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Stručni članak

Research paper

Arheološka istraživanja na Otresu 2017. i 2018. godine

Ovo izvješće prikazuje rezultate dviju posljednjih istraživačkih kampanja na lokalitetu Otres - Crkvina u Ostrovičkom polju. U prvoj kampanji, provedenoj 2017. godine, teren je u potpunosti saniran i stvorene su pretpostavke za nastavak sustavnih istraživanja. Sljedeće su godine radovi bili usredotočeni na sjeverni dio lokaliteta, na kojemu se nalazi otprije poznati sklop arhitekture. Utvrđeno je da je lokalitet znatno prostorniji nego što je do sada bilo poznato. Istražene prostorije potvrđuju da je građevina nastala između 330. i 410. godine te da je bila korištena za skladištenje poljodjelskih proizvoda. Preliminarni rezultati ukazuju da ljudska aktivnost na istraženom prostoru prestaje između 530. i 599. godine. U tijeku je nastavak istraživanja.

Ključne riječi: *Otres - Crkvina, Ostrovičko polje, kasna antika, kasnoantička ruralna arhitektura*

Archaeological investigations at Otres in 2017 and 2018

This report presents the results of the two latest investigation campaigns at the Otres – Crkvina site in Ostrovičko polje. During the first campaign in 2017, the site was completely remediated, and prerequisites created for further systematic investigations. The following year, the works were focused on the northern section of the site, with an already known architectural complex. The site has been found to be significantly larger than known to date. The investigated rooms confirm that the structure was made between 330 and 410 and used as agricultural storage. The preliminary results indicate that human activities in the investigated area ceased between AD 530 and 599. Continued investigation is currently under way.

Keywords: *Otres – Crkvina, Ostrovičko polje, late antiquity, late antique rural architecture*

Ostrovičko polje nalazi se na krajnjem istoku Ravnih kotara. Omeđeno je brdom Plančanik i potokom Bribišnica na istoku, odnosno jugoistoku, žažvičkom gredom na jugu, gredama i dragama između Ostrovice i Lišana Ostrovičkih na zapadu, a na sjeveru Mačkovim kamenom (Ostrovička gradina) te nizom brda visine oko 400 metara, koji se pruža prema Plančaniku (vrhovi Orlovača, Čelinka i Divić). Sjeverni rub prostora zauzimaju padine brda na kojima se mjestimično nakupila veća količina naplavne zemlje (zaselci Mandići i Bjelanovići). Uglavnom je riječ o gustoj borovoj šumi stradaloj u velikom požaru 2017. godine. Južnije od izvora Otresa i maloprije spomenutih zaselaka počinje područje sa značajnijim nanosom zemlje, elevacijski na nižoj razini, pogodnim za poljoprivredu. Također, južno od te linije nalaze se i zabilježene zone s arheološkim materijalom.¹ Sredina Ostrovičkoga polja elevacijski je najniža. Današnji je izgled poprimila kontinuiranim nanosom zemlje s padina okolnih brda, ali i poljoprivrednim aktivnostima. Ta se zemlja nalazi na podlozi vapnenačkih ploča koje sporo propuštaju vodu, što uzrokuje poplavu polja u jesenskim i zimskim mjesecima. Sporo otjecanje vode omogućilo je bušenje lokvi, kojih je u Ostrovičkom polju izrazito velik broj. U polju su vidljivi kanali, od kojih su danas mnogi potpuno zapušteni i više ne služe svojoj svrsi. Na spomenutom prostoru danas teku tri potoka: Bribišnica na krajnjem jugoistoku, Otres od Mandića prema Bribirskim Mostinama i Miljevac u Ostrovici.

Zbog njegova smještaja južno i zapadno od padina manjih brda i Plančanika, Ostrovičko polje zaštićeno je od udara bure. Zato je u cijelom polju moguće uzgajati masline i još poneke klimatski osjetljive kulture, za razliku od sjevernijega prostora Đevrsaka, koji geografski pripada Bukovici.

Terenskim pregledom i promatranjem satelitskih snimaka uočili smo 28 lokvi na području Polja, a gotovo sve se nalaze zapadno od potoka Otresa. Također, u Ostrovičkom polju postoje već spomenuta tri danas živa izvora vode, a nedaleko od izvora Otresa pronađen je i jedan presušeni izvor s dobro vidljivim koritom, koje se spaja s tokom potoka Otres. Na gredi od Crkvine prema Čorašima, to jest na Puđaričinom bregu dokumentirana su

Ostrovičko polje is located in the far eastern part of Ravni kotari. It is surrounded by the Plančanik hill and the Bribišnica stream in the east and south-east, the Žažvić stock in the south, stocks and creeks between Ostrovica and Lišane Ostrovičke in the west, and the hill of Mačkov kamen (the Ostrovica hill-fort) with a hill range approximately 400 metres high, stretching to Plančanik (the Orlovača, Čelinka and Divić peaks), in the north. The northern outskirts of this area are occupied by hill-sides with occasional significant quantities of alluvium (the Mandići and Bjelanovići hamlets). For the most part, they comprise a thick pine-wood, burnt in the great wildfire of 2017. To the south of the Otres spring and the above-mentioned hamlets, there begins an area with abundant quantities of alluvial soil at a lower level of elevation, suitable for agriculture. In addition, south of this line there are recorded zones with archaeological material¹. The central part of Ostrovičko polje is the lowest in elevation. Its contemporary appearance is due to continuous accumulation of soil from the surrounding hill-sides, as well as to agricultural activities. This soil lies on limestone beds through which water permeates slowly, causing flooding of fields in autumn and winter months. Slow water runoff has facilitated the drilling of quite a number of puddles in Ostrovičko polje. There are canals visible in the field, nowadays mostly completely derelict and no longer serviceable. Today there are three streams in this area: the Bribišnica in its far south-eastern part, the Otres from Mandići to Bribirske Mostine, and the Miljevac in Ostrovica.

The position of Ostrovičko polje, south and west of smaller hill-sides and Plančanik, offers protection against bora gales. Therefore, it is possible to grow olives and some other climate-sensitive cultures in the whole field, in contrast to the northward area of Đevrske, geographically belonging to Bukovica.

Field surveys and satellite imaging revealed 28 puddles in the field, almost all to the west of the Otres stream. In addition, there are the three already mentioned active water-wells in Ostrovičko polje, and another dried-up one near the Otres spring with a plainly visible bed running into the Otres stream. Two large deposits of yellow clay and one deposit of sand were recorded on the stock from

¹ Od prosinca 2017. na prostoru Ostrovičkoga polja provodili smo i sustavne terenske preglede, o kojima će biti riječi u posebnom tekstu.

¹ Since December 2017 we have been performing field-walking surveys in Ostrovičko polje, which will be discussed in a separate text.



