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MONBRODO - NOVA ISTRAŽIVANJA GRADINE JUŽNO OD ROVINJA U BLIZINI UVALE CISTERNA

MONBRODO - NEW RESEARCH ON THE HILLFORT SOUTH OF ROVINJ NEAR THE CISTERNA BAY

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Istra je poznata po brojnim utvrđenim gradinskim naseljima na brdima, koja se pojavljuju od početka ranog brončanog razdoblja, oko 2000. g. pr. n. e. Premda postoji više od 400 takvih poznatih naselja, istraženo ih je tek manje od desetak. Stoga za većinu njih nije sigurno točno kronološko određenje i veličina u različitim razdobljima, što otežava istraživanja fenomena gradina i sustava naselja brončanog i željeznog doba. Osim toga, mnoga su naselja ugrožena poljoprivrednom ili građevinskom djelatnošću. Ne bi li se stavio veći naglasak na istraživanje istarskih gradina, međunarodni tim započeo je, kao zajednički korejsko-hrvatski projekt 2016. godine[1]*, s iskopavanjima na gradini Monbrodo južno od uvale Cisterna pokraj Rovinja.*

KLJUČNE RIJEČI: *gradina, brončano doba, željezno doba, Istra*

Istria is well-known for numerous hillfort settlements that have been built there since the beginning of the Early Bronze Age around 2000 BC. More than 400 are known, but fewer than a dozen have been researched. Therefore for most of them exact dating and assignment to different periods of occupation is uncertain and research on the development of hillforts and settlement systems in the Bronze and Iron Ages are difficult. Furthermore many of the settlements are endangered by agricultural or construction activities. To bring the Istrian hillfort settlements more into the focus of the research, an international team started a Korean-Croatian joint project in 2016[1] *with excavations on the hillfort of Monbrodo south of the Cisterna Bay near Rovinj.*

KEY WORDS: *hillfort settlement, Bronze Age, Iron Age, Istria*

[1] Ovo je istraživanje sufinancirala vlada Republike Koreje sredstvima Nacionalne istraživačke zaklade Koreje (NRF-2016S1A5A8018505).

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1. UVOD

S arheološkog gledišta, jedno od najočiglednijih obilježja Istre brojni su vidljivi ostaci prapovijesnih naselja na vrhovima uzvisina koja karakteriziraju krški krajolik ovog poluotoka. Te takozvane gradine ili *castellieri* predmet su istraživanja od 19. stoljeća (Hänsel, Mihovilić, Teržan 2015, 27). Prema površinskim nalazima i određenom broju iskopavanja potvrđeno je da su ta mjesta osnovana u brončano doba i, u nekim slučajevima, trajala do ranog željeznog doba. No, ta su mjesta bila u upotrebi i ponovno nastanjivana i u kasnijim razdobljima, kada su nastajale i konglomeracije struktura izrađenih od lokalnog vapnenca koje obuhvaćaju nekoliko arheoloških i povijesnih razdoblja.

Unatoč brojnim gradinama u istarskom krajoliku - dosad je registrirano 436 naselja (Buršić-Matijašić 2007, 185, 386) - samo ih je nekoliko detaljnije istraženo. Najznačajniji primjer je gradina Monkodonja, na kojoj su obavljana sustavna i opsežna iskopavanja tijekom 1950-ih godina te od 1997. do 2008. godine (Hänsel, Mihovilić, Teržan 2015). Premda je istraživanje Monkodonje donijelo mnogo informacija o nekoliko aspekata života, gospodarstva i društvene strukture stanovnika Istre u brončano doba, to je tek prvi, i to veliki korak za razumijevanje fenomena gradina. Budući da za većinu gradina nedostaju osnovne činjenice, poput veličine naselja u određenom razdoblju te trajanje nastanjenosti, daljnji se zaključci vezani uz, primjerice, vezu između susjednih naselja i njihovu organizaciju, temelje na nepotpunim podacima. Stoga se čini nužnim prikupiti više informacija o gradinama kako bi se shvatilo njihov nastanak i razvoj kroz vrijeme. Osim toga, mnogim tim jedinstvenim mjestima prijeti uništenje uslijed poljoprivrednih ili građevinskih radova, zbog čega je stavljanje gradina u središte nacionalnog i međunarodnog istraživanja još hitnije. Iskapanje gradine Monbrodo, smještene na 3 km zračne udaljenosti od Monkodonje 2016. godine može se smatrati prvim korakom u ostvarenju toga cilja.

2. MONBRODO: POLOŽAJ

Monbrodo je jedna od brojnih uzvisina koje karakteriziraju krški krajolik zapadne Istre. Lokalitet se nalazi na zapadnoj obali istarskog poluotoka, na otprilike 5 km zračne udaljenosti od južnog dijela grada Rovinja, u blizini ornitološkog rezervata Palud te južno od poznate uvale Cisterna (sl. 1). Podnožje brežuljka gotovo je ovalnog oblika, a visina mu je 30,6 m n. v. Vrh brežuljka je ravan, blago zakošeni plato oblika suze, površine otprilike 5500 četvornih

