

Sipar, arheološka istraživanja i zaštita lokaliteta od 2013. do 2015. godine*

U radu se iznose rezultati triju istraživačkih kampanja (2013., 2014. i 2015.) na arheološkom lokalitetu Sipar, 4 km sjeverno do Umaga. Prve dvije godine lokalitet se raščišćavao od kamenog nasipa, a treće se godine započelo s revizijom istraživanja iz 1964. i 1965. godine. Od nepokretnih arheoloških struktura definiran je rimski objekt s pilonima (horreum) na južnoj strani središnjeg dijela poluotoka, kasnoantička/ranosrednjovjekovna pentagonalna kula s bedemima na istočnoj strani poluotoka te dio naselja zapadno od njih. Revizijskim istraživanjem tog dijela naselja ustanovljeno je postojanje nekoliko faza funkcioniranja naselja. Istraživanja su postavila pitanje korespondencije između utvrde i naselja.

Ključne riječi: Istra, Sipar, pristanište, naselje, utvrda, antika, kasna antika

Sipar, archaeological excavation and protection of the site from 2013 to 2015*

This paper presents the results of three excavations campaigns (2013, 2014 and 2015) at the Sipar archaeological site, north of Umag. During the first two years, the site was being cleared of a stone embankment, and in the third year a excavations was initiated as follow-up to the 1964 and 1965 excavations. With regard to immovable archaeological structures, we defined a Roman construction with pylons (horreum) in the south side of the central part of the peninsula, a late antique/early mediaeval pentagonal tower with ramparts in the east side of the peninsula, and a section of a settlement to their west. The revision of this part of the settlement revealed several phases of its existence. The excavations raised the question of correspondence between the fortification and the settlement

Keywords: Istria, Sipar, harbour, settlement, fortification, antiquity, late antiquity

Arheološki lokalitet Sipar smješten je na sjeverozapadnom dijelu hrvatske Istre na oko 4 kilometara zračne linije sjeverno od grada Umaga i nalazi se na malom poluotoku (površine 0,5 ha) koji s kopnom spaja sprud dužine osamdesetak metara. Za vrijeme plime more se diže iznad razine spruda pa poluotok postaje otok. Porast razine mora od vremena nastanka i egzistiranja Sipra doveo je do toga da se dio tadašnjeg poluotoka danas nalazi pod morem pa je točnu rasprostranjenost lokaliteta nemoguće utvrditi bez ciljano provedenog istraživanja poluotoka, podmorja i kopnene okoline.¹

Koliko nam je do sada poznato, u sačuvanim pisanim dokumentima Sipar se prvi put, uz ostale istarske priobalne gradove (*civitates*), spominje kao *Sapparis*, odnosno *Siparis* u *Kozmografiji* Anonimnog Ravenjanina.² Poslije se u pisanim dokumentima prepoznaje kao *urbs Sipiaries*, kako ga naziva Ivan Đakon krajem 10. i početkom 11. stoljeća kada nabroja istarske gradove koje su razorili Neretvani 876. godine.³ Prema nepisanim izvorima, nakon toga razaranja, premda su se tijekom srednjega vijeka na lokalitetu događale nove gradnje (kasnosrednjovjekovni kaštel, po kojem se i južna siparska uvala danas naziva Kaštel), Sipar se nikada više nije

The Sipar archaeological site is located in the north-west part of Croatian Istria, about four kilometres north of the city of Umag, on a small peninsula (of about 0.5 ha), linked to the mainland by an eighty odd metres long bank. During the high tide, the sea rises above the level of the bank, and the peninsula turns into an island. As a result of the sea-level rise since the emergence and existence of Sipar, a part of today's peninsula lies under the sea, and therefore it is not possible to determine the exact extent of the site without a targeted research of the peninsula, underwater, and the mainland environs.¹

As far as we know, Sipar was first mentioned in preserved written documents together with other Istrian coastal towns (*civitates*) as *Sapparis* and *Siparis* in *The Ravenna Cosmography*.² In later documents it was called *urbs Sipiaries* by John the Deacon in the late tenth and early eleventh century, in his list of Istrian towns ravaged by the Narentines in 876.³ According to unwritten sources, after this destruction, and despite new construction during the Middle Ages (such as the late mediaeval castle,

* Lokalitet Sipar je, kao arheološka baština, zaštićeno kulturno dobro Republike Hrvatske i kao takav upisan je u Registar kulturnih dobara na Listu zaštićenih kulturnih dobara pod oznakom Z-2900. Sustavna arheološka istraživanja lokaliteta započela su 2013. godine s ciljem očuvanja i prezentacije lokaliteta. Istraživanje i zaštitu lokaliteta u potpunosti financiraju Ministarstvo kulture Republike Hrvatske, Istarska županija i Grad Umag. Vodi ih Branka Milošević, do 2016. godine arheologinja i viša kustosica Muzeja grada Umaga, a od 2016. arheologinja i viša kustosica Muzeja hrvatskih arheoloških spomenika. Od 2016. godine nadalje program se kontinuirano realizira u suradnji dvaju muzeja, Muzeja grada Umaga i Muzeja hrvatskih arheoloških spomenika.

¹ Sredinom devedesetih godina 20. stoljeća provedeno je hidroarheološko rekognosciranje umaškog akvatorija te je ubicirano pristanište s lukobranom na južnoj strani siparskog poluotoka i svjetionik po sredini manje uvale. Početak funkcioniranja pristaništa, na osnovi nalaza keramike, datiran je u sredinu I. st. po. Kr. (Brusić, 2009, str. 251 i bilj. 33). Postojanje antičke luke na Sipru pretpostavlja i A. Gnirs (Gnirs 2009, str. 78). Godine 2012. načinjena je batimetrijska snimka podmorja od Crvene uvale do Sipra, uključujući i uvalu južno od Sipra (Koncani Uhač, Čuka 2015, str. 30, sl. 13). Rekognosciranjem podmorja 2013. godine ustanovljeni su ostaci mula (Koncani Uhač 2018, str. 235).

² Križman 1997, str. 366–371.

³ Klaić 1971, str. 247 i bilj. 88; Šišić 1925, str. 365.

* The Sipar site is a protected cultural property of the Republic of Croatia as archaeological heritage, and is included as such in the Register of Cultural Property on the List of Protected Cultural Goods under the designation Z-2900. Systematic archaeological excavations of the site were initiated in 2013 with an aim to preserve and present the site. The excavation and protection of the site is entirely funded by the Ministry of Culture of the Republic of Croatia, Istria County, and the City of Umag. Their field director is Branka Milošević, archaeologist and senior curator of the Museum of the City of Umag until 2016, and archaeologist and senior curator of the Museum of Croatian Archaeological Monuments since 2016. Since 2016, the programme has been continuously implemented through collaboration of the Museum of the City of Umag and the Museum of Croatian Archaeological Monuments.

¹ In the mid-1990s, hydroarchaeological surveying of the Umag sea area was made, and a harbour with a breakwater on the south side of the Sipar peninsula, as well as a lighthouse in the middle of a cove were all located. The start of harbour operations, based on the ceramic finds, has been dated to the mid-first century AD (Brusić, 2009, p. 251 and fn. 33). A. Gnirs (Gnirs 2009, p. 78) also assumes the existence of an ancient harbour at Sipar. In 2012, a bathymetric survey of seabed from Crvena uvala to Sipar was made, including the cove south of Sipar (Koncani Uhač, Čuka 2015, p. 30, Fig. 13). During the 2013 underwater surveying, the remains of a pier were identified (Koncani Uhač 2018, p. 235).

² Križman 1997, p. 366–371.

³ Klaić 1971, p. 247 and fn. 88; Šišić 1925, p. 365.

u potpunosti obnovio te primat u priobalnom pojasu SZ Istre prelazi na *Humagum*, naselje na kojem tijekom stoljeća nastaje današnji grad Umag.

Arheološka istraživanja

Do godine 2013. jedina arheološka istraživanja lokaliteta i konzervaciju pronađenih zidova proveo je Arheološki muzej Istre, a vodio ih je arheolog Štefan Mlakar (1964. i 1965. godine).⁴ Ta su istraživanja prekinuta, koliko nam je poznato, nakon oluje s mora koja je uništila nekoliko zidova koji su na lokalitetu prvi put otkriveni i dokumentirani. Dio rezultata istraživanja, određene nalaze i kratak opis razvoja lokaliteta objavio je Branko Marušić.⁵ Znatno kasnije, tek 2008. i 2009. godine, lokalitet je istražen nedestruktivnim metodama; urađeni su strukturalni pregled terena, zračna snimka iz balona, geodetska i geofizička mjerenja.⁶ Godine 2012. za potrebe planiranih arheoloških i konzervatorskih radova laserom je načinjena prva 3D snimka lokaliteta.⁷

Zbog svojega specifičnog mikrogeografskog položaja lokalitet Sipar je za ekstremno jakih južnih vjetrova, koji su česta pojava u ovom dijelu Jadrana, izrazito izložen razornom djelovanju mora. Do godine 2013. i početka novih arheoloških istraživanja dotada otkrivene i djelomično konzervirane zidane strukture umnogome su bile devastirane djelovanjem tog prirodnog destruktivnog faktora. Iz tih razloga radovi započeti krajem 2013. godine imali su vrlo jednostavan cilj - zaustavljanje ili bar usporavanje daljnje degradacije lokaliteta. Planirani su na način da se s istraživanjem započne na istočnoj strani lokaliteta, na mjestu gdje se nalazi djelomično vidljiva kula, pa da se sukcesivno ide prema zapadnom dijelu, odnosno prema dijelu gdje je Mlakar 1964. godine započeo svoja istraživanja, te da se do kraja istraži zemljani humak sa sačuvanim zidovima. Taj humak je jedini dio lokaliteta gdje je moguće utvrditi vertikalnu stratigrafiju. Opći izgled lokaliteta, prije početka radova 2013. godine, odavao je potpunu zapuštenost i lokalitet kao takav nije bio prepoznatljiv. Lokalitet je cijelom površinom bio prekriven lomljenim i obrađenim kamenom te

giving the name to the south Sipar cove of Kaštel), Sipar never managed to recover completely, and the primacy in the littoral NW Istria fell to the settlement of *Humagum*, which has evolved over centuries to today's Umag.