Sl. 1. Satelitska snimka Ostrovičkog polja s naznačenim arheološkim lokalitetima (podloga ESRI Satellite®, A. Alajbeg)

Fig. 1 Satellite image of Ostrovičko polje with indicated archaeological site (ESRI Satellite® map, A. Alajbeg)

dva velika ležišta žute gline i jedno ležište pijeska. U neposrednoj blizini ovih nabrojanih temeljnih resursa, na malenoj gredi koja se pruža sjevernim rubom Ostrovičkog polja, smješten je arheološki lokalitet Otres - Crkvina.²

Kratka povijest istraživanja

Arheološki lokalitet na Otresu poznat je još od samih početaka srednjovjekovne arheologije u Dalmaciji. Fra Lujo Marun 1895. godine bilježi ostatke malene jednobrodne crkve s polukružnom apsidom (romanička crkva), a ubrzo zatim na lokalitet dolazi njegov povjerenik Vladimir Ardalić

Crkvina to Ćoraši, i.e. on Pudaričin breg. The Otres – Crkvina archaeological site is located in the immediate vicinity of such fundamental resources, on a small stock stretching along the northern edge of Ostrovičko polje².

A brief history of investigations

The archaeological site at Otres has been known since the very beginnings of mediaeval archaeology in Dalmatia. Friar Lujo Marun recorded the remains of a small single-nave (Romanesque) church with a semi-circular apse in 1895. Soon after, his commissioner Vladimir Ardalić came to the site from the

² Lokalitet je u starijoj literaturi često nazivan Otres – Lukačuša ili Otres – Lukačeva ograda. Lokalno stanovništvo taj položaj naziva Crkvina, a toponim Lukačuša odnosi se tek na manju parcelu smještenu između Crkvine i potoka. Stoga je izraz Crkvina prikladniji. Budući da o lokalitetu na Otresu nije dosad previše pisano u arheološkoj literaturi, nećemo stvoriti veliku zabunu ako tu pogrešku ispravimo i od sada ga nazivamo njegovim pravim imenom.

² The site was often called Otres – Lukačuša or Otres – Lukačeva ograda in the older literature. The local population calls this site Crkvina, while the place-name Lukačuša regards only a small stretch of land located between Crkvina and the stream. Therefore, the name Crkvina is more appropriate. Since the site at Otres has not been extensively covered in the archaeological literature, we will not create a great confusion if we corrected this error and started calling it by its proper name.



Sl. 2. Istraživanja na Otresu 1977. godine (foto: arhiv MHAS)
 Fig. 2 Investigations at Otres in 1977 (photograph: MHAS archive)

iz susjednih Đevrsaka.³ Tijekom nekoliko sljedećih godina Ardalić je s Otresa prikupio značajan broj raznodobnih nalaza koji su bili poticaj za početak iskopavanja.⁴ U prvim radovima provedenim 1911. i 1912. godine Marun i Ardalić pretražili su prostor uokolo crkve.⁵ Pronašli su popriličan broj grobova, a nalazi nakita i novca iz razvijenoga i kasnog srednjeg vijeka poslužili su im kao oslonac za datiranje groblja. U zemlji između grobova, ali ponekad i unutar grobnih konstrukcija pronalazili su ulomke predromaničke kamene plastike. Unatoč zanimljivim nalazima, Marun i Ardalić nisu nastavili rad na Otresu. Sustavna istraživanja konačno započinju 1977. godine djelatnici Muzeja hrvatskih arheoloških spomenika na čelu s Matom Zekanom.⁶

neighbouring Đevrske³. Over the next few years, Ardalić collected quite a few artefacts from various eras at Otres, which served as an incentive to initiate excavations⁴. During their initial works in 1911 and 1912, Marun and Ardalić examined the area around the church⁵. They found quite a number of graves, and used the unearthed jewellery and coins from the High and Late Middle Ages as the basis for dating of the graveyard. They found fragments of pre-Romanesque stonework in the ground around the graves, but sometimes also within grave structures. Despite the interesting finds, Marun and Ardalić did not continue their work at Otres. Systematic investigations were finally initiated in 1977 by the Museum of Croatian Archaeological Monuments, led by Mate Zekan⁶.

³ Vrijedne zabilješke o Otresu donosi fra Lujo Marun u svojim *Starinarskim dnevnicima*. Posebno je zanimljiva opaska o „mnogo malih većinom četvrtastih a vjerojatno u suhozid sgrada“, koje je primijetio na gredi od Otresa prema bribirskome zaselku Ćoraši (Marun 1998, str. 62).

⁴ Marun 1896, str. 124.

⁵ Marun 1998, str. 217; Zekan 2000, str. 265.

⁶ Zekan 1983, str. 34.

³ Friar Lujo Marun made valuable annotations on Otres in his *Starinarski dnevnic*. His comment on “a number of small, mainly rectangular, buildings, most likely with dry-walls”, referring to his observations on the stock from Otres to the Bribir hamlet of Ćoraši (Marun 1998, p. 62) is particularly interesting.

⁴ Marun 1896, p. 124.

⁵ Marun 1998, p. 217; Zekan 2000, p. 265.

⁶ Zekan 1983, p. 34.

Nakon nekoliko kampanja provedenih do 1986. godine postavljena je relativna kronologija lokaliteta sa strukturama i nalazima od rimskoga i ranosrednjovjekovnoga pa sve do kasnosrednjovjekovnoga doba. Utvrđeno je postojanje dviju crkava – predromaničke i romaničke.⁷ Revizijskim su istraživanjem dokumentirani grobovi otvoreni 1911. i 1912. godine, pri čemu je pronađen i velik broj neotvorenih grobova. Na prostoru groblja zabilježeni su ostatci arhitektonskoga sklopa koji su presložili pojedini grobovi. Sjeverno od groblja otkrivena je građevina s dvije pravokutne prostorije, sjevernom i južnom. U sjevernoj prostoriji pronađena je i apsida prekinuta zidom koji povezuje dvije pravokutne prostorije, što sugerira da je građevina imala najmanje dvije faze.⁸ Najveću su pozornost u stručnoj javnosti pobudili nalazi ulomaka arhitrava i zabata oltarne ograde s natpisom imena kneza Branimira (879. - 892.) i sedmorice svetaca, pronađeni 1984. godine.⁹ Nažalost, nakon 1986. istraživanja gube kontinuitet. Tek je poratne 1997. godine istraženo 38 grobova, od kojih je dobar dio otvorio Ardalić.¹⁰ U kratkim kampanjama 2011. i 2012. radovi su bili usredotočeni na konzervaciju arhitekture i pretraživanje preostalog prostora groblja.

Kampanja 2017.¹¹

Pet godina nakon završetka zadnje kampanje na Crkvini lokalitet je bio potpuno zarastao u šipražje. Neprohodan i nepregledan, ničim nije odavao svoje značenje kao ni dotad uložena sredstva u njegovo istraživanje. Dvije hrpe zemlje nastale kopanjem tijekom stotinu godina narušavale su vizuru lokaliteta i prostorno razdvajale područje srednjovjekovnog groblja s crkvama na jugu od sklopa arhitekture na sjeveru Crkvine. Istočni dio groblja bio je potpuno ispražnjen od zemlje sve do kamena živca i sterilnoga tla, što ga je učinilo nižim u odnosu na obližnju gomilu zemlje za gotovo pet metara. Trebalo je, dakle, raščistiti lokalitet i bagerom vratiti

After several campaigns until 1986, the relative chronology of the site was determined with structures and finds from the Roman to the Early and Late Mediaeval eras. The existence of two churches was established – one pre-Romanesque and the other Romanesque⁷. During reinvestigation, the graves opened in 1911 and 1912 were recorded, and a number of unopened graves found in the process. Remains of an architectural complex were recorded in the graveyard, re-layered by certain graves. A structure with two rectangular rooms, north and south, was discovered north of the graveyard. An apse crossed over by a wall connecting the two rectangular rooms was found in the north room, suggesting that the structure had been erected in at least two phases⁸. The greatest interest among the experts was sparked by the fragments of the architrave and altar screen gable with the inscribed name of duke Branimir (879–892) and seven saints, found in 1984⁹. Unfortunately, the investigations were not continued after 1986. It was only in post-war 1997 that 38 graves were investigated, a number of them previously opened by Ardalić¹⁰. During the brief 2011 and 2012 campaigns, the works were focused on architectural conservation and examination of the remaining graveyard area.