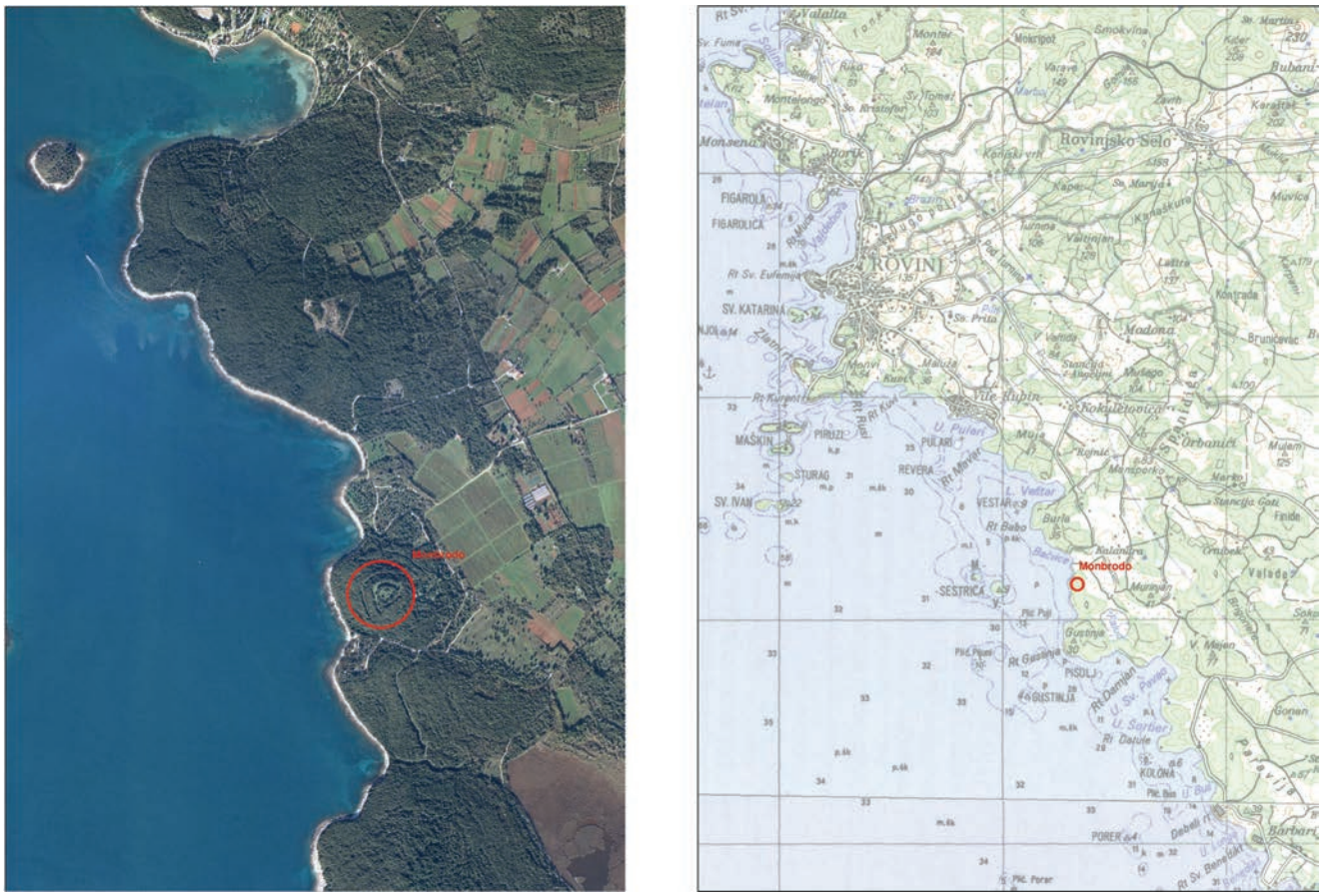
1. INTRODUCTION

Among the most conspicuous archaeological features of Istria are the numerous visible remains of prehistoric settlements on top of the hills and elevations that characterize the karst-landscape of the peninsula. These hillforts or 'Castillieri' have been the subject of research since the nineteenth century (Hänsel, Mihovilić, Teržan 2015, 27). It has been confirmed by surface finds and through a number of excavations that the formation of these sites took place in the Bronze Age and lasted in some cases until the Early Iron Age. Nevertheless, the sites have been used and reoccupied in later times as well, creating conglomerations of structures made of the local limestone that encompass several archaeological and historical periods.

Despite the high frequency of the hillforts in the Istrian landscape - so far 436 sites have been registered (Buršić-Matijašić 2007, 185, 386) - few of them have been examined in more detail. The most prominent example is the hillfort of Monkodonja, which has been systematically and extensively excavated in the 1950s and in a longer campaign from 1997 to 2008 (Hänsel, Mihovilić, Teržan 2015). Although research in Monkodonja has provided plenty of information on several aspects of the life, economy and social structure of the Bronze Age population in Istria, it has to be considered as a first, albeit huge, step for understanding the hillfort phenomenon. Since for most of the hillforts basic facts such as the size of the settlement in a particular period or the duration of the occupation are missing, further conclusions regarding, for instance, the connection between neighboring settlements and their organization are based upon insufficient data. Thus, it appears to be necessary to gather more information on the hillforts in order to understand their origin and development through time. Additionally, many of these unique places are at risk to be destroyed due to agricultural or construction work, which makes it even more urgent and crucial to bring the hillforts more into the focus of national and international research. The 2016's excavation on the hillfort of Monbrodo, located at three kilometers linear distance from Monkodonja, can be seen as a first step to achieve this goal.

2. MONBRODO: THE LOCATION

Monbrodo is one of numerous elevations that are typical for the karst-landscape of western Istria. The site is located at the western coast of the peninsula in ca. 5 km linear distance from the southern edge of Rovinj, near the bird sanctuary Palud and directly south of the famous Cisterna Bay (Fig. 1). The hill has an almost oval



Sl. 1 Položaj Monbroda.
Fig. 1 Location of Monbrodo.

metara. Otprilike trećinu brijega sa zapadne strane okružuje Jadransko more. Danas je cijeli brežuljak gusto pošumljen, osim platoa na vrhu, koji je, osim prstena stabala i grmlja u središtu, uglavnom obrastao niskim raslinjem travom. Zračni snimci brežuljka upućuju na razlike u gustoći vegetacije, što ukazuje na postojanje kružnih zidova (sl. 1); to se prilikom rekognosciranja lokaliteta, tijekom kojeg su otkrivene i terasaste zaravni te segmenti nekoliko radijalnih zidova, pokazalo točnim. Na sjeveroistočnom rubu platoa, uz obzidani put koji vodi izravno do podnožja brijega, nalazi se spomenik od lokalnog vapnenca u čast pothvata lokalnih partizana u Drugom svjetskom ratu.