Archaeological excavations

By 2013, the only archaeological investigations of the site and conservation of the unearthed walls were conducted by the Archaeological Museum of Istria, directed by the archaeologist Štefan Mlakar in 1964 and 1965.⁴ To our knowledge, the excavations were aborted when a storm from the sea ruined several walls discovered and recorded at the site. A part of the results, some findings and a short description of the site history were published by Branko Marušić.⁵ Much later, only in 2008 and 2009, the site was investigated using non-destructive methods, with structural inspection of terrain, hot air balloon photography, geodetic and geophysical measurements.⁶ In 2012, the first 3D laser image was made for the purpose of planned archaeological and conservation works.⁷

Due to its specific microgeographic position, the Sipar site is highly exposed to the destructive action of the sea during extremely strong southern winds, something very common in this part of the Adriatic. By 2013 and the start of new archaeological excavations, the previously unearthed and conserved masonry structures had been largely devastated by the actions of that natural destructive factor. For those reasons, the objective of the works initiated at the end of 2013 was simple – to halt or at least slow down further degradation of the site. It was planned to start the excavations on the east side of the site, i.e. the location of a partially visible tower, and to extend them successively to the western part, where Mlakar had commenced his excavations in 1964, as well as to fully excavate an earth mound with preserved walls. This mound is the only part of the site that allows vertical stratigraphy. The general appearance of the site before the start of the works in 2013 gave the impression of total neglect, and the

⁴ Mlakar 1965.

⁵ Marušić 1975, str. 338-341; Marušić 1995, str. 66-68.

⁶ Čučković 2010, str. 392-395.

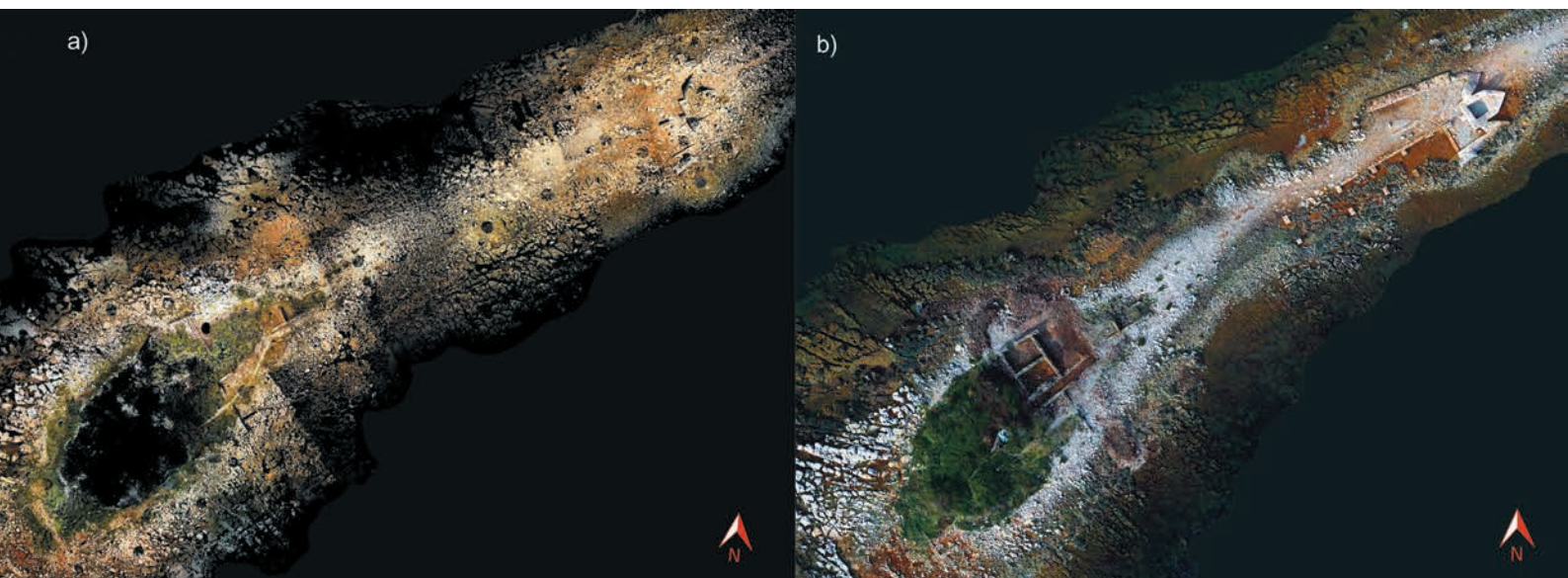
⁷ Snimku 3D napravila je tvrtka *Vektra* d. o. o. iz Varaždina, kao preduvjet za kasnije prijave na programe Ministarstva kulture i Istarske županije.

⁴ Mlakar 1965.

⁵ Marušić 1975, p. 338-341; Marušić 1995, p. 66-68.

⁶ Čučković 2010, p. 392-395.

⁷ The 3D image was made by the *Vektra* d.o.o. from Varaždin, as a precondition for subsequent applications to programmes offered by the Ministry of Culture and Istrian County.



Sl. 1. a) Fotogrametrijska snimka lokaliteta 2012. godine prije novih iskopavanja (*Vektra d.o.o.*, Varaždin), b) Fotogrametrijska snimka lokaliteta tijekom iskopavanja 2015. godine (M. Thivet, E. Fovet u suradnji s D. Vurpillot, B. Milošević i Z. Čučković: Muzej grada Umaga, Hrvatska, Chrono-Environnement (UMR 6249) - MSHE Ledoux (USR 3124), CNRS/Univ. Bourgogne Franche-Comté, Francuska)

Fig. 1 a) Photogrammetric image of the site in 2012, prior to new excavations (Vektra d.o.o., Varaždin), b) Photogrammetric image of the site during the 2015 excavations (M. Thivet, E. Fovet in collaboration with D. Vurpillot, B. Milošević and Z. Čučković: Umag City Museum, Croatia, Chrono-Environnement (UMR 6249) – MSHE Ledoux (USR 3124), CNRS/Univ. Bourgogne Franche-Comté, France)

morskim nanosima sitnog kamena i morskog pijeska te se prve dvije godine istraživanje uglavnom svodilo na raščišćavanje, a 2015. godine započelo se s revizijom istraživanja iz 1964. i 1965. godine. Istraživanja se i dalje nastavljaju sustavno svake godine.

Istraživanje 2013. godine⁸

Arheološki radovi na lokalitetu započeli su raščišćavanjem terena od rasutog kamena i morskog nanosa na dijelu sjevernoga i južnog bedema te djelomično vidljive kule. Debljina nasipa kretala se između 0,30 i 0,50 metara. Sterilni sloj na ovom dijelu, koji će se daljnjim iskopavanjima pojaviti i na svim ostalim dijelovima lokaliteta, masna je zemlja crvenica i kamen živac. Raščišćavanjem prostora kule otkrivena je njezina pentagonalna osnova zidana priklesanim i većim komadima lomljenoga kamena vezanim crvenkastom vapnenom žbukom s primjesama školjaka i sitno lomljene opeke. Tlocrt

site was unrecognisable as such. The whole area of the site was covered with broken and dressed stone and deposits of grit from the sea. Therefore, during the first two years, the excavation mainly came down to clearing. The excavations as follow-up to the 1964 and 1965 excavations was initiated in 2015. The research have been continued systematically every year.

The 2013 excavation⁸

The archaeological works at the site were started by removal of the scattered stones and grit from the sea on a section of the north and south ramparts and the partly visible tower. The embankment layer was between 0.30 and 0.50 metres thick. The sterile layer in this section, later found in all other parts of the site, is greasy terra rossa and bed-rock. The clearing revealed the pentagonal base of the tower, made of ashlar-stone and larger pieces of broken stone, bonded with reddish lime mortar tempered with

⁸ Nositelj projekta bio je Muzej grada Umaga. Voditeljica istraživanja bila je Branka Milošević, a stručni suradnik Biljana Petrović Markežić. Konzervatorske radove izvela je tvrtka *Kapitel* d. o. o. iz Žminja, koja je osigurala i fizičku radnu snagu za istraživanje.

⁸ The project operator was the Umag City Museum. The field director was Branka Milošević, and the assistant was Biljana Petrović Markežić. The conservation works were performed by the *Kapitel* d.o.o. from Žminj, which also provided labour for the excavation.



