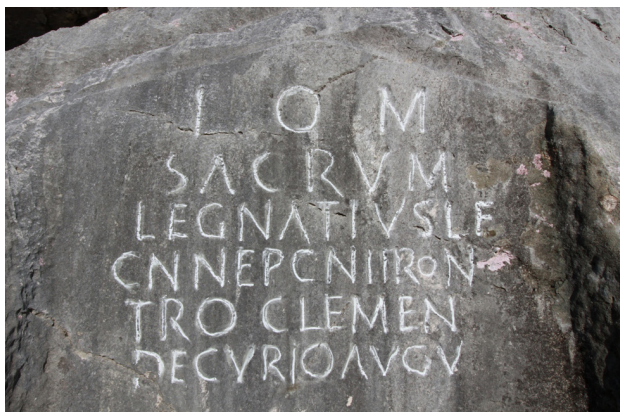


Fig. 4. Inscription dedicated to Jupiter (photo: I. Alduk)



Fig. 5. Southern part of the site with drystone wall of large blocks (photo: I. Alduk)

the cliff is interrupted by elongated steps/channels that probably collect rain water for the cistern.

The fact is that the quarry is located about a hundred meters above the presumed Roman road through Klis Kosa. This road to Salona descends constantly (from the Klis Pass to Salona) which greatly facilitates the transport of stone, especially of long and heavy blocks.¹³

It is also necessary to point out that there is a possibility that due to the size of the complex, the dedication to Jupiter and function of dedicator (decursion-city councillor/augur-priest), this is some kind of official enterprise. All the more so because most of the mentioned buildings in Salona built with these blocks are of a public and official character. Also, it looks as if Lucius Egnatius Clemens was very active in the early Salona community and he is confirmed

13 BUŠKARIOL 1987, 30.



Fig. 6. Steps carved in stone (photo: I. Alduk)

as augur in another inscription from Salona and indirectly through the inscription of one of his freedmen.¹⁴

The inscription in Klis Kosa is likely to be seen in the context of Jupiter as the supreme and most popular deity and not in the context of the presumed quarry. Quarries in Dalmatia are associated almost exclusively with the cult of Hercules or Heracles.¹⁵ However, Hercules, or Saxsanus combined with Jupiter occurs in one altar from Šmartno on Pohorje near Ptuj (Slovenia) near the local large quarries.¹⁶ A dedication exclusively to Jupiter and also related with a quarry was recorded on one altar from Škrip on the island of Brač. On that inscription, the centurion Titus Flavius Pompey was the head of works at the amphitheater “...curam agens fab(ricae) am(phiteatri)...” probably in Salona.¹⁷

As for the residents or users of the complex at Klis Kosa, or workers in the Mosor quarries we can say almost nothing. Most of them were probably slaves. However

14 MATIJEVIĆ 2006, 149.

15 SANADER 1994, 90-91, 98-99, 102-103; MARŠIĆ 2007.

16 DJURIĆ 2004, 158-159, 169.

17 KIRIGIN 1979, 129-134.



Fig. 7.
Part of the Roman theater in
Salona built with large blocks
of stone (photo: I. Alduk)

Salona had a guild, or perhaps several guilds, (*collegia*) of stonecutters. One of the inscriptions mentions “(co) *llegium (la)pidarior(um)*”.¹⁸

This short article has not nearly completed discussion of Gradina in Klis Kosa. Here we have tried to explain an idea that needs more time and work. Of course, the outcome is uncertain. But it is precisely such work that can bring new and interesting conclusions about the organization of Salona at the time of its establishment as the capital of Illyricum or Roman Dalmatia.

BIBLIOGRAPHY

- ALDUK I. 2013: “Arheološka topografija jugozapadnog dijela Mosora”, *Tusculum* 6, 25-33.
- BULIĆ F. 1890: “Osservazioni alle iscrizioni dalmatiche pubblicate nel C.I.L. III e Bull. Dalm”, *Bulletino di archeologia e storia dalmata* XIII, 150-152.
- BUŠKARIOL F. 1987: “Bilice kod Solina-Klis-Grlo”, *Obavijesti Hrvatskog arheološkog društva* 1/XIX, 29-32.
- BUŠKARIOL F. 1987a: “Općina Solin-Rekognosciranje”, *Arheološki pregled* 27, 178-179.
- CAMBI N. 2000: “Važnost Klisa u antici”, *Mogućnosti* 4/6, 83-91.
- DJURIĆ B. 2004: “V Saksanovem svetu-Rimsko pridobivanje belega marmorja s Pohorja”, in *RIMLJANI – steklo, glina, kamen, Celje/Ptuj/Maribor (katalog izložbe)*, 147-202.
- KIRIGIN B. 1979: “Nalaz rimskih natpisa i reljefa kod Škripa na otoku Braču”, *Vjesnik za arheologiju i historiju dalmatinsku* LXXII-LXXIII, 129-142.
- LONGAE SALONAE II, *Ilustracije*, (Emilio Marin ed.), Split 2002.
- MARŠIĆ D. 2007: “Novi Heraklov žrtvenik iz Trogira”, *Archaeologia Adriatica* I, 111-128.
- MATIJEVIĆ I. 2006: “Neobjavljeni natpisi iz Žrnovnice i Salone”, *Vjesnik za arheologiju i povijest dalmatinsku* 99, 145-152.
- MILETIĆ Ž. 1993: “Rimske ceste između Jadera, Burnuma i Salone”, *Radovi Filozofskog fakulteta u Zadru*, 32 (19), 117-150.
- PROTIĆ G., BUŠKARIOL F. 1990: “Klis/Grlo, Klis-Kosa-Salona, istraživanje agera”, *Arheološki pregled* 26/1988, 139-143.
- RENDIĆ-MIOČEVIĆ D. 1980: “Iz ranije salonitanske graditeljske tradicije”, in M. SUIĆ, M. ZANINOVIĆ (eds.): *Materijali, tehnike i strukture predantičkog i antičkog graditeljstva na istočnom jadranskom prostoru: znanstveni kolokvij održan u Zadru od 6. do 8. XII 1976*, Zagreb, 91-99.
- SANADER M. 1994: “O kultu Herkula u Hrvatskoj”, *Opuscula Archaeologica* 18, 87-114.