The 2017 campaign¹¹

Five years after the completion of the last campaign at Crkvina, the site was completely thicketed. Impassable and obscure, it did not give away its significance or the resources invested into its investigation. Two piles of soil, accumulated by a century's worth of digging, marred the view of the site and physically separated the mediaeval graveyard with the churches in the south from the architectural complex in the north of Crkvina. The eastern part of the graveyard was completely devoid of soil all the way to bed-rock and sterile soil, which made it lower than the adjacent pile of earth by almost five metres. Therefore, it was necessary to clear

⁷ Zekan 1986a, str. 163.

⁸ Zekan 1986b, str. 32.

⁹ Zekan 1986a, str. 163; Delonga 1996, str. 215–218.

¹⁰ Zekan 2000, str. 268–269.

¹¹ Istraživanje je provedeno od 26. lipnja do 21. srpnja 2017. Sudjelovali su: Mateja Baričević, dr. sc. Goran Bilogrivić, Denis Blažević, Katarina Franušić, Maja Marković, Branka Milošević (zamjenica voditelja istraživanja), Deni Tojčić, Josip Zorić i Ante Alajbeg (voditelj istraživanja).

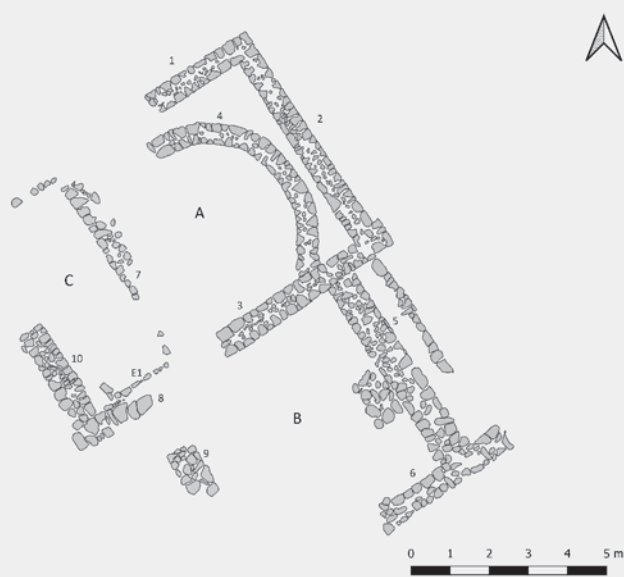
⁷ Zekan 1986a, p. 163.

⁸ Zekan 1986b, p. 32.

⁹ Zekan 1986a, p. 163; Delonga 1996, pp. 215–218.

¹⁰ Zekan 2000, pp. 268–269.

¹¹ The investigation was conducted from 26 June to 21 July 2017. The participants were: Mateja Baričević, Goran Bilogrivić PhD, Denis Blažević, Katarina Franušić, Maja Marković, Branka Milošević (deputy investigation director), Deni Tojčić, Josip Zorić and Ante Alajbeg (investigation director).



Sl. 3. Otres 2017 - tlocrt (A. Alajbeg)
Fig. 3 Otres 2017 – top view (A. Alajbeg)

oko 300 m³ zemlje na prostor srednjovjekovnoga groblja. Usto je bilo potrebno i izraditi suvremenu dokumentaciju i ispitati arheološki potencijal zane-marenoga sjevernog dijela lokaliteta, kako bismo stvorili osnovne pretpostavke za stručnu evaluaciju Crkvine, ali i buduću prezentaciju. Izvršenom sanacijom omogućen je vizualni kontakt sjevernoga i južnog dijela lokaliteta.

Srednjovjekovno groblje na Crkvini nije u potpunosti istraženo, pa smo neistražene grobove preventivno zaštitili nanosom zemlje. Vjerujući da im se ništa neće dogoditi u sljedećim desetljećima, jer u zemlji netaknuti stoje već stoljećima, odlučili smo usmjeriti radove na sjeverni dio Crkvine - područje s vidljivim ostacima zidova, za koje se pretpostavljalo da je riječ o ostacima antičkih i srednjovjekovnih stambenih objekata.¹²

Lokalitet je u ovoj kampanji relativno georeferenciran pomoću GPS točaka drona *Phantom 3* u lokalnom HTRS96/TM koordinatnom sustavu. Iskopavanja su dokumentirana fotogrametrijski uz pomoć fotoaparata i drona, a točke su povezane mjerenjem totalnom stanicom. Svaka stratigrafska jedinica i struktura zabilježena je u obliku ortomosaika i 3D modela, na temelju kojih su iscrtani odgovarajući vektori. Stratigrafski slijed zapisan je u programu *Harris Matrix Composer*.

Iskopavanjem unutrašnjosti pravokutnih prostorija (dalje: prostorija A i prostorija B) primijetili



Sl. 4. Otres 2017 - ortomosaik
(Z. Alajbeg i A. Alajbeg)
Fig. 4 Otres 2017 – orthomosaic
(Z. Alajbeg and A. Alajbeg)

up the site and return around 300 m³ of soil to the mediaeval graveyard using a bulldozer. It was also required to prepare contemporary documentation and investigate the archaeological potentials of the neglected northern section of the site, in order to create the basic preconditions for an expert valuation of Crkvina, as well as for future presentations. The completed rehabilitation enabled visual contact between the northern and southern parts of the site.

The mediaeval graveyard at Crkvina has not been fully investigated, and therefore we applied preventive protection of unexplored graves by means of transported soil. Believing that nothing would happen to them in the decades to come, since they had been left untouched under ground for centuries, we decided to focus on the northern part of Crkvina – the area with visible remains of walls assumed to be relics of dwellings from the Antiquity and Middle Ages¹².

During this campaign, the site was relatively georeferenced by means of the *Phantom 3* drone GPS points in the local HTRS96/TM coordinate system. The excavations were recorded photogrammetrically with drone-mounted cameras, and the points connected by measurement with a total station. Each stratigraphic unit and structure was recorded as an orthomosaic and 3D model, based on which corresponding vectors were made. The

¹² Zekan 2000, str. 269.

