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Rimske ceste i kasnoantički ruralni krajolik u Jabuci i Veliću kod Trilja*

*U radu se donosi novo tumačenje kasnoantičkog ruralnog krajolika u Jabuci i Veliću kod Trilja utemeljeno na interpretaciji lidarskog snimka, rekognosciranju terena i ciljanim arheološkim istraživanjima koja su otkrila složen i dobro očuvan stočarsko-gospodarski sklop. Posebno se razmatra mreža rimskih cesta. Magistralna prometnica omogućavala je distribuciju i trgovinu viškovima dobara s veleposjeda, dok su vicinalne ceste služile unutarnjem funkcioniranju imanja i povezivanju njegovih proizvodnih cjelina. Lidarski snimak pokazao je složen raspored izdužen-ih kameno-zemljanih struktura, suhozida, torova i putova, koje je zbog njihove morfologije bilo teško kronološki odrediti i funkcionalno protumačiti. Taj se problem djelomice razriješio arheološkim istraživanjem dviju kasnoantičkih kuća na lokalitetima Biluše i Osoje. Krcina ograda, ranije istraživan lokalitet, bila je upravno i crkveno središte veleposjeda (*saltusa*), čije je gospodarenje prostorom bilo zasnovano ponajprije na ekstenzivnom stočarstvu i planskom upravljanju krajolikom. U članku se obrađuju i eksploatacijske zone građevinskog kamena i kopnenog pijeska te proizvodnja živog vapna, što svjedoči o integriranoj proizvodno-distributivnoj infrastrukturi. Naglašava se značenje kasnoantičke utvrde Čačvina, koja je nadzirala ceste i okolni prostor te osiguravala stabilnost gospodarskih aktivnosti. Rezultati potvrđuju da je* saltus *u Veliću bio opsežan kasnoantički ruralni projekt, odmaknut od klasičnog modela* villae rusticae*, obilježen složenom stočarskom organizacijom prostora i eksploatacijom lokalnih mineralnih sirovina, što je rezultiralo snažnom i trajnom transformacijom krajolika.*

Ključne riječi: *Jabuka, Velić, Vedrine, Čačvina, kasnoantički ruralni krajolik, rimske ceste, eksploatacija pijeska, kasnoantički kamenolom, stočarstvo,* saltus*, suhozidna arhitektura.*

* Ovaj rad posvećujem Vedrani Delongi, dugogodišnjoj kustosici Muzeja hrvatskih arheoloških spomenika, čiji je stručni rad trajno pridonio djelovanju i razvoju Muzeja / This paper is dedicated to Vedrana Delonga, long-time curator at the Museum of Croatian Archaeological Monuments, whose professional work has made a lasting contribution to the Museum's activities and development.

Roman roads and the late ancient rural landscape in Jabuka and Velić near Trilj

This paper presents a new interpretation of the late ancient rural landscape in the areas of Jabuka and Velić near Trilj, based on the analysis of a LiDAR image, field reconnaissance of the area and targeted archaeological investigations that led to the discovery of a complex and well-preserved pastoral-agricultural estate. Particular attention is also devoted to the network of Roman roads. The main (magistral) road enabled the distribution and trade of surplus goods from the estate, while a network of vicinal roads supported its internal organization and connected its various production units. The analysis of the LiDAR image revealed a complex arrangement of elongated stone-and-earth structures, dry-stone walls, animal pens and pathways, which, due to their morphology, were difficult to date and interpret in terms of their function and purpose. This problem was partially resolved through archaeological investigations of two late ancient houses at the sites of Biluše and Osoje. The previously investigated site of Krcina ograda (Krce's pen) appears to have served as the administrative and ecclesiastical centre of the estate (saltus). The management of this territory was primarily based on extensive animal husbandry and a planned system of landscape organization. This paper also examines zones associated with the exploitation of building stone, sand and the production of quicklime, all of which testify to the existence of an integrated production and distribution infrastructure. It also highlights the significance of the late ancient fort of Čačvina, which controlled the roads and surrounding territory and ensured the stability of economic activities. The findings confirm that the saltus in Velić represented an extensive late ancient rural enterprise, distinct from the classical model of the villa rustica. It was characterised by a complex spatial organization devoted to livestock management and by the systematic exploitation of local mineral resources, resulting in a profound and lasting transformation of the landscape.

Key words: *Jabuka, Velić, Vedrine, Čačvina, late ancient rural landscape, Roman roads, sand exploitation, late ancient quarry, animal husbandry, saltus, dry-stone architecture.*



Sl. 1 - Utvrda Čačvina
Fig. 1 - Fort of Čačvina

Posljednjih godina kasnoantički ruralni krajolik u zaleđu Salone sve se češće izdvaja kao zasebna tema arheoloških istraživanja. Analizom tragova rimskih cesta, ranokršćanskih crkava i kasnoantičkih utvrda uočene su i arheološke strukture koje se očituju u obliku krčevina, dugih kamenih i zemljanih gomila te urušenih suhozida. Takvi se nalazi najčešće pojavljuju uz rimske komunikacije ili u podnožju kasnoantičkih utvrda. Arheološka istraživanja provedena tijekom posljednjih desetljeća omogućila su jasnije sagledavanje njihove naravi i funkcije.[1] U arhitekturi tih ruralnih naselja prevladavaju suhozidne konstrukcije: ograde, torovi i stambeni objekti. Redovito se nalaze u „sjeni“ kasnoantičkih utvrda.

Upravo takvim oblikom kasnoantičkog ruralnog krajolika bavi se ovaj rad. Na prostoru Jabuke i Velića identificiran je veći ruralni kompleks stočarskog karaktera koji se prostire zapadno od kasnoantičke utvrde smještene na položaju srednjovjekovne i ranonovovjekovne utvrde Čačvina (sl. 1). Vojnostrateški karakter tog prostora ne iscrpljuje se samo na Čačvini; defenzivna uloga jabučko-velićkog područja bit će predmet zasebne analize u drugom radu. Ovdje je naglasak stavljen na gospodarsku ulogu kasnoantičkog veleposjeda.

[1] Temu „novoosnovanih nefortificiranih naselja“ široko je zahvatio Ciglenečki 2023, str. 187, 190–193. U njegovoj su knjizi obrađene i kasnoantičke palače u Hrvatskoj.

In recent years, the late ancient rural landscape of the hinterland of Salona has increasingly been recognized as a distinct subject of archaeological research. The analysis of traces of Roman roads, early Christian churches and late ancient forts has also revealed a range of archaeological structures, visible in the form of clearings, elongated stone-and-earth mounds and collapsed dry-stone walls. These features are most frequently located along Roman communication routes or at the foot of late ancient forts. Archaeological investigations conducted over the past decades have significantly improved our understanding of their nature and function.[1] The architecture of these rural settlements is characterised predominantly by dry-stone structures: enclosures, livestock pens and residential buildings, which are usually found in the “shadow” of late ancient forts.

It is precisely this form of late ancient rural landscape that the present study addresses. In the area of Jabuka and Velić, a larger rural complex with a pastoral character has been identified, which extends west of the late ancient fort that is situated on the site of the medieval and early modern fort of Čačvina (Fig. 1). The military-strategic character of the area is not confined to Čačvina alone; the defensive role of the Jabuka–Velić region will, however,

[1] The topic of “newly established unfortified settlements” has been comprehensively addressed by Ciglenečki (2023, pp. 187, 190–193), whose monograph also examines late ancient palaces in Croatia.

Riječ je o naselju koje ne pripada tradiciji rimskih gospodarstva (*villae rusticae*), brojnih na području salonitanskog agera, niti je bilo usmjereno na intenzivnu ratarsku i zemljoradničku proizvodnju. Kasnoantička ruralna naselja u zaleđu Salone najčešće su smještena u krškim područjima pogodnim za uzgoj stoke sitnog zuba i skromniji oblik zemljoradnje, sukladan geomorfološkim uvjetima.

Prvi značajniji nalaz kasnoantičke ruralne arhitekture u salonitanskom zaleđu istražio je Ante Milošević na lokalitetu Škalje u Bisku. Tijekom zaštitnih istraživanja 1987. godine, provedenih prilikom gradnje lokalne ceste, otkriveni su ostatci triju kuća i jedne devastirane zidane kasnoantičke grobnice sa svodom. Nalazi upućuju na to da je naselje bilo veće od istraženog dijela, a Milošević ga je interpretirao kao *vicus* koji je egzistirao od 3. do 6. stoljeća.[2]

Slična se situacija uočava i na lokalitetu Pločje u Kučićima, u zaleđu Omiša. Ondje je Vedrana Delonga, uz srednjovjekovno groblje, istražila jedan objekt čiju je prvu fazu, prema nalazima novca, datirala u prvu polovinu 3. stoljeća. Druga faza pripada 4. stoljeću, dok se prestanak egzistencije naselja smješta u 6. stoljeće.[3] U Bisku i Kučićima zabilježena je starija arhitektura iz 3. stoljeća koja se tijekom kasne antike prilagođava i nastavlja koristiti. U obama primjerima riječ je o kompleksima koji, iako egzistiraju u kasnoantičkom razdoblju, zadržavaju tradiciju rimskih ruralnih vila.

Ovu vrstu kasnoantičkih gospodarskih posjeda najbolje ilustrira arheološki lokalitet u uvali Podšilo na otoku Rabu, smješten uz trajne izvore slatke vode, koji su u rimskom razdoblju uključivali najmanje dva vodotoka. Ta je okolnost omogućila razvoj kasnoantičkog gospodarskog sklopa od 3. stoljeća, s vrhuncem u 4. i 5. stoljeću te mogućim trajanjem do prve polovine 6. stoljeća. U uvali Podšilo nađena je keramičarska peć za proizvodnju tegula i imbreksa, a pretpostavlja se i metalurška aktivnost.[4] Istraživanja na Rabu i u zaleđu Salone ukazuju na potrebu boljeg proučavanja gospodarskih imanja koja su egzistirala od 3. do 6./7. stoljeća. To je dinamično vrijeme prilagodbe novim povijesnim i gospodarskim okolnostima kasne antike. Tada se počinju oblikovati temelji srednjovjekovne ruralne strukture na hrvatskoj obali Jadrana i u zaleđu.

[2] Milošević 1987a, str. 94–95; Milošević 1998, str. 288–290.

[3] Delonga 2000, str. 79.

[4] Welc *et al.* 2019, str. 438–439, 449; za keramičarsku peć vidi: Lipovac Vrkljan, Šiljeg 2010, str. 64–69.

be analysed in a separate study. Here the emphasis is placed on the economic role of the late ancient estate.

This was a settlement that did not belong to the tradition of Roman estates (*villae rusticae*), which were numerous in the ager of Salona, nor was it oriented toward intensive crop production and arable farming. Late ancient rural settlements in the hinterland of Salona were most often located in karst areas, which were well suited for small livestock breeding and to modest forms of agriculture adapted to the prevailing geomorphological conditions.

The first significant discovery of late ancient rural architecture in the hinterland of Salona was investigated by Ante Milošević at the site of Škalje in Bisko. Rescue excavations in 1987, prompted by the construction of a local road, uncovered the remains of three houses and one damaged late ancient vaulted tomb. The finds indicate that the settlement extended beyond the excavated area, and Milošević interpreted it as a *vicus* that existed from the 3rd to 6th centuries.[2]

A similar situation has been observed at the site of Pločje in Kučiće, in the hinterland of Omiš, where Vedrana Delonga investigated a structure located next to a medieval cemetery. She dated its first phase to the first half of the 3rd century based on coin finds and its second phase to the 4th century, while the settlement appears to have ceased to exist in the 6th century.[3] In both Bisko and Kučiće, earlier architectural remains dating to the 3rd century have been recorded, which were adapted and remained in use throughout Late Antiquity. In both cases, these are complexes that, although they continued to exist in the late ancient period, retained the tradition of Roman rural villas.

This type of late ancient agricultural estate is best illustrated by the archaeological site in the bay of Podšilo on the island of Rab. It was situated near permanent freshwater sources, which in the Roman period included at least two streams. These favourable conditions enabled the development of the late ancient agricultural complex from the 3rd century, reaching its peak in the 4th and 5th centuries, with possible continuity into the first half of the 6th century. Archaeological investigations in the bay of Podšilo have uncovered a pottery kiln for the

[2] Milošević 1987, pp. 94-95; Milošević 1998, pp. 288-290.

[3] Delonga 2000, p. 79.

Druga vrsta ruralnog naselja, koja morfološki više odgovara temi ovog rada, zabilježena je u Banjačama kod Dugopolja.[5] Kasnoantičko ruralno naselje, od kojeg je iskopan manji dio, nalazilo se na sjevernom rubu krškog polja, u manjoj „uvali" na padini brda. Istražena su dva objekta jednostavne suhozidne arhitekture, od kojih je veći (objekt 1) bio dimenzija 9 × 6,8 m, sa zidovima širokim oko 1 m. Kuće su bile zakrovljene tegulama.[6] Ruralno naselje u Banjačama egzistiralo je tijekom 5. – 6. stoljeća, kako pokazuju pokretni arheološki nalazi.[7] Brojni nalazi ulomaka amfora, kamenih tarionika, utega za tkalački stan, kuhinjskih lonaca i dubokih zdjela upućuju na intenzivan život ruralnog posjeda.[8] Nalazi srpova svjedoče o tome da su stanovnici Banjača u obližnjem polju uzgajali žitarice.[9] Nedvojbeno je da su se po okolnim brdima bavili stočarstvom, odnosno uzgojem stoke sitnog zuba, kao i tkanjem vunenog platna u svojim nastambama. Banjače su bile povezane s obližnjim nalazištem u Vučipolju, gdje je pronađena kasnoantička cisterna. Ondje se najvjerojatnije nalazila ranokršćanska crkva, što bi trebalo provjeriti nastavkom arheoloških istraživanja.[10] Niže od tog lokaliteta, u polju, iskopana je kasnoantička grobnica sazidana od sekundarno upotrijebljenih nadgrobnih spomenika rimskih vojnika.[11]

Za sve ove lokalitete, zajedno s grobnicama u Vučipolju, važno je istaknuti da su se nalazili na trasi rimske ceste koja je prolazila oko 250 m južnije kroz krško polje. Kolotrazi su se mjestimice uočavali blizu lokalne ceste (ŽC 6260) na padini brda, u kršu jugoistočnije od Banjača.[12] Ta se cesta pružala od lokve Dračanice na Kapelu te je, nastavljajući se kroz polje, izbijala na Prosik, odakle se spuštala

[5] Ožanić Roguljić, Miloglav, Tončinić 2018, str. 135–149.

[6] Isto, str. 144–145.

[7] Ožanić Roguljić 2018, str. 167. Na intenzivan život tijekom 5. stoljeća upućuju numizmatički nalazi, vidi: Pavlović 2018, str. 207; Ožanić Roguljić, Miloglav 2023, str. 120–125.

[8] Ožanić Roguljić, Miloglav, Tončinić 2018, str. 145; Ožanić Roguljić, Miloglav 2018, str. 8.

[9] Ivčević 2018, str. 227–228.

[10] Borzić, Jadrić 2007, str. 162–163.

[11] Cambi 2001, str. 82–98.

[12] Banjače i kolotrazi rimske ceste uz cestu ŽC 6260 otkriveni su tijekom arheološkog rekognosciranja koje sam proveo s pokojnim Marijanom Lozom u sklopu priprema za zaštitna arheološka istraživanja na trasi Jadranske autoceste.

production of tegulae and imbrices, while metallurgical activity is assumed there as well.[4] The excavations on Rab and in the hinterland of Salona underscore the need for more thorough studies of estates that existed from the 3rd to the 6th/7th centuries. This was a dynamic period, during which communities adapted to the changing historical and economic circumstances of Late Antiquity. It was also during this time that the foundations of the medieval rural landscape along the eastern Adriatic coast and its hinterland began to take shape.

Another type of rural settlement, morphologically more closely related to the subject of this paper, has been identified at Banjače near Dugopolje.[5] This late ancient rural settlement, of which only a small part has been excavated, was located on the northern edge of a karst field, within a small depression on the slope of a hill. Archaeological investigations uncovered two simple dry-stone structures. The larger building (structure 1) measured 9 × 6.8 m and had walls approximately 1 m thick. Both structures were roofed with tegulae.[6] Based on the movable archaeological material, it is assumed that the rural settlement at Banjače existed during the 5th–6th centuries.[7] Numerous finds of fragments of amphorae, stone mortars, loom weights, cooking pots and deep bowls point to intensive activity and daily life within the rural estate.[8] The discovery of sickles indicates that the inhabitants of Banjače cultivated cereals in the nearby field.[9] It is also almost certain that animal husbandry was practiced on the surrounding hills, particularly the raising of small livestock, while wool processing and weaving likely took place within their dwellings. The settlement at Banjače appears to have been connected with the nearby site of Vučipolje, where a late ancient cistern has been discovered. It is likely that an early Christian church once stood at this location, although this assumption requires confirmation through further

[4] Welc et al. 2019, pp. 438–439, p. 449; for the pottery kiln, see: Lipovac Vrkljan, Šiljeg 2010, pp. 64-69.

[5] Ožanić Roguljić, Miloglav, Tončinić 2018, pp. 135-149.

[6] Ibid., pp. 144-145.

[7] Ožanić Roguljić 2018, p. 167. Numismatic finds indicate intensive occupation during the 5th century; see: Pavlović 2018, p. 207; Ožanić Roguljić, Miloglav, 2023, 120-125.

[8] Ožanić Roguljić, Miloglav, Tončinić 2018, p. 145; Ožanić Roguljić, Miloglav 2018, p. 8.

[9] Ivčević 2018, pp. 227-228.

prema Ercegovcima.[13] Iza njih se morala spojiti na magistralni pravac koji se od Križica pružao prema Tiluriju.