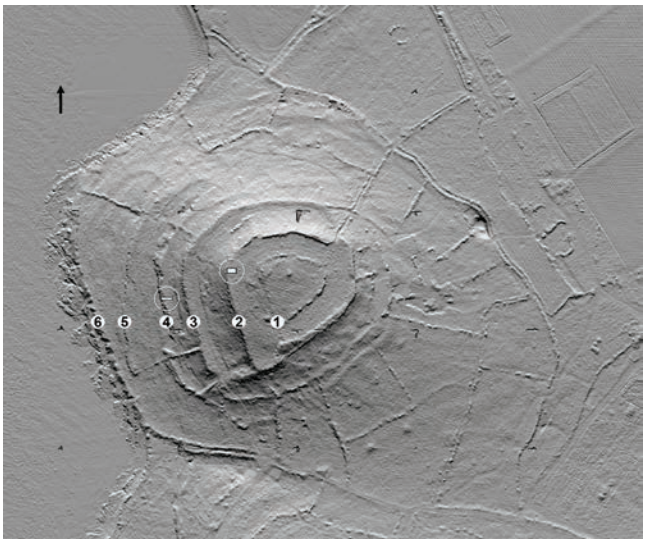
Na činjenicu da je Monbrodo bio korišten u prapovijesno doba upućuju površinski nalazi, koji pokazuju da je lokalitet bio aktivan tijekom brončanog doba, a možda već i eneolitika (Bekić 1996, 84; Buršić-Matijašić 2007, 177). Iskopavanja se, međutim, nisu obavljala sve do kampanje u ljeto 2016.

Iako su zračni snimci i terenski pregledi potvrdili postojanje sustava suhozida, uslijed guste vegetacije bilo je teško utvrditi točan broj zidova, njihovu očuvanost

shape at its base and rises to a height of 30.6 m a.s.l. The hilltop is a flat, slightly sloping plateau of ca. 5500 square meters with a teardrop-shaped outline. Around one third of the hill is on the western flank bordered by the Adriatic Sea. Today the entire hill is densely forested except for the plateau on the top, which, except for a ring of trees and bushes around its center, is mainly overgrown by pasture. Aerial photographs show differences in the density of the vegetation suggesting the existence of circular walls (Fig. 1), which was proven to be correct through surveys of the site that also revealed the presence of terraces and of several radial wall sections. A monument made of local limestone commemorating the deeds of a local partisan group in the Second World War is located at the northeastern edge of the plateau beside a walled path that leads directly to the foot of the hill.

The prehistoric occupation of Monbrodo has been ascertained by surface finds that suggest usage of the location during the Bronze Age, maybe even the Eneolithic period (Bekić 1996, 84; Buršić-Matijašić 2007, 177). Excavation works were, however, not carried out until the campaign in summer 2016.

i točan položaj na brijegu. Nedavno skeniranje šireg područja zapadne Istre, uključujući i Monbrodo, LiDAR tehnologijom koje su obavili Arheološki muzej Istre u Puli i Centar za preventivnu arheologiju Slovenije, uistinu je otkrilo sustav koncentričnih, polukružnih i radijalnih suhozida na brežuljku[2] (sl. 2). Prema tim novim podacima, na zapadnoj padini može se razlučiti ukupno šest zidova: dok su prva tri zida (računajući od vrha) koncentrična, druga tri su polukružna. Potonji su djelomično međusobno povezani radijalnim zidovima koji ne pokazuju pravilnosti u pogledu dužine ili međusobne udaljenosti. Na istočnoj padini brda nalazi se rezidencijalni objekt obitelji Malusa, koja je i vlasnik većeg dijela zemlje na ovom dijelu Monbroda. Ondje se mogu vidjeti samo prva tri koncentrična zida i poneki kraći radijalni zidovi. Čini se da neka područja omeđena suhozidima odgovaraju parcelama koje danas imaju različite vlasnike. Činjenica da je većina suhozida imala određenu funkciju u novije vrijeme - primjerice, služili su kao granice između parcela - također se vidi iz njihove uščuvanosti, što upućuje na obnovu starijih, već postojećih struktura ili posve novu gradnju. Tu pretpostavku podupiru određeni presjeci zidova, prema kojima se vidi postojanje nekoliko slojeva gradnje.



Sl. 2 LiDAR-snimak Monbroda s numeracijom kružnih i polukružnih suhozida te položajima istraženih površina (sonde 1 i 2).
Fig. 2 LiDAR-scan of Monbrodo with numbering of circular and semicircular dry stone walls and mapping of the excavation areas (Trenches 1 and 2).

3. ISKOPAVANJE

Iskopavanje na Monbrodu obavljeno je od 15. do 29. srpnja 2016. u suradnji s Institutom za mediteranske

[2] Zahvaljujemo M. Črešnar, Ljubljana, i K. Mihovilić, Pula, na ustupljenim LiDAR-snimcima Monbroda.

Although aerial photographs and on-site surveys confirmed the existence of a system of dry stone walls, it has been difficult, due to the dense vegetation, to ascertain the exact number of walls, their preservation and their precise location on the hill. A recently made LiDAR-scan, conducted by the Archaeological Museum of Istria in Pula and the Centre for Preventive Archaeology Slovenia for a larger area of western Istria including Monbrodo, revealed a system of concentric, semicircular and radial dry stone walls on the hill[2] (Fig. 2). Based upon this new data a total of six walls can be distinguished on the western slope, although the first three walls - counted from the top - are concentric in their outline whilst the other three are only semicircular. The latter are partly connected with each other by radial walls that do not show any regularity in terms of distance or length. On the eastern slope of the hill lies the residential building of the family Malusa which also owns larger pieces of land in this part of Monbrodo. There, only the first three concentric walls are observable and a number of shorter radial walls. Some of the areas divided by the dry stone walls are congruent with parcels of land owned by different landlords today. The fact that most of the dry stone walls served a function in recent times - for instance as markers for the parcels of land - is additionally recognizable from their good preservation which suggests a renewal of older, already existing structures or completely new constructions. This assumption is supported by particular wall sections that are apparently composed of several construction layers.

3. THE EXCAVATION

The excavation works on Monbrodo took place from 15 July to 29 July 2016 in cooperation with the Institute for Mediterranean Studies (IMS) at Busan University of Foreign Studies (BUFS) in South Korea, the Archaeological Museum of Istria in Pula and Rovinj Heritage Museum[3]. The general purpose of the excavation was to gather more information on the hillfort of Monbrodo in order to understand its connection within the prehistoric settlement system. The excavation had three objectives:

1. ascertaining the character and the archaeological periods of the prehistoric occupation of Monbrodo;

[2] We would like to thank M. Črešnar, Ljubljana, and K. Mihovilić, Pula, for providing the LiDAR-scan of Monbrodo.