¹² Zekan 2000, p. 269.

smo da su u prethodnim istraživanjima kulturni slojevi potpuno otkopani. Netom nakon uklanjanja trave i površinskoga sloja zatekli smo kamen živac, na koji su naslonjeni konzervirani zidovi prostorija A i B, i to bez temeljne stope. U zapadnome dijelu sonde pronađen je Zid 7, koji zatvara perimetar prostorije A, sačuvan samo u jednome redu kamena.¹³ Zapadno od toga zida naišli smo na visinski ujednačen i ravnomjerno raspoređen sloj kamenja (SJ 9), koji je djelovao odveć pravilno za urušenje zida. To je bio nagovještaj da smo naišli na prostor koji nije bio zahvaćen radovima od 1984. do 1986. Južno od kamenja (SJ 9), to jest izvan prostorije A, pronađene su intaktne strukture od tegula i tubula. Kako da je riječ o nižim strukturama u odnosu na sloj kamenja te da iznad njih nismo naišli na nederinuti stratigrafski slijed, možemo pretpostaviti da je taj dio prekopan u nekoj starijoj kampanji. Razlomljeni tubuli, ovdje sasvim sigurno u sekundarnoj upotrebi, bili su pravilno poslagani i povezani žbukom kako bi popločali pravokutni kameni okvir duljine 2,1 i širine 1,1 m (dalje: E1). Najprije smo pretpostavili da se radi o grobnoj konstrukciji, ali nismo pronašli dokaze koji bi to potvrdili. Južno od E1 nalazi se spoj dvaju zidova (zidovi 8 i 10), koji su očito zatvarali perimetar novopronađene prostorije (dalje: prostorija C). Time smo dobili potvrdu da je sklop prostorija površinom veći no što je dosad bilo poznato. Također, prilikom radova u prostoriji B pronađen je zid 9, koji tu prostoriju u potpunosti tlocrtno definira. Zid je sačuvan u jednome redu kamena i postavljen je na kamenu živcu. Dakle, u kampanji 2017. definirali smo tlocrt prostorija A i B i utvrdili postojanje nove prostorije C, koja svojim smještajem slijedi dosad poznate zidove. Svi otkriveni zidovi zidani su od nepravilnoga kamena povezanog s malo žbuke.

U prostorijama A i B stratigrafski slijed bio je prilično jednostavan, budući da se radi o prethodno prekopanoj površini. Ispod površine (T) i sloja humusa (SJ 1), slijedio je sloj tamnosive rastresite zemlje (SJ 2), debljine dvadesetak centimetara, a zatim kamen živac (G). Pokretni nalazi bili su prilično malobrojni, osim ulomaka odbačenih tegula iz starijih kampanja. U sjevernom dijelu prostorije C smo ispod površine, sloja humusa i SJ 2 naišli na sloj kamenja (SJ 9), a u južnom dijelu na strukturu od tubula i tegula (E1). I u toj su prostoriji

stratigraphic sequence was defined using the *Harris Matrix Composer* application.

While excavating the interior of the rectangular rooms (hereinafter: room A and room B), we noticed that the cultural layers had been completely unearthened during previous investigations. Immediately after the stripping of turf and top-soil, we found bedrock, supporting the conserved walls of rooms A and B, but with no strip foundation. In the western part of the trench we found Wall 7, closing the perimeter of room A, with only one row of stones preserved¹³. To the west of the wall we came upon a layer of stones (SU 9) of equal height and even distribution, seemingly too regular to be a collapsed wall. This was an indication that this spot had not been part of the 1984–1986 works. South of the stones (SU 9), i.e. outside of room A, we found intact structures of tegulae and tubuli. Since these structures are lower than the layer of stones, and we found no untouched stratigraphic sequence above them, we can assume that this section had been excavated in a previous campaign. The fragmented tubuli, here surely in secondary use, were regularly arranged and bound with mortar, tiling a rectangular stone frame 2.1 m long and 1.1 m wide (hereinafter: E1). At first, we thought it was the bottom section of a grave structure, but we found no artefacts to confirm this. To the south of E1 there is a joint of two walls (8 and 10), which were obviously closing the perimeter of a newly-found room (hereinafter: room C). Thus, it was confirmed that the room complex is larger than it had been known. Furthermore, during the works in room B we found wall 9, fully defining the ground plan of the room. The wall was placed on bedrock, with one layer of stones preserved. Consequently, during the 2017 campaign we defined the ground plans of rooms A and B and identified the existence of the new room C, whose position is in line with the walls known to date. All unearthened walls were made of irregular-shaped stones bound with small amounts of mortar.

The stratigraphic sequence in rooms A and B was fairly simple, since the area had been unearthened before. Below the top-soil (T) and the humus layer (SU 1), there followed a layer of dark-grey loose earth (SU 2), some twenty centimetres thick, and then the bedrock (G). The movable finds were rath-

¹³ Na Zekanovu tlocrtu iz 2000. godine taj je zid drukčije pozicioniran (Zekan 2000, str. 264).

¹³ This wall is positioned differently on Zekan's ground plan from 2000 (Zekan 2000, p. 264).

pokretni nalazi bili malobrojni, samo nekoliko ulomaka grube keramike bez dijagnostičkih elemenata, ulomci tubula koji su se odvojili od popločenja i dvije tegule s radioničkim žigom PANSIANA.

U prostorijama A i B nije bilo mogućnosti za revizijsko istraživanje, jer su slojevi u potpunosti odstranjeni, a arhitektura potpuno konzervirana, bez sačuvanih originalnih dijelova. Stoga nismo imali osnove za datiranje prostorija. Moglo se tek konstatirati kako konzervacija sugerira da je apsida starija od pravokutnih prostorija, koje su je u nekom trenutku poništile. U prostoriji C, koja je tlocrtno kompatibilna s prostorijama A i B, pronađena je intaktna struktura od sekundarno upotrijebljenoga rimskoga građevinskog materijala. Ni taj nalaz nije bio od velike pomoći za datiranje, osim što je ponudio prijedlog da je građevinski materijal iskorišten od starije građevine s apsidom, na čijem je mjestu kasnije sagrađen sklop s pravokutnim prostorijama. Nakon konačnog dokumentiranja zaustavili smo iskopavanje, čuvajući intaktne slojeve i strukture za sljedeću kampanju.

Kampanja 2018.¹⁴

Druga kampanja na Crkvini izvedena je u suradnji Muzeja hrvatskih arheoloških spomenika i Odsjeka za arheologiju i muzeologiju Filozofskog fakulteta Masarykova sveučilišta u Brnu. Usporedno s nastavkom rada u prostoriji C odlučili smo proširiti sondu prema zapadu, to jest prema padini, kako bismo prikupili dovoljno podataka za interpretaciju sklopa prostorija.

Tijekom iskopavanja svaki je pronađeni artefakt i novootkriveni arheološki kontekst fotografski dokumentiran i geodetski izmjeran. Georeferentne točke prenesene su u dokumentiranu situaciju i izmjerene totalnom stanicom. Također, geodetski su zabilježeni svi preostali elementi (granice slojeva, nakupine kamenja itd.) koji bi bili uništeni daljnjim iskopavanjem. Sve strukture i slojevi fotografirani su iz svih gledišta, na temelju čega je izveden de-

er few in number, but the fragments of discarded tegulae from earlier campaigns. In the northern section of room C we came across a layer of rocks (SU9) beneath the top-soil, humus and SU 2, and in its southern part we found a structure of tubuli and tegulae (E1). There were very few movable finds in this room, too, i.e. only several fragments of rough pottery with no diagnostic elements, fragments of tubuli detached from the tiling, and two tegulae with the PANSIANA workshop stamp.