Cesta koja je prolazila kroz polje pored Banjača bila je paralelna sa sjevernijim magistralnim pravcem rimske ceste koja je s dugopoljskih Poda, preko brda Mojanke, izbijala na Križice kod današnjeg kamenoloma, odakle je preko Dicma nastavljala prema Sinju. Banjače su bile izravno spojene na južni pravac ceste; njime su vodili stoku na pojilište, na lokvu Dračanicu te pristupali zemljištu koje su obrađivali u Dugopolju. U sjeni kasnoantičke utvrde na Grubuši lokalno se stanovništvo bavilo stočarstvom i poljodjelstvom.[14]

Primjeri Banjača, Vučipolja i Velića potvrđuju da se kasnoantička ruralna naselja oblikuju unutar mreže komunikacija i utvrđenih središta koja su određivala njihovu funkciju i opstojnost. Utvrda na brdu Grubuši, kao dominantna točka tog prostora, predstavljala je ključni element sigurnosnog sustava, pružajući stanovništvu okolnih ruralnih naselja zaštitu i utočište u razdobljima pojačane nesigurnosti kasne antike.[15] S druge strane, utvrda Čačvina (sl. 1) nadzirala je cijeli prostor Velića i komunikacije koje su prolazile njezinim podnožjem. Vojna posada utvrde bdjela je nad sigurnošću putnika i funkcioniranjem daleko većeg gospodarskog kompleksa od onog u Banjačama. Ondje je postojao posjed površine najviše oko 20 000 m², dok je Velić predstavljao znatno složeniji i prostorno veći kasnoantički posjed, čija se veličina mjeri u kvadratnim kilometrima.[16] U tom su kontekstu Banjače

[13] Nedavno je prilikom čišćenja terena za novi vinograd na Stupači u Dugopolju otkriven dio rimske ceste s mjestimice sačuvanim kolotrazima. Riječ je o S-zavoju rimske trase koja se iz vododerine u podnožju brda uspinjala prema današnjoj lokalnoj cesti koja vodi iz Dugopolja u Bisko (ŽC 6260). Ispod i iznad te ceste, paralelno s njom, mjestimice su vidljivi kolotrazi rimske trase usječeni u kamenu živcu. Oni vode prema nasipu autoceste, odnosno prema prosjeku stare uskotračne željeznice „rere“, odakle se trasa ceste spuštala prema zaseoku Bojićima. Na sjevernoj padini Prosika kolotrazi su mjestimice sačuvani i na padini brda, gdje se uočavaju na vrhovima kamenih kukova, na visini od približno 0,5 do 1 m iznad današnje površine tla. Takav položaj posljedica je dugotrajne erozije koja je odnijela izvorni cestovni sloj i okolno tlo.

[14] Ožanić Roguljić, Miloglav 2018, str. 9.

[15] Katić 2018, str. 263–264.

[16] Banjače su iskopane samo u zoni utjecaja građevinskih radova na autocesti. Prema jugu i jugozapadu ima još objekata.

archaeological excavations.[10] In the field below the site, a late ancient tomb was unearthed, which was built from reused tombstones originally belonging to Roman soldiers.[11]

It is important to emphasize that all these sites, together with the tombs discovered at Vučipolje, were located along the route of a Roman road that passed approximately 250 m to the south across the karst field. Occasional wheel ruts have been observed on the hillside near the present-day local road (ŽC 6260), in the karst terrain southeast of Banjače.[12] This route appears to have extended from the pond of Dračanica on Kapela and, continuing across the field, emerged at Prosik, from where it descended toward Ercegovci.[13] Beyond this point it likely joined the main communication route running from Križice toward Tilurium.

The road that crossed the field near Banjače ran parallel to the more northerly main Roman road which from the Dugopolje plateau (Podi) traversed Mount Mojanka and reached Križice near the present-day quarry, from where it continued via Dicmo toward Sinj. Banjače was directly connected to the southern branch of this communication network; along this route the inhabitants could drive their livestock to the watering place at the Dračanica pond and access the land they cultivated in Dugopolje. In the shadow of the late ancient fort at

[10] Borzić, Jadrić 2007, pp. 162-163.

[11] Cambi 2001, pp. 82-98.

[12] The site of Banjače and the wheel ruts of the Roman road along county road ŽC 6260 were identified during archaeological survey conducted by the author together with the late Marijan Lozo in preparation for rescue excavations along the route of the Adriatic motorway.

[13] A section of a Roman road, with wheel ruts preserved in some places, was recently discovered during land clearance for a new vineyard at Stupača in Dugopolje. The remains form an S-shaped bend where the Roman route ascended from an erosion gully at the foot of the hill toward the present-day local road connecting Dugopolje and Bisko (ŽC 6260). Above and below this road, parallel to it, wheel ruts carved into bedrock are visible in places. These lead toward the motorway embankment and the cut of the former narrow-gauge railway (“rera”), from where the route descended toward the hamlet of Bojići. On the northern slope of Prosik, wheel ruts are also preserved in some places on the hillside, visible atop rock outcrops at a height of approximately 0.5–1 m above the present ground level. This elevation is the result of long-term erosion that removed the original road surface and surrounding soil.

tek uvod u temu kasnoantičkog veleposjeda u salonitanskom zaleđu.

Rimske ceste na području Jabuke i Velića (karta 1, br. 6, 7, 8)[17]

Današnji Velić je naselje na cesti D220 koja vodi iz Trilja prema Kamenskom. Komunikacije su određivale razvoj triljskog kraja od antičkog vremena do danas. Rimska magistralna cesta, izgrađena od Trilja, tj. triljskog mosta (*Pons Tiluri*), preko Vedrina, Jabuke, Velića i Donje Tijarice te dalje prema Duvanjskom polju (*Delminium*), mjestimice je dobro očuvana. Taj je pravac krajem 19. stoljeća naznačio Filip Baliff. On spominje kolotrage u Vedrinama i Tijarici.[18] Ceste na području Vedrina, Jabuke i Velića posebna su tema koja zaslužuje cjelovitiju studiju.[19] Ekstenzivna stočarska proizvodnja na platou brda Osoja i Ržišta iznad Jabuke i Velića te blizina kasnoantičke utvrde Čačvina utjecale su na izgradnju guste mreže lokalnih cesta koje su olakšavale gospodarenje prostorom, opskrbu i transport proizvoda kasnoantičkog veleposjeda koji se ondje nalazio, a zbog kojeg se također ulagalo u infrastrukturu. Na području Vedrina, Jabuke i Velića postoje tri pravca antičkih cesta: magistralna cesta iz Salone prema unutrašnjosti provincije (karta 1, Grubuša, the local population engaged in both livestock breeding and agriculture.[14]

The examples of Banjače, Vučipolje and Velić demonstrate that late ancient rural settlements developed within a network of communications and fortified centres that shaped their function and ensured their survival. The fort on Grubuša hill, as the dominant point in the surrounding landscape, represented a key element of the regional defensive system, offering protection and refuge to the inhabitants of nearby rural settlements during periods of heightened insecurity in Late Antiquity.[15] By contrast, the fort of Čačvina (Fig. 1) controlled the entire area of Velić and the communication routes that passed along its foot. The military garrison stationed at the fort supervised the safety of travellers and the functioning of a significantly larger economic complex than that attested at Banjače. Whereas the estate at Banjače probably covered no more than approximately 20,000 m², the site at Velić represents a far more complex and spatially extensive late ancient estate, whose size can be measured in square kilometres.[16] In this context, Banjače serves merely as an introduction to the topic of the late ancient large estate in the hinterland of Salona.

Roman roads in the area of Jabuka and Velić (map 1, nos. 6, 7, 8)17

Present-day Velić is a settlement situated along the D220 road connecting Trilj with Kamensko. Communication routes have significantly shaped the development of the Trilj region from antiquity to the present. The principal Roman road leading from Trilj, i.e. from the bridge in Trilj (*Pons Tiluri*), passed through Vedrine, Jabuka, Velić and Donja Tijarica before continuing toward the plain of Duvno (*Delminium*) and sections of this route remain well preserved in certain areas. The course of the road was already noted at the end of the 19th century by Filip Baliff, who recorded the presence of

17 Sve trase ucrtanih cesta jasno su prepoznatljive i potvrđene na terenu te njihovo postojanje nije upitno. Međutim, zbog gustog raslinja pojedine dionice nije bilo moguće u cijelosti pregledati, zbog čega ucrtani pravci zahtijevaju dodatno, preciznije terensko lociranje i verifikaciju.

18 Ballif 1893, str. 25.

19 Povijesne putove u Veliću pokušali su obrađivati studenti arheologije u okviru fakultetske prakse. Vidi: Bužanić *et al.* 2018, str. 39. Nedavno su objavljena važna arheološka istraživanja rimske ceste u Vedrinama kod Trilja (usp. Tončinić, D. Bužanić, J. Bužanić 2025, str. 25–29, sl. 11). U istom se radu, međutim, na prostoru Jabuke i Velića nepotrebno raspravlja o prometnici koju su autori označili kao trasu A2. Nastala je u 19. stoljeću, a njezini su dijelovi bili u uporabi još u 20. stoljeću, prije izgradnje današnje državne ceste D220, te nema nikakve veze s rimskom cestovnom trasom. Položaj kolotraga rimske ceste u Veliću, odnosno njihovu točnu lokaciju, otkrili su Marijo Kozina iz Velića, Tonko Bartulović iz Katuna i Igor Podrug iz Dicma, o čemu je izvještavao dnevni tisak 2023. godine (usp. „U Veliću pronađeni dokazi dugo tražene rimske ceste“, Večernji list, 16. 4. 2023.; „Potvrđeno veliko povijesno otkriće u triljskome kraju, o tome se dugo nagađalo, još od iskopa jednog neobičnog kamena“, Slobodna Dalmacija, 18. 4. 2023.).

14 Ožanić Roguljić, Miloglav 2018, p. 9.

15 Katić 2018, pp. 263-264.

16 The site of Banjače has been excavated only within the zone affected by motorway construction; there are more structures to the south and southwest.

17 All routes of mapped roads are clearly identifiable and confirmed in the field, their existence is out of the question. However, due to dense vegetation, certain sections could not be fully examined, and thus the mapped routes require further precise determination of their location in the field and verification.



Sl. 2 - Trasa rimske ceste u Čelagušama (autor: M. Katić)

Fig. 2 - Route of the Roman road in Čelaguše (author: M. Katić)

br. 6) i dvije vicinalne – jedna sa sjevera, od Rude preko Poda na Velić (karta 1, br. 7), a druga se od Vedrina odvajala u brdo preko Kosmaša i Ljuta te vodila u Čačvinu (karta 1, br. 8). Ove ćemo trase obraditi u općim crtama; bez njih nije moguće razumjeti položaj i funkcioniranje kasnoantičkog ruralnog kompleksa na području Velića i Jabuke.

Od Vedrina, gdje je prije nekoliko godina istražen potez rimske ceste,[20] preko Jabuke i Velića pruža se magistralna cesta. Ona se penje sjevernom padinom klanca Čelaguša; kaldrmana je i prema padini ima podignut zid od većih kamenih blokova (sl. 2). U Čelagušama se nalazi bunar Novak, koji pripada Jabuci; postoji predaja da su ga izgradili Turci, što upućuje na njegovu starost.[21]

Ispred bunara nalazi se veća kamenica koja je služila kao pojilište za životinje. Ova je trasa tijekom srednjeg vijeka služila kao karavanski put prema Bosni. Kasnije je nadodan i odvojak koji je vodio prema tvrđavi Čačvina. Dalje se put preko Maja i Biluša do groblja u Veliću može dobro pratiti, a iza groblja postaje vidljiv po kolotrazima na kamenu živcu.

Novovjekovna obrada polja promijenila je konfiguraciju terena pa se u polju teže prati pravac ceste. Na lokaciji Krivača pronađen je miljokaz (sl. 3). Bio je postavljen negdje uz cestu 236. godine, u vrijeme cara Gaja Julija Vera Maksimina (vladao

[20] Tončinić, D. Bužanić, J. Bužanić 2025, str. 26–28, sl. 12.

[21] Sikirica 1979, str. 163. Za „turske" starine vidi: Budiša 2013, str. 134–135.

wheel ruts in Vedrine and Tijarica.[18] The roads in the area of Vedrine, Jabuka and Velić represent a special topic that deserves a more comprehensive study.[19] Extensive livestock production on the plateau of the hills Osoje and Ržišta above Jabuka and Velić, combined with the proximity of the late ancient fort of Čačvina, led to the development of a dense network of local roads. These routes facilitated the management of the surrounding landscape, ensured supply and the transport of products from the late ancient large estate located there. Its existence also prompted investments in the local infrastructure. In the area of Vedrine, Jabuka and Velić, three routes of ancient roads have been identified: the main road leading from Salona toward the interior of the province (map 1, no. 6) and two vicinal roads—one running from the north from Ruda via Podi to Velić (map 1, no. 7), and another branching off from Vedrine and ascending the hills via Kosmaš and Ljut toward Čačvina (map 1, no. 8). These routes will be discussed in general terms, as they are essential for understanding both the location and the functioning of the late ancient rural complex in the area of Velić and Jabuka.

From Vedrine, where a section of the Roman road was investigated several years ago,[20] the main road runs through Jabuka and Velić. It ascends along the northern slope of the Čelaguše gorge. The road's surface is paved with cobblestone, and on the

[18] Ballif 1893, p. 25.

[19] Historical routes in Velić were also analysed by archaeology students as part of their field training. See: Bužanić, Glavinić, Ivak, Šekrst, Vidović 2018, p. 39. Recently, important archaeological research on a Roman road in Vedrine near Trilj has been published (cf. Tončinić, D. Bužanić, J. Bužanić 2025, pp. 25–29, Fig. 11). However, the same study unnecessarily discusses a route in the area of Jabuka and Velić, marked A2 by the authors; this route originated in the 19th century and its sections remained in use into the 20th century prior to the construction of the modern state road D220, it has no connection whatsoever with the Roman road route. The wheel ruts of the Roman road in Velić, i.e. their exact location, were identified by Marijo Kozina from Velić, Tonko Bartulović from Katuni, and Igor Podrug from Dicmo, which was reported in the daily press in 2023 (cf. *U Veliću pronađeni dokazi dugo tražene rimske ceste*, Večernji list, 16. 4. 2023; *Potvrđeno veliko povijesno otkriće u triljskome kraju, o tome se dugo nagađalo, još od iskopa jednog neobičnog kamena*, Slobodna Dalmacija, 18. 4. 2023).

[20] Tončinić, D. Bužanić, J. Bužanić 2025, pp. 26-28, fig 12.



Sl. 3 - Počasni miljokaz Maksimina Tračanina iz Velića (foto: T. Seser)
Fig. 3 - Honorary milestone of Maximinus Thrax from Velić (photo: Tonći Seser)

235. – 238.),[22] poznatog kao Maksimin Tračanin (*Thrax*).

Za vrijeme svoje vladavine nikada nije bio u Rimu jer mu nisu bili skloni ni Rimljani ni senat. Maksimin je bio vojnik, jedan od brojnih careva iz 3. stoljeća kojeg je na carski tron postavila vojska. Pisani povijesni izvori podrugljivo ga opisuju kao nepismena čobana silne snage.[23] Uspješno je ratovao na sjevernim granicama Carstva protiv Dačana i Sarmata. Njegovo sjedište bilo je u Sirmiju (Sremska Mitrovica). Ondje je boravio zbog odanosti panonskih jedinica koje su ga proglasile carem i zbog blizine ugrožene granice na Dunavu.[24] Ivo Bojanovski nabrojao je 14 počasnih miljokaza koji spominju Maksimina Tračanina, često s njegovim sinom i suvladarom Maksimom. U Naroni mu je blizu gradskih vrata bio postavljen posvetni natpis.[25] Još jedan njegov miljokaz nađen je na lokalitetu Dolac u Dugopolju (CIL XVII/4, 324).

22 Abramić 1926–1927, str. 140–141.
23 Bojanovski 1977, str. 189.
24 Isto, str. 193.
25 Isto, str. 190–192.

downslope side it is supported by a retaining wall built of larger stone blocks (Fig. 2). Within the area of Čelaguše lies the well of Novak, which belongs to Jabuka. Local tradition holds that it was built by the Ottomans, suggesting its considerable age.[21]

In front of the well stands a large stone trough that once served as a watering place for animals. During the Middle Ages, this route functioned as a caravan road leading toward Bosnia. At a later stage, an additional branch road was built that led to the fort of Čačvina. Farther along, the course of the route can be clearly followed across the areas of Maje and Biluše toward the cemetery in Velić; beyond the cemetery, its line becomes visible through wheel ruts carved into the bedrock.

Early modern agricultural activity altered the configuration of the terrain, making the course of the road more difficult to trace across the field. At the site of Krivača, a milestone was discovered (Fig. 3), which had originally been erected somewhere along the road in the year 236, during the reign of the emperor Gaius Julius Verus Maximinus (r. 235–238),[22] better known as Maximinus Thrax.

During his reign, Maximinus never visited Rome, as he enjoyed little support from either the Roman populace or the Senate. He was a soldier, one of the many emperors of the 3rd century who were elevated to the imperial throne by the army. Written historical sources portray him in a derogatory manner, describing him as an illiterate shepherd of extraordinary physical strength.[23] He campaigned successfully on the northern frontiers of the Empire against the Dacians and the Sarmatians. His seat of power was in Sirmium (modern Sremska Mitrovica), where he resided due to the loyalty of the Pannonian units that had proclaimed him emperor and because of the proximity of the threatened Danube frontier.[24] Ivo Bojanovski recorded 14 honorary milestones mentioning Maximinus Thrax, often together with his son and co-ruler Maximus. In Narona, a dedicatory inscription in his honour was erected near the city gates.[25] Another of his milestones was discovered at the site of Dolac in Dugopolje (CIL XVII/4, 324).

21 Sikirica 1979, p. 163. For remains from the Ottoman period, see: Budiša 2013, pp. 134-135.
22 Abramić 1926-1927, pp. 140-141.
23 Bojanovski 1977, p. 189.
24 Ibid, p. 193
25 Ibid, pp. 190-192.



Sl. 4 - Segment rimske vicinalne ceste Ruda – Velić u južnom dijelu trase (strelicom je označen kolotrag)
Fig. 4 - Segment of the Roman vicinal road Ruda–Velić in the southern section of the route (wheel ruts indicated by an arrow)

Nameće se pitanje odakle u Dalmaciji i Panoniji toliko natpisa ovog cara uzurpatora, koji je vladao svega tri godine. Većinom su to počasni milijarni stupovi bez oznaka milijacije, a neki su pisani u dativu u obliku počasnih titula. Takav je i miljokaz s lokaliteta Krivača u Veliću (sl. 3).

I. Bojanovski smatrao je da je pojava velikog broja Maksiminovih natpisa odraz njegove vojne prisutnosti na zapadnom Balkanu te da je u Dalmaciji morao ugušiti neku pobunu podignutu protiv njega.[26] Vjerojatno je počasni miljokaz iz Velića bio smješten na raskrižju gdje se vicinalna cesta sa sjevera spajala na magistralni pravac. Ta je cesta vodila preko Rude i Poda na Velić (sl. 4).