[3] The following researchers participated in the excavation works: Archaeological Museum of Istria in Pula: Maja Čuka, Žan Budim; Rovinj Heritage Museum: Damir Matošević; Busan University of Foreign Studies: Sebastian Müller; University of Ljubljana: Anja Hellmuth Kramberger, Bine Kramberger.

studije (IMS) pri Busan Universityju of Foreign Studies (BUFS) iz Južne Koreje, Arheološkim muzejom Istre iz Pule i Zavičajnim muzejom grada Rovinja[3]. Osnovna je svrha iskopavanja bilo sakupljanje više informacija o gradini Monbrodo, kako bi se razumjela njezina povezanost s prapovijesnim sustavom naselja. Iskopavanje je imalo tri cilja:

1. utvrditi značajke i arheološka razdoblja prapovijesnog naseljavanja Monbroda;
2. utvrditi u kojoj je mjeri brdo bilo naseljeno u prapovijesno vrijeme;
3. utvrditi moguću povezanost sa susjednim naseljem Monkodonjom.

Kako bi se postigli navedeni ciljevi, nakon obilaska lokaliteta i na temelju spomenutog snimka LiDAR tehnikom otvorene su dvije sonde. Prva sonda postavljena je na vrhu brda, s unutarnje strane zida br. 2, dok je druga sonda smještena s unutarnje strane polukružnog zida br. 4 (sl. 2). U objema je sondama cilj bio slijediti niz stratigrafskih slojeva sve do matične stijene, kako bi se dokumentirali slojevi i eventualne strukture, te sakupiti dijagnostički materijal za datiranje slojeva. Prapovijesne strukture kao što su zid i druge strukture otkrivene tijekom iskopavanja sačuvane su neizmijenjene u svojem položaju, ne bi li se omogućilo njihovo buduće istraživanje *in situ*.

Sonda 1

Sonda 1 prvotno je imala oblik kvadrata dimenzija 2×2 m postavljenog izravno uz unutarnje lice zida br. 2, na sjeveroistočnoj četvrtini platoa brda (sl. 2). Kad je iskopavanje tog prostora završeno, prema istoku je dodan produžetak dimenzija 2x2 m. Sonda je bila podijeljena na osam kvadranata (A1-2, B1-2, C1-2, D1-2) (sl. 3). Pozicija sonde odabrana je iz više razloga. Kao prvo, postavljanje sonde na platou brda činilo se ključnim kako bi se dobila cjelovita slika nastanjivanja lokaliteta. Budući da je krško tlo osobito sklono eroziji, a taloženje zemljanih slojeva se odvija samo na određenim mjestima, lokacija u blizini zida koji sprječava eroziju tla činila se najboljom za dokumentiranje postojanog stratigrafskog niza. Kao drugo, tijekom terenskog pregleda duž prstenastog zida br. 2, širokog otprilike 3,50 m, uočeno je da se na jednom mjestu unutar djelomično urušenog dijela zida,

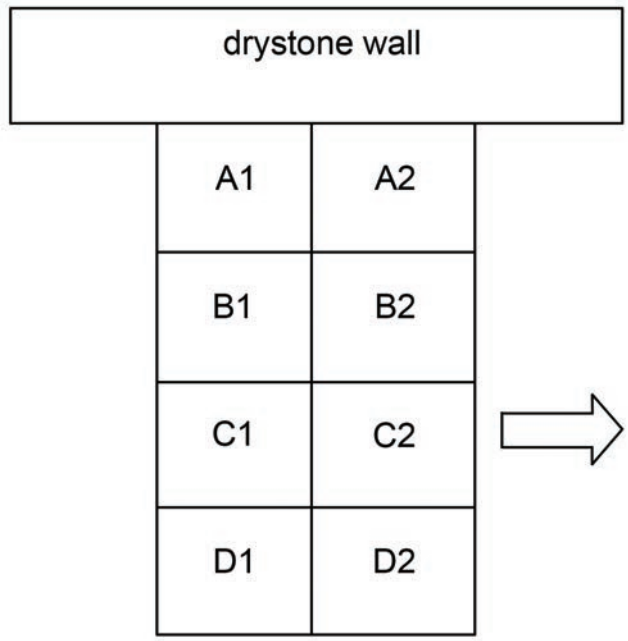
[3] U iskopavanju su sudjelovali sljedeći istraživači - Arheološki muzej Istre u Puli: Maja Čuka, Žan Budim; Zavičajni muzej grada Rovinja: Damir Matošević; Busan University of Foreign Studies: Sebastian Müller; Sveučilište u Ljubljani: Anja Hellmuth Kramberger, Bine Kramberger.

2. ascertaining the extent of the prehistoric occupation of the hill;
3. ascertaining possible connections to the nearby settlement of Monkodonja.

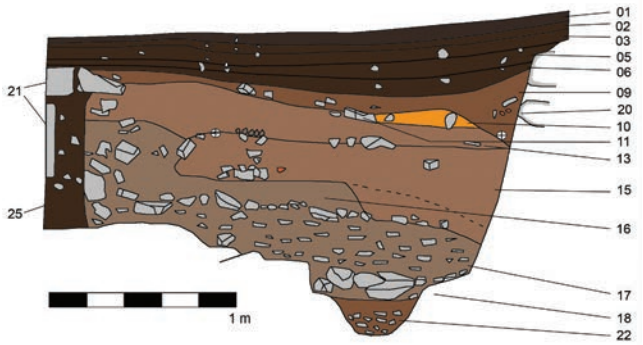
In order to achieve the mentioned objectives, two excavation trenches were dug after an on-site inspection and on the basis of the above mentioned LiDAR-scan. The first trench was placed on top of the hill at the inner edge of wall no. 2 and the second trench was outlined at the inner edge of the semicircular wall no. 4 (Fig. 2). In the case of both trenches the goal was to follow the sequence of stratigraphic layers down to the bedrock, to document layers and possible features, and to obtain diagnostic material for dating the layers. Prehistoric constructions such as the wall and other structures discovered during the excavation were kept unaltered in their position in order to enable future research to examine the features *in situ*.