Sl. 2. Obrambena kula: a) sjeveroistočna strana (foto: B. Milošević),
b) fotogrametrijska snimka (*Vektra d.o.o.*, Varaždin)
Fig. 2 Defensive tower: a) north-east side (photograph: B. Milošević),
b) photogrammetric image (*Vektra d.o.o.*, Varaždin)

kule čine tri u osnovi uzdužna zida širine 1,25 m i jedan u osnovi trokutasti, istureni, istočni zid čija je jugoistočna strana dužine 3,80 m, sjeveroistočna 4,20 m, a dužina od trokutastog vrha kule do unutrašnje strane zida iznosi 4,25 m. Dužine uzdužnih zidova su različite; južni je dug 5,20 m, sjeverni 5,00 m, a zapadni 5,50 m, tako da s unutrašnjom stranom istočnog, trokutastog, zida čine nepravilan četverokut dimenzija 3,07 x 2,59 x 2,75 x 2,96 m, na čijim je zidovima i podu sačuvana izvorna hidraulična žbuka nekadašnje cisterne. Na sredini zapadnog lica zapadnog zida kule nalazi se kontrafor dimenzija 0,95 x 0,95 m, građen jednako kao i zidovi kule. Pentagonalna kula s trokutastim vrhom okrenuta je prema kopnu i građena je na masnoj crvenici. Na kulu se sjeverno i južno, s dva nepravilna polukružna zida isturena k istoku, vezuju sjeverni i južni bedem. Bedemi su zidani na isti način kao i kula, sjeverni je dužine 2,00 m, a južni 2,60 m. U zidu kule i sjevernog bedema pronađena su tri spolija: ulomak rimske stele s natpisom, ulomak praga i profilirani ulomak stele bez natpisa. Na sjevernoj strani kule, na spoju sjevernoga i sjeveroistočnog zida, vidljivi su kasniji građevinski zahvati kojima se istureni trokutasti dio kule najvjerojatnije preoblikuje u polukružni. Na južnom bedemu, u visini od oko 2 m, očuvan je dio nadograđenog zida sa zakošenim donjim dijelom.

Tijekom istraživanja otvorene su dvije arheološke sonde veličine 1 x 1 m. Sonda 1 iskopana je na prostoru između pentagonalne kule i sjevernog bedema. Iskopavalo se do sterilne masne crvenice na dubini od 0,50 m. Unutar sonde 1 definirana su

shells and fine-crushed bricks. The tower ground plan is formed of three longitudinal walls, 1.25 m thick, and one trigonal projecting east wall, with its south-east side 3.80 m long, and north-east 4.20 m in length, while the length from the triangular top of the tower to the inner side of the wall is 4.25 m. The longitudinal walls vary in length; the south one is 5.20 m long, the north 5.00 m, and the west wall 5.50 m. Thus they form an irregular quadrangle with the inner side of the east trigonal wall, with dimensions 3.07 x 2.59 x 2.75 x 2.96 m. The original hydraulic mortar of a former cistern has been preserved on its walls and floor. In the middle of the western face of the west wall of the tower there is a 0.95 x 0.95 m buttress, built in the same manner as the tower walls. The pentagonal tower with the trigonal top, built on greasy terra rossa, faces the mainland. To the north and south, the tower is linked with the north and south ramparts with two irregular semi-circular walls projecting eastward. The ramparts were constructed in the same way as the tower. The north one is 2.00 m long, and the south rampart 2.60 m. Three spolia were found in the wall of the tower and the north rampart: a fragment of a Roman stela with an inscription, a fragment of a threshold and a profiled fragment of a stela without inscription. On the north side of the tower, at the joint of the north and north-east walls, later construction efforts are visible, most likely reshaping the projecting trigonal part of the tower into semi-circular form. On the south rampart, at the height of about 2 m, a part of an extended wall with an angled lower part has been preserved.



Sl. 3. Brončana igla-ukosnica, 6.-7. stoljeće, pronađena unutar sonde 1 (foto: Z. A. Alajbeg)
Fig. 3 Bronze hairpin, 6th–7th century, found in trench 1 (photograph: Z. A. Alajbeg)

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dva kulturna sloja. U donjem je pronađena brončana igla za kosu s profiliranom kuglastom glavom datirana u 6. - 7. stoljeće. Sonda 2 iskopana je na spoju sjevernog kraka bedema i zapadnog zida kule do dubine od 0,30 m. U sondi 2 definiran je jedan kulturni sloja od crvenice s ulomcima priklesanog kamena i većeg broja ulomaka građevinske keramike (tegule, imbreksi, podne tavele).

Nakon iskopavanja otkriveni zidovi su konzervirani, a cisterna je zaštićena geotekstilom i zasuta kamenom frakcijom.

Istraživanje 2014.⁹

Arheološkim radovima 2014. godine nastavilo se s raščišćavanjem površina uokolo sjevernog bedema u pravcu zapada kao i širi prostor objekta s pilonima na južnom dijelu poluotoka. Debljina morskog nanosa i urušenog kamena na ovom dijelu lokaliteta bila je 0,30 metara. Ispod njega se, kao sterilni sloj, također nalazila masna zemlja crvenica i kamen živac. Uklanjanjem površinskih nanosa otkriveno je još 16 m sjevernog bedema u smjeru zapada, što s otkrivenim dijelom prethodne godine

Two 1 x 1 m archaeological trenches were made during the investigations. Trench 1 was dug in the area between the pentagonal tower and the north rampart. Excavations were made to the level of greasy terra rossa at a depth of 0.50 m. Two cultural layers were defined in trench 1. In the lower one, a bronze hair needle with a profiled spherical head was found and dated to the sixth–seventh century. Trench 2 was made at the joint of the northern branch of the rampart and the west wall of the tower, to a depth of 0.30 m. In trench 2, one cultural layer of terra rossa was defined, with fragments of ashlar-stone and a number of construction ceramic fragments (tegulae, imbrices, floor tiles).

The uncovered walls were conserved after the excavation, and the cistern protected with geotextile and covered with stone fraction.

The 2014 excavation⁹

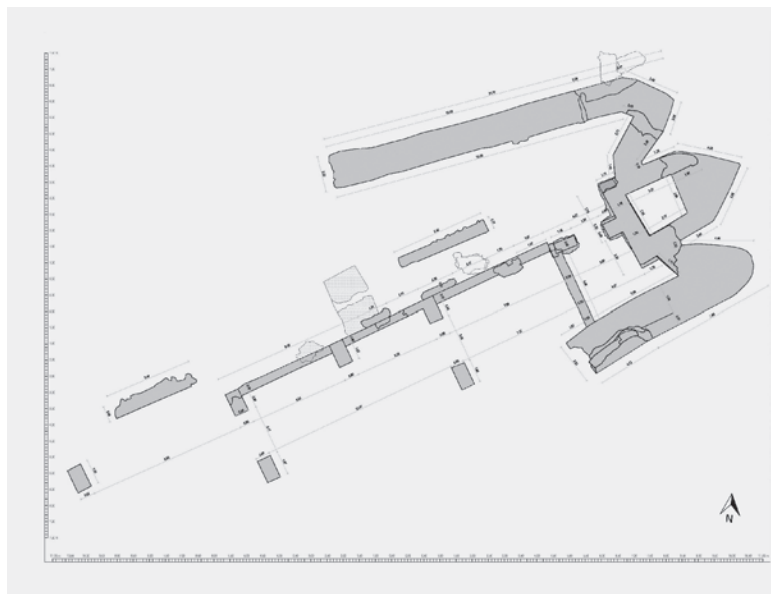
The 2014 archaeological works were a continuation of the clearing of areas around the northern rampart toward the west, as well as of the greater area of the structure with pylons in the southern part of the peninsula. The deposits from the sea and the collapsed stone material in this section of the site were 0.30 metres thick. Greasy terra rossa and bedrock were below them, as a sterile layer. Upon removal of surface deposits, an additional 16 m of the northern rampart was discovered toward the west, which, together with the part unearthed the previous year, makes a total of 21.60 m. The rampart was built on bed-rock, which was partly integrated into the foundation wall structure. At its highest part, it was preserved at a height of 0.30 m, whereas in certain westernmost sections its line is discernible only through traces of lime mortar on bed-rock. In the immediate vicinity of the tower, on the northern rampart, a 0.25 m wide drain was defined over the whole width of the rampart in the north-south direction. The northern rampart was made of ashlar-stones, just like the southern one, with two faces

⁹ Nositelj projekta bio je Muzej grada Umaga. Voditeljica istraživanja godine 2014. bila je Branka Milošević, astručna suradnica Biljana Petrović Markežić. Konzervatorske radove izvela je tvrtka *Kapitel* d. o. o. Žminj, koja je osigurala fizičku radnu snagu za istraživanje. Velike probleme tijekom istraživanja predstavljala je plima, jer je dio poluotoka koji se istraživao na nadmorskoj visini od samo 0,40 – 0,60 metara, pa je površina određena za istraživanje vrlo često plavila.

⁹ The project operator was the Umag City Museum. The field director in 2014 was Branka Milošević, and the assistant was Biljana Petrović Markežić. The conservation works were performed by the *Kapitel* d.o.o. from Žminj, which also provided labour for the excavation. The high tide was a huge issue during the excavation, since the part of the peninsula under excavation is merely 0.40–0.60 metres above the sea level, and the area designated for the research was frequently flooded.