Već je krajem 19. stoljeća Ćiril Iveković upozorio na cestovni pravac koji je od Čitluka (*Aequum*) vodio do Rude. On ga dalje od Rude vodi preko Roža na Voštane te navodi da je služio samo za konje i pješake, pa je upitno radi li se o rimskoj trasi ceste. Za trasu od Voštana prema Tijarici spominje da je „usječena u kamen".[27] Prema Ivekoviću, očito je da je lijevom obalom rijeke Cetine prolazila jedna lokalna cesta koja je spajala *Aequum* preko mosta na Mostinama u Bajagiću s prostorom Rude

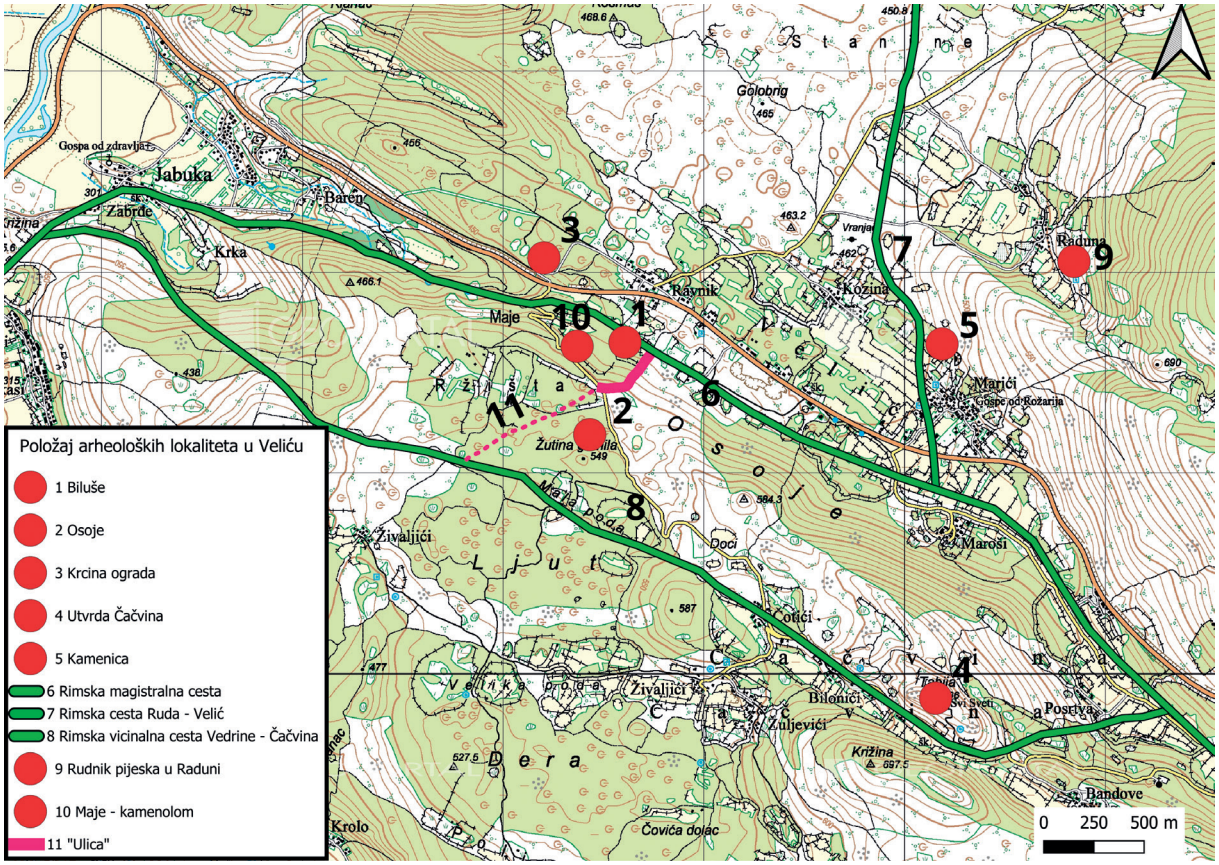
[26] Isto, str. 193.
[27] Iveković 1897, str. 199–200.

This raises the question of why so many inscriptions of this usurper emperor, who ruled for only three years, are found in Dalmatia and Pannonia. Most of them are honorary milestones lacking indications of mileage, and some are inscribed in the dative in the form of honorific titulature. One such example is the milestone from the site of Krivača in Velić (Fig. 3).

Ivo Bojanovski suggested that the relatively large number of inscriptions referring to Maximinus reflects his military presence in the western Balkans. In Dalmatia, he may have been involved in suppressing a rebellion directed against his authority.[26] The honorary milestone from Velić was probably erected at a crossroads where a vicinal road from the north joined the main communication route. This secondary road led via Ruda and Podi toward Velić (Fig. 4).

Already at the end of the 19th century, Ćiril Iveković identified a road route leading from Čitluk (*Aequum*) to Ruda. From Ruda he traced it further via Rože toward Voštane, noting that it was used only by horses and pedestrians, which raises the question of whether this was indeed a Roman road. For the section extending from Voštane toward Ti-

[26] Ibid, p. 193.



Karta 1 - Položaj arheoloških nalazišta i trase rimskih cesta u Veliću
Map 1 - Location of archaeological sites and routes of Roman roads in Velić

i Tijarice. Tu se spajala s magistralnom cestom koja je iz Trilja preko Velića i Tijarice vodila na Buško blato i dalje u unutrašnjost Bosne.[28] Ivekoviću je bio nepoznat odvojak od Rude prema Veliću, a mi smo ga identificirali na južnom potezu gdje se mjestimice u kršu vide kolotrazi i kaldrma (sl. 4). Cesta se teško prati jer je loše očuvana, ali se njezin pravac može približno rekonstruirati, kao što smo učinili na karti 1.[29] S krškog platoa izlazila je na rimski gospodarski sklop na Livadama kod Kamenice. Tu se u jednoj kamenoj gomili vidi zid građen pravilnijim kamenom i vapnenim mortom. Na obližnjem kamenom kuku iskopan je bazen dubok oko 125 cm, veličine oko 10 m² (sl. 5). Kamenica je očito pripadala tom rimskom gospodarskom objektu (karta 1, br. 5).

jarica he recorded that it was "cut into the rock."[27] According to Iveković's observations, it appears that a local road ran along the left bank of the Cetina River, linking *Aequum*—via the bridge at Mostine in Bajagić—with the area of Ruda and Tijarica. There it joined the principal route that led from Trilj through Velić and Tijarica toward Buško Blato and further into the interior of Bosnia.[28] The branch road from Ruda toward Velić was unknown to Iveković, but we identified it along its southern stretch, where wheel ruts and cobble-stones are occasionally visible in the karst terrain (Fig. 4). The road is difficult to trace due to its poor state of preservation, but its route can be approximately reconstructed, as shown on map 1.[29] From the karst plateau it descended toward the Roman agricultural complex at Livade

[28] Bojanovski 1974, str. 58.

[29] Cestu su krajem 2024. godine na terenu detektirali Tonko Bartulović i Marijo Kozina. S njima sam 6. siječnja 2025. obišao ovu dionicu; na trima se mjestima s većom sigurnošću mogu identificirati potezi kolotraga. Bartuloviću i Kozini zahvaljujem na informacijama.

[27] Iveković 1897, pp. 199-200.

[28] Bojanovski 1974, p. 58.

[29] The road was identified in the field at the end of 2024 by Tonko Bartulović and Marijo Kozina. I surveyed this section with them on 6th January 2025; at three locations, stretches of wheel ruts can be identified with greater certainty. I would like to thank Bartulović and Kozina for the information.



Sl. 5 - Kamenica u Gornjem Selu u Veliću
Fig. 5 - Stone trough in Gornje Selo in Velić.

U ljeto 2022. godine Marijo i Matilda Kozina ispraznili su i očistili Kamenicu. Fotografirao ju je i opisao Tonko Bartulović. On navodi da je njezina površina nešto veća od 10 m² te je interpretira kao tijesak za grožđe.[30] Navodi i koristan podatak da je etnolog Josip Miličević zabilježio lokalne predaje vezane za Kamenicu. Jedna je uobičajena i odnosi se na zakopano blago, a druga govori da su se u njoj

[30] Bartulović 2022, str. 1–2. Iako je Bartulovićev zaključak logičan s obzirom na elemente koji podsjećaju na rimski tijesak za vino, mišljenja sam da je ipak riječ o otvorenoj cisterni u koju se akumulirala kišnica s kamenog kuka u kojem je iskopana, a služila je za napajanje stoke. Kružni recipijent u središtu, s kraćim bočnim kanalom na istočnoj strani, služio je za usmjeravanje nečistoća prema središnjem kružnom udubljenju, gdje se taložio mulj, dok je kanal na južnoj strani iz kružnog dijela vodio prema najnižoj južnoj točki cisterne. Antičke cisterne obično imaju manje kružne recipijente na dnu za taloženje mulja, a Vitruvije u VIII. knjizi navodi kako će voda biti čišća ako se mulj ima gdje slegnuti (Vitruvius 1990, str. 170). U Kamenici su recipijenti znatno uvećani jer je cisterna bila velika i otvorena pa se u nju lako nakupljala nečistoća.

near the site of Kamenice, where a stone trough was discovered. There, a wall built of more regularly cut stones and lime mortar is still visible within a stone mound. On a nearby rocky outcrop, a pool approximately 125 cm deep and covering about 10 m² was hewn into the bedrock (Fig. 5). This stone trough evidently belonged to the Roman agricultural estate (map 1, no. 5).

In the summer of 2022, Marijo and Matilda Kozina emptied and cleaned the stone trough, after which it was photographed and described by Tonko Bartulović. He notes that its surface area slightly exceeds 10 m² and interprets it as a wine press.[30] He

[30] Bartulović, 2022, pp. 1-2. Although Bartulović's conclusion is logical given the features that resemble a Roman wine press, I am nevertheless of the opinion that this is an open cistern in which rainwater accumulated from the rocky outcrop into which it was carved, and which served for watering livestock. The circular recipient in the centre, with a short lateral channel on the eastern side, served to direct impurities toward the central circular deepening, where silt would settle, while the channel on the southern side led from

miješali živo vapno, bjelanjci od jaja i pijesak te da se nastalo vezivo koristilo za žbuku.[31] To potvrđuje aktivnost proizvodnje vapna u Veliću, što pokazuju i brojni ostatci zatrpanih klakara.

Na Kamenici i Livadama nalazio se rimski gospodarski sklop od kojeg je spomenuta cesta nastavljala pored gomile sa stećcima u Gornjem Selu te dalje u polje, gdje se spajala s magistralnim pravcem rimske ceste.

Važnost i promet na ovoj sjevernoj vicinalnoj dionici u Veliću bili su usko vezani za (ne)funkcioniranje mosta na rijeci Cetini (*Pons Tiluri*).[32] U srednjem i novom vijeku nije bilo mosta u Trilju pa su se ljudi i roba preko rijeke prevozili skelom. Zato se za karavanski promet počela češće koristiti kraća trasa stare rimske ceste koja je iz Splita preko Sinja vodila na Han, gdje je bio most, a zatim dalje preko Bilog briga i Vagnja na Prologu, odakle se spuštala u Livanjsko polje. Turci su održavali most na Hanu, a cijela dionica s postajama kartirana je početkom 18. stoljeća s jasno naznačenim udaljenostima između naselja i postaja.[33] Tijekom 19. i 20. stoljeća izgrađene su nove cestovne trase prema Bosni i Hercegovini, prilagođene tadašnjim vojnim, strateškim i prometnim potrebama, a ponovno se gradi i most u Trilju.

Još jedan pravac vicinalne ceste odvajao se od rimske magistralne ceste kod današnjeg groblja u Vedrinama, u blizini prethistorijske gradine Križina. Na tom je mjestu 2020. godine istražena spomenuta dionica rimske ceste.[34] Stotinjak metara južnije od groblja odvajala se vicinalna cesta. Penjući se uz blagu padinu (sl. 6), u širokom luku skretala je na sjevernu padinu brda iznad zaseoka Zabrđa i prelazila preko područja koje lokalno stanovništvo naziva Vlaka. Dalje je prolazila zapadno od brda Kosmaša prema području koje je na topografskoj karti označeno kao Ljut,[35] gdje dolazi na lokaciju

[31] Isto.

[32] Milošević 2009, str. 169–182.

[33] Kao autor karte navodi se Sebastiano Polverigiani, uz napomenu *in copia*, što znači da je karta izrađena kao preslika starijeg izvornika. Vidi: Duplančić 1988, str. 64–65, sl. 1.

[34] Vuković *et al.* 2024, str. 247–248.

[35] Početni dio ove vicinalne trase ucrtao je Vuković na svojoj karti, interpretirajući je kao novovjekovnu/modernu cestu (vidi: Vuković *et al.* 2024, prilog 1). Međutim, ako je dobro popraćen pravac na lidarskom snimku, riječ je o dionici rimske ceste Vedrine – Čačvina.

also provides valuable information that the ethnologist Josip Miličević recorded local traditions associated with the trough. One widespread tradition relates to a buried treasure, while another maintains that quicklime, egg whites and sand were mixed in the basin to produce a binding mortar used for plastering.[31] These traditions provide further evidence for lime production in the Velić area, which is also attested by numerous remains of buried lime kilns.

A Roman agricultural complex occupied the area of Kamenica and Livade. From there, the road continued past a mound containing medieval tombstones (*stećci*) in Gornje Selo before extending across the field, where it joined the main Roman road.

The importance and intensity of traffic along this northern vicinal route at Velić were closely connected to the (non-) functioning of the bridge over the Cetina River (*Pons Tiluri*).[32] During the medieval and early modern periods, no bridge existed in Trilj, and people and goods had to be ferried across the river. Consequently, caravan traffic increasingly relied on a shorter section of the old Roman road, which ran from Split via Sinj to Han, where a bridge existed, and continued toward Bili Brig and Vaganj near Prolog, from where it descended into the plain of Livno. The Ottomans maintained the bridge at Han, and by the beginning of the 18th century the entire route, together with its stations, had been mapped, with distances between settlements and stopping places clearly indicated.[33] During the 19th and 20th centuries, new roads towards Bosnia and Herzegovina were constructed to meet the military, strategic and transport requirements at that time, while the bridge at Trilj was rebuilt.

Another vicinal road branched off from the principal Roman road near the present-day cemetery at Vedrine, close to the prehistoric hillfort of

the circular section toward the lowest southern point of the cistern. Ancient cisterns usually have smaller circular recipients at the bottom for the settling of silt, and Vitruvius notes in Book VIII that water will be cleaner if there is a place for silt to settle (Vitruvius 1990, p. 170). In the stone basin, the recipients are significantly enlarged because the cistern was large and open, allowing impurities to accumulate more easily.

[31] Ibid.

[32] Milošević 2009, pp. 169-182.

[33] The map is attributed to Sebastiano Polverigiani, with the remark *in copia*, indicating it is a copy of an earlier original. See: Duplančić 1988, pp. 64-65, fig. 1.

Mala poda, južno od Žutine gomile (karta 1, br. 8). Tu je cesta vidljiva u prostoru s dvama paralelnim dugim nasipima, slično kao „ulica“ na Bilušama (karta 2). Sjeverni zemljano-kameni nasip širok je oko 5 m, a visok nešto više od 0,5 m; južni je nasip malo niži, širine oko 2,7 m. Cesta u sredini široka je oko 3 m. Na lidarskom se snimku ovaj potez dobro uočava. Prekinut je na jugoistočnom početku velikog ograđenog dolca, gdje su u novom vijeku cesta i njezin neposredni okoliš prekrčeni tijekom obrade poljoprivrednog zemljišta. Trasa ceste s bočnim urušenjima ogradnih suhozida oko pola je metra viša od razine obradivog tla u dolcu. Cesta se iza Malih poda prema sjeverozapadu može pratiti po jednom valumu – zemljano-kamenom urušenju ogradnog zida koji je pratio cestu. Prema Čačvini, odnosno jugoistoku, nastavlja sjevernom stranom brda Glavice dosežući uski vrh polja kod zaseoka Čota u Čačvini (vidi kartu 1).[36] Prateći sjeverni rub polja, trasa vodi ravno prema zidanoj cisterni u Čotama, nakon čega je vjerojatno izlazila na pravac današnje lokalne ceste.[37] U daljnjem dijelu trasu je teško pratiti zbog suvremene izgradnje. Može se pretpostaviti da je između Čačvine i Bandoškog briga skretala prema Vrpolju, gdje se spajala s magistralnim pravcem rimske ceste.

Ova je trasa, prema načinu gradnje i slabijem intenzitetu pojave kolotraga, vrlo slična prethodno opisanoj cesti Ruda – Velić. U Vlakama, na padini brda, prepoznatljiva je po rubnjaku (sl. 6a). Budući da je riječ o sjevernoj padini, mahovina i gusto raslinje u velikoj su mjeri prekrili trasu ceste, zbog čega je ona na tom dijelu teže uočljiva, osobito na mjestima gdje je erozija uništila pojedine dijelove. Bila je popločana i kaldrmom, koja se danas skriva ispod guste trave. Kod Čota u Čačvini, na sjeverozapadnom prilazu polju, kolotrazi u kamenu živcu jasnije su vidljivi.

Analizom lidarskog snimka tim arheologa s Odsjeka za arheologiju Filozofskog fakulteta u Zagrebu utvrdio je na prostoru između gradine Križina i brda Kosmaša postojanje čak 38 kamenih gomila, od kojih je veći dio prekriven gustom šumom. Također je uočena pravilna četvrtasta struktura koja podsjeća na privremeni vojni logor, a autori članka ističu razlike u odnosu na rimski logor u Klancu kod Križina. In 2020, this section of the Roman road was archaeologically investigated at that location.[34] Approximately one hundred metres south of the cemetery, the vicinal road diverged from the main route, and after ascending a gentle slope (Fig. 6), it turned in a wide arc toward the northern slope of the hill above the hamlet of Zabrđe, crossing an area locally referred to as Vlaka. From there, the road continued west of the hill of Kosmaša toward the area named Ljut on the topographic map,[35] where it continued to the site of Mala poda, south of the tumulus known as Žutina gomila (map 1, no. 8). At this point the road is clearly visible in the landscape, marked by two long, parallel embankments, similar to the “street” recorded at Biluše (Map 2). The northern earthen–stone embankment measures approximately 5 m in width and slightly more than 0.5 m in height, while the southern embankment is somewhat lower and about 2.7 m wide. The roadway in between is roughly 3 m wide. This feature is clearly discernible on LiDAR imagery. It is interrupted at the southeastern edge of a large enclosed field depression, where in the modern period both the road and its immediate surroundings were cleared during agricultural cultivation. The route of the road, together with the collapsed remains of the adjacent dry-stone boundary walls, stands approximately half a metre above the level of the cultivated soil within the depression. Northwest of Mala poda, the route can be followed thanks to a *vallum*—an earthen-stone collapse of the boundary wall that once flanked the route. Toward Čačvina, that is, to the southeast, the road continued along the northern side of the hill known as Glavice, reaching the narrow end of the field near the hamlet of Čota in Čačvina (see map 1).[36] Following the northern edge of the field, the route runs directly toward a masonry-built cistern at Čota, after which it likely joined the route of the present-day local road.[37] In

[36] Na ovu trasu upozorio me T. Bartulović, na čemu mu zahvaljujem. Cestu smo zajedno višekratno obilazili tijekom prosinca 2025. i siječnja 2026. godine.