Trench 1

Trench 1 was initially laid out as a square of 2×2 m directly at the inner edge of wall no. 2 in the northeastern quarter of the hill's plateau (Fig. 2). After the excavation of this area was completed, an extension to the east by another 2×2 m square was added. All in all the trench was divided into eight quadrants (A1-2, B1-2, C1-2, D1-2) (Fig. 3). The site of the trench was selected for a number of reasons. First of all it appeared to be crucial to investigate the plateau of the hill in order to gain a full picture of the occupation of the site. Due to the well-known fact that karst surfaces are especially prone to erosion, and that sedimentation takes place in specific areas only, the location near the wall, which serves as a barrier for soil erosion, seemed to be most promising for obtaining a meaningful stratigraphic sequence. Secondly, a survey along the approximately 3.50 m wide ring wall no. 2 revealed, in a partly collapsed section, in front of the area later chosen for the placement of the trench, not only smaller limestones, which are the usual filler for the dry stone walls, but also numerous pottery fragments of prehistoric dating that may have been washed out from the plateau and transported into the collapsed wall. In this regard it is noteworthy that wall no. 2 is on the plateau only recognizable by single stones scattered along its edge, whereas from the flank of the hill the wall has still a height of around 2.50 m. Numerous blocks of limestone piled up along the wall base are indicators that the construction was initially higher. Due to limitations in regard of time and resources it was not planned to cut through the wall, but for the purpose of obtaining at least some preliminary information the trench was sited in such a way that the



Sl. 3 Podjela sonde 1.
Fig. 3 Division of Trench 1.



Sl. 4 Južni profil sonde 1, kvadranti A1, B1, C1 (brojevi se odnose na stratigrafske jedinice u tekstu).
Fig. 4 South-profile of Trench 1, quadrants A1, B1, C1 (numbers refer to stratigraphical units in the text).

ispred područja koje je kasnije izabrano za postavljanje sonde, nalazi ne samo manje vapnenasto kamenje, koje obično služi kao ispuna suhozida, nego i brojni ulomci keramike iz prapovijesnog i antičkog razdoblja, koji su možda bili isprani s platoa i preneseni u urušeni zid. U tom je pogledu važno spomenuti da je zid br. 2 na samom platou prepoznatljiv samo po pojedinačnom kamenju razbacanom duž ruba, dok je s vanjske strane zid očuvan do visine od oko 2,50 m. Brojne nakupine kamenih blokova duž njegovog podnožja upućuju da je zid izvorno bio dosta viši. Zbog ograničenog vremena i sredstava, nije se planiralo probijati zid nego je, u svrhu dobivanja barem preliminarnih podataka, sonda postavljena na način da je unutarnji rub najviših blokova kamenja bio uključen u prostor sonde. Kao treće, odabrano područje bilo je lako dostupno za istraživačke radove zahvaljujući manje gustoj vegetaciji pa nije trebalo rušiti stabla.

Tijekom iskopavanja sonde 1, u pogledu struktura i slojeva, situacija je bila sljedeća: ispod gornjeg travnatog dijela tla debljine oko 3 cm (SJ 01) nalazio se niz od četiri sloja (SJ 02, 03, 05, 06) tamnosmeđeg glinovitog sastava i niskog plasticiteta (sl. 4). Ti relativno tanki slojevi (oko 5-10 cm) međusobno su se razlikovali po količini sitnog kamenja, čiji se udio povećavao do sloja SJ 05, a smanjivao u nižim slojevima. Prapovijesna keramika pojavljivala se već nakon uklanjanja SJ 1, a količina rimske keramike smanjivala se u dubljim slojevima. Osim keramike, u tim je slojevima bilo i kostiju te manjih mrlja od izgorene gline. Posebno inner edge of the uppermost stone blocks were included in the excavation area. Thirdly, the chosen area was easily accessible for excavation work because of a lack of dense vegetation, so no trees needed to be cut down.

The situation of the features and layers as observed during the excavation within trench 1 can be summarized as follows: after removing the topsoil of ca. 3 cm (SU 01), a package of four layers (SU 02, 03, 05, 06) consisting of dark-brown silty soil with a low plasticity could be observed (Fig. 4). The comparatively thin layers (ca. 5-10 cm) were distinguished based upon the density of small limestones which increased until layer SU 05 and decreased in the layers below. Pottery of prehistoric and ancient origin occurred immediately after removing the topsoil whereas the amount of Roman pottery decreased in the lower layers. Besides pottery fragments, bones and smaller pieces of burned clay were visible. Particularly noteworthy is the increasing emergence of sea snails and shells[4], whose density became greater in the lower layers of the package of dark brown soil. Remarkable small finds in the first two layers were a fragmented nail with a pyramidal head and a dark-blue glass bead with groups of vertical grooves (T. 6:3,6). Below, between layer SU 05 and 06 an exceptional find was made in quadrant A1 close to the dry stone wall no. 2. There the strongly corroded fragment of a bronze Certosa-fibula (foot and bow intact) was unearthed (T. 1:5; T. 6:5), and furthermore several pieces of metal scoria were discovered.

The removal of the upper layers led to the discovery of several features in the trench. Whilst, on the western edge of quadrants A1 and B1 further blocks belonging to the dry stone wall no. 2 became visible, it turned out that a rock (SU 4) that protruded slightly from the surface

[4] Among these are numerous specimens, casings and opercula, of the rough star shell (*Bolma rugosa*) from the family of the Turbinidae, Patellidae and Murex snails (*Hexaplex trunculus*).

treba napomenuti povećanje količine morskih puževa i školjaka[4], čija je gustoća rasla u donjim slojevima spomenutog niza tamnosmeđeg tla. Značajni nalazi iz prva dva sloja su ulomak čavla s piramidalnom glavom i tamnoplava staklena perla sa snopovima okomitih brazda (T. 6:3,6). Ispod toga, između slojeva SJ 05 i SJ 06 otkriven je poseban nalaz u kvadrantu A1, u blizini suhozida br. 2: izrazito korodirani ulomak brončane certosa fibule (nožica i luk netaknuti) (T.1:5; T.6:5) te nekoliko komada metalne troske.

Nakon uklanjanja gornjih slojeva, u sondi 1 definirano je nekoliko struktura. Dok su na zapadnom rubu kvadranata A1 i B1 otkriveni daljnji kameni blokovi suhozida br. 2, pokazalo se da stijena (SJ 4) koja je malo provirivala na površini na granici kvadranata B2 i C2 ima mnogo veće dimenzije nego što se prvotno moglo očekivati te da se proteže u sjeverni profil sonde. Osim toga, u kvadrantima D1 i D2 pojavila se i velika stijena, dimenzija otprilike 1,2 × 0,8 m i ravne površine, te uz nju manje vapnenačko kamenje (SJ 21) prema sjeveru i istoku (sl. 5).