There was no possibility for a reinvestigation in rooms A and B, since the layers had been completely removed, and architecture fully conserved, with no original components preserved. Therefore, we had no basis to date the rooms. We could only note that the conservation was suggesting that the apse is earlier than the rectangular rooms, which had cancelled it out at some point in time. In room C, whose ground plan is compatible with that of rooms A and B, we found an intact structure of secondarily used Roman building material. This find was also of little help in terms of dating. However, it did suggest that the building material had been used from the earlier structure with the apse to construct the complex with the rectangular rooms in its place. We halted the excavations after making the final records, preserving the intact layers and structures for the next campaign.

The 2018 campaign¹⁴.

The second campaign at Crkvina was a collaboration of the Museum of Croatian Archaeological Monuments with the Department of Archaeology and Museology from the Masaryk University Faculty of Arts in Brno. In addition to our continued works in room C, we decided to extend the trench westward, i.e. toward the slope, in order to collect sufficient information for an interpretation of the room complex.

During the excavation, each unearthed artefact

¹⁴ Istraživanje je provedeno od 4. do 13. lipnja i od 3. do 9. studenog 2018. Sudjelovali su: Denis Blažević, doc. dr. sc. Petr Dresler (zamjenik voditelja istraživanja), Metod Gáll, Jiří Geršl, Anna Koudelková, Mariela Martinov, Branka Milošević, Anna Nováčková, Ondřej Pelikán, Michaela Prištáková, Deni Tojčić, mr. sc. Nikolina Uroda, Michal Vágner, Nicola Kate Wesseling, Josip Zorić i Ante Alajbeg (voditelj istraživanja). Lokalitet je georeferencirao Ante Roglič iz tvrtke *Temenos* d. o. o.

¹⁴ The investigation was conducted from 4 to 13 June and from 3 to 9 November 2018. The participants were: Denis Blažević, Petr Dresler PhD, Assistant Professor (deputy investigation director), Metod Gáll, Jiří Geršl, Anna Koudelková, Mariela Martinov, Branka Milošević, Anna Nováčková, Ondřej Pelikán, Michaela Prištáková, Deni Tojčić, Nikolina Uroda MSc, Michal Vágner, Nicola Kate Wesseling, Josip Zorić and Ante Alajbeg (investigation director). The site was georeferenced by Ante Roglič from the *Temenos* d.o.o. company.



Sl. 5. Otres 2018 - tlocrt (A. Alajbeg - J. Geršl)
Fig. 5 Otres 2018 – top view (A. Alajbeg – J. Geršl)

taljni fotogrametrijski 3D model u programu *Agisoft Photoscan*. Iz 3D modela izveden je realni ortomozaik, koji je poslužio kao rasterska podloga za vektorizaciju svake jedinice i za izradu digitalnoga vektorskog tlocrta u GIS sustavu (*ESRI ArcMap*). Završni proizvod u obliku preciznoga 3D modela iskoristili smo i kao dodatni način arheološkoga dokumentiranja. Svi su prostorni podatci izmjereni i obrađeni u lokalnom HTRS96/TM koordinatnom sustavu. Stratigrafski slijed zapisan je u programu *Harris Matrix Composer*.

Prvi zadatak u prostoriji C bio je ukloniti sloj kamenja koji je prekrivao dvije trećine površine prostorije (SJ 9). Iskopavanjem je potvrđeno da nije riječ o urušenju ili razbacanom građevinskome materijalu, jer je kamenje poredano prilično pravilno i jednoslojno. Također, ne radi se ni o nivelaciji površine za eventualni kasniji graditeljski zahvat, jer kamenje prati geološku konfiguraciju terena i spušta se zajedno s padinom, i to točno na visini sačuvanih zidova prostorije. Dakle, prostorija C namjerno je prekrivena jednim slojem kamenja u nekom trenutku nakon prestanka njezina korištenja.

Tu pretpostavku dodatno potvrđuje sastav zemlje kojim je kamenje bilo popunjeno (SJ 13): izrazito rahla, tamnosmeđa zemlja nije kulturni sloj, već naslaga nastala dekomponiranjem organskih tvari. Iz toga također proizlazi da se sloj kamenja (SJ 9) određeno vrijeme nalazio na samoj površini, ali da nakon njegova postavljanja na tome mjestu nije nastavljen ljudska aktivnost. Uklanjanjem



Sl. 6. Prostorija C - SJ 9 i E1
(M. Prišťáková i M. Vágner)
Fig. 6 Room C – SU 9 and E1
(M. Prišťáková and M. Vágner)

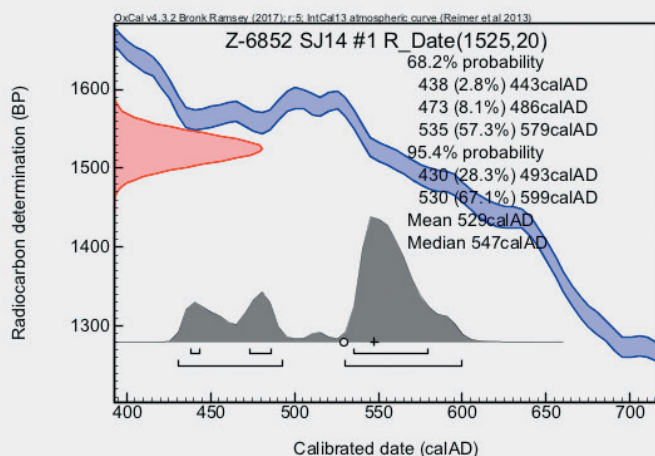
and newly-found archaeological context was photographed and geodetically surveyed. The georeferencing points were transferred to a recorded layout plan and measured with a total station. Furthermore, all remaining elements (layer boundaries, rock piles, etc.), which would have been destroyed by further excavations, were geodetically recorded. All structures and layers were photographed from all points of view, based on which a detailed photogrammetric 3D model was made using the *Agisoft Photoscan* software. A true orthomosaic was derived from the 3D model. It was then used as a raster screen for vectorization of each unit and to prepare a digital vector plan in the GIS system (*ESRI ArcMap*). We also utilised the final product in the form of a precise 3D model as an additional mode of archaeological recording. All spatial data were measured and processed in the local HTRS96/TM coordinate system. The stratigraphic sequence was defined using the *Harris Matrix Composer* application.