čini ukupno 21,60 m. Bedem je građen na kamenu živcu koji je jednim dijelom i ukomponiran u temeljnu zidanu strukturu. Na najvišem dijelu očuvan je u visini 0,30 m, dok se na pojedinim, sasvim zapadnim, dijelovima njegovo pružanje nazire tek kroz tragove vapnene žbuke na kamenu živcu. U neposrednoj blizini kule, na sjevernom bedemu, definiran je odvodni kanal širine 0,25 m koji prolazi cijelom širinom bedema u pravcu sjever - jug. Sjeverni je, kao i južni bedem, građen od priklesanog kamena, s dva lica i ispunom od neobrađenog kamena, dok je u donjim dijelovima korišten lomljeni kamen većih dimenzija. Kao vezivo u gradnji korištena je vapnena žbuka crvenkastog tona s primjesama morskih kamenčića, cigle i morskih životinja (sitnih puževa i školjki).

Raščišćavanjem šireg prostora objekta s pilonima smještenog uz južnu stranu poluotoka otkriveni su njegov istočni i sjeverni zid, dok je točan položaj zapadnog i južnog zida ostao nepoznat.¹⁰ Godine 2014. objekt pačetrovinskog tlocrta otkriven je u duljini od 33,50 m u pravcu zapada. Njegov istočni i manjim dijelom sjeverni perimetralni zid, do prvog pilona s unutarnje strane, širine su 0,57 m, dok je ostali dio sjevernoga zida širine 0,49 m i u njega su uzidana četiri pilona. Južno od sjevernog zida u liniji njegovih uzidanih pilona definirana su još dva reda istovjetnih pilona. Širina pilona je od 0,92 do 1,85 m, a duljina im iznosi 1,47 m. Njihov međusobni razmak u pravcu sjever-jug iznosi 3,05 m, dok im udaljenost u pravcu istok-zapad varira u rasponu od 5,33 m, između prvoga i drugog pilona, do 6,24 m, između drugoga i trećeg, te 9,93 m između trećega i četvrtog pilona. Građeni su slično perimetralnim zidovima, od klesanog kamena vezanog crvenom vapnenom žbukom. Piloni su, kao i vanjski zidovi, sačuvani u visini od 0,30 m. Dok su piloni u potpunosti građeni na masnoj sterilnoj crvenici uz korištenje prirodnih morskih udubina među živim stijanjem, za gradnju sjevernoga zida je između drugog i trećeg pilona korišten i kamen živac. Uz vanjsko lice sjevernog zida definirana su dva kasnije građena zida, koja su loše sačuvana. Na spoju istočnoga i sjevernog zida definirana je nadogradnja. Na sredini istraživane površine definirana su dva zida koja se pružaju u smjeru istok-zapad. Svi kasniji zidovi načinom gradnje istovjetni su zidovima kule, osobito zid na spojevima objekta



Sl. 4. Tlocrt nakon završenih iskopavanja 2014. godine (*Vektra d.o.o. Varaždin*)

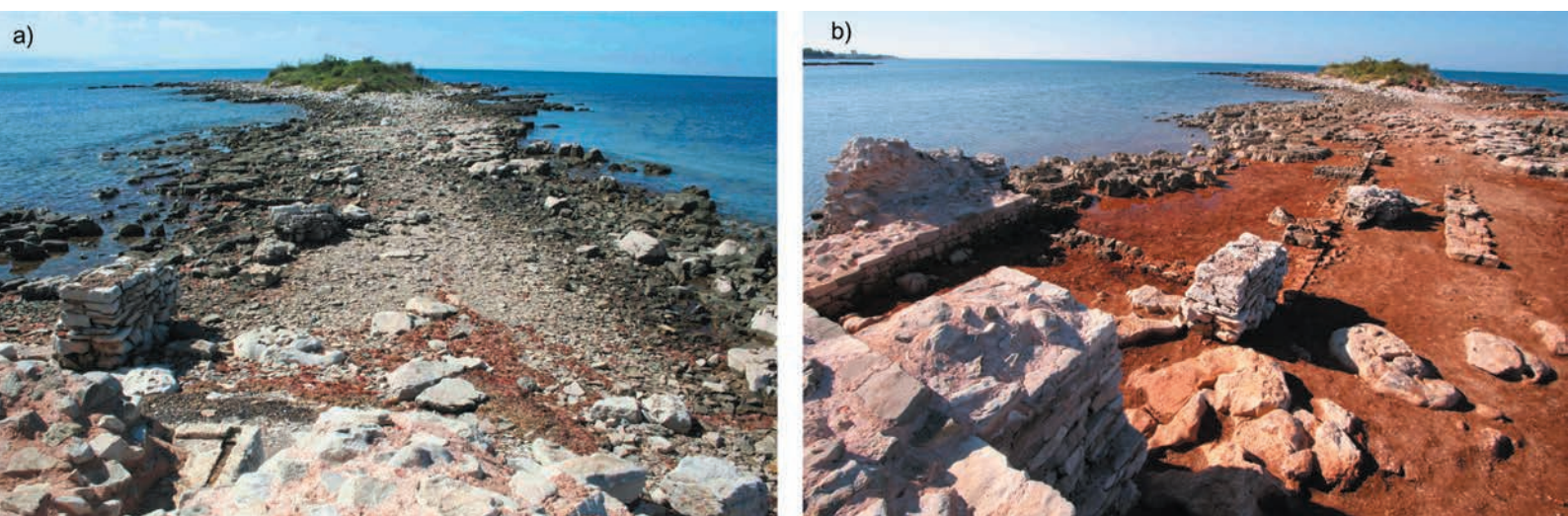
Fig. 4 Ground plan after the completed 2014 excavations (*Vektra d.o.o. Varaždin*)

and filled with natural stones, with larger broken stones used in its lower parts. Lime mortar of reddish tone was used as binder, tempered with small sea-stones, bricks and marine animals (tiny snails and shells).

Upon clearing the greater area of the structure with pylons, located along the south side of the peninsula, its east and north walls were unearthed, while the exact positions of the west and south walls remain unknown.¹⁰ In 2014, a parallelogram-ground plan structure was discovered. It is 33.50 m long, stretching westward. Its eastern, and, in lesser part, western perimeter wall, up to the first pylon on the inside, are 0.57 m thick, while the rest of the north wall is 0.49 m thick and has four incorporated pylons. South of the north wall, in the line of its incorporated pylons, two more rows of identical pylons were defined. The pylons are 0.92 to 1.85 m wide, and 1.47 m long. They are spaced 3.05 m apart in the north-south direction, whereas this distance varies in the east-west direction from 5.33 m between the first and second pylons to 6.24 m between the second and the third, and 9.93 m between the third and fourth pylons. They were built similar to the perimeter walls, of dressed stone bound with red lime mortar. The pylons have been preserved to a height of 0.30 m, like the external

¹⁰ Zapadni zid definiran je tijekom istraživanja 2015. godine.

¹⁰ The west wall was defined during the 2015 excavation.



Sl. 5. Pogled s kule na lokalitet u pravcu zapada: a) situacija prije iskopavanja 2014. godine (foto: B. Milošević), b) situacija poslije iskopavanja 2014. godine (foto: B. Milošević)

Fig. 5 View of the site from the tower, looking west: a) layout prior to the 2014 excavations (photograph: B. Milošević), b) layout after the 2014 excavations (photograph: B. Milošević)

koji je sačuvan u visinu od 0,50 m, gdje je vidljivo korištenje istovjetnog načina klesanja kamena i korištenje istog vapnenog veziva. Ostali zidovi su građeni od većih komada lomljenog kamena i pokazuju značajke gradnje donjih dijelova kule, ali i sjevernoga i južnoga bedema.

Istraživanjima godine 2014. uspostavljena je relativna kronologija koja je omogućila razdvajanje dviju vremenskih građevinskih faza kao i dviju funkcijom različitih građevina: starije, objekta s pilonima, i mlađe građevine, kule s obrambenom funkcijom. Negiranje objekta s pilonima naročito je vidljivo na dijelu gdje je južni bedem nasjeo na istočni perimetralni zid objekta.

Pronađeni pokretni arheološki materijal iz godine 2014. stratigrafski nikako nije mogao biti svrstan po slojevima s obzirom na potpunu izvaljanost ovoga dijela lokaliteta morem. Riječ je o nalazima (keramički ulomci, brončani, željezni, olovni i stakleni predmeti) čija se datacija kreće u vremenskom rasponu od 1. do 9. st. Nakon iskopavanja konzervirani su svi otkriveni zidovi, a lokalitet je zaštićen geotekstilom i prekriven kamenom.

walls. While the pylons were completely built on greasy sterile terra rossa utilising natural hollows made by the sea in living rocks, the north wall was built using bed-rock between the second and third pylons. Along the external face of the north wall, two later poorly preserved walls were defined. At the joint of the east and north walls, an extension was defined. In the middle of the investigated area, two walls extending in the east-west direction were defined. All later walls have the same construction features as the tower walls, especially the wall at the structure joints, preserved at a height of 0.50 m, with the same type of dressed stone and mortar binder. The other walls were built of larger broken stones, with construction features like those of the lower parts of the tower, as well as of the north and south ramparts.