Ispod spomenutog niza tamnosmeđih slojeva, sloj SJ 9 pokazao je blagu promjenu u boji prema tamnijim žućkastosmeđim nijansama, no osnovna svojstva tla - glinoviti sediment niskog plasticiteta - nisu se promijenila. Sloj je sadržavao kompaktne nakupine kamenja, prapovijesnu keramiku, životinjske kosti te morske školjke i puževe, osobito u kvadrantima A1, B1 i C1. Drvenog ugljena bilo je samo u izrazito malim količinama. Kvadranti A2 i B2 sadržavali su znatno manje gore spomenutog materijala, dok su karakteristike tla bile jednake. Uz već uočljivu veliku stijenu (SJ 4) i spomenutu veliku kamenu ploču u sredini, kvadranti C2, D1 i D2 sadržavali su i gustu nakupinu vapnenačkog kamenja (SJ 21) (sl. 5). Posebno zanimljiva tvorevina pojavila se u kvadrantu A1, protežući se u kvadrant B1: kružna koncentracija pečene gline dužine 70 cm (SJ 10) koja se protezala u južni profil sonde. Pečena glina debljine 6 cm nije bila ujednačeno očuvana; osobito se nisu mogli jasno utvrditi rubovi (sl. 6). Međutim, moglo se vidjeti da ona leži na gusto postavljenom kamenju različitih veličina koje je istovrsno kamenju sadržanom u okolnom sloju (SJ 9). U kvadrantu C1, duž ruba velike kamene ploče (SJ 21), definirana je pruga širine oko 10 cm koja nije sadržavala kamenje, kosti ili keramiku, premda se sediment činio istovrsnim ostatku sloja. Na gornjem rubu sloja u kvadrantu B2, uz veliku stijenu koja je virila iz sjevernog profila sonde (SJ 4), pojavio

[4] Među njima su brojni uzorci, obloge i poklopci morskih puževa turbana (*Bolma rugosa*) iz porodica Turbinidae, Patellidae i morskih puževa iz porodice volaka (*Hexaplex trunculus*).

at the border between quadrant B2 and C2 had bigger measurements than initially expected and stretched into the northern profile of the trench. Moreover, a big rock of ca. 1.2×0.8 m with flat surface and accompanied by smaller limestone rocks (SU 21) to the north and east emerged in quadrants D1 and D2 (Fig. 5).

Sl. 5 Sonda 1 nakon uklanjanja SJ 6 (A: kvadranti A1-2, B1-2; B: kvadranti C1-2; D1-2).
Fig. 5 Trench 1 after removing SU 6 (A: quadrants A1-2, B1-2; B: quadrants C1-2; D1-2).

The layer below the above-mentioned package of dark-brown soil (SU 9) showed a slight change in color to a darker yellowish-brown, whereas the basic characteristics of the soil, silty with a low plasticity, did not change. The layer contained particularly in quadrants A1, B1, and C1, densely packed stones, prehistoric pottery, animal bones as well as sea shells and snails. Charcoal appeared only in extremely tiny amounts. Quadrants A2 and B2 contained significantly less of the aforementioned material, whilst the actual soil was identical. Quadrants C2, D1, and D2 showed, besides the already visible large rock (SU 4) and the mentioned big stone slab in the center, densely packed limestone rocks (SU 21) (Fig. 5). A particularly conspicuous feature appeared in quadrant A1 stretching

Sl. 6 Sonda 1, SJ 10 u kvadrantima A1, B1.
Fig. 6 Trench 1, SU 10 in quadrants A1, B1.

Sl. 7 Sonda 1 nakon uklanjanja SJ 9 (A: kvadranti A1-2, B1-2; B: kvadranti C1-2, D1-2).
Fig. 7 Trench 1 after removing SU 9 (A: quadrants A1-2, B1-2; B: quadrants C1-2, D1-2).

se poseban nalaz: ulomak još jedne brončane certosa fibule (nožica i luk) (T.1:6; T.6:2). Među ostalim sitnim nalazima iz ovog sloja treba spomenuti mali pršljen za vreteno i jantarnu perlu, oboje iz kvadranta C1 (T.3:3; to B1: it was a rounded, ca. 70 cm long concentration of burned clay (SU 10), which extended into the southern profile of the trench. The preservation of the ca. 6 cm thick burned clay was not homogenous; in particular, the edges were not clearly ascertainable (Fig. 6).

However, it was observable that the clay rested upon densely packed stones of different sizes which were of the same sort as those included in the surrounding layer (SU 9). In quadrant C1 along the edge of the big stone slab (SU 21) a ca. 10 cm wide stripe became apparent that was characterized by the absence of stones, bones or pottery, although the sediment seemed to be identical with the rest of the layer. On the upper edge of the layer in quadrant B2, close to the big rock protruding from the northern profile of the trench (SU 4), a special find appeared: the fragment of another bronze Certosa fibula (foot and bow) (T. 1:6; T.6:2). Noteworthy small finds from this stratum are furthermore a small spindle whorl and an amber bead both uncovered in quadrant C1 (T. 3:3; T.6:4). At the lower limit of the soil layer (SU 9) a compact layer of stones (SU 11) started to appear in the quadrants A1, A2, B1, B2 and C1. The other quadrants (C2, D1, D2) were increasingly packed with middle-sized and partly huge rocks (SU 21) (Fig. 7) that might belong to a bigger north-south running structure which is the reason why these rocks were not removed and the excavation works were not further pursued in this sector of the trench.

The soil of the next two layers (SU 13 and SU 15) appeared to be again a hue lighter than the layer above (Fig. 4). However, the characteristics in terms of sediment nature and plasticity remained the same. The difference between the layers was the density of limestones that became greater in the lower stratum (SU 15). The amount of finds was clearly lower than in the upper layers, consisting of animal bones and prehistoric pottery. In the northern quadrants A2 and B2 the soil (SU 14) between and below the stone layer was distinguished by a slightly darker color than the material in the southern quadrants A1 and B1 (SU 13). After removing the aforementioned stone layer (SU 11) and parts of the soil, the indicated division between quadrants A1 and B1 on one side and A2 and B2 on the other side became clearly obvious (Fig. 8). In A2 and B2 a stone structure (SU 12) of neatly joined limestone blocks and slabs emerged that extended below the dry stone wall no. 2 (SU 20) on the western edge and the northern edge of the trench as well as below the huge rock (SU 4) in the middle of the trench. The construction was framed by a ca. 10 cm wide stripe of the same dark sediment observed before (SU 14) but additionally included smaller stones, artefacts and bones.