[37] U blizini dvorišta prve kuće vidi se jedan kolotrag.

[34] Vuković, Tončinić, D. Bužanić, J. Bužanić 2024, pp. 247-248.

[35] The initial section of this vicinal route was plotted by Vuković on his map, interpreting it as an early modern/modern road, see: Vuković, Tončinić, D. Bužanić, J. Bužanić 2024, Appendix 1. However, if the alignment is correctly followed on the LiDAR image, it is in fact a section of the Roman road Vedrine–Čačvina.

[36] T. Bartulović drew my attention to this route, for which I am grateful. We surveyed the road together on several occasions during December 2025 and January 2026.

[37] A single wheel rut is visible near the courtyard of the first house.



Sl. 6 - Kolotrag na odvojku vicinalne od magistralne ceste kod groblja u Vedrinama
Fig. 6 - Wheel ruts on the branch of the vicinal road diverging from the main Roman road near the cemetery in Vedrine.



Sl. 6a - Trasa vicinalne ceste Vedrine – Čačvina u Vlakama na sjevernoj strani brda
Fig. 6a - Route of the vicinal road Vedrine–Čačvina in the area of Vlake on the northern slope of the hill.

Burnuma.[38] A. Milošević s ovog prostora donosi jedinstven nalaz sjekire s polumjesečastim sječivom, za koju izravne analogije nalazi na području sjeverne Albanije, u okviru tzv. komanske kulturne grupe. Nalaz pripisuje jadranskom ranobizantskom krugu, a sjekiru datira u prvu polovinu 7. stoljeća.[39] Vicinalna cesta Vedrine – Čačvina prolazi rubom ovog predjela. Ostale arheološke strukture, vrlo slične onima u Jabuci i Veliću, koje se pružaju na platou između brda Kosmaša i gradine Križina, protumačene su kao „tragovi ekonomskih aktivnosti prapovijesnih populacija".[40] Međutim, mišljenja sam da ih treba interpretirati prema sličnim kasnoantičkim strukturama u Veliću i Jabuci. Na platou u podnožju Kosmaša nalazi se Vedrinska lokva, pogodna za napajanje stoke. Četvrtasta struktura podsjeća na rimski vojni logor, no indikativan je nalaz spomenute kasnoantičke bojne sjekire u njegovoj blizini, pa bi navedene zaključke trebalo uzeti s oprezom. Odvojak sporedne ceste koja se odvaja kod gradine Križina u Vedrinama vodi prema kasnoantičkoj utvrdi na Čačvini. Nesigurno kasnoantičko razdoblje davalo je snažan defenzivni pečat širem prostoru zaleđa Salone.[41] Koliko god je ova lokalna cesta olakšavala opskrbu utvrde Čačvina, u gospodarskom je smislu izravno spajala prostor Vedrina, odnosno rub Sinjskog polja i lijevu obalu rijeka Rude i Cetine, s prostorom Velića i Čačvine.

[38] Vuković *et al.* 2024, str. 249–250.
[39] Milošević 1987b, str. 117–120.
[40] Vuković *et al.* 2024, str. 249.
[41] Katić 2018, str. 245–279.

its further course, the route is difficult to trace due to modern construction. It may be assumed that between Čačvina and Bandoški Brig the road turned toward Vrpolje, where it connected to the main direction of the Roman road.

This route, in terms of construction technique and the relatively limited occurrence of wheel ruts, closely resembles the previously described road Ruda–Velić. In the area of Vlake, on the slope of the hill, the route is identifiable by a kerbstone (Fig. 6a). As the route runs along the northern slope, moss and dense vegetation have largely covered the roadway, making it difficult to detect, particularly in places, where erosion has damaged parts of the road structure. The road was paved with cobbles, which today lie concealed beneath a thick grass cover. Near the hamlet of Čota in Čačvina, at the north-western entrance to the field, wheel ruts carved into the bedrock are more clearly visible.

The analysis of the LiDAR image by a team of archaeologists from the Department of Archaeology at the Faculty of Humanities and Social Sciences in Zagreb identified as many as 38 stone mounds in the area between the hillfort of Križina and the hill of Kosmaša, many of which are located beneath dense forest. The same analysis also revealed a regular quadrangular structure reminiscent of a temporary military camp; however, the authors noted certain differences in comparison with the Roman camp in Klanac near Burnum.[38] From this area, A.

[38] Vuković, Tončinić, D. Bužanić, J. Bužanić 2024, pp. 249-250.

Poprečne „ulice“ koje se u Veliću odvajaju prema jugu na Osoje spajale su magistralnu i vicinalnu cestu Vedrine – Čačvina. Naime, vidjet ćemo da se od Biluša, gdje smo našli stočarski punkt s kućom i torovima, odvaja put od magistralne ceste uz sjevernu padinu Osoja prema jugu. Ta je „ulica“ povezivala kompleks na Bilušama i stočarske objekte na platou brda, ali i vicinalnu cestu Vedrine – Čačvina (karta 1, br. 11). Naziru se tragovi sličnih pravaca koji vode prema jugu. Moguće je da je jedna u istom smjeru vodila preko Maja, zapadno od kamenoloma. Nedvojbena je povezanost ruralnog krajolika s vicinalnim cestama. One također naglašavaju važnost donjeg toka rijeke Rude za krški prostor Jabuke i Vedrina, gdje se pruža prostrano polje. U blizini se nalazio i *Pons Tiluri* pa je ova trasa uvelike olakšavala funkcioniranje utvrde Čačvina i kasnoantičkog ruralnog sklopa u Jabuci i Veliću. Nakon što smo obradili komunikacije, lakše ćemo odgovoriti na pitanje što se nalazilo na području Velića i Jabuke da je zahtijevalo takvu gustu mrežu cesta.

Djelomičan odgovor dobili smo otkrićem ranokršćanske memorije i zidanih grobnica u Krcinoj ogradi (karta 1, br. 3), gdje su 2011. godine započeli intenzivni pregledi terena,[42] a 2013. i prva arheološka iskopavanja koja je vodio Odsjek za arheologiju Filozofskog fakulteta u Zagrebu.[43] Arheološkim istraživanjem na tom lokalitetu i pregledom okolnog terena utvrđeno je postojanje kompleksnog kasnoantičkog naselja koje je imalo „bedem“ širine 1,6 m s prostorijama unutar njegova perimetra.[44] Stambeno-crkveni kompleks bio je kraćim potezom ceste spojen na magistralni pravac rimske ceste. I Krcinu ogradu teško je razumjeti bez šire slike. Nju pruža lidarski snimak (sl. 9), koji pokazuje samo dio velike površine od približno 4 km² s gustom mrežom ogradnih suhozida, kuća, torova za stoku, antičkih komunikacija, ograđenih poljoprivrednih površina, gomila i, na koncu, kamenoloma građevinskog kamena i klakara te rudnika kopnenog pijeska. U toj mreži međusobno povezanih zidova,

Milošević reports a unique find of an axe with a crescent-shaped blade, for which he identifies direct analogies in northern Albania, within the so-called Koman cultural group. He attributes the find to the Adriatic early Byzantine cultural sphere and dates the axe to the first half of the 7th century.[39] The vicinal road Vedrine–Čačvina passes along the edge of this area. Other archaeological features recorded on the plateau between Kosmaša and the hillfort of Križina, very similar to those identified at Jabuka and Velić, have been interpreted as “traces of economic activities of prehistoric populations.”[40] In my view, however, these remains should be interpreted in accordance with the comparable late ancient structures in Velić and Jabuka. On the plateau at the foot of Kosmaša lies the pond called Vedrinska lokva, suitable for watering livestock. Although the quadrangular structure resembles a Roman military camp, the discovery of the aforementioned late ancient battle axe in its immediate vicinity is indicative, and therefore such interpretations should be approached with caution. The branch of the secondary road diverging near the Križina hillfort in Vedrine leads toward the late ancient fort at Čačvina. The insecurity of the late ancient period left a strong defensive imprint on the wider hinterland of Salona.[41] While this local road undoubtedly facilitated the supply of the fort of Čačvina, in economic terms it also directly connected the area of Vedrine, i.e. the edge of the plain of Sinj and the left banks of the rivers Ruda and Cetina, with the areas of Velić and Čačvina.

Transverse “streets” branching southward toward Osoje in the area of Velić connected the main Roman road with the Vedrine–Čačvina vicinal route. As noted earlier, at the site of Biluše, where a pastoral station with a house and animal enclosures was identified, a track diverges from the main road and runs southward along the northern slope of Osoje. This “street” connected the complex at Biluše and the pastoral structures on the hilltop plateau, as well as the vicinal road Vedrine–Čačvina (map 1, no. 11). Traces of similar routes extending southward can also be discerned in the surrounding terrain. It is possible that one such route continued in the same direction across the site of Maje, west

42 Bubić 2015, str. 91–101.

43 Tončinić 2020, str. 367–381.

44 Bubić 2015, str. 96. Isto piše i Tončinić (2020, str. 368). Međutim, pri mapiranju prostora izostavljena je informacija o „bedemu“ naselja (usp. Bužanić *et al.* 2017, str. 45–60). Zapravo je riječ o temeljima visokog ogradnog zida stambenog i crkvenog kompleksa, izgrađenog radi zaštite ljudi i stoke. U tom funkcionalnom kontekstu ne može se isključiti ni njegova defenzivna uloga.

39 Milošević 1987a, pp. 117-120.

40 Vuković, Tončinić, D. Bužanić, J. Bužanić 2024, p. 249.

41 Katić 2018, pp. 245-279.

kojima je strukturiran gotovo čitav prostor, bilo je teško razlučiti njihovu funkciju i kronologiju, zbog čega smo se odlučili na arheološka iskopavanja radi preciznijeg tumačenja zatečenih ostataka.

Istraživanje na Bilušama

Na Bilušama (karta 1, br. 1) se u šumskom krajoliku uočavaju dvije trase ceste, međusobno udaljene približno 5 m. Južnija, rimska cesta, u izravnom je kontaktu s istraživanim stočarskim kompleksom o kojem je ovdje riječ. Omeđena je dugim kamenozemljanim gomilama (obje trase ucrtane su na karti 2). Sjevernija cesta, omeđena suhozidom, očito je korištena u kasnijem razdoblju.

Na prostoru Biluša jasno su vidljive promjene uzrokovane novovjekovnim potrebama za širenjem obradivih površina. Krajem 17. stoljeća započinju seobe prema ovom području,[45] nakon čega novopridošlo stanovništvo intenzivnije obrađuje zemlju u krškim poljima i dolcima, nastojeći maksimalno proširiti poljoprivredno zemljište. U tom se procesu pojedini segmenti stare rimske ceste napuštaju, a nova se pomiče lijevo ili desno, onoliko koliko je bilo potrebno da se zadrži regionalni komunikacijski pravac koji je i dalje povezivao obalu s unutrašnjošću. Istodobno se podižu suhozidi i međe, koji često prekrivaju stare kasnoantičke ruševine, već prije pretvorene u duge kamene ili kameno-zemljane gomile. Kasnoantička intervencija u širi prostor bila je toliko snažna da je nove prostorne intervencije nisu mogle bitno izmijeniti ili uništiti, nego su se prilagodile postojećoj infrastrukturnoj matrici.

Kako bi se razjasnio problem pomicanja trase ceste, jedan kraći novovjekovni potez istražen je 2023. godine (sl. 7). Nalazio se sjevernije od rimske trase ceste (karta 2), imao je zaravnjen kameni živac te je bio nasut sitnijim kamenom i zemljom. Njime se mogla kretati zaprega, što je lokalnom stanovništvu znatno olakšavalo pristup parcelama i prijevoz dobara. Doima se da su lokalne potrebe u tom razdoblju postale prioritetnije, no pritom se ipak očuvala svijest o regionalnom značenju komunikacije.

U cijelosti je sačuvana izvorna rimska trasa ceste prema jugoistoku, flankirana s obiju strana zemljano-kamenim gomilama koje su zapravo ruševi-

[45] Soldo 2011, str. I: 63–65. Prvo su se na području Radune i Vrpolja naselili Poljičani, a zatim, u migracijskom valu koji potiču Mlečani, dolaze i Hercegovci.

of the quarry. It is beyond doubt that the rural landscape was integrated into a network of vicinal roads. These roads further highlight the importance of the lower course of the Ruda River for the karst areas of Jabuka and Vedrine, where an extensive plain extends. Also situated nearby was the *Pons Tiluri*, which greatly facilitated the functioning of the fort of Čačvina as well as the late ancient rural complex in Jabuka and Velić. With the communication routes examined, it becomes easier to address the question of what was located in the areas of Velić and Jabuka that necessitated such a dense road network.

A partial answer emerges from the discovery of the early Christian memoria and the built tombs within the area known as Krcina ograda (map 1, no. 3), where intensive field surveys began in 2011,[42] followed by the first archaeological excavations in 2013, conducted by the Department of Archaeology at the Faculty of Humanities and Social Sciences in Zagreb.[43] Archaeological investigation at Krcina ograda, together with surveys of the surrounding terrain, revealed the presence of a complex late ancient settlement with a "defensive wall" approximately 1.6 m wide and rooms within its perimeter.[44] The residential–ecclesiastical complex at Krcina ograda was connected by a short section of road to the main Roman road. However, the site Krcina ograda cannot be fully understood without considering the wider landscape. This is provided by the LiDAR image (Fig. 9), which reveals only a part of the roughly 4 km² large area, characterized by a dense network of dry-stone walls, dwellings, livestock pens, ancient roads, enclosed fields, burial mounds, and, ultimately, quarries for building stone and lime, as well as inland sand extraction sites. Within this network of interconnected walls, which defines nearly the entire area, it was difficult to determine their function and chronology. For this reason, we decided to carry out archaeological excavations to achieve a more precise interpretation of the preserved remains.

[42] Bubić 2015, pp. 91-101.

[43] Tončinić 2020, pp. 367-381.

[44] Bubić 2015, p. 96. The same is noted by Tončinić 2020, 368. However, when mapping the area, information about the "rampart" of the settlement was omitted (cf. Bužančić, Dunjko, Glavinić, Ivak, Manhrad, Šekrst, Vidović 2017, pp. 45–60). In fact, these are the foundations of a high enclosing wall of a residential and ecclesiastical complex, built to protect people and livestock. In this functional context, its defensive role cannot be excluded.



Sl. 7 - Istraženi dio trase novovjekovne ceste
Fig. 7 - Investigated section of the route of the early modern road

ne starog ogradnog suhozida ceste. Trasa se proteže od ruba šume sve do novog groblja u Veliću, gdje je sjeverni zid groblja djelomično nalegao na rimsku cestu.

S magistralnog pravca, u sjeveroistočnom uglu parcele na jugoistočnom dijelu arheološkog lokaliteta Biluše (k. č. 989/3), odvajala se „ulica" prema jugu (vidi kartu 2). O njoj je već bilo riječi u obradi vicinalne ceste Vedrine – Čačvina. I ta je komunikacija u gornjem dijelu funkcionirala i u novom vijeku. Premda možda više nije imala jasnu ulogu u povezivanju dvaju paralelnih cestovnih pravaca, zadržala se uporaba zadanog kasnoantičkog komunikacijskog smjera. Višestoljetno korištenje kasnoantičke infrastrukture rezultiralo je očuvanjem jedinstvenog kulturno-povijesnog krajolika na prostoru Velića i Jabuke.

Na mjestu na kojem je Muzej hrvatskih arheoloških spomenika započeo arheološka istraživanja 2023. godine u novom je vijeku formirana torina, čiji su suhozidi prelazili preko širokih, izduženih kameno-zemljanih osipina. Te su osipine dominirale širim prostorom, a lidarski je snimak pokazao da je riječ o naizgled kaotično raspoređenim ostatcima urušenih suhozida. Na prostoru Velića i Jabuke zbunjujuća je bila njihova dobra očuvanost, veličina te široka rasprostranjenost po nizini i okolnim padinama, sve do tjemena Osoja. Od Čačvine do ruba brda koje se pruža prema Jabuci protežu se „čipke" suhozida, torova, kuća i komunikacija. Kako smo vidjeli, sličnih struktura ima i u Vedrinama ispod brda Kosmaša.[46]

[46] Ti su ostatci monumentalni, osobito na padini Osoja.

Excavations at Biluše

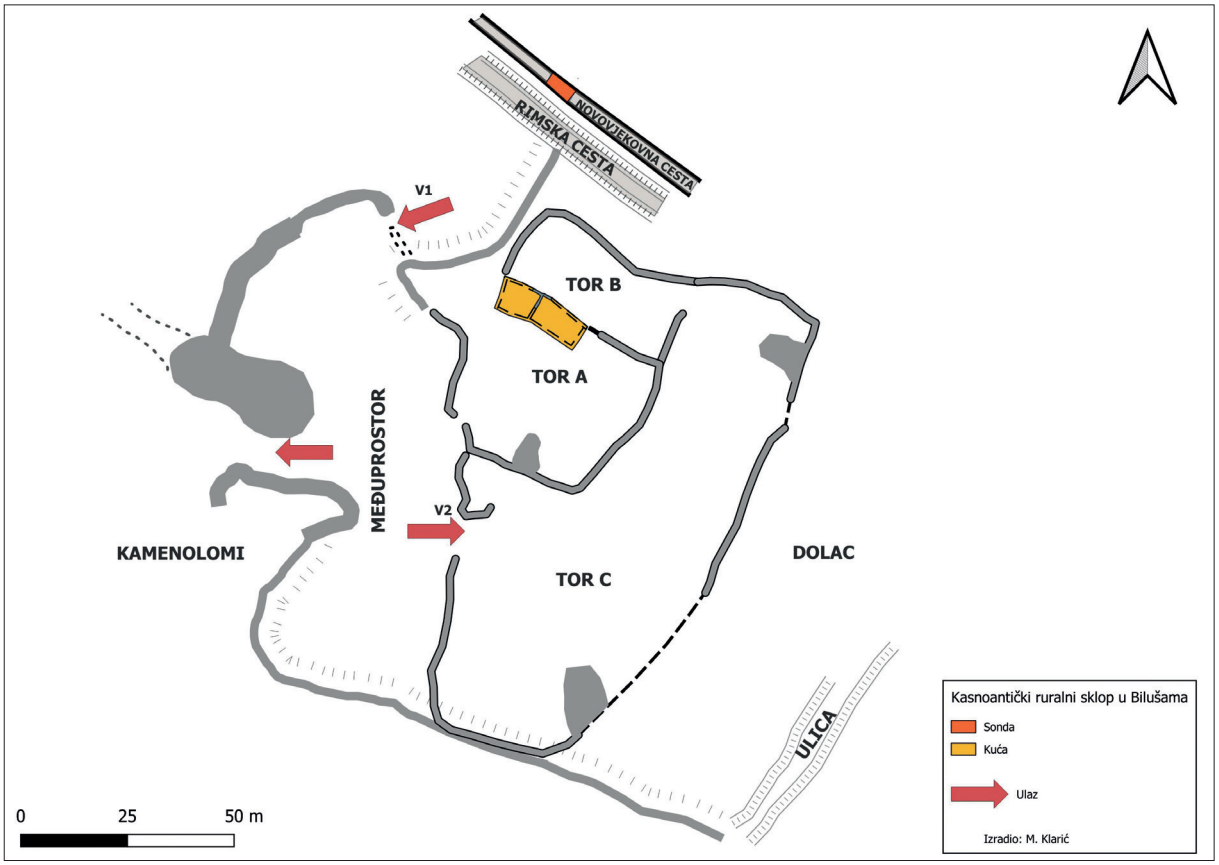
At Biluše (map 1, no. 1), within the forested landscape, two distinct routes of roads are visible, approximately 5 m apart. The southern route corresponds to the Roman road, which runs directly alongside the pastoral complex investigated in this study and is bordered by elongated earthen–stone mounds (both routes are marked on map 2). The northern route, defined by a dry-stone wall, appears to have been used during a later period.