Under the 2014 excavations, a relative chronology was established, enabling a separation of the two temporal construction phases, as well as of the two structures with different purposes: the earlier one, with pylons, and the later building, i.e. the tower for defensive purposes. A negation of the structure with pylons is especially conspicuous in the part where the south rampart lies on the east perimeter wall of the structure.

The found small archaeological material from 2014 could not have been classified stratigraphically by layers since this part of the site has been completely affected by the actions of the sea. These are

Istraživanje 2015.¹¹

Arheološkim istraživanjem 2015. godine započelo se s revizijom istraživanja iz 1964. i 1965. godine. S iskopavanjem se, odnosno u ovom slučaju s raščišćavanjem nasipa od sitnog kamena, koji je prekrivao cijelu nekoć istraženu površinu, išlo do dubine na kojoj su se zaustavila tadašnja istraživanja. Revizijski je, 2015., istražena sjeverna polovica površine koja je prethodno bila istražene površine iz 1964./1965. Naslanjajući se na Mlakarov shematski tlocrt istraženoga, ciljana površina je prije raščišćavanja 2015. godine bila podijeljena na prostorije omeđene ucrtanim zidovima na tlocrtu i označena po principu: prostorija 1 (PR1), prostorija 2 (PR2), prostorija 3 (PR3), prostorija 4 (PR4), prostorija 5 (PR5), prostorija 6 (PR6), prostorija 7 (PR7) i prostorija 7A (PR7A), a tijekom istraživanja je, zbog nepronalaženja određenih ucrtanih zidova, došlo do povezivanja dviju prostorija u jednu, pa su prostorije 4 i 5 spojene u prostoriju 4/5 (PR4/5). Revizijom istraživanja nisu pronađeni ucrtani zidovi: zid g (PR4/5), zid zapadno od zida g (bez oznake na shematskom tlocrtu, PR4/5) i zidana konstrukcija do njega (PR4/5), što je bilo razlogom spajanja prostorija 4 i 5 u jednu prostoriju 4/5. Nije pronađena ni kvadratna zidana konstrukcija unutar PR3 kao ni ucrtani neoznačeni zid sasvim istočno koji je spajao zidove ucrtane i označene na shematskom tlocrtu kao zid I i zid II.

Unutar prostorija 3, 4/5, 6 i 7 kameni nasip se uklanjao do nabijenog sloja rahle crvenice, a nakon raščišćavanja nisu pronađeni tragovi nekadašnjih zidova ucrtanih na tlocrtu. Prostorija 3 središnja je os naselja. Riječ je o izduženoj prostoriji uvjetno nazvanoj hodnik, koju sa sjeverne i južne strane omeđuju zidovi svih ostalih prostorija. Godine 2015. raščišćena je u dužini od 23 m. Širina joj varira od 1,60 m na spoju PR2 i PR4/5, do 1,40 m na spoju PR4/5 i PR6 te 1,00 m na dijelu gdje je sa sjeverne strane omeđuje južni zid PR7.

Prostorija 4/5 naslanja se na PR3 sa sjeverne strane. Uklanjanjem nasipa postalo je vidljivo da nije riječ o jednoobrazno građenom zidu koji ih

the finds (ceramic fragments, bronze, iron, lead and glassware) dating from the first to the ninth centuries. After the excavation, all unearthened walls were conserved, and the site was protected with geotextile and covered with stones.

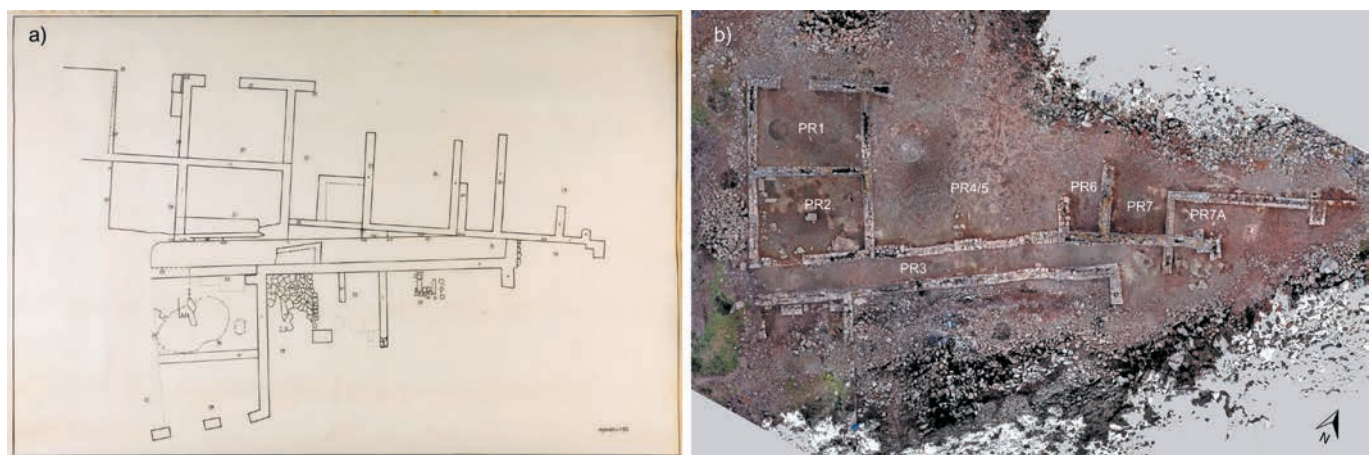
The 2015 excavation¹¹

The 2015 archaeological excavation marked the beginning of a excavations as follow-up to the 1964 and 1965 excavations. The excavations, or, in this case, the cleaning of the embankment of gravel, which had covered the entire previously excavated area, reached the depth at which the previous research had been halted. The north half of the area which had been excavated in 1964/1965 was revisited in 2015. On the basis of Mlakar's schematic ground plan, prior to the 2015 clearing, the target area was divided into rooms bounded by walls as shown in the ground plan and marked according to the following principle: room 1 (PR1), room 2 (PR2), room 3 (PR3), room 4 (PR4), room 5 (PR5), room 6 (PR6), room 7 (PR7), and room 7A (PR7A). Since certain marked walls were not found, two rooms were combined into one during the investigation, viz. rooms 4 and 5 into room 4/5 (PR4/5). The following shown walls were not found during the reinvestigation: wall g (PR4/5), the wall west of wall g (without marking in the schematic ground plan, PR4/5), and the adjacent masonry structure (PR4/5), which was the reason for merging rooms 4 and 5 into one room, i.e. 4/5. We also could not find the square masonry structure inside PR3 and the easternmost shown unmarked wall, connecting the walls shown and marked in the schematic ground plan as wall I and wall II.

In rooms 3, 4/5, 6 and 7, the stone embankment was removed to the compacted layer of loose terra rossa. No traces of former walls as shown in the ground plan were found. Room 3 is the central axis of the settlement. It is an elongated room, tentatively referred to as a hallway, enclosed to the north and south by walls of all other rooms. In 2015, it was cleared over a length of 23 m. Its width varies from

¹¹ Nositelj projekta bio je Muzej grada Umaga. Voditeljica istraživanja bila je Branka Milošević, a u istraživanjima je sudjelovala Anika Mijanović, studentica pete godine arheologije na Filozofskom fakultetu u Zadru. Konzervatorski radove izvela je tvrtka *Kapitel* d. o. o. iz Žminja, koja je osigurala fizičku radnu snagu za vrijeme istraživanja.

¹¹ The project operator was the Umag City Museum. The field director was Branka Milošević, with participation of Anika Mijanović, fifth-year archaeology student at the Faculty of Humanities and Social Sciences in Zadar. The conservation works were performed by the *Kapitel* d.o.o. from Žminj, which also provided labour during the excavation.



Sl. 6. a) Shematski tlocrt Mlakarovih iskopavanja 1964. i 1965. godine (Arheološki muzej Istre, Pula, Dokumentacijski odjel, PLA-139); b) Fotogrametrijska snimka nakon iskopavanja 2015. godine (Vektra d.o.o., Varaždin)

Fig. 6 – a) Schematic ground plan of Mlakar's 1964 and 1965 excavations (Archaeological Museum of Istria, Pula, Documental Department, PLA-139); b) Photogrammetric image after the 2015 excavations (Vektra d.o.o., Varaždin)

odjeljuje, kako je ucrtano na shematskom tlocrtu. Riječ je o tri zida pravilnog izduženog oblika (uvjetno nazvana piloni) koji su istovjetni po načinu gradnje (korištenje pločastoga priklesanog kamena vezanog bijelom žbukom) te dva naknadno (kasnije) građena zida koje karakterizira obilnija upotreba vapnene bijele žbuke i korištenje lomljenoga i priklesanoga kamena u strukturi, koji su zatvorili moguće prolaze između pilona. Dimenzije ova dva zida su 2,8 x 0,45, dok su dimenzije pilona: zapadni: 1,67 x 0,64 m; središnji: 1,57 x 0,61 m, istočni: 1,53 x 0,63 m.