The first task in room C was to remove the stone layer, which covered two-thirds of the room area (SU 9). The excavations confirmed that it was not a case of collapsed or scattered building material, since the stones were arranged quite regularly and in a single layer. Likewise, the surface was not levelled for possible subsequent construction activities, since the stones were in line with the geologic



Sl. 7. Prostorija C - SJ 16, SJ 14, E2 i E1 (M. PrišŤáková i M. Vágner)

Fig. 7 Room C – SU 16, SU 14, E2 and E1 (M. PrišŤáková and M. Vágner)



Sl. 8. kalibracijska krivulja uzorka iz SJ 14, (I. Krajcar Bronić i A. Sironić, Institut Ruđer Bošković)

Fig. 8 Calibration curve of sample from SU 14 (I. Krajcar Bronić and A. Sironić,

kamenja i iskopavanjem depozita SJ 13 u sredini prostorije C nailazimo na novi sloj – SJ 14. To je sloj izrazito tamne zemlje, prepun ulomaka tegula, u kojemu je pronađena i jedna cjelovita kvadratna suspenzura hipokausta. Nalaz suspensure izvan izvornoga konteksta, uz prethodno otkrivene ulomke

configuration of land, descending with the slope, exactly at the height of the preserved room walls. Therefore, room C was deliberately covered with one layer of stones at some moment after its abandonment.

This assumption is additionally corroborated by the composition of the soil deposit between the stones (SU 13): markedly loose, dark-brown earth is not a cultural deposit, but a heap created by decomposing organic matter. Consequently, the layer of stones (SU 9) was on the very surface for a while, but no human activities followed after its making. Upon removal of the stones and excavation of deposit SU 13, we found a new layer in the middle of room C – SU 14. This is a layer of extremely dark earth, replete with fragments of tegulae, as well as one whole square hypocaust suspensura. The discovery of the suspensura outside of the original context, with the previously unearthed fragments of tubuli from E1, further suggests the existence of an earlier Roman structure with a central heating sys-

tubula iz E1, dodatno sugerira da se u blizini, ili baš na tome mjestu, nalazila starija rimska građevina sa sustavom centralnoga grijanja.

Iz toga smo sloja (SJ 14) izuzeli uzorak drvenoga ugljena koji je AMS ¹⁴C analizom datiran u razdoblje Cal AD 530. - 599.¹⁵ Ta datirana stratigrafska jedinica se ne podvlači pod zid 7, niti negira bilo koju drugu konstrukciju u prostoriji C. Također, budući da tlocrtno kontaktira sa zidovima, potpuno je isključena mogućnost da su zidovi izgrađeni nakon nastanka ovoga sloja. Nastavkom iskopavanja u sjevernome dijelu prostorije, u kojem smo zabilježili žućkastu glinastu zemlju (SJ 15), dolazimo do suhozidne konstrukcije u obliku četvrtine kružnice (SJ 16), koja je ravnim stranicama naslonjena na zidove 7 i 18.

Ta je jednoslojna kamena struktura bila popunjena tom istom žućkastom glinastom zemljom. Nakon dokumentiranja čitava je konstrukcija uklonjena i nastavljeno je s iskopavanjem susjedne SJ 14. Tada je postalo jasno da gotovo čitavu površinu prostorije prekriva sloj smeđe zemlje, svjetlije od SJ 14, koji izdvajamo u SJ 23. Za razliku od ostalih slojeva s oskudnom količinom nalaza, u ovoj smo stratigrafskoj jedinici prikupili znatno više pokretnog materijala, uglavnom ulomke rimske glazirane keramike i stakla.

Na razini SJ 23, pola metra sjevernije od E1, pronađen je kvadratni kameni okvir širine oko 70 cm (E2). Ispunjen je zemljom, a na njegovoj su površini bila vidljiva tri velika ulomka tegula. Iskopavanjem je utvrđeno da se unutar kamenog okvira nalazi velika keramička posuda na stopu, koja je bila poklopljena tegulama uz koje je pronađeno još nekoliko ulomaka druge keramičke posude. Keramička posuda na stopu prilično je netipična: oblikom nalikuje doliju (*dolia, pithos*), ali je znatno manjih dimenzija i tanjih stijenki. Na unutarnjoj stijenci posude dobro su vidljivi tragovi ručnog oblikovanja. Nepravilna je oblika, izrađena od slabo pročišćene svijetle gline, te čitava posuda djeluje kao rustičan proizvod kućne radinosti neprikladan za tipološko datiranje. Zemlja iz posude izuzeta je za flotaciju.

tem either in the vicinity or on the very spot.

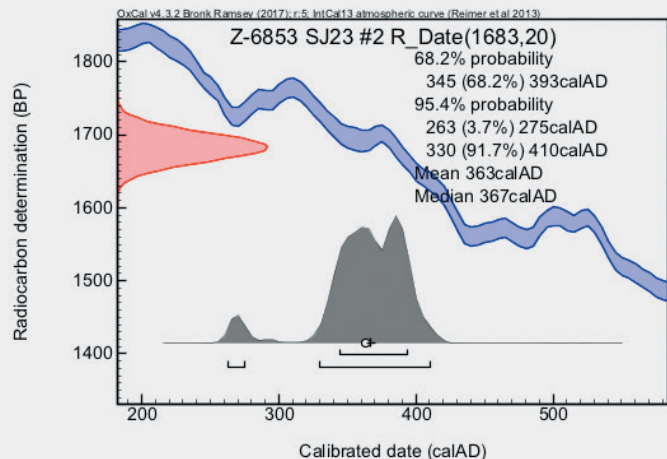
We took a sample of charcoal from this layer (SU 14), which has been dated to cal AD 530–599 by means of AMS ¹⁴C analysis¹⁵. This dated stratigraphic unit does not stretch below wall 7, nor does it negate any other structure in room C. Additionally, since it is in contact with the walls by its layout, the possibility that the walls were built after the creation of this layer can be completely ruled out. During the continued excavations in the northern section of the room, we came upon yellowish clay soil (SU 15), and found a drywall structure in the form of a quarter-circle (SU 16), with its straight sides leaning against walls 7 and 18.

This single-layer stone structure was filled with the same yellowish clay soil. After its recording, the whole structure was removed, and excavations of the adjacent SU 14 were continued. Then it became evident that almost the whole area of the room was covered with a layer of brown earth, paler than SU 14, which we separately designated as SU 23. In contrast to the other layers with scarce quantities of finds, in this stratigraphic unit we collected considerably more movable material, mainly fragments of Roman glazed pottery and glass.

At the level of SU 23, half a metre north of E1, we found a square stone frame, about 70 cm wide (E2). It was filled with earth, with three large fragments of tegulae visible on its surface. A large pottery vessel with a foot was excavated from within the stone frame. It was covered with tegulae. We also found several fragments of another pottery vessel. The pottery vessel with a foot is quite atypical: it is shaped like a storage jar (*dolia, pithos*), but is much smaller and has thinner walls. There are well-visible traces of hand-moulding on its inner wall. It is irregular in shape, made of poorly cleaned pale clay, and the whole vessel gives the impression of a rustic cottage industry product, unfit for typological dating. The earth from the vessel was taken for flotation.

¹⁵ Ispitivanja je provedeno u Laboratoriju za mjerenje niskih radioaktivnosti Instituta Ruđer Bošković u Zagrebu (dr. sc. Andreja Sironić i dr. sc. Ines Krajcar Bronić) te u Center for Applied Isotope studies, University of Georgia, Athens, SAD. Uzorke zemlje iz istoga sloja smo flotirali, a o rezultatima analize će biti riječi drugom prigodom.

¹⁵ The investigation was conducted in the Laboratory for Low Radioactivity Measurement of the Ruđer Bošković Institute in Zagreb (Andreja Sironić, PhD, and Ines Krajcar Bronić, PhD) and in the Center for Applied Isotope Studies, University of Georgia, Athens, USA. We floated the soil samples from the same layers. We will discuss the results of the analysis on another occasion.