In the area of Biluše, changes caused by early modern needs for expanding arable land are clearly visible. Following the migrations that began at the end of the 17th century to this area,[45] the newly settled population intensified the cultivation of karst fields and depressions, seeking to increase the extent of cultivable land wherever possible. During this process, certain sections of the old Roman road were abandoned, while a new route was moved to the left or right as needed, in order to maintain the regional communication axis that continued to connect the coast with the interior. At the same time, new dry-stone walls and border markers were built, often overlaying older late ancient ruins, which had previously been transformed into long stone or stone–earth mounds. The late ancient interventions in the wider landscape were so substantial that later spatial modifications could not significantly alter or destroy them; instead, they adapted to the existing infrastructural matrix.

To clarify the issue of the shift in the road alignment, a short early modern section was investigated in 2023 (Fig. 7). This segment was located north of the Roman road alignment (map 2), consisted of a levelled bedrock and was covered with smaller stones and earth. It was wide enough to accommodate carts, which significantly made it easier for the local population to access their parcels of land and to transport goods. It appears that local needs became a greater priority during this period, while an awareness of the road's regional significance was nevertheless maintained.

The original route of the Roman road towards the southeast is preserved in its entirety. It is flanked on both sides by earthen–stone mounds, which represent in fact the collapsed remains of the old dry-

[45] Soldo 2011, pp. I – 63-65. The people of Poljica first settled in the area of Radun and Vrpolje, and were later followed, in a migration wave encouraged by the Venetians, by settlers from Herzegovina.



Karta 2 - Prostorni snimak kasnoantičke kuće na Bilušama s neposrednim okolišem
Map 2 - Spatial image of the late ancient house at Biluše with its immediate surroundings



Karta 2a - Idealna rekonstrukcija ruralnog središta na Bilušama s torovima i obližnjim kamenolomom (crtež: D. Popovič)
Map 2a - Ideal reconstruction of the rural centre at Biluše, showing sheepfolds and the nearby quarry (drawing: D. Popovič)

Kako bi se barem djelomično razmrsila ova prostorna i kronološka zbrka, bilo je nužno odabrati polazišnu točku istraživanja i utvrditi vrijeme nastanka starijih, rasutih suhozida. Kao posebno pogodno mjesto za početak istraživanja pokazao se kompleks nastambi, torova i rimske ceste na položaju Biluše. Ondje je, naime, bilo moguće istodobno definirati trasu rimske ceste i ruralnu arhitekturu koja se izravno na nju naslanjala.

Na lokalitetu Biluše nalazi se dobro očuvana veća kuća dimenzija oko 22,5 × 8 m, pregrađena po sredini. Kuća je bila prostorno i funkcionalno usklađena s kompleksom torova koji su je okruživali te je, prema svemu sudeći, predstavljala središnji objekt stočarskog kompleksa. Radi preciznog mjerenja i dokumentiranja cijelog prostora proveden je terenski pregled i kartiranje pomoću GPS-a (vidi kartu 2).[47] Darko Popovič prema arheološkoj dokumentaciji izradio je idealnu rekonstrukciju kasnoantičkog ruralnog kompleksa na Bilušama (karta 2a).

Smještena je u neposrednoj blizini rimske ceste prema kojoj je bio orijentiran ulaz (V1) širine oko 14,2 m. On nije bio u potpunosti otvoren; pregrađivao ga je suhozid širine oko 1 m, koji se pružao u smjeru sjeverozapad-jugoistok. Njegov temeljni dio vidljiv je i danas. Na sjeverozapadnoj strani tog pregradnog zida nalazio se prolaz koji je vodio u „međuprostor“ unutar kompleksa.[48] „Međuprosto-

stone wall that run along the side of the road. The route extends from the edge of the forest to the new cemetery in Velić, where the cemetery's southern wall partially overlies the Roman road.

From the main route, a "street" branched off southwards at the north-eastern corner of the plot located in the south-eastern part of the archaeological site of Biluše (cadastral plot no. 989/3) (see map 2). This communication has already been discussed in the analysis of the vicinal road Vedrine–Čačvina. The route also remained in use in its upper section during the early modern period. Although it may no longer have had a clearly defined function in connecting the two parallel road corridors, the established late ancient direction of communication continued to be followed. Centuries of use of the late ancient infrastructure contributed to the preservation of a distinctive cultural and historical landscape in the region of Velić and Jabuka.

At the site where the Museum of Croatian Archaeological Monuments began archaeological investigations in 2023, a sheepfold was formed in the early modern period, with its dry-stone walls extending across wide, elongated stone-and-earth deposits. These deposits dominated the surrounding area, and the LiDAR image revealed what appeared to be the chaotically arranged remains of collapsed dry-stone structures. In the area of Velić and Jabuka, these features were particularly striking due to their good state of preservation, dimensions and wide distribution across the lowlands and surrounding slopes, reaching up to the summit of Osoje. From Čačvina to the edge of the hill stretching toward Jabuka, a complex network—or "lacework"—of dry-stone walls, sheepfolds, houses and pathways is evident. As previously noted, similar structures are also present in Vedrine, beneath the hill of Kosmaš.[46]

Ante Milošević u svojoj je knjizi o arheologiji Sinjskog polja na topografskoj karti pomalo proizvoljno nacrtao navodni „bedem“ koji se od Ržišta spušta niz padinu preko Maja prema Krcinoj ogradi, gdje je locirao *castrum* (usp. Milošević 2017, str. 102, sl. 138). Čini se da je, potaknut masivnošću zidova u Majama, u njima prepoznao nekakav „bedem“ koji je uklopio u svoju teoriju o dvostrukom kasnoantičkom limesu na Cetini. Valja naglasiti da na terenu ne postoje nikakvi ostatci bedema kakav Milošević prikazuje, niti postoji *castrum* na mjestu Krcine ograde.

47 Riječ je o shematskom prikazu prostora koji služi kao dopuna i vizualno pojašnjenje tekstualnog opisa stočarskog kompleksa u Bilušama. Kartiranje pomoću GPS-a proveli su Miro Klarić i Ante Alajbeg, dok je dokumentaciju arheološke sonde u kasnoantičkoj kući izradila Nada Šimundić-Bendić.

48 Pregrađivanje širokog ulaza imalo je jasnu funkcionalnu logiku. Jedan od zahtjevnijih pastirskih poslova bilo je prebrojavanje stoke, osobito nakon povratka s ispaše. Sužavanje prolaza neposredno na ulazu u stočarski kompleks omogućavalo je kontroliran i postupan prolaz životinja, čime se znatno olakšavalo precizno i sigurno obavljanje tog važnog zadatka.

46 These remains are monumental, especially on the slope of Osoje. In his book on the archaeology of the plain of Sinj, Ante Milošević rather arbitrarily drew a supposed "rampart" on a topographic map, descending from Ržište down the slope across Maje toward Krcina ograda, where he located a castrum (cf. Milošević 2017, p. 102, fig. 138). It seems that, prompted by the massive nature of the walls in Maje, he recognized in them some kind of "rampart," which he incorporated into his theory of a double late ancient limes along the Cetina River. It should be emphasized that there are no remains in the field of any rampart such as the one Milošević depicts, nor is there a castrum at the location of Krcina ograda.

rom“ nazivam veliki ograđeni dio koji je također mogao biti korišten kao tor za stoku, a u njemu su se nalazila dvoja veća vrata. Istočna (V2) su vodila u tor koji je pripadao kući, dok su zapadna vodila u kompleks u kojem su se nalazili kamenolomi građevinskog kamena i klakare. Taj kompleks u svojem sjevernom, ravnijem dijelu ima manje kaverne, gdje se pliće eksploatirao kamen, dok se cijeli labirint manjih i većih kamenoloma nalazi južnije, na padini brda.[49] Zbog jasne prostorne i funkcionalne povezanosti „međuprostor“ je imao značajnu komunikacijsku i radnu ulogu između kamenoloma i stočarskog kompleksa te se ne može tumačiti kao isključivo stočarski prostor. Povezanost s rimskom magistralnom cestom dodatno upućuje na organiziran prijevoz kamene građe, pri čemu su zaprežna kola i životinje za vuču mogli biti osigurani u neposrednoj blizini. Prijevoz građevinskog materijala u antičko doba bio je dobro organiziran i isplativ.[50] Jedan dio velike kuće na Bilušama mogao je služiti i kao štala za krupniju stoku.

Jugozapadno od kuće nalazio se tor A, površine oko 1411 m², dok se na sjeveroistočnoj strani kuće prostiralo četvrtasto dvorište, odnosno tor B, površine 757 m² (vidi kartu 2). Ulaz u jugoistočni dio kuće bio je orijentiran prema tom prostoru te je danas prepoznatljiv kao blaga depresija na sjeveroistočnom dijelu kućnog zida. Iako dimenzijama nadilazi uobičajene okvire tora namijenjena isključivo držanju stoke, njegove proporcije, kao i veličina pripadajućih ograda, upućuju na uzgoj većeg broja grla. Uz ovce, ovdje se vjerojatno držala i krupnija stoka, što je u skladu s aktivnostima u obližnjem kamenolomu i prometnim potrebama na cesti. Dvorište je služilo za svakodnevne stočarske aktivnosti i boravak na imanju.

Kuća s dvorištem / torom B i jugozapadnim torom A bila je povezana užim putom koji se odvaja od rimske ceste. Južno i jugoistočno od navedenih torova prostire se veliki tor C, površine 4841 m². U njegovu zapadnom ogradnom zidu nalazila su se široka vrata V2 (vidi kartu 2). Jugoistočni potez ogradnog zida tog velikog tora nije sačuvan u cijelosti; na karti 2 taj je dio prikazan iscrtkano.

[49] Kamenolomi su danas zarasli šumom i grmljem. U njihovu užem okolišu uočavaju se i klakare korištene za proizvodnju vapna. Nakon uklanjanja raslinja planira se sustavnije i detaljnije istraživanje ovog prostora.

[50] U Saloni su zabilježeni kolegiji za prijevoz kamena (*collegium lapidariorum saccariorum*). Vidi: Škegro 1999, str. 266–267.

In order to at least partially untangle this spatial and chronological confusion, it was essential to establish a starting point for the research and to determine the construction period of the older, dispersed dry-stone walls. The complex of dwellings, sheepfolds and the Roman road at Biluše proved particularly suitable for this purpose. Here, it was possible to simultaneously determine the route of the Roman road and identify the rural architecture directly adjoining it.

A well-preserved larger house measuring approximately 22.5 × 8 m and divided in the middle has been documented at the site of Biluše. The house was both spatially and functionally integrated with the surrounding complex of sheepfolds and likely served as the central structure of the pastoral estate. For precise measurement and documentation of the entire area, a field survey and GPS-based mapping were conducted (see map 2).[47] Based on the archaeological documentation, Darko Popovič made an ideal reconstruction of the late ancient rural complex at Biluše (map 2a).

The house was situated in close proximity to the Roman road, toward which the approximately 14.2 m wide entrance to the complex (V1) was oriented. This entrance was not fully open; it was partially divided by a dry-stone wall about 1 m wide, running in a northwest–southeast direction. The foundation of this wall is still visible today. On the northwest side of the partition wall, a passage provided access to the “intermediate space” within the complex.[48] The term “intermediate space” is used here to denote a large enclosed area that may likewise have served as a livestock pen; however, it was equipped with two larger doors. The eastern door (V2) provided access to the pen belonging to the house, while the western one led to a complex containing quarries

[47] This is a schematic representation of the area, intended as a supplement and visual clarification of the textual description of the agricultural complex in Biluše. The GPS mapping was carried out by Miro Klarić and Ante Alajbeg, while the documentation of the archaeological trench in the late ancient house was prepared by Nada Šimundić-Bendić.

[48] The narrowing of the wide entrance had a clear functional logic. One of the more demanding tasks of a shepherd was counting livestock, especially after returning from grazing. By constricting the passage immediately at the entrance to the agricultural complex, animals could be guided through in a controlled and gradual manner, greatly facilitating the accurate and safe completion of this important task.

Uništen je novovjekovnom obradom zemljišta, no ogradni su zidovi većinom dobro očuvani i zatvaraju površinu od gotovo pola hektara. Na južnoj strani, bliže padini brda, uočavaju se kamene gomile gdje bi mogli biti još neki objekti ili suhozidi, ali je bez arheološkog istraživanja teško reći o čemu je riječ.

S jugoistočne strane tog tora danas se nalazi manji dolac, odnosno ograđena parcela koja je kao obradivo zemljište formirana u novom vijeku. Sjevernim dijelom ta je obradiva površina djelomično zahvatila trasu rimske ceste. Riječ je o novovjekovnim širenjima obradivih površina o kojima smo već govorili. Spomenuo sam i „ulicu", zapravo kasnoantički put, čiji se ostatci uočavaju na jugoistočnoj strani ograđenog dolca; na karti 2 označen je kao „ulica". Pruža se u smjeru sjeveroistok-jugozapad. U donjem, sjevernom dijelu omeđen je dvama nasipima, odnosno ostatcima suhozida koji su ga ograđivali, a spajao se s magistralnom cestom u Bilušama kod sjeveroistočnog ugla današnje suhozidne ograde dolca (k. č. 989/3). Na padini brda donedavno je zadržao istu funkciju. Nastavljajući uzbrdo, izbijao je na sjeverozapadni ugao velikog tora koji je gravitirao kasnoantičkoj kući istraženoj na Osoju. Dalje se spajao s vicinalnom cestom Vedrine – Čačvina (karta 1, br. 11).[51] „Ulica" je povezivala dvije ceste te gospodarske i stočarske cjeline. Ovakvih poprečnih komunikacija u smjeru sjever-jug moglo je biti još.

Istočni ograđeni dio, na karti 2 označen kao Dolac, vjerojatno je bio poljoprivredno zemljište, što mu je i današnja namjena. Tlo je ondje dublje i pogodnije za oranje, a stoka se u tom prostoru mogla privremeno utoriti tijekom zimskog razdoblja radi gnojidbe stajskim gnojem, nakon čega se u proljeće pristupalo sjetvi. Gust raspored suhozida na širem području Jabuke, pri čemu je svaka cjelina morala biti ograđena radi zaštite stoke ili obradivih površina, odražava isprepletenost stočarskih i poljoprivrednih funkcija, osobito u nizinskom dijelu Velića.

Da je na Bilušama riječ o iznimno dobro očuvanom kasnoantičkom krajoliku, jasno su pokazala istraživanja velike kuće (sl. 8). Iako tijekom istraživanja nije pronađen veći broj pokretnih arheoloških nalaza niti je zabilježen stabilan stratigrafski sloj koji bi omogućio preciznije datiranje, bilo je

[51] Ona je u sjevernom dijelu vidljiva i očuvana, dok južni dio nismo pronašli zbog gustog raslinja. Zato smo na karti 1 tu dionicu označili isprekidanom linijom.

for building-stone and lime kilns. In its northern, flatter sector, this complex contains smaller cavities where stone was extracted more shallowly, while the extensive labyrinth of both smaller and larger quarries lies further south on the hillside.[49] Due to its clear spatial and functional connections, the "intermediate space" played an important communicational and operational role between the quarries and the pastoral complex, and therefore cannot be interpreted as an exclusively pastoral space. Its connection with the main Roman road further suggests the organized transport of stone materials, with carts and draft animals likely being provided in the immediate vicinity. The transport of building materials in antiquity was well organized and economically viable.[50] Part of the large house at Biluše may also have served as a stable for larger livestock.

Southwest of the house was sheepfold A, covering an area of approximately 1,411 m², while on the northeastern side of the house there was a square courtyard, or sheepfold B, with a surface area of 757 m² (see map 2). The entrance to the southeastern part of the house was oriented toward this space and is today recognizable as a slight depression in the northeastern part of the house wall. Although its dimensions exceed the usual size of pens intended solely for livestock keeping, its proportions, together with the extent of the associated fences, indicate the breeding of a larger number of animals. In addition to sheep, larger livestock were likely also kept within this space, which is consistent with activities in the nearby quarry and the transport demands of the road. The courtyard functioned as a space for everyday pastoral activities and general use within the estate.

The house, together with courtyard/sheepfold B and the southwestern sheepfold A, was connected to a narrow path branching off from the Roman road. South and southeast of these enclosures extends the large sheepfold C, covering an area of 4,841 m². In its western enclosure wall there was a wide gate (V2) (see map 2). The southeastern stretch of the enclosure wall of this large pen has not been ful-

[49] The quarries are now overgrown with forest and shrubs. In their immediate surroundings, lime kilns can also be observed, which were used for lime production. After the vegetation is cleared, more systematic and detailed investigations of this area are planned.