T.6:4). Na donjoj granici sloja SJ 9 počeo se pojavljivati kompaktan sloj kamenja (SJ 11) u kvadrantima A1, A2, B1, B2 i C1. U ostalim kvadrantima (C2, D1, D2) bilo je sve više nakupina kamenja srednjih i dijelom većih dimenzija (SJ 21) (sl. 7) koje bi mogle pripadati većoj strukturi čiji je smjer pružanja sjever-jug, zbog čega kamenje nije uklonjeno te iskopavanje u ovom dijelu sonde nije dalje nastavljeno.

Sediment sljedeća dva sloja (SJ 13 i SJ 15) je bio nijansu svjetliji od sloja iznad (sl. 4). Međutim, svojstva sedimenta i plasticitet su ostali isti. Ta su se dva sloja razlikovala po udjelu kamenja, koji se povećao u donjem sloju (SJ 15). U usporedbi s gornjim slojevima, količina nalaza bila je znatno manja, a sačinjavali su ih životinjske kosti i prapovijesna keramika. U sjevernim kvadrantima A2 i B2 sloj (SJ 14) koji se nalazio među kamenjem i ispod sloja kamenja razlikovao se po malo tamnijoj boji od onog u južnim kvadrantima A1 i B1 (SJ 13). Nakon uklanjanja spomenutog sloja kamenja (SJ 11) i dijelova zemljanog sloja, razdjelnica između kvadranata A1 i B1 s jedne strane te A2 i B2 s druge strane postala je jasno vidljiva (sl. 8). U kvadrantima A2 i B2 pojavila se kamena struktura (SJ 12) uredno spojenih vapnenačkih blokova te se pružala ispod suhozida br. 2 (SJ 20) na zapadnom i sjevernom rubu sonde, kao i ispod velike stijene (SJ 4) u sredini sonde. Struktura je bila omeđena istom, ranije uočenom prugom tamnog sedimenta, širokom oko 10 cm (SJ 14), koja je sadržavala i manje kamenje, artefakte i kosti. Slično se može zaključiti i za kvadrant C1, u kojem je pruga duž kamene ploče postavljene u smjeru sjever-jug (SJ 21), koja je bila uočljiva već na višoj razini, između stijene i stvarnog sloja (sl. 9), sadržavala tamniju zemlju pomiješanu s kamenjem, kostima i keramikom. U daljnjem postupku iskopavanja kamene strukture su ostavljene na mjestu kako bi se u budućem istraživanju mogle u cijelosti definirati i dokumentirati. Stoga se iskopavanje nastavilo samo u dijelovima sonde koji nisu bili pokriveni kamenim strukturama (A1, B1, C1 i mali dio B2). Premda je sjeverni profil sonde djelomično bio pokriven kamenom strukturom koja je iz njega virila, u presjeku kvadranta A1 se vidjelo da je suhozid (SJ 20) "prošao" kroz dva sloja (SJ 13 i SJ 15).

Na dubini od oko 1,2 m otkriven je još jedan glinasti sloj, debeo oko 30 cm (SJ 16), blage razlike u boji (sl. 4). Sloj je bio vrlo rastresit, s udjelom većeg i manjeg vapnenačkog kamenja te sa sporadičnim nalazima keramike i kostiju. Sljedeći sloj (SJ 17) razlikovao se od gornjeg sloja samo po povećanju udjela manjeg i većeg kamenja.

Na dubini od oko 1,80 m konačno se pojavila matična stijena (SJ 18) (sl. 10). Osobito je značajno da se matična

Fig. 8 Sonda 1, kvadranti A1-2, B1-2, tijekom uklanjanja SJ 13.
Fig. 8 Trench 1, quadrants A1-2, B1-2, while removing SU 13.

A similar observation could be made in quadrant C1 along the north-south aligned stone slab (SU 21), where a stripe, that was already visible above, between the rock and the actual layer (Fig. 9), contained darker soil mixed with stones, bones and pottery. In the further process of excavation the stone constructions were left in place in order to enable future research to unearth and document the entire structure intact. Thus, the excavation work continued only in the areas of the trench which were not covered by the stone structures (A1, B1, C1 and a small part of B2). Although the northern profile of the trench was partly covered by the emerging stone construction, in the section of quadrant A1 it was observable that the dry stone wall (SU 20) did cut into this package of two layers (SU 13 and 15).

In ca. 1.2 m depth measured from the surface another layer of ca. 30 cm thick, silty soil (SU 16) with a slightly different color came to light (Fig. 4). The soil appeared

Sl. 9 Sonda 1 nakon uklanjanja SJ 13 u kvadrantu C1.
Fig. 9 Trench 1 after removing SU 13 in quadrant C1.

Sl. 10 Sonda 1, matična stijena.
Fig. 10 Trench 1, bedrock.

stijena u sondi stepenasto uzdizala od zapada prema istoku i da je očito na nekim dijelovima bila obrađena radi poravnavanja površine.

Interpretacija stratigrafske situacije sonde 1

Zbog ograničenog opsega istraženog područja, interpretacija istraženih slojeva i struktura neminovno je preliminarna. Naročito je zbog boljeg razumijevanja otkrivenih kamenih struktura potrebno računati na buduća istraživanja. Na temelju trenutačnog stupnja istraženosti, uključujući preliminarne analize sitnih nalaza, možemo iznijeti sljedeći sažetak situacije u sondi 1, počevši od dna: prvo naseljavanje na ovom brdu pratilo je djelomično izravnavanje terena, vjerojatno kako bi se omogućilo nesmetano penjanje po inače strmoj padini na ovom mjestu, a na taj se način istovremeno dolazilo do građevinskog materijala. Vrijeme ove faze nije jasno utvrdivo: kao radna hipoteza moguće je da je riječ o ranom ili srednjem brončanom dobu. Potom je područje zapunjeno zemljom i manjim kamenjem (SJ 17-16) koje je djelomično bilo sabijeno u gusti sloj. Trenutačno nije moguće utvrditi je li taj proces bio prirodan ili antropogen. Keramika u tim nižim

to be very loose, including bigger and smaller lime stone rocks as well as sporadic pottery and bones. The following layer (SU 17) was only distinguished from the one above by the increasing density of smaller and bigger stones.