Prostorija 6 zajedno s prostorijom 7 čini cjelinu, što je vidljivo u načinu gradnje njihovih zidova i njihovim međusobnim spojevima. U gradnji njezinih zidova korišten je priklesani kamen različitih dimenzija i oblika (pločasti, obli, kvadratni) vezan bijelom vapnenom žbukom. Zapadni zid PR6 sačuvan je u dužini od 2,60 m, širina mu je 0,62 m, zapadni zid PR7 sačuvan je u dužini od 4 m, a širina mu je 0,58 m, dok je južni zid, zajednički zid PR6 i PR7, dužine 9,20 m, a širina mu je 0,58 m. Prostoriju 7 je na istočnoj strani zatvarao zid na shematskom tlocrtu označen kao zid g. Širina mu je 0,56 m, a sačuvan je u visini od 0,30 m. Izvorni ulazi u PR6 i PR7 očito su bili na sjevernoj strani prostorija. Svi ovi zidovi bili su konzervirani tijekom prethodnog istraživanja i na svima su, osim na zapadnom zidu PR6, bile sačuvane cementne kape. Pokretni arheološki materijal pronađen u nasipu prostorija 3, 4/5, 6 i 7 odnosio se na kasnoantičke

1.60 m at the joint of PR2 and PR4/5, to 1.40 m at the joint of PR4/5 and PR6, and 1.00 m in the part where it is enclosed to the north by the south wall of PR7.

Room 4/5 is leaning on PR3 on the north side. Upon removal of the embankment it became evident that this was not a uniformly built partition wall, as shown in the schematic ground plan. These are three walls of regular elongated shape (tentatively called pylons), identical in their construction method (with dressed stone slabs bonded with white mortar), and two subsequent (later) walls, characterised by an abundant use of white lime mortar and broken and ashlar stones, permitting no passage between the pylons. The dimensions of the two walls are 2.8 x 0.45, while the sizes of the pylons are as follows: the west one is 1.67 x 0.64 m, the central one 1.57 x 0.61 m, and the east one 1.53 x 0.63 m.

Room 6 and room 7 together make an integral unit, as is apparent in the construction of their walls and joints. Its walls were made of ashlar-stone of different dimensions and shapes (slabs, round, cuboid), bonded with white lime mortar. The west wall of PR6 has been preserved over a length of 2.60 m, and is 0.62 m thick. The west wall of PR7 has been preserved over a length of 4 m; it is 0.58 m thick. The south wall, shared by PR6 and PR7, is 9.20 m long, and 0.58 m thick. Room 7 was closed on its east side by the wall marked in the schematic ground plan as wall g. It is 0.56 m thick, and has been preserved to a height of 0.30 m. It was evi-

ulomke sjevernoafričkih amfora, istočnomediterranskih narebrenih amfora (LRA3) i grube kuhinjske keramike, zatim keramičke pršljenove, kamene brusove, ulomak kamenog mortara, dno kamene cilindrične posude (*pietra ollare*), stope staklenih čaša. Tek sporadično pronađen je materijal koji se može datirati ranije od 3. stoljeća (zatvarači amfora, ulomci keramičkih posuda tankih stijenki, posude *terra sigillata*).

Zid ucrtan i označen na shematskom tlocrtu kao zid *e* definiran je tijekom 2015. kao zapadni perimetralni zid objekta s pilonima. Pruža se u smjeru sjever-jug u dužini od 4,50 m, širine je 0,48 m i negiran je gradnjom južnog zida PR7, koji je u sebe uklopio njegovu strukturu. Njegovo definiranje potvrdilo je i otkriće zida s kojim tvori pravi kut, a koji se pruža u pravcu istoka. Zid u pravcu istoka otkriven je u dužini od 10,50 m, širine je 0,48 m i nastavak je sjevernoga perimetralnoga zida objekta s pilonima. I on u svome tkivu ima ukomponiran pylon. Pylon (1,45 x 0,87 m) se svojim dimenzijama uklapa u ostale definirane pilone. Otkrićem ova dva zida dobivena je dužina objekta s pilonima u pravcu istok-zapad koja iznosi 64 m, a koja govori u prilog tomu da se radi o puno većem objektu nego se pretpostavljalo.¹² Zid je ujedno i jedan od zidova koji su bili konzervirani sredinom 60-ih godina 20. stoljeća. Konzerviran je bio i početni dio sjevernoga zida, koji je ortogonalno na njega vezan. Arheološki materijal pronađen čišćenjem nasipa unutar zapadnog dijela objekta s pilonima (PR7A) sastoji se od ulomaka građevinskog crijepa (tegule, imbreksi) i ulomaka posuda *terra sigillata*.

Zidovi PR1 i PR2 također su bili konzervirani nakon istraživanja 1965. godine; ostali su sačuvani gotovo neoštećeni i jedni su od rijetkih zidova na lokalitetu koji su bili prepoznatljivi prije početka novih istraživanja. PR1 i PR2 građene su u istom trenutku, intergrirane su sa središnjim zidom, a u gradnji zidova korišten je priklesani kamen različitih dimenzija i oblika, vezan bijelom vapnenom žbukom. Prostorija 1 ima ulaz sa sjeverne strane, širine je 1,60 m. Unutarnje dimenzije PR1 su 4,5 x 6,00 m; širina zapadnog, južnog i istočnog zida je između 0,47 i 0,49 m, dok su dva sjeverna zida koji flankiraju ulaz nešto širi (0,52 m). Sjeveroistočni

dent that the original entrances to PR6 and PR7 had been on their north sides. All the walls had been conserved during the previous investigation, and concrete caps were preserved on all, bar the west wall of PR6. The movable archaeological material found in the embankment of rooms 3, 4/5, 6 and 7 consists of late antique fragments of North-African amphorae, East-Mediterranean ribbed amphorae (LRA3) and coarse kitchen pottery, as well as ceramic whorls, grindstones, a fragment of a stone mortar, the bottom part of a stone cylindrical vessel (*pietra ollare*), and feet of glass beakers. Only occasional material which can be dated to periods prior to the third century was found (amphorae stoppers, fragments of thin-walled ceramic vessels, *terra sigillata* vessels).

The wall shown and marked in the schematic ground plan as wall *e* was defined in 2015 as the west perimeter wall of the structure with pylons. It is 4.50 m long and 0.48 m thick, extends in the north-south direction and is negated by the construction of the south wall of PR7, which incorporates its structure. Its defining was further confirmed by the discovery of a wall with which it forms a right angle, which extends in the east direction. The discovered eastward wall is 10.50 m long, 0.48 m thick, and is an extension of the north perimeter wall of the structure with pylons. It also incorporates a pylon. The pylon (1.45 x 0.87 m) fits in with other defined pylons dimension-wise. The discovery of these two walls means that the structure with pylons is 64 m long in the east-west direction, which demonstrates that this is a much larger structure than it was assumed.¹² The wall is also one of the walls which were conserved during the mid-1960s. The initial part of the north wall, orthogonally linked to it, was also conserved. The archaeological material found by clearing the embankment in the western part of the structure with pylons (PR7A) consists of fragments of building tiles (tegulae, imbrices) and fragments of *terra sigillata* vessels.

Walls PR1 and PR2 had also been conserved after the 1965 investigation; they were preserved almost intact and were among the few walls at the site which were identifiable before the new investigation. PR1 and PR2 were built at the same time,

¹² Čučković 2010., str. 395. Nakon otkrića tri vanjska zida objekta s pilonima načinjena je pretpostavljena rekonstrukcija objekta, prema kojoj bi on zauzimao površinu od 960 m².

¹² Čučković 2010, p. 395. After the discovery of three outer walls of the structure with pylons, an assumed reconstruction of the structure was made, according to which it covers an area of 960 m².



Sl. 7. Kontrolni profil unutar prostorije 2 (foto: B. Milošević)
 Fig. 7 Control profile in room 2 (photograph: B. Milošević)

zid, osim što flankira ulaz u PR1, nastavlja se prema istoku, prema PR4/5, malim dijelom je zatvarajući sa sjeverne strane. Uklanjanjem nasipa do nabijene rahle crvenice unutar PR1 pronađen je pokretni materijal jednak onome pronađenom u prethodno istraženim prostorijama (sjevernoafričke amfore, amfore LRA3, pršljeni, zatvarači amfora). Nakon uklanjanja kamenog nasipa uz južni zid PR2 ostao je sačuvan kontrolni profil iz 1964./1965. godine te uz njega, nad njegovom sjevernom polovicom, naknadno izgrađen zid. Taj kontrolni profil i naknadni zid ucrtani su na Mlakovu tlocrtu. Struktura u jugoistočnom kutu prostorije je neodrediva, odnosno nije ju bilo moguće definirati kao manju vapnenicu.

Kameni nasip uklonjen je do hodne površine, s mjestimično sačuvanim kamenim pločama i tragovima vapnene žbuke na rahloj nabijenoj crvenici. Na kontrolnom profilu definirana su četiri kulturna sloja (odozgo nadolje): 1. sloj urušenja naknadno izgrađenog zida; 2. sloj pločastog kamena; 3. sloj sive prašnjave zemlje; 4. sloj gorenja. Sloj gorenja vidljiv je mjestimično i na hodnoj površini. Zid naknadno izgrađen nad dijelom južnog zida PR2 pronađen je u vrlo lošem stanju; bio je građen od priklesanog kamena izduženog oblika i vezan vrlo lošom vapnenom žbukom sačuvanom samo u tragovima. Potpuno je negirao postojanje zida ispod njega. Uklanjanjem kontrolnog profila i zida pokazalo se da je izvorni ulaz, širine 1,80 m, bio na južnoj

and integrated with the central wall. The walls were made of ashlar-stone of different dimensions and shapes, bound by white lime mortar. The entrance to room 1 is on the north side; it is 1.60 m wide. The inside dimensions of PR1 are 4.5 x 6.00 m; the west, south and east walls are 0.47 to 0.49 m thick, while the two north walls, flanking the entrance, are somewhat thicker (0.52 m). The north-east wall, in addition to flanking the entrance to PR1, extends to the east, toward PR4/5, and closes it to some extent on the north side. Upon removal of the embankment up to the compacted loose terra rossa in PR1, movable material was found identical to that unearthed in the previously investigated rooms (North-African amphorae, LRA3, whorls, amphorae stoppers).