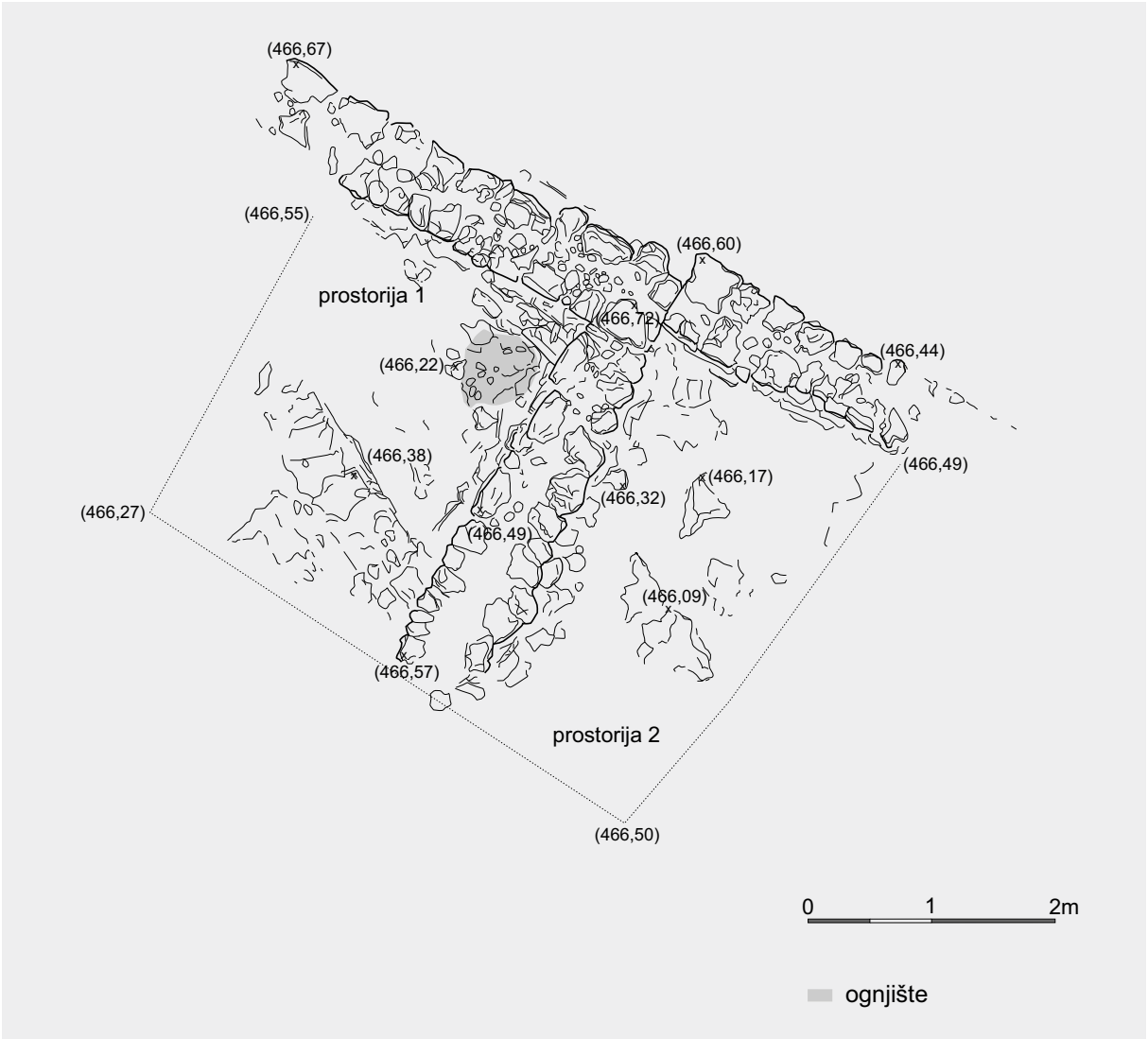
[50] In Salona, collegia for the transport of stone (*collegium lapidariorum saccariorum*) have been recorded. See: Škegro 1999, pp. 266-267.



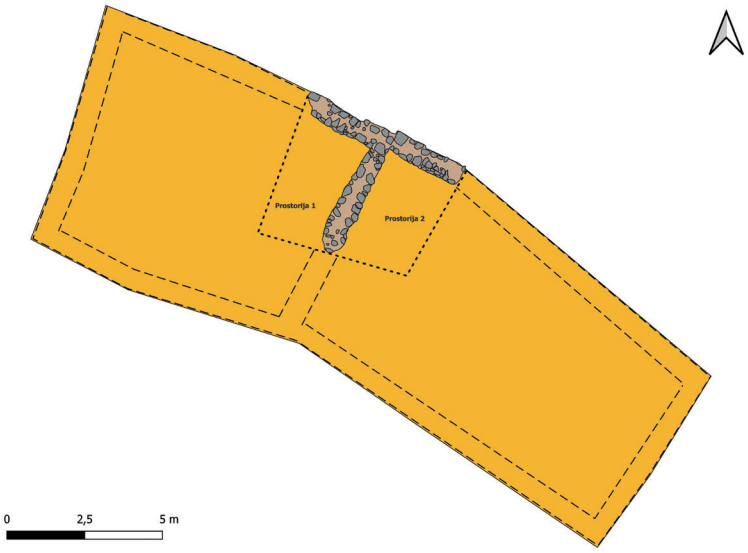
Sl. 8 - Arheološka sonda na Bilušama
Fig. 8 - Archaeological trench at Biluše

ly preserved; in map 2 this section is shown with dashed lines. It was destroyed by early modern agricultural activity, but the enclosure walls are mostly well preserved and enclose an area of almost half a hectare. On the southern side, closer to the slope of the hill, several stone mounds can be observed, where additional structures or dry-stone walls may have existed. However, without archaeological investigation, it is difficult to determine their exact nature.

Today, there is a small depression located southeast of this pen, i.e. an enclosed plot that was formed as arable land in the early modern period. In its northern part, this cultivated surface has partially encroached upon the route of the Roman road. This represents one of the earlier mentioned expansions of arable land during the early modern period. I also



Pl. 1 - Crtež iskopane arhitekture na Bilušama
Pl. 1. Drawing of the excavated architecture at Biluše



Pl. 1a - Istražena arhitektura u kontekstu kasnoantičke kuće

Pl. 1a - Investigated architecture in the context of the late ancient house

razvidno da je kuća bila fizički i funkcionalno povezana s ostalim suhozidnim strukturama u širem prostoru. Njihova međusobna isprepletenost kao i zajednička morfologija upućuju na jedinstven arhitektonski korpus ruralnog krajolika. U tom se kontekstu nametnulo ključno pitanje: iz kojeg je razdoblja ta struktura?

Nalaz jednog mletačkog novca iz kraja 17. stoljeća, s natpisom DALMATIA ET ALBANIA, u istočnom dijelu tora B jasno je ukazivao na korištenje ovog prostora u novom vijeku, što su potvrđivali i spomenuti suhozidi podignuti iznad rasutih zemljano-kamenih gomila. Kako bi se otklonile sumnje, otvorili smo jednu arheološku sondu po sredini sjeveroistočnog zida kuće, gdje se nazirao pregradni zid (sl. 8, pl. 1). Istraživanja su otkrila da je riječ o dvjema kućama naslonjenim jedna na drugu. Sjeverozapadna je ranija, a jugoistočna je naslonjena na nju te joj je vanjsko lice blago izbačeno (pl. 1 i 1a). Njihovi zidovi bili su široki 60 cm te su mjestimice sačuvani do visine od 40 cm. Kako se gornji dio zidova urušavao, nakupine kamena učvrstile su temeljni dio objekta pa su temelji ostali sačuvani ispod kamenih gomila do naših dana. Zidovi su bili povezani vapnenim mortom slabije kvalitete; tek smo pomnijim pregledom ustanovili tragove morta na njihovu unutrašnjem licu. Očito je tijekom vremena mort ispran iz zida.

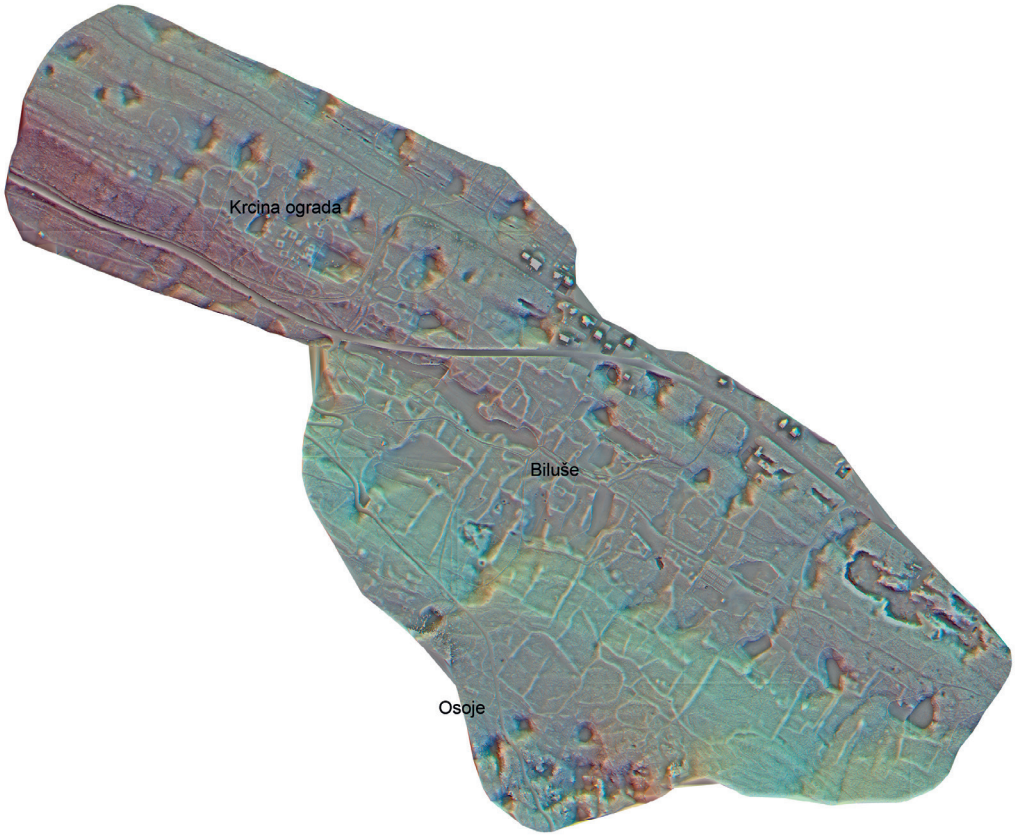
Desetak ulomaka tijela amfora, među kojima i jedan ranobizantske narebrene amfore, upućivalo je

referred to the "street," in fact a late ancient path, whose remains can be seen on the southeastern side of the enclosed depression; on map 2 it is marked as "*ulica*" (street). It runs in a northeast–southwest direction and is bounded in its lower northern section by two embankments, i.e. the remains of dry-stone walls that once enclosed it. It joined the main Roman road at Biluše near the northeastern corner of the present-day dry-stone enclosure of the depression (cadastral plot no. 989/3). On the slope of the hill it retained the same function until relatively recently. Continuing uphill, it reached the northwestern corner of a large sheepfold associated with the late ancient house investigated at Osoje. Further on, it connected with the vicinal road Vedrine–Čačvina (map 1, no. 11)[51]. The "street" thus linked two roads as well as the associated economic and pastoral units. There may have been additional transverse communications of this kind running in a north–south direction.

The eastern enclosed area marked as *Dolac* on map 2 was probably agricultural land, which is also its present-day use. The soil there is deeper and more suitable for ploughing, and livestock could have been temporarily penned in this area during the winter in order to fertilize it with manure, after which sowing would take place in spring. The dense network of dry-stone walls in the wider area of Jabuka, where each unit had to be enclosed to protect either livestock or cultivated plots, reflects the close interweaving of pastoral and agricultural activities, particularly in the lowland part of Velić.

Investigations of the large house (Fig. 8) have clearly shown that Biluše represents an exceptionally well-preserved late ancient landscape. Although the excavation did not yield a large number of movable archaeological finds, nor was a stable stratigraphic layer recorded that would allow more precise dating, it was evident that the house was physically and functionally connected with the other dry-stone structures in the wider area. Their mutual interweaving, as well as their shared morphology, points to a unified architectural corpus within the rural landscape. In this context, a key question arose: to which period does this structure belong?

[51] The northern part of it is visible and well-preserved, while the southern section could not be located due to dense vegetation. For this reason, on Map 1 we marked that section with a dashed line.



Sl. 9 - Lidarski snimak središnjeg dijela kasnoantičkog krajolika u Veliću
Fig. 9 - LiDAR image of the central part of the late ancient landscape in Velić

na 5./6. stoljeće. Nekoliko ulomaka stakla, od kojih je jedan obod staklene svjetiljke, upućivalo je na isto vrijeme. U jugoistočnom kutu kuće 1 nađeno je ognjište iz kojeg je uzet uzorak za radiokarbonsku analizu. Rezultat je kalibrirani raspon od 536. do 644. godine, uz vjerojatnost od 94,5 % (Beta – 672131: 1500 ± 30 BP). Ognjište je nastalo na prijelazu iz 6. u 7. stoljeće pa s većom sigurnošću možemo reći da je kuća u Veliću egzistirala tijekom 6. i prve polovine 7. stoljeća. Nije isključeno da je postojala i u 5. stoljeću, ali za precizniju dataciju egzistencije kasnoantičkog ruralnog sklopa u Bilušama trebalo bi imati više databilnog arheološkog materijala. Nakon rezultata arheološkog istraživanja u Veliću postalo je jasno da su kamene izdužene gomile koje se pružaju po padinama brda i u polju zapravo ostatci kasnoantičkog krajolika. Lidarski snimak pomogao nam je cjelovitije sagledati taj krajolik u kojem se moglo uočiti još kontura kuća (sl. 9).

Da bismo potvrdili ili opovrgnuli ovu pretpostavku, odlučili smo istražiti još jedan objekt smješten 500 metara južnije, sličan onom u Bilušama.

The discovery of a Venetian coin from the end of the 17th century with the inscription DALMATIA ET ALBANIA in the eastern part of sheepfold B clearly indicated the use of this area in the early modern period, which was also confirmed by the aforementioned dry-stone walls built over scattered earth-and-stone mounds. To remove any doubts, we opened an archaeological trench in the middle of the northeastern wall of the house, where a partition wall could be discerned (Fig. 8; Pl. 1). The excavation revealed that the structure consisted of two houses leaning against one another. The northwestern one is earlier, while the southeastern one was built against it, with its outer facade slightly projecting outward (Pl. 1; Pl. 1a). Their walls, which in places are preserved up to a height of 40 cm, were 60 cm wide. Following the collapse of the upper wall sections, the resulting accumulations of stone reinforced the foundations of the structure, allowing them to survive beneath the collapsed stone deposits until the present day. The walls were bonded with lime mortar of rather poor quality; only upon closer inspection were traces of mortar identified

Nalazio se na platou brda na južnoj strani iznad Velića. I na tom prostoru postoje duge kamene gomile, ostatci prastarih suhozida, među kojima se jasno uočavao tlocrt jedne „duge kuće“, kao i na Bilušama. Datiranje još jednog udaljenog objekta iste morfologije bitno bi pomoglo razumijevanju šireg povijesnog krajolika Velića i Jabuke.

Istraživanje na Osoju

Plato brda Osoja, koje se uzdiže južno iznad Velića, također je premrežen brojnim dugim gomilama. U šumi, oko 70 m južno od lokalne ceste koja vodi prema Čačvini, na 513 m nadmorske visine, u tlocrtu se nazirala kuća koja je, poput one na Bilušama, imala dvorište i tor (karta 1, br. 2). Osamdesetak metara sjeveroistočno od nje nalazi se drugi, veći četvrtasti ograđeni prostor tora na čijem je jugozapadnom dijelu, s vanjske strane, bila naslonjena još jedna kuća.

U studenom 2024. započelo je istraživanje kuće na Osoju. Iskopan je njezin jugozapadni dio, očišćeni su zidovi te je geodetski snimljen neposredni okoliš. Kuća je orijentirana identično onoj na Bilušama, u smjeru sjeverozapad-jugoistok, a uz njezinu sjeveroistočnu stranu pružao se ogradni zid dvorišta.

Mjereno od vanjskih lica zidova, kuća je bila duga 12 m i široka 6,3 m (pl. 2). Zidovi su široki oko 0,7 m. Za razliku od kuća na Bilušama, ovdje je riječ o još bolje očuvanoj suhozidnoj arhitekturi, sačuvanoj u visini od tri do četiri reda kamena, odnosno do približno 0,6 m. Kuća je sagrađena od lokalnog kamena, dok je ispuna između dvaju lica zida izvedena od sitnijeg kamena, vjerojatno pomiješanog sa zemljom. U sjeverozapadnom kutu kuće pronađeno je nekoliko komada vapna, no riječ je o ostatcima paljenja klakara (vapnenica), kojih u Veliću uokolo arheoloških ruševina ima dosta.

U jugozapadnom kutu kuće zatečeni su ostatci urušene krušne peći. Njezin rub bio je ograđen kamenom, dok je podloga bila kaldrmana sitnijim kamenjem utopljenim u glinu crvene boje (sl. 10). Da nije riječ o otvorenom ognjištu pokazuje sloj crvene i žućkaste gline kupasta oblika; otvoreno ognjište na površini bi ostavilo ravan sloj ugljena, a ne ovakvu nakupinu gline.[52]

[52] Jedna potpuno sačuvana kasnoantička peć pronađena je na gradini Jelica u Srbiji. Vidi: Milinković 2010, str. 113–114, sl. 111–112.