Sl. 9. kalibracijska krivulja uzorka iz SJ 23 (I. Krajcar Bronić i A. Sironić, Institut Ruđer Bošković)
Fig. 9 Calibration curve of sample from SU 23
(I. Krajcar Bronić and A. Sironić, Ruđer Bošković Institute)

U prostoriji C primijećen je još jedan element: E3 je jama kružnoga tlocrta promjera oko 40 cm, dubine oko 30 cm. U njoj nije bilo nalaza, ali je zemlja izuzeta za flotaciju.

Stratigrafsku jedinicu 23 možemo odrediti kao *terminus ante quem* za datiranje svih spomenutih elemenata unutar prostorije C: detaljnim pregledom stratigrafskih odnosa utvrđeno je da su elementi E1 i E2 nastali prije formiranja SJ 23, ali i da su tijekom određenoga vremena zajedno tvorili interfacij razdoblja.¹⁶ SJ 23 je depozit akumuliran ljudskom aktivnošću, to jest korištenjem prostorije C, o čemu svjedoče znatno brojniji nalazi ulomaka keramičkih i staklenih posuda u odnosu na ostale jedinice. Iz toga smo sloja izuzeli uzorak drvenoga ugljena koji je AMS ¹⁴C analizom datiran u razdoblje Cal AD 330. – 410.¹⁷

Kamena konstrukcija popločena tubulima i tegulama (E1) te kameni pravokutni okvir s keramičkom posudom (E2) superimponirani su sloju žute glinaste zemlje (SJ 21). Taj depozit nije sterilan, jer je iskopavanjem pronađeno više pokretnih nalaza,

¹⁶ Harris, 1997, str. 64–68.

¹⁷ Ispitivanje je provedeno u Laboratoriju za mjerenje niskih radioaktivnosti Instituta Ruđer Bošković u Zagrebu (dr. sc. Andreja Sironić i dr. sc. Ines Krajcar Bronić) te u Center for Applied Isotope studies, University of Georgia, Athens, SAD. Uzorke zemlje iz istoga sloja smo flotirali, a o rezultatima analize bit će riječi drugom prigodom.



Sl. 10. Otres 2018 - ortomozaik
(Z. Alajbeg i A. Alajbeg)
Fig. 10 Otres 2018 – orthomosaic
(Z. Alajbeg and A. Alajbeg)

One more element was spotted in room C: E3 is a circular pit, having a diameter of approximately 40 cm, and around 30 cm deep. There were no finds in it, but the earth was taken for flotation.

Stratigraphic unit 23 can be set as the *terminus ante quem* for the dating of all the above elements in room C: a detailed examination of stratigraphic relations revealed that elements E1 and E2 had originated before the creation of SU 23, but also that they together made a period interface for some time¹⁶. SU 23 is a deposit accumulated by human activity, that is, by the use of room C, as evidenced by a quite larger number of unearthed pottery and glass vessel fragments compared to the other units. We took a sample of charcoal from this layer, dated to cal AD 330–410 by means of AMS ¹⁴C analysis¹⁷.

The stone structure tiled with tubuli and tegulae (E1), and the stone rectangular frame with the pottery vessel (E2) are superimposed to the yellow clay soil layer (SU 21). This deposit is not sterile, since the excavations revealed a number of mova-

¹⁶ Harris, 1997, pp. 64–68.

¹⁷ The investigation was conducted in the Laboratory for Low Radioactivity Measurement of the Ruđer Bošković Institute in Zagreb (Andreja Sironić, PhD, and Ines Krajcar Bronić, PhD) and in the Center for Applied Isotope Studies, University of Georgia, Athens, USA. We flotated the soil samples from the same layer. We will discuss the results of the analysis on another occasion.

poput željeznih čavala i olovnih klinova. Dakle, sloj glinaste zemlje debljine desetak centimetara postavljen je po čitavoj površini prostorije C kako bi izolirao superimponirane strukture.

U zapadnome dijelu sonde smo netom nakon uklanjanja trave naišli na novu prostoriju (dalje: prostorija D), naslonjenu na prostoriju C. Približno je kvadratnoga tlocrta. Njezina je površina većim dijelom prekrivena jednim slojem kamenja (SJ 25), poput prostorije C. Na najnižem dijelu nije bilo kamenja, već sloj smeđe zemlje (SJ 24). Uklanjanjem sloja kamenja dolazimo do svijetlosmeđe zemlje (SJ 26) u kojoj smo pronašli priličan broj nalaza. Nastavkom iskopavanja, u tamnijoj zemlji (SJ 28) pronašli smo dosta potrošenu brončanu kovanicu. Nakon čišćenja ipak se moglo prepoznati da je riječ o rimskome novcu iz druge polovine 4. stoljeća.¹⁸

Naposlijetku, ispod SJ 28 naišli smo na sloj žute, glinaste zemlje debljine desetak centimetara (SJ 29), koji se nalazio izravno na kamenu živcu. Stratigrafski slijed u prostoriji D bio je daleko jednostavniji od onoga u prostoriji C.

Interpretacija

Strukture i nalazi iz prostorije C sugeriraju da je ta prostorija bila namijenjena skladištenju poljoprivrednih proizvoda. Sadržavala je najmanje dvije konstrukcije za skladištenje hrane u dolijima, od kojih je jedna izgrađena od sekundarno upotrijebljenih tegula i tubula. AMS ¹⁴C analize datirale su početak korištenja između 330. i 410. godine, a prestanak ljudske aktivnosti u prostoriji C u razdoblje između 530. i 599. godine. Nema nikakvih pokazatelja da je prestanak aktivnosti bio uzrokovan nasilnim događajem.

Nalazi u prostoriji D nisu omogućili određivanje njezine namjene, no nalaz kovanice iz druge polovine 4. stoljeća, kao i jednak način prekrivanja prostorije jednim slojem kamenja, upućuje na zaključak kako su obje prostorije funkcionirale istovremeno te da su u istom trenutku zatvorene.

Istražene prostorije C i D dio su kasnoantičkoga stambeno-gospodarskoga objekta, koji je sasvim sigurno funkcionirao zajedno s prostorijama A i B iskopanima prije tridesetak godina. Budući da revizijskim istraživanjem nismo pronašli izvorne

ble finds, such as iron nails and lead pins. A layer of clay soil, approximately 10 centimetres thick, was placed in the whole room C to isolate the superimposed structures.

In the western part of the trench, immediately after the removal of turf, we found a new room (hereinafter: room D), leaning on room C. It is approximately square in layout. Its surface was mostly covered by one layer of stones (SU 25), like room C. There were no stones in the lowest section, but rather a layer of brown earth (SU 24). Having removed the layer of stones, we came upon light-brown earth (SU 26) in which we found quite a few artefacts. Further excavations yielded a rather worn bronze coin in darker earth (SJ 28). After its cleaning, it was possible to identify it as a Roman coin from the second half of the fourth century¹⁸. Finally, beneath SU 28 we found a layer of yellow clay soil (SU 29), some ten centimetres thick, resting directly on bed-rock. The stratigraphic sequence in room D was far simpler than that in room C.