After removal of the stone embankment by the south wall of PR2, the control profile from 1964/1965 remained preserved, and with it, above its northern half, a later wall. This control profile and the later wall are shown in Mlakar's ground plan. The structure in the south-east corner of the room cannot be determined, i.e. it was not possible to define it as a small mortar trough. The stone embankment was removed up to the floor surface, with occasionally preserved flagstones and traces of lime mortar on loosely compacted terra rossa. Four cultural layers were defined in the control profile (from top to bottom): 1. the deposit of the subsequent, collapsed wall; 2. the deposit of flagstones;

strani. Unutarnje dimenzije i širina zidova PR2 isti su kao kod PR1.

Najveći dio pokretnih nalaza pronađenih u PR2 su keramički ulomci: sjevernoafričke i istočnomediterranske amfore te grubo posuđe. Pronađene su životinjske kosti i rogovi te ulomci staklenih čaša, a od kamenih nalaza brusovi i polovica mlinskog kola s tragovima rotacije. Pomiješan s navedenim materijalom pronađen je i rimski keramički materijal (čepovi amfora i ulomci tubula). U sloju 3 kontrolnog profila uz ulomke sjevernoafričkih amfora pronađen je ulomak koštanog češlja.

Nakon iskopavanja preventivno je provedena konzervacija zidova. Prostorije 1 i 2 prekrivene su geotekstilom i kamenom frakcijom. Ostale prostorije zaštićene su samo geotekstilom budući da ig se 2016. godine planira istražiti u potpunosti.

Preliminarni rezultati istraživanja

Na osnovi pronađenih pokretnih i nepokretnih arheoloških nalaza egzistiranje Sipra kao naseobine, bilo gospodarske, stambene ili kombinirane, moglo bi se smjestiti u razdoblje od najkasnije 1. stoljeća prije Krista do kraja 9. stoljeća poslije Krista, kada ga razaraju Neretvani.¹³ Koliko nam je poznato, najstarija dosad otkrivena struktura na Sipru je objekt s pilonima smješten uz južnu stranu središnjega dijela siparskog poluotoka.

On bi mogao biti ujedno i najstarija nam poznata funkcija Sipra, poluotoka s organiziranim pristaništem s lukobranom i svjetionikom. S obzirom na to da se u neposrednoj blizini Sipra nalaze dvije poznate nam rimske vile, jedna u Zambratiji i druga u Katoru, postojanje ovakvog, organiziranog, pristaništa logistički je opravdano. Nažalost, zbog porasta razine mora i razornog djelovanja morskih valova za vrijeme juga na južnoj strani ovog objekta do sada nisu pronađene nikakve strukture

3. the deposit of grey dusty soil; 4. the deposit of burning. The deposit of burning is occasionally also visible on the floor surface. The subsequent wall above a part of the south wall of PR2 was found in a very bad condition; it was made of elongated ashlar-stone, bonded with rather inferior lime mortar preserved in traces only. It completely negated the wall beneath. Upon removal of the control profile and the wall, it turned out to be that the original entrance, 1.80 m wide, was on the south side. The inside dimensions and wall thicknesses of PR2 are the same as in PR1.

The bulk of the movable finds from PR2 consists of ceramic fragments: North-African and East-Mediterranean amphorae, and coarse pottery. Animal bones and horns were found, as well as fragments of glass beakers, and some stone artefacts: grindstones and one half of a mill wheel with traces of rotation. Roman ceramic material was also found, mixed with the above: amphorae stoppers and fragments of tubuli. In control profile layer 3, a fragment of bone comb was found with fragments of North-African amphorae.

After the excavation, the walls were preventively conserved. Rooms 1 and 2 were covered with geotextile and stone fraction. The other rooms were protected with geotextile only, due to plans to fully excavate them in 2016.

Preliminary results of the excavations

Based on the small archaeological findings and structures, the existence of Sipar as a settlement, whether of economic, residential or combined nature, can be dated to a period no later than the first century BC to the end of the ninth century AD, when it was devastated by the Narentines.¹³

¹³ Prilikom strukturalnoga pregleda terena pronađeno je nekoliko ulomaka prapovijesne željeznodobne keramike (Čučković 2010, str. 394). Pretpostavku da je egzistiranje počelo i ranije, krajem 2. i početkom 1. stoljeća prije Krista, iznijela je V. Girardi-Jurkić, vezujući početke naseljenosti Sipra uz nalaz republikanskog novca. Girardi-Jurkić ujedno povezuje toponim *Insula Sepomaia* prisutan na Peutingerovoj karti uz Sipar (Girardi Jurkić 1981, str. 81). *Insula Sepomaia* različito se ubicira; većinom se smatra da je riječ o široj površini koja pokriva područje od Zambratije do Rta Monterol (vidi: Bolšec Ferri, Milošević 2012, str. 89). Posljednja ubikacija *Insula Sepomaia* je grad Umag (Benčić 2011, str. 367-388).

¹³ During the structural survey of the site, several fragments of prehistoric Iron Age pottery were found (Čučković 2010, p. 394). The assumption that the existence had started even earlier, in the late second and early first century BC, was presented by V. Girardi-Jurkić, who tied the beginnings of a settlement at Sipar with the found Republican coins. Girardi-Jurkić also connected the place-name *Insula Sepomaia* from the Peutinger Map with Sipar (Girardi Jurkić 1981, p. 81). *Insula Sepomaia* has been assumed to be in different locations; mostly it is considered to be a wide space covering the area from Zambratija to Cape Monterol (cf. Bolšec Ferri, Milošević 2012, p. 89). The last assumed location of *Insula Sepomaia* is the city of Umag (Benčić 2011, p. 367-388).

koje bi tu stranu definirale, a time i potpune gabarite objekta, čija je jedina u potpunosti definirana strana, sjeverna, imponantne duljine od 64 m. Južna strana objekta nalazila se na samoj tadašnjoj obali, ili je, pak, moguće, radi lakšeg pristajanja brodova, da je jednim dijelom i ulazila u more, a je li i koliko, možda će se znati nakon detaljnog istraživanja podmorja tog dijela lokaliteta. Daljnja pretpostavka je da je ovako veliko pristanište imalo skladišno-transportnu funkciju. S njega je vjerojatno za Akvileju brodovima transportirana roba s okolnih rimskih posjeda. Pretpostavljam da je pristanište imalo i znatan skladišni prostor (*horreum*) čiji se gabariti u okviru objekta s pilonima zasad ne daju prepoznati.

Naime, sudeći po relativno malom broju tegula i imbreksa pronađenih na ovom dijelu lokaliteta, ne možemo sa sigurnošću pretpostaviti da je ovaj objekt imao krovni pokrov na cijeloj površini, premda ni to još nije posve isključeno. Također, sudeći po relativno uskim temeljima i maloj količini obrađenog kamena tipičnog za rimski način zidanja pronađenog na lokalitetu, možemo zaključiti da visina objekta svakako nije bila velika, ali ne možemo znati ni pretpostaviti je li, osim u slučaju temelja i pilona, građen od kamena ili od drva ili pak kombinirano. Na osnovi ostalih nepokretnih nalaza razvidno je da su zidovi objekta s pilonima preslojeni, negirani, s dva zida bitno drugačije strukture: jedan je zid južnog bedema, koji negira istočni zid objekta, a drugi je južni zid prostorije 7, koji negira zapadni zid objekta. U trenutku izgradnje bedema (fortifikacije) i spomenutog zida (naselja) objekt s pilonima zasigurno više nije funkcionirao.

Fortifikaciju na istočnom dijelu poluotoka, na osnovi nepokretnih i pokretnih arheoloških nalaza, možemo datirati u razdoblje od 5./6. st. do 9. st. i spomenutih razaranja. Tlocrt njezina istočnog dijela u potpunosti je definiran očuvanim dijelovima sjevernoga i južnoga bedema te istočnim bedemom, koji čine dva masivna grudobrana između kojih je pentagonalna kula sa svojim trokutasto isturenim južnim zidom. Tijekom istraživanja nisu pronađeni nikakvi artefakti, temelji ili zidovi koji bi flankirali sjeverni ili južni bedem na zapadnoj strani, pa je zapadni dio fortifikacije i njezin cjelovit tlocrt ostao nedefiniran. Izvjesno je samo da se utvrda radijalno širila od istoka ka zapadu. Njezin istočni, naglašeno obrambeni dio s kulom i grudobranima okrenut je ka kopnu dok zapadni dio predstavlja njezinu unutrašnjost.