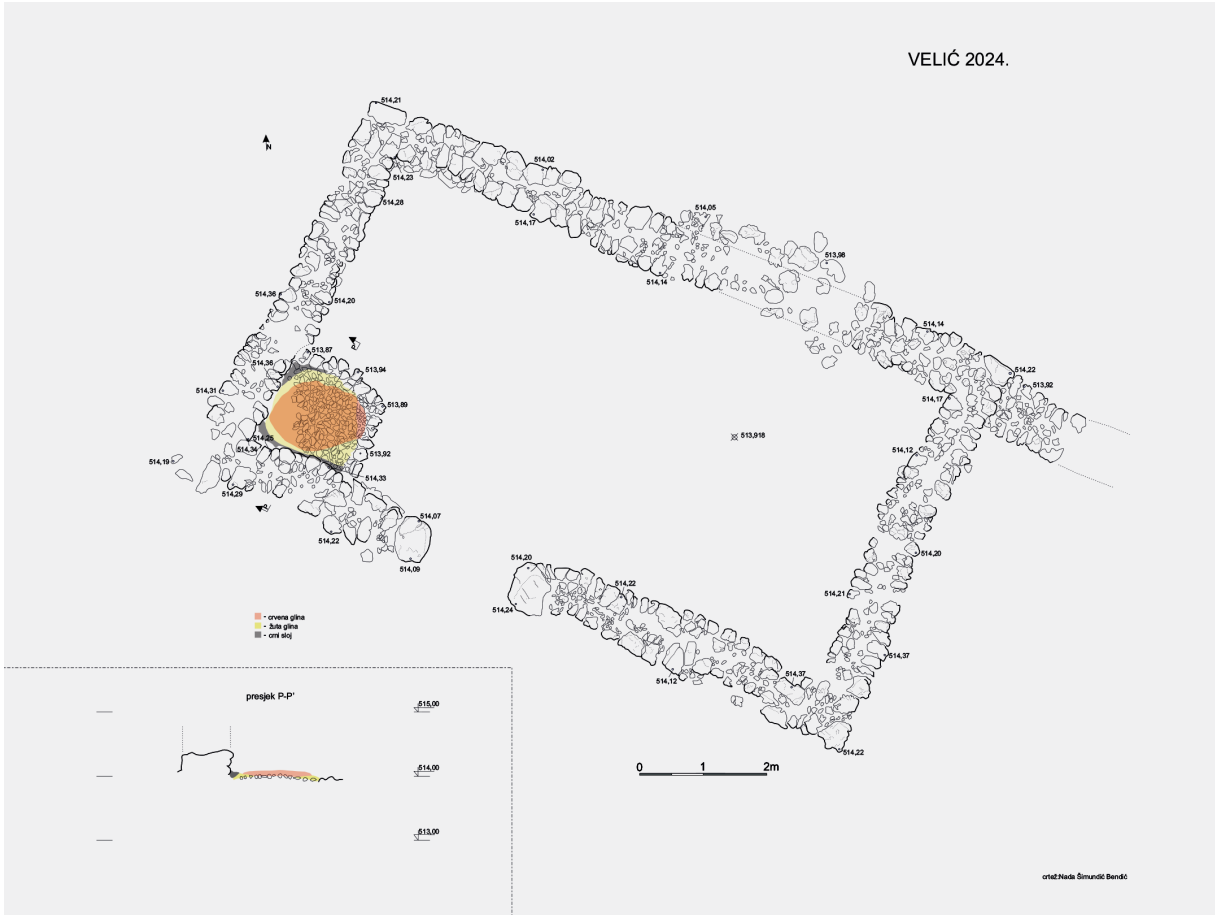
on the walls' inner faces. Over time, the mortar had evidently deteriorated and been washed away from the wall faces.

Approximately ten fragments of amphora bodies were recovered during the excavation, including a fragment of an early Byzantine ribbed amphora, indicating a date within the 5th–6th centuries. Several fragments of glass were also found, one of which was the rim of a glass lamp, likewise indicating the same period. In the southeastern corner of house 1, a hearth was discovered, from which a sample was taken for radiocarbon analysis. The result yielded a calibrated range of 536–644 AD, with a probability of 94.5% (Beta – 672131: 1500 +/- 30). The hearth dates to the turn of the 6th into the 7th century, allowing us to state with greater certainty that the house in Velić existed during the 6th and the first half of the 7th century. It is not excluded that it may also have existed in the 5th century. However, a more precise dating of the late ancient rural complex at Biluše would require a larger quantity of datable archaeological material. Following the results of the archaeological investigations in Velić, it became clear that the elongated stone mounds extending across the slopes of the hill and into the field are in fact the remains of a late ancient landscape. The LiDAR image helped us to perceive this landscape more comprehensively, revealing additional outlines of houses (Fig. 9).

In order to confirm or refute this hypothesis, we decided to investigate another structure located approximately 500 m to the south, similar to the one identified at Biluše. It is situated on a plateau on the hill rising above Velić to the south. This area also contains elongated stone mounds, remains of ancient dry-stone walls. Among these features, the ground plan of a "long house," comparable to that observed at Biluše, could be clearly distinguished. Establishing the date of another, more distant structure of the same morphology would significantly contribute to a better understanding of the broader historical landscape of Velić and Jabuka.

Investigations on Osoje hill

The plateau of Osoje hill, rising south of Velić, is likewise intersected by numerous elongated stone mounds. In the forest, approximately 70 m south of the local road leading toward Čačvina, at an elevation of 513 m above sea level, the ground plan of a house could be discerned, which had, like the ex-



Pl. 2 - Kasnoantička suhozidna kuća na Osoju
Pl. 2 - Late ancient dry-stone house on Osoje.

Oko peći je pronađena manja količina sivkasto-crnih nakupina, odnosno tragova pepela pomiješanih sa zemljom, odakle su uzeti uzorci za radiokarbonsku analizu. Rezultat analize upućuje na kalibrirani raspon 534. – 640. godine, uz vjerojatnost od 89,3 % (Beta – 725753), što se podudara s datacijom kasnoantičke kuće na Bilušama.

Kuća na Osoju, građena u suhozidu, nije bila visoka. Najvjerojatnije je bila pokrivena šindrom jer u blizini i na samom lokalitetu nije pronađen nijedan ulomak tegule ili imbreksa. Vrata široka 1,4 m bila su okrenuta prema jugozapadu. U temeljima dovratnika bila su ugrađena dva velika neobrađena kamena bloka dimenzija 0,6 × 0,5 m. Međutim, bez provedenih arheoloških istraživanja teško je pouzdano razlikovati radi li se o prethistorijskoj, kasnoantičkoj, srednjovjekovnoj ili novovjekovnoj suhozidnoj arhitekturi. Na temelju istraživanja provedenih na području Velića može se zaključiti da ostatci većih stambenih objekata u ruralnom pejzažu upućuju na kasnoantičku arhitekturu. Kuće dokumentirane na lokalitetu Banjače (dimenzija 9

ample at Biluše, an associated courtyard and sheepfold (map 1, no. 2). About 80 m to the northeast lies another, larger square enclosed area interpreted as a sheepfold; on its southwestern side, an additional house was attached externally to the enclosure wall.

Archaeological excavations of the house on Osoje began in November 2024. The southwestern part of the structure was excavated, its walls were cleared, and the immediate surroundings were documented through geodetic survey. The house has the same orientation as the one at Biluše, aligned along a northwest–southeast axis, while along its northeastern side ran the enclosure wall of the courtyard.

Measured from the outer faces of the walls, the house was 12 m long and 6.3 m wide (Pl. 2). The walls are approximately 0.7 m thick. Unlike the houses at Biluše, this example represents even better-preserved dry-stone architecture, surviving to a height of three to four rows of stone, or up to approximately 0.6 m. The house was built from locally available stone, while the core between the two wall faces consisted of smaller stones, probably mixed



Sl. 10 - Ostatci krušne peći pronađeni u kutu kuće na Osoju

Fig. 10 - Remains of a bread oven discovered in the corner of the house on Osoje.

× 6,8 m), kao i one na Bilušama i Osoju, redovito su imale pripadajuća dvorišta, što pokazuje podudarnost s prostornom organizacijom novovjekovnih kuća u Dalmatinskoj zagori.

Dvorište kuće u Osoju imalo je dva ulaza: sa sjeverozapadne i s jugoistočne strane. Između dvorišnog ogradnog zida i jugoistočne strane kuće najvjerojatnije se nalazio nekakav pomoćni objekt. U njegovu nastavku, iza dvorišta, nalazio se četvrtasti tor. Prema jugu se također pružao tor, ali bi trebalo raščistiti šumu kako bi se mogao detaljnije snimiti. Okolne ograde i tor jasno upućuju na stočarski karakter kompleksa na Osoju. Osamdesetak metara sjeveroistočno od kuće nalazi se jedan veliki tor podijeljen na dva dijela. Na njegov južni zid s vanjske je strane bila naslonjena još jedna kuća, čije se konture naziru na terenu. Taj je tor nedvojbeno gravitirao kući na Osoju. Stambena kuća na Osoju, zajedno s velikim torom u blizini, bila je izravno povezana s kompleksom na Bilušama putem već spomenute „ulice“. Vjerojatno je imala pristup i vicinalnoj cesti Vedrine – Čačvina.

Suhozidne strukture, promatrane pojedinačno, predstavljaju zasebne funkcionalne i gospodarske cjeline, a zajedno tvore jedinstven kasnoantički ruralni krajolik na prostoru Velića i Jabuke. Takav je krajolik rijedak u dalmatinskom ali i u širem regionalnom kontekstu. Prostorni resursi na njemu korišteni su intenzivno i planski. Istraživanja eksploatacijskih i radnih zona u neposrednom okolišu naselja – poput kamenoloma i klakara – tek predstoje.

with earth. Several pieces of lime were discovered in the northwestern corner of the house; however, these appear to be the remains of lime burning from a nearby lime kiln, which are relatively common among the archaeological ruins in Velić.

Collapsed remains of a bread oven were discovered in the southwestern corner of the house. Its edge was bounded by stones, while the base consisted of a cobbled surface made of small stones set into red clay (Fig. 10). The feature cannot be interpreted as an open hearth, as indicated by the conical shape of red and yellowish clay. An open hearth would typically leave a flat layer of charcoal at the surface, rather than such a concentrated deposit of clay.[52]

A small quantity of greyish-black deposits, i.e. traces of ash mixed with soil, was identified around the oven. Samples from these deposits were taken for radiocarbon analysis. The results indicate a calibrated date range of 534–640 AD with a probability of 89.3% (Beta-725753), which coincides with the dating obtained for the late ancient house in Biluše.

The dry-stone house on Osoje was relatively low in height and was most likely roofed with wooden shingles, as no fragments of tegulae or imbrices were found either nearby or at the site itself. Its door faced southwest and measured 1.4 m in width. Two large unworked stone blocks, each approximately 0.6 × 0.5 m, were embedded in the foundations of the door jambs. However, without extensive archaeological investigation, it is difficult to conclusively determine whether the structure represents prehistoric, late ancient, medieval or early modern dry-stone architecture. Based on research conducted in the area of Velić, it can be concluded that the remains of larger residential structures within the rural landscape point to late ancient architecture. Houses documented at the site of Banjače (measuring 9 × 6.8 m), as well as those at Biluše and Osoje, regularly featured associated courtyards, reflecting a spatial organization comparable to that of early modern houses in the Dalmatian hinterland.

The courtyard of the house on Osoje featured two entrances: one on the northwest side and another on the southeast side. Between the wall enclosing the courtyard and the southeastern side of the house, there was likely an ancillary structure. Be-

[52] A fully preserved late ancient kiln was found on the Jelica hillfort in Serbia. See: Milinković 2010, pp. 113-114, figs. 111,112.

Mrke stine kod zaseoka Raduna (karta 1, br. 9) i kamenolom građevinskog kamena u Majama (karta 1, br. 10)

Oko 200 metara zračne linije jugoistočno od zaseoka Raduna, na južnim padinama brda Jelinaka, nalazi se lokalitet Mrke stine (sl. 11). Ondje se prostiru geološke naslage pijeska specifične tamnosmeđe boje. Između kukova smeđeg pješčenjaka uočavaju se obilnije naslage pijeska. Kamen ima rahlu strukturu pa ga kiša lako ispire. Na pojedinim mjestima vide se udubine – tragovi nekadašnjeg iskopavanja. Danas se ostatci eksploatacije prepoznaju na površini od oko 8000 m². Lokalno stanovništvo ovu vrstu pijeska naziva mrkuša.

Na lokalitetu se nalazi i lokva Raduna, koja zadržava vodu tijekom cijele godine. Do nje i do Mrkih stina vodi uska staza iz zaseoka Raduna. Prema kazivanju Branka Kozlice, pok. Vladimira iz Radune, pijesak se ovdje eksploatirao za lokalne potrebe sve do sedamdesetih godina 20. stoljeća. Stanovnici iz Krivodola, Poda i Rude dolazili su s tovarnim životinjama i odvozili pijesak, a to je potrajalo dok se nisu otvorili veliki kamenolomi i dok građa nije počela stizati kamionima. Lokva Raduna koristila se do osamdesetih godina, a voda je bila čista jer se kišnica slijevala niz pješčanu padinu i prirodno se filtrirala.

Pijesak s Mrkih stina koristio se i u kasnoj antici. Pomiješan s vapnom davao je specifičnu boju mortu, koja ga i danas čini lako prepoznatljivim. Upotrebljavao se u arhitekturi Krcine ograde, u gradnji kasnoantičke kuće u Bilušama te na kasnoantičkoj utvrdi Grubuša iznad Dicma.[53] Vrlo je vjerojatno da je korišten i na drugim lokalitetima, poput obližnje tvrđave Čačvina, što će buduće geološke analize tog pijeska dodatno rasvijetliti.

Valja napomenuti da Vitruvije navodi kako je jamski pijesak, odnosno pijesak koji se iskopava na kopnu, najpogodniji za miješanje s vapnom i izradu kvalitetnog vapnenog morta. Za razliku od riječnog

[53] Godinama zamjećujem pijesak specifične boje u mortu kasnoantičke arhitekture u zaleđu Salone, prepoznatljiv i u pojedinim ulomcima grube kasnoantičke keramike. Tijekom arheoloških istraživanja na Bilušama taj se materijal ponovno pojavio. Uzorak morta pokazao sam Mariju Kozini, koji ga je odmah prepoznao te nas odveo u Radunu, gdje se isti pijesak stoljećima eksploatirao u građevinske svrhe. Ovom prilikom zahvaljujem Mariju Kozini na pomoći. Otkriće je ukazalo na još jednu gospodarsku dimenziju veleposjeda u Veliću i Jabuci.

yond this, at the rear of the courtyard, lay a square-shaped sheepfold. Another sheepfold extended to the south, though detailed documentation would require clearing the forest in that area. The surrounding enclosures and the sheepfold clearly indicate the pastoral nature of the complex on Osoje. Approximately eighty meters to the northeast of the house lies a large sheepfold divided into two parts. Against its southern wall, another house was attached on its external side, the outlines of which are still discernible on the ground. This sheepfold was unquestionably associated with the house on Osoje. The residential building on Osoje, together with the nearby large sheepfold, was directly connected to the complex in Biluše via the previously mentioned "street." It likely also had access to the vicinal road linking Vedrine and Čačvina.

The dry-stone structures, when considered individually, represent distinct functional and economic units; collectively, however, they form a coherent late ancient rural landscape across the areas of Velić and Jabuka. Such a landscape is rare not only within Dalmatia but also in the broader regional context. Spatial resources within this landscape were utilized intensively and in a planned manner. Research into the exploitation and operational zones in the immediate vicinity of the settlement, such as quarries and lime kilns, remains a task for future investigation.

Mrke stine near the hamlet of Radun (Map 1, no. 9) and the building-stone quarry at Maje (Map 1, no. 10)

Approximately 200 meters southeast, in a straight line, from the hamlet of Radun, on the southern slopes of the hill of Jelinak, lies the site of Mrke Stine (Fig. 11). The area is characterized by geological deposits of sand with a distinctive dark brown coloration. Between the mounds of brown sandstone, more abundant sand deposits are visible. The stone has a friable structure, making it highly susceptible to erosion by rainfall. In several locations, depressions can be observed, indicative of past extraction activity. Today, the remains of past extraction activities are visible across an area of approximately 8,000 m². The local population refers to this type of sand as *mrkuša*.

The site also features a pond called Radun, which retains water throughout the entire year. A narrow path leads to the pond, as well as to the site



Sl. 11 - Rudnik pijeska u Raduni
Fig. 11 - Sand quarry in Radun

i morskog pijeska, koji je sadržavao soli, kopneni se pijesak bolje veže s vapnom.[54] Prema rimskim standardima, mrkuša iz Velića odgovarala bi boljoj tamnoj vrsti pijeska koja se preferirala u antičko doba.

Specifična mrka boja velićkog pijeska omogućava njegovo prepoznavanje na mjestima gdje je korišten u vapnenom mortu. Prisustvo takvog pijeska u mortu zidova kasnoantičke utvrde Grubuša iznad Dicma snažan je indikator da je građevinski materijal bio transportiran iz Velića, što potvrđuje da se lokalni pješčenjak koristio ne samo za potrebe samog kasnoantičkog gospodarstva nego i za regionalne graditeljske projekte. U primjeru Grubuše riječ je o vojnom projektu. To upućuje na dodatnu djelatnost u okviru kasnoantičkog veleposjeda u Veliću i Jabuci.

Kamenolomi građevinskog kamena u Majama, smješteni neposredno preko puta istraživanog lokaliteta na Bilušama, zahvaćaju padinu brda. Cijela padina prekrivena je manjim i većim kavama koje se međusobno nadovezuju. Eksploatacija kamena odvijala se pretežito površinski, iako postoje i pozicije na kojima se dublje zadiralo u padinu brda. Zbog guste vegetacije nije bilo moguće detaljnije dokumentirati prostor kamenoloma. Na kasnoantičku fazu eksploatacije upućuju spomenuta zapad-

[54] Vitruvius 1990, str. 38.

of Mrke stine from the hamlet of Radun. According to the testimony of Branko Kozlica, son of the late Vladimir Kozlica from Radun, sand at this location was exploited for local use until the 1970s. Residents from the nearby settlements of Krivodol, Podi and Ruda transported the sand using pack animals, a practice that continued until the opening of large quarries and the increasing availability of construction materials delivered by trucks. The pond of Radun remained in use until the 1980s. Its water was considered clean, as rainwater flowed down the sandy slope above the pond and underwent natural filtration before collecting in the basin.

Sand from Mrke stine was already exploited in Late Antiquity. When mixed with lime, it produced a mortar with a distinctive coloration that is easily identifiable even today. This material was used in the architecture of Krcina ograda, in the construction of the late ancient house in Biluše, and at the late ancient fort of Grubuša above Dicmo.[53] It is

[53] For years, I have noticed sand of a specific colour in the mortar of late ancient architecture in the hinterland of Salona, also recognizable in certain fragments of coarse late ancient pottery. During archaeological research at Biluše, this material appeared again. I showed a sample of the mortar to Marijo Kozina, who immediately recognized it and took us to Radun, where the same sand has been exploited for construction purposes for centuries. I would like to thank Mari-

na vrata koja iz tzv. „međuprostora“ vode u zonu kamenoloma (vidi kartu 2 i 2a). Ta funkcionalna povezanost s kasnoantičkim ruralnim kompleksom sugerira istodobno korištenje kamenoloma.

Lidarski snimak Velića otkriva na desetke klakara za pečenje vapna, od kojih su neke zasigurno novovjekovne, no pojedine su mogle biti i kasnoantičke, što ćemo u budućnosti provjeriti arheološkim istraživanjem. U svakom slučaju, u Veliću se može govoriti o geoekonomski determiniranoj proizvodnji vapna i morta. Time se dodatno učvršćuje interpretacija Velića kao važnog kasnoantičkog proizvodno-distributivnog središta građevinskog materijala. To potvrđuje prisustvo kamenoloma građevinskog kamena i kopnenog pijeska s brojnim tragovima proizvodnje vapna (klakare).[55] Pravna regulacija kasnoantičkih kopova građevinskog kamena i pijeska ne može se tumačiti u okviru posebnog „rudarskog prava“, koje rimsko pravo ne poznaje za takve materijale, nego kroz pravni režim zemljišta kojem su pripadali. Budući da se kopovi nalaze u sklopu velikog ruralnog kompleksa uz važnu prometnicu i utvrdu, kamen i pijesak korišteni su kako za lokalne tako i za javne potrebe.