Interpretation

The structures and finds from room C suggest that the space was intended for agricultural storage. It contained at least two structures for storage of food in dolia, of which one was made of secondarily used tegulae and tubuli. By means of AMS ¹⁴C analysis, the beginning of the utilisation of room C has been dated to a period between AD 330 and 410, and the cessation of human activity to a period between AD 530 and 599. There are no indications that the activities were wound down due to some violent cause.

The finds from room D did not help determine its purpose, but the unearthed coin from the second half of the fourth century, as well as the same method of covering the room with one layer of stones, lead to the conclusion that both rooms had been used simultaneously and abandoned at the same moment.

The investigated rooms C and D are parts of a late antique residential-farm building, undoubtedly in use together with rooms A and B, excavated some thirty years before. Since the reinvestigation failed to reveal the original parts of the apse and architecture in room A (the walls were conserved

¹⁸ Za datiranje novca zahvaljujemo kolegi dr. sc. Tomislavu Šeparoviću iz MHAS-a.

¹⁸ We are grateful to our colleague Tomislav Šeparović, PhD, from the MHAS for the dating of the coins.



Sl. 11. Rimski novac iz prostorije D, druga polovica 4. stoljeća (foto: Z. Alajbeg)

Fig. 11 Roman coin from room D, second half of the fourth century (photograph: Z. Alajbeg)

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dijelove apsida i arhitekture u prostoriji A (zidovi su konzervirani do temelja), možemo samo ponoviti zaključak Mate Zekana kako je apsida preostatak starije građevine koju su poništile mlađe pravokutne prostorije A i B. Ipak, Zekanovo datiranje zidova po kojemu je apsida antička, a pravokutne prostorije srednjovjekovne, i to bez ikakva obrazloženja, nije utemeljeno.¹⁹ Tijekom iskopavanja nismo primijetili ni jedan nalaz ni strukturu koji bi upućivali na srednjovjekovno razdoblje. Štoviše, svi podatci koje donosi Zekan o iskopavanjima u prostorijama A i B u potpunosti se podudaraju sa situacijom koju smo pronašli u prostorijama C i D: zidovi su građeni s malo žbuke, a slojevi prostorija prepuni su ulomaka tegula. Apsida je definitivno antička, starija od svih dosad pronađenih struktura na lokalitetu. Stoga bi apsida mogla biti jedini vidljivi ostatak starije građevine sa sustavom centralnoga grijanja, kako je i pretpostavio Zekan.²⁰ Nakon rušenja građevinski materijal starije zgrade (tegule, tubuli) djelomično je iskorišten za popunu unutrašnjosti zidova pravokutnih prostorija te izgradnju strukture E1. Pravokutne prostorije A, B, C i D dio su drugoga graditeljskog sklopa, mlađeg od apsida, koji pripada kasnoantičkom, a ne srednjovjekovnom razdoblju.

Budući da su istražene tek dvije manje prostorije, u ovome trenutku nije moguće povezivanje građevine na Otresu s kronološki i tipološki srodnim lokalitetima. No svakako možemo istaknuti kako se kronologija istražene arhitekture na Otresu

down to their foundations), we can only reiterate Mate Zekan's conclusion that the apse is the residue of an earlier structure negated by subsequent rectangular rooms A and B. Notwithstanding, Zekan's dating of the walls, according to which the apse dates from antiquity, and the rectangular rooms from the Middle Ages, with no elaboration whatsoever, is unfounded¹⁹. During the excavations, we did not see a single find or structure that would indicate the mediaeval period. Moreover, all Zekan's information on the excavations in rooms A and B exactly match the conditions we found in rooms C and D: the walls were built with small quantities of mortar, and the layers in the rooms were full of tegulae fragments. The apse is definitely from antiquity, i.e. earlier than any other structure found to date at the site. Thus, the apse could be the only visible remainder of an earlier building with a central heating system, as assumed by Zekan²⁰. After the demolition, the building material of the earlier structure (tegulae, tubuli) was partially used to fill the walls of the rectangular rooms and to erect structure E1. Rectangular rooms A, B, C and D are parts of another building complex, later than the apse, belonging to late antiquity, rather than to the mediaeval period.

Since only two smaller rooms were investigated, currently it is not possible to link the structure at Otres with chronologically and typologically related sites. However, we can certainly point out that the investigated architecture at Otres fits perfectly into the chronological framework of reviving neglected *villae rusticae* all over the Empire following Constantine's reforms in the fourth century²¹. These were reutilized by room rearrangements with rough walls, often using recycled building material²². The system of villas finally collapsed in this area in the mid-sixth century, *inter alia*, due to the Byzantine-Gothic wars. This was the era of the decline of rural aristocracy and the rise of the new warrior elite – the beginning of the Middle Ages²³.

¹⁹ Zekan 1986b, p. 32; Zekan 2000, p. 269.

²⁰ Zekan 2000, p. 269.

²¹ Francovich, Hodges 2003, p. 107–108.

²² Marzano 2007, p. 207.

²³ Francovich, Hodges 2003, p. 107–108.

¹⁹ Zekan 1986b, str. 32; Zekan 2000, str. 269.

²⁰ Zekan 2000, str. 269.



Sl. 12. Mate Zekan na Otresu 1979. godine (foto: arhiv MHAS-a)
Fig. 12 Mate Zekan at Otres in 1979 (photograph: MHAS archive)

potpuno uklapa u sljedeći kronološki okvir: nakon Konstantinovih reformi u četvrtome stoljeću brojne zapuštene *villae rusticae* diljem Carstva ponovno su oživljene.²¹ Reutilizirane su pregrađivanjem prostorija u gruboj izvedbi, i to često recikliranjem građevinskog materijala.²² Sustav vila na ovome području nepovratno propada sredinom šestoga stoljeća, među ostalim i kao posljedica bizantsko-gotskih sukoba. Tada dolazi do pada ruralne aristokracije i uzdizanja nove ratničke elite – počinje srednji vijek.²³

Ovaj tekst posvećujemo pokojnome muzejskom savjetniku MHAS-a i dugogodišnjem voditelju arheoloških istraživanja na Otresu Mati Zekanu (1948. – 2015.).

We dedicate this text to the late Mate Zekan (1948–2015), museum consultant of the MHAS and long-term director of archaeological investigations at Otres.

²¹ Francovich, Hodges 2003, str. 107-108.

²² Marzano 2007, str. 207.

²³ Francovich, Hodges 2003, str. 107-108.

Popis kratica / List of abbreviations

AP – Arheološki pregled (Ljubljana)
 E – element (struktura, jama ili neka druga pojava koja može imati interne stratigrafske jedinice)/ an element (a structure, pit or some other instance which can have internal stratigraphic units)
 GIS – geografski informacijski sustavi/ geographic information systems
 MHAS – Muzej hrvatskih arheoloških spomenika [Museum of Croatian Archaeological Monuments] (Split)
 Obavijesti – Obavijesti Hrvatskog arheološkog društva (Zagreb)
 SHP – Starohrvatska prosvjeta (Split)
 SJ/SU – stratigrafska jedinica/ stratigraphic unit

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