As far as we are aware, the oldest construction discovered to date at Sipar is the structure with pylons, located along the south side of the central part of Sipar peninsula. It could also represent the oldest known purpose of Sipar, as a peninsula with an organised harbour, complete with a breakwater and a lighthouse. Given that there are two known Roman villas in the immediate vicinity of Sipar, one in Zambratija, and another in Katoro, the existence of such an organised harbour was a logistical necessity. Unfortunately, due to sea-level rise and destructive action of sea waves during the sirocco on the south side of the building, no structures have been found which would help define this side, and consequently all dimensions of the building. The only fully defined side, the north one, is of an imposing length of 64 m. The south side of the structure was on the very shore at the time, or possibly partly immersed in the sea to facilitate berthing of ships, but the details may only be known after a detailed research of underwater in this part of the site. It is further assumed that such a large-scale harbour was used for storage and transport. It was probably the starting point for conveyance of goods from the surrounding Roman lands by ships to Aquileia. I assume that the harbour was equipped with significant storage facilities (*horreum*) whose dimensions within the structure with pylons are still unknown. Namely, judging by a relatively small number of tegulae and imbrices found in this part of the site, we cannot assume with certainty that this structure had a roof covering over the whole surface, although it is not at all unlikely either. In addition, judging by the relatively narrow foundations and a small quantity of Roman-style dressed stone found at the site, it can be concluded that the structure was certainly not high, and we can neither know nor assume whether it was made of stone or wood or a combination thereof, excepting the foundations and pylons. Based on the remaining immovable finds, it is apparent that the walls of the structure with pylons are overlaid, negated, with two walls substantially different in construction: one is the south rampart wall, negating the east wall of the structure, and the other the south wall of room 7, negating the west wall of the structure. The structure with pylons was certainly out of use when the ramparts (fortification) and the mentioned wall (settlement) were built.

Based on the archaeological structures and small findings, we can date the fortification in the east

Na središnjem i najširem dijelu poluotoka, zapadno od objekta s pilonima i malim dijelom na njemu nalaze se zidovi dijela naselja koje je već umnogome definirao Mlakar. Nova revizijska istraživanja definirala su postojanje nekoliko faza gradnje u strukturi pojedinih zidova. Te faze odnose se na dogradnje, nadogradnje i pregradnje određenih prostorija unutar naselja ili pak zatvaranje postojećih i otvaranje novih komunikacijskih prolaza između pojedinih prostorija. Ti naknadni zahvati bili su, možemo reći, neplanski (stihijski), uvjetovani trenutnim promjenama stambenih i gospodarstvenih potreba stanovnika unutar malog, morem ograničenog, prostora. Urbanistička organizacija naselja je jednostavna. Naselje je po osi istok-zapad podijeljeno uskom ulicom kojoj širina ne prelazi 1,6 m. Ta je ulica tijekom novih istraživanja u dokumentaciji označena kao PR3, a s njezinih obje strane, u dva su reda nanizane zasebne prostorije s po tri zajednička zida.

Ulazi u pojedinačne prostorije, ovisno o položaju prostorija, bili su sa strane ulice i s morske strane.

Struktura očuvanih zidova utvrde i objekata unutar naselja daje osnove za pretpostavku da su nastali u bliskom vremenskom razdoblju te da dulje vrijeme zajedno funkcioniraju. Stoga je pitanje njihove korespondencije logično, a mogući odgovor od velike je važnosti. Nije osobito vjerojatno da je utvrda podignuta isključivo radi zaštite tako malog naselja već je razlog njezinom podizanju strateška važnost samog poluotoka s kojeg je vojska lako mogla intervenirati na kopnu, a s mora dobivati logističku potporu i opskrbu.¹⁴ Sama utvrda tako je i građena: obrambenom kulom i masivnim grudobranima na istoku u potpunosti je okrenutima prema kopnu, te zaključujemo da je najveća, ako ne i jedina, očekivana opasnost za utvrdu dolazila isključivo s kopna. Sjeverni i južni bedem se prema zapadu radijalno šire, čime se unutarnji prostor utvrde znatno povećava, što mu najvjerojatnije ciljano daje i funkciju refugija.

Pretpostavku da je naselje integralni dio utvrde te da je služilo za život vojnika, dovodi u pitanje dosad pronađen pokretni arheološki materijal isključivo civilne namjene: utezi ribarskih mreža (pršljenovi), koštani češljevi, kuhinjska keramika, mlinski kamenovi, kameni brusovi... Stoga se otvara pitanje na koje bi daljnja istraživanja lokaliteta, do pot-

part of the peninsula to a period between the fifth/sixth century and the ninth century, i.e. the mentioned devastation. The ground plan of its eastern part is fully defined by the preserved parts of the north and south ramparts and by the east rampart, which form two massive parapets, and the pentagonal tower, with its trigonal projecting south wall, between them. No artefacts, foundations or walls flanking the north or south ramparts in the west side were found during the excavation, and therefore the western part of the fortification and its whole ground plan have remained undefined. It is only clear that the fortification spread radially from the east to the west. Its eastern part with the tower and parapets, markedly defensive, faces the mainland, while its western part represents its interior.

In the central – the widest part of the peninsula – west of the structure with pylons, and, to some extent, on the mentioned structure, there are walls of the part of the settlement already largely defined by Mlakar. New revision defined the existence of several construction phases in the structure of respective walls. These phases regard extensions, annexes and remodelling of certain rooms in the settlement, or closing the existing and opening new passages between respective rooms. It can be said that these subsequent interventions were planless (haphazard), dictated by current changes in residential and economic needs of the population in this small space, limited by the sea. The urban organisation of the settlement is simple. The settlement is divided along the east-west axis by a narrow street, no more than 1.6 m wide. This street has been marked as PR3 during new excavations, with separate rooms lined in two rows on both of its sides, each partitioned by three common walls. The entrances to respective rooms, depending on the location of the rooms, were from the street and the seaward side.

The structure of the preserved fortification and structures within the settlement gives us ground to assume that they were made within a short space of time, and then used together over a longer period. Therefore, the question of their correspondence is logical, and the possible answer is of great importance. It is not very likely that the fortification was erected only to defend such a small settlement, but rather due to the strategic importance of the very peninsula, from which an army could easily intervene on the mainland and receive logistical support

¹⁴ Ovdje svakako treba imati u vidu i raniju funkciju poluotoka kao ekonomskog pristaništa.

pune istraženosti, možda mogla dati odgovor: nije li Sipar kao naselje nastao i razvijao se usporedo s vojnom utvrdom? Naime, radovi na izgradnji značajne vojne utvrde, koje je financirala država, osim radnika na gradilištu zasigurno su privukli i okupili određeni broj ljudi iz šire okoline koji su u državnoj investiciji na ovaj ili onaj način prepoznali svoju egzistenciju. Na taj način moglo je nastati nekakvo privremeno stanište koje potom prerasta u stalno civilno naselje. Pretpostavimo da to naselje logično svoje gospodarstvene djelatnosti, u manjoj ili većoj mjeri, prilagođava i vezuje za potrebe aktivne vojne utvrde te na taj način dolazi do stvaranja i neke vrste uzajamne zavisnosti između dviju dijametralno različitih društvenih skupina koje istovremeno egzistiraju na izrazito malom geografskom prostoru, poluotoku Sipru.

Ovo su tek preliminarni rezultati i početne pretpostavke nakon što je istraženo 20 % lokaliteta. Buduća istraživanja bi, osim na potpuno iskopavanje naselja, svakako trebala biti fokusirana i na podmorje, osobito s južne strane poluotoka, i potragu za strukturama koje bi definirale južnu stranu „objekta s pylonima“, te na dodatna istraživanja prostora između kule i naselja koja bi, nadamo se, definirala zapadni dio utvrde i eventualnu fizičku vezu s naseljem.

and supplies via the sea.¹⁴ The very fortification was made to that end: its defensive tower and massive parapets in the east completely face the mainland, and therefore it is our conclusion that the greatest, if not the only, danger for the fortification was expected solely from the mainland. The north and south ramparts radially spread to the west, which significantly increases the interior space of the fortification, most probably for an added intended purpose of a refuge.

The assumption that the settlement is an integral part of the fortification and served as living quarters for soldiers prejudices the small archeological findings found to date, exclusively of civilian nature: weights for fishing nets (whorls), bone combs, kitchen pottery, millstones, grindstones... This raises the question to which further excavations of the site might provide the answer, until fully researched: was Sipar established and developed as a settlement simultaneously with the military fortification? Namely, construction works for a significant military facility, funded by the state, surely attracted not only the construction workers, but also a certain number of people from a greater area, who regarded this government investment as a means to provide for their own livelihood. This could have been a catalyst for a temporary habitat which grew into a permanent civilian settlement. Let us assume logically that this settlement more or less adjusted and tied its economic activities to the requirements of the military fortification, consequently creating a sort of correlation between the two diametrically opposed social groups simultaneously existing in an extremely small geographical area, the peninsula of Sipar.

These are merely preliminary results and initial assumptions after having investigated 20 % of the site. In addition to the excavation of a complete settlement, future research should certainly also be focused on the underwater, particularly in the south side of the peninsula, as well as on a search for structures that would define the south side of the structure with pylons, and on additional research of the area between the tower and the settlement, which would hopefully help define the west part of the fortification and a possible physical connection with the settlement.

¹⁴ We should here certainly keep in mind the earlier purpose of the peninsula as an economic harbour.

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