Zaključna razmatranja

Rimske prometnice koje su prolazile područjem Vedrina, Jabuke i Velića imale su presudnu ulogu u njegovu gospodarskom i prostornom razvoju. Odvojak vicinalnog puta preko Vedrina do Čačvine lokalnog je karaktera. Povezivao je jugoistočni rub Sinjskog polja i lijevu obalu rijeka Cetine i Rude s utvrdom Čačvina i kasnoantičkim ruralnim kompleksom u Jabuci i Veliću. S druge strane, vicinalna dionica koja je negdje iz polja u Veliću preko Kamenice vodila na sjever, povezujući prostor Velića s Rudom, nastavljala se lijevom obalom Cetine prema antičkom mostu koji se nalazio nekoliko stotina metara uzvodno od današnjeg mosta u Hanu. Tu se spajala s drugom magistralnom cestom Aequum – Salviae iz Itinerara Antonina.[56] Ovaj pravac ceste olakšavao je sezonske stočarske migracije prema

[55] Lokalni vapneni mort s prisutnošću mrkuše predstavlja vrijedan indikator za datiranje eksploatacije kamenoloma i pijeska u kasnoj antici. Međutim, uporaba istovjetnog veziva pri gradnji srednjovjekovne i novovjekovne utvrde Čačvina nalaže oprezniji pristup kronološkom određivanju korištenja kamena iz kamenoloma kao i procesa proizvodnje vapna.

[56] Bojanovski 1974, str. 58–60.

highly likely that the same sand was also used at other sites, such as the nearby fort of Čačvina, a hypothesis that future geological analyses of this sand may help to clarify.

It is worth noting that Vitruvius states that pit sand, i.e. sand excavated on land, is the most suitable material for mixing with lime in the preparation of high-quality lime mortar. Unlike river or marine sand, which contains salts, terrestrial sand bonds more effectively with lime.[54] According to Roman standards, the *mrkuša* sand from Velić would correspond to the higher-quality dark type of sand that was preferred in antiquity.

The distinctive dark coloration of the sand from Velić allows it to be readily identified at sites where it was used as a component of lime mortar. The presence of such sand in the mortar of the walls of the late ancient fort of Grubuša above Dicmo strongly indicates that the construction material was transported from Velić, which confirms that the local sandstone was used not only for the needs of the late ancient estate itself, but also for regional building projects, which in the case of Grubuša was a military construction project. This observation points to an additional economic activity within the framework of the late ancient estate in Velić and Jabuka.

The quarries for building stone in Maje, located directly opposite the investigated site at Biluše, extend across the slope of the hill. The entire hillside is marked by a series of smaller and larger extraction pits that are interconnected. Stone extraction was carried out primarily at the surface, although there are locations where deeper cuts into the hillside were made. Due to dense vegetation, it was not possible to document the quarry area in greater detail. Evidence suggesting a late ancient phase of exploitation is provided by the previously mentioned western gate, which leads from the so-called “intermediate space” into the quarry zone (see Maps 2 and 2a). This functional connection with the late ancient rural complex indicates that the quarry was likely in use at the same time.

The LiDAR image of Velić reveals dozens of lime kilns, some of which are undoubtedly from the early modern period, while others may date to

jo Kozina for his assistance on this occasion. This discovery highlighted yet another economic aspect of the large estate in Velić and Jabuka.

[54] Vitruvius 1990, p. 38.

planinskim pašnjacima Kamešnice, kao i pristup riječnim tokovima Rude i Cetine. Ceste su bile važna infrastrukturna komponenta stočarskog sustava, bilo da je riječ o sezonskoj ispaši, pristupu vodi, gospodarskoj razmjeni, prostornoj organizaciji ili integraciji u lokalni gospodarski sustav.

Spajanje velićke dionice magistralne ceste Salona – Argentaria s vicinalnom cestom Vedrine – Čačvina poprečnom „ulicom" upućuje na ekonomično upravljanje prostorom. U taj su sustav integrirani utvrda Čačvina i krška visoravan Osoja, zatim područje koje se na topografskoj karti u mjerilu 1 : 5000 označava kao Ljut te prostor Jabuke, čime je oblikovan jedinstven gospodarski prostor povezan s rubom Sinjskog polja i mostom na rijeci Cetini. Takvi prirodni uvjeti – ponajprije bogata ljetna ispaša i blizina velikih krških i nizinskih polja – omogućili su intenzivan uzgoj stoke sitnog i krupnog zuba. Uz stočarstvo, gospodarsku okosnicu činila su i lokalna ležišta građevinskog kamena, tzv. velita, kopnenog pijeska te proizvodnja vapna, o čemu svjedoče brojni kamenolomi i klakare. Eksploatacija ovih resursa bila je jasno integrirana u prostornu organizaciju naselja i vezana za prometnu infrastrukturu.

U usporedbi s lokalitetima poput Banjača, Konjskog ili naselja podno utvrde Šutanj, velićki se krajolik znatno izdvaja prostornom veličinom, složenošću i stupnjem očuvanosti. Riječ je o radikalno preoblikovanom prostoru u kojem je kasnoantička zajednica bitno odmakla od starijeg gospodarskog koncepta rimskih rustičnih vila te uspostavila novi model ekstenzivnog, stočarski orijentiranog veleposjeda. Na površini od nekoliko četvornih kilometara krajolik je planski restrukturiran u jedinstvenu gospodarsku cjelinu, pri čemu su lokalni resursi – kamenolomi i prirodna ležišta pijeska – korišteni stoljećima. Intenzitet i opseg tog graditeljskog zahvata trajno su preoblikovali fizionomiju prostora, zbog čega su masivne suhozidne strukture – međe, kuće, „ulice" i torovi – ostale dobro očuvane i prepoznatljive kao materijalni trag kasnoantičke transformacije ruralnog krajolika.

Magistralna rimska cesta koja je prolazila kroz Velić funkcionirala je kao svojevrsna „ulica" niza stočarsko-gospodarskih cjelina. Njome su se distribuirali stočarski proizvodi ali i građevinski materijal – kamen, pijesak i vapno – prema Saloni i priobalju ili prema kasnoantičkim središtima u zaleđu. Dugotrajna tradicija stočarstva i prerade mlijeka u

the Late Antiquity, a hypothesis that future archaeological investigation will clarify. In any case, Velić can be regarded as a site of geo-economically determined lime and mortar production, reinforcing the interpretation of Velić as an important late ancient production and distribution centre for building materials. This is further corroborated by the presence of quarries for building stone and terrestrial sand, accompanied by numerous traces of lime production activity (lime kilns).[55] The legal regulation of late ancient quarries for building stone and sand should not be interpreted as a form of specialized "mining law," which Roman law did not recognize for such materials, but rather through the legal regime of the land to which they belonged. Since the quarries were situated within a large rural complex along a major roadway and adjacent to a fort, the extracted stone and sand were used both for local purposes and for public projects.

Concluding remarks

The Roman roads traversing the areas of Vedrine, Jabuka and Velić played a crucial role in the economic and spatial development of the region. The branch of the vicinal road passing through Vedrine to Čačvina had a predominantly local function, linking the southeastern edge of the plain of Sinj, the left banks of the Cetina and Ruda rivers, with the fort of Čačvina and the late ancient rural complex in Jabuka and Velić. On the other hand, a section of the vicinal road that led from somewhere in the field of Velić via Kamenica northward, linking the area of Velić with Ruda, continued along the left bank of the Cetina River toward an ancient bridge located a few hundred meters upstream from the modern bridge at Han. Here, it joined the major Roman road Aequum–Salviae recorded in the Itinerarium Antonini.[56] This direction of the road facilitated seasonal livestock migrations to the mountain pastures of Kamešnica, as well as access to the rivers Ruda and Cetina. Roads were key infrastructur-

[55] The local lime mortar containing *mrkuša* serves as a valuable indicator for dating the exploitation of quarries and sand in Late Antiquity. However, the use of the same binder in the construction of the medieval and early modern fort of Čačvina requires a more cautious approach when chronologically determining the use of stone from the quarry, as well as the lime production processes.

[56] Bojanovski 1974, pp. 58 – 60.

Cetinskoj krajini, potvrđena još od prapovijesti,[57] u kasnoj se antici uklapa u širi gospodarski sustav vezan za preradu vune i tekstilnu proizvodnju u Saloni i Splitu.[58]

Središnje upravno i simboličko mjesto imanja nalazilo se u Krcinoj ogradi (karta 1, br. 3), gdje su dokumentirani ostatci crkve s memorijom i zidanim grobnicama. Taj prostor ne pokazuje elemente reprezentativnog luksuza, već je prije operativno središte upravljanja imanjem, u kojem je vjerojatno boravio upravitelj (*vilicus* ili *actor*), dok je vlasnik posjeda, u skladu s kasnoantičkim obrascima, pretežno boravio u urbanim središtima. Ostatak krajolika bio je organiziran kroz mrežu torova, dvorišta, kuća i radnih zona, čiji su obrisi i danas jasno čitljivi u prostoru.

Istraživanja provedena u Bilušama i Osoju pokazala su da je riječ o homogeno organiziranom kasnoantičkom ruralnom krajoliku iz 6. i prve polovine 7. stoljeća, koji se prostirao na površini od 3,5 do 4 km². Procjene kapaciteta torova upućuju na mogućnost uzgoja više desetaka tisuća grla stoke sitnog zuba, što svjedoči o izrazito razvijenoj stočarskoj proizvodnji. Kamenolom građevinskog kamena, izravno povezan s kasnoantičkim stočarskim kompleksom u Bilušama, sugerira da se kamen transportirao zaprežnim kolima uz uporabu volova ili mazgi koji su pripadali imanju. Blizina magistralne prometnice dodatno naglašava transportnu dimenziju ove djelatnosti i njezinu uključenost u šire gospodarske tokove.

Tako široko postavljen gospodarski potencijal jasno nadilazi okvir običnog imanja poput onog u Banjačama te upućuje na veleposjed, najvjerojatnije *saltus*, čiji su se godišnji prihodi mogli mjeriti u stotinama solida.

Srednjovjekovna i ranonovovjekovna utvrda Čačvina (karta 1, br. 4; sl. 1) imala je kasnoantičku fazu, što potvrđuje dugotrajnu stratešku važnost

[57] Marović 2001, str. 242–246. Sirevi su bili važan prehrambeni proizvod u antičko doba. Plinije Stariji spominje *Alpes Dalmaticae* s kojih dolazi „dokleatski sir" (Plin. XI, 240). Taj sir potječe iz južnijih krajeva Dinarida, s područja antičkog grada *Doclea*, čije se ruševine nalaze kod Podgorice u današnjoj Crnoj Gori. No, nije teško prepoznati u Plinijevu navodu da je sir s Dinarida stekao ugled i u Rimu. Vidi: Ivšić 2012, str. 102–103, bilj. 19.

[58] Belamarić 2012a, str. 25. Razmjere proizvodnje i trgovine tkaninama Belamarić detaljno opisuje u drugom članku (Belamarić 2012b, str. 57–108).

al components of the livestock system, supporting seasonal grazing, water access, commercial trade, spatial organization or integration into the broader local economic system.

The connection of the Velić section of the main road Salona–Argentaria with the vicinal road Vedrine–Čačvina via a transverse "street" indicates efficient spatial management. Within this system were integrated the fort of Čačvina and the karst plateau of Osoje, along with the area designated as Ljut on the 1:5000 topographic map and the area of Jabuka, thereby forming a unified economic space linked to the edge of the plain of Sinj and the bridge over the Cetina River. Such natural conditions—particularly abundant summer pastures and proximity to extensive karst and lowland fields—enabled intensive animal husbandry, including both small and large livestock. Alongside animal husbandry, the economic backbone of the region included the exploitation of local deposits of building stone, terrestrial sand and lime production, as evidenced by numerous quarries and lime kilns. The extraction of these resources was clearly integrated into the spatial organization of settlements and closely connected to the road infrastructure.

Compared to sites such as Banjače, Konjsko or the settlement beneath the fort of Šutanj, the landscape of Velić stands out due to its spatial extent, complexity and state of preservation. This was a radically transformed landscape in which the late ancient community significantly departed from the earlier economic concept of Roman rustic villas and established a new model of extensive, livestock-oriented estate management. Over an area of several square kilometres, the landscape was deliberately reorganized into a unified economic entity, with local resources—quarries and natural sand deposits—exploited over several centuries. The intensity and scale of these construction activities permanently reshaped the physiognomy of the landscape, leaving massive dry-stone structures, such as boundary walls, houses, "streets" and sheepfolds, well preserved and readily identifiable as material evidence of the late ancient transformation of the rural landscape.

The main Roman road passing through Velić functioned asa kind of "street" linking a series of pastoral-economic units. It served as a route for the distribution of livestock products as well as construction materials—stone, sand and lime—either

njezina položaja. Utvrda je nadzirala magistralnu cestu Salona – Argentaria te je bila ključna u širem defenzivnom sustavu kasnoantičke Salone i cijelog Cetinskog kraja. Kasnoantički ruralni krajolik u Veliću i Jabuci, premrežen suhozidima, ogradama, torovima i stambenim objektima, mogao je funkcionirati kao oblik strateške prepreke, otežavajući kretanje i prodor neprijatelja. U takvom sustavu utvrda na Čačvini funkcionirala je kao središte lokalnog defenzivnog sustava, čija će uloga i organizacija daljnjim arheološkim istraživanjima zasigurno biti jasnije definirane.

Lidarski snimak omogućio je cjelovito sagledavanje prostorne organizacije ovog krajolika, dok su ciljana arheološka istraživanja potvrdila njegovu kronologiju i funkcionalnu strukturu. Na taj je način prostor Velića i Jabuke prepoznat kao iznimno dobro očuvan kasnoantički ruralni krajolik, rijedak ne samo u dalmatinskom nego i u širem europskom kontekstu. Riječ je o gotovo cjelovito očuvanom primjeru kasnoantičkog *saltusa*, unutar kojeg je moguće pratiti obrasce gospodarskog upravljanja, prostornog planiranja i eksploatacije resursa u neposrednoj povezanosti s prometnom i vojnom infrastrukturom. Visok stupanj očuvanosti suhozidnih struktura, torova, stambenih objekata i eksploatacijskih zona čini ovaj krajolik iznimno vrijednim arheološkim izvorom za proučavanje kasnoantičkog ruralnog prostora u Dalmaciji te jasno ukazuje na potrebu njegove sustavne zaštite i nastavka interdisciplinarnih istraživanja.

toward Salona and the Adriatic coast or to late ancient centres in the hinterland. The long-standing tradition of livestock husbandry and dairy processing in the Cetinska krajina, attested as far back as prehistory,[57] was integrated in Late Antiquity into a broader economic system connected to wool processing and textile production in Salona and Split.[58]

The central administrative and symbolic place of the estate was situated at Krcina ograda (Map 1, no. 3), where the remains of a church with a memoria and built tombs have been documented. This area shows no elements of representational luxury; rather, it appears to have functioned as the operational management centre of the estate, likely housing the estate manager (*vilicus* or *actor*), while the landowner, in accordance with late ancient practices, resided primarily in urban centres. The rest of the landscape was structured as a network of sheepfolds, courtyards, houses and operational areas, whose outlines remain clearly legible in the landscape today.

Investigations in Biluše and Osoje indicate that this area represents a homogeneously organized late ancient rural landscape dating to the 6th and the first half of the 7th century, which extended across approximately 3.5–4 km². Estimates of the capacity of the sheepfolds suggest the possibility of raising several tens of thousands of small livestock, pointing to a highly developed livestock production. The quarry for building stone, directly associated with the late ancient farming complex in Biluše, suggests that stone was transported by animal-drawn carts, most likely using oxen or mules kept within the estate. The proximity of the main Roman road further emphasizes the transport dimension of this activity and its integration into broader economic networks.

Such a broadly structured economic potential clearly exceeds the scale of an ordinary estate such

[57] Marović 2001, pp. 242-246. Cheese was an important food product in antiquity. Pliny the Elder mentions the *Alpes Dalmaticae*, from which comes the "Docleate cheese" (Plin. XI, 240). This cheese originates from the southern regions of the Dinaric Alps, from the area of the ancient city of *Doclea*, whose ruins are located near Podgorica in present-day Montenegro. It is not difficult to recognize from Pliny's account that cheese from the Dinaric Alps had gained renown in Rome. See: Ivšić 2012, pp. 102-103, fn. 19.

[58] Belamarić 2012, p. 25. The scale of textile production and trade is described in detail by Belamarić in another paper (Belamarić 2012a, pp. 57–108).

as the one at Banjače and instead points to a large property, most likely a *saltus*, whose annual revenues may have been measured in hundreds of solidi.

The medieval and early modern fort of Čačvina (Map 1, no. 4; Fig. 1) also had a late ancient phase, confirming the long-term strategic significance of its position. The fort controlled the main road Salona–Argentaria and formed an important element within the wider defensive system of late ancient Salona and the entire Cetina region. The late ancient rural landscape in Velić and Jabuka, characterized by an extensive network of dry-stone walls, enclosures, sheepfolds and residential structures, may also have functioned as a form of strategic barrier, complicating the movement and advance of potential enemies. Within this system, the fort on Čačvina likely served as the centre of a local defensive network, whose precise role and organization will undoubtedly become clearer through further archaeological research.

The LiDAR image has provided a comprehensive view of the spatial organization of this landscape, while targeted archaeological investigations have confirmed its chronology and functional structure. In this way, the area of Velić and Jabuka has been identified as an exceptionally well-preserved late ancient rural landscape, rare not only within the Dalmatian context but also on a broader European scale. It represents an almost completely preserved example of a late ancient *saltus*, within which patterns of economic management, spatial planning and exploitation of resources can be traced in direct connection with the road and military infrastructure. The high degree of preservation of dry-stone structures, sheepfolds, residential buildings, and extraction zones, makes this landscape an exceptionally valuable archaeological source for the study of the late ancient rural environment in Dalmatia. At the same time, it clearly underscores the need for its systematic protection and for the continuation of interdisciplinary research.

Skraćenice /*Abbreviations*

ANUBiH – Akademija nauka i umjetnosti Bosne i Hercegovine
AP – Arheološki pregled
AV – Arheološki vestnik
BASD – Bulletino di archeologia e storia dalmata
CIL – Corpus inscriptionum Latinorum
FOC – Folia onomastica Croatica
HA – Histria Antiqua
OA – Opuscula Archaeologica
SHP – Starohrvatska prosvjeta
VAHD – Vjesnik za arheologiju i historiju dalmatinsku
VAMZ – Vjesnik arheološkog muzeja u Zagrebu

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