At a depth of ca. 1.80 m measured from the surface, the bedrock (SU 18) finally emerged (Fig. 10). It is particularly noteworthy that the rock ascended stepwise from west to east in the trench and that it was apparently in some parts worked in such a way as to flatten the surface.

Interpretation of the features in trench 1

Due to the limited extent of the examined area, the interpretation of the observed layers and structures must be inevitably of preliminary nature. Particularly for a better understanding of the unearthed stone structures, further research is clearly indicated. Based upon the current state of research, including a preliminary analysis of the artefacts, the following summary of the situation represented in trench 1, beginning from the bottom, can be given: the first occupation of the hill was accompanied by the partial leveling of the underground, perhaps to enable people to conveniently climb up the steep slope in this area and at the same time to obtain construction material. The date of this phase is not clearly ascertainable, but as a working hypothesis this might have happened in the Early or Middle Bronze Age. Subsequently the area was filled up with soil and smaller rocks (SU 17-16) which had been partly compressed into a dense package. Whether this process was natural or anthropogenic is not determinable at the moment. The pottery within these lower layers seem to suggest contemporaneity with the settlement activities on Monkodonja. The following layers (SU 15; 13) are characterized by the alternation of stone packages whereas the size of the rocks decreases from the bottom to the top. The mixture with pottery and bones indicates settlement activities which, however, cannot be specified because of the absence of any structures. It is noteworthy in this regard that trench 1 did not provide any evidence for the existence of a wall at this time. The reason for that might be that the actual remains of the older wall construction are located a little bit more to the west, outside of the excavation area.

Whilst the artefacts of the lower layers seem to correlate with the material known from Monkodonja, which means a rough dating into the Middle Bronze Age, the upper strata (SU 13; 9) provided pottery types that might date later, presumably into the Late Bronze Age or even the Early Iron Age. This time seems to be represented in trench 1 as a transition between the lower, lighter colored layers (SU 17-15; 13; 9) and the upper layers of a significantly darker tone (SU 6; 5; 3-1). The stone layer

slojevima upućuje na istovremenost s naseljavanjem Monkodonje. Sljedeće slojeve (SJ 15; 13) karakterizira izmjena nakupina kamenja, pri čemu se veličina kamenja smanjuje od dna prema vrhu. Udio keramike i kostiju u ovim slojevima upućuje na naseljavanje, no nije moguće preciznije specificirati o kakvim se aktivnostima radilo, zbog nepostojanja ikakvih konkretnih struktura. U tom smislu valja napomenuti da sonda 1 nije pružila ikakav dokaz o postojanju zida u to vrijeme. Razlog bi mogao biti taj što ostaci starijeg zida leže nešto zapadnije, izvan područja iskopavanja.

Dok sitni nalazi iz donjih slojeva odgovaraju materijalu poznatom s Monkodonje, što ugrubo datira u srednje brončano doba, gornji slojevi (SJ 13; 9) sadržavali su tipove keramičkih posuda koje bi mogle datirati u kasnije vrijeme, vjerojatno kasno brončano doba ili čak rano željezno doba. Čini se da je to vrijeme u sondi 1 predstavljeno prijelazom između nižih slojeva koji su svjetliji (SJ 17-15; 13; 9) i gornjih slojeva koji su znatno tamnijih nijansi (SJ 6; 5; 3-1). Sloj kamenja SJ 11, koji je dijelio SJ 13 i SJ 9, mogao je funkcionirati kao popločenje poda koji je potom preslojen otpadnim materijalom (SJ 9). Upitno je je li nakupina gline SJ 10 ostatak vatrišta koje je pripadalo tom podu ili je riječ o otpadnom materijalu iz kasnije faze; tu će situaciju trebati razjasniti budućim iskopavanjem.

Uočljiva razlika između kvadranata A1, B1 i C1 s jedne strane i A2, B2 s druge strane, koja je postala naročito primjetna od sloja SJ 9, upućuje na činjenicu da je kamena konstrukcija u A2 i B2 (SJ 12) postavljena nakon što je u slojevima SJ 9 i SJ 13 ukopana građevinska jama. Isto vrijedi za kamenje u kvadrantima C2, D1, D2 (SJ 21). U ovom je slučaju građevinski jarak djelomično bio vidljiv u dnu kvadranta C1 i u južnom profilu sonde (sl. 4; 9). Zbog skromnih dimenzija sonde teško je ponuditi jasnu interpretaciju obiju struktura. Iako se istočna granica strukture SJ 21, koja se protezala u smjeru sjever-jug, nalazila izvan gabarita sonde, može se utvrditi da se radi o ostacima masivnog zida. Struktura SJ 12, koja se sastojala od znatno manjeg kamenja, mogla bi se tumačiti kao temelj za veću konstrukciju koja nije nužno bila izgrađena od kamena. Velika stijena (SJ 4) u sredini sonde onemogućuje daljnje tumačenje odnosa između struktura SJ 12 i SJ 21. Ipak, čini se da je ta pravokutna stijena nekada bila u uspravnom položaju.

U tom je smislu zanimljivo da se kamena struktura SJ 12, kao i kameni sloj SJ 11, proteže ispod zida br. 2 (SJ 20) (sl. 8; 10). Ta okolnost upućuje ne samo na kasnije vrijeme izgradnje zida nego i na datiranje u 4. stoljeće pr. n. e., zbog certosa fibule pronađene na donjem rubu zida u kvadrantu A1.

SU 11 that divided SU 13 and 9 could have functioned as the pavement of a floor which was subsequently filled up with waste (SU 9). Whether the clay concentration SU 10 is the remains of a fireplace belonging to this floor or just to the later phase of disposal is debatable and needs to be clarified in a future excavation.

The conspicuous division of quadrants A1, B1 and C1 on one side and A2, B2 on the other side that became increasingly obvious from the stratum SU 9 seems to indicate that the limestone construction in A2 and B2 (SU 12) was put in place after digging a construction pit into the layers SU 9 and SU 13. The same applies to the limestone rocks in the quadrants C2, D1, D2 (SU 21). Here the construction ditch was partly visible in the plana of quadrant C1 and in the southern profile of the trench (Fig. 4, 9). Due to the small extent of the excavated section a clear interpretation of both constructions is difficult. Although the eastern border of the north-south stretching structure SU 21 was seemingly not completely captured by the trench, it could be the remains of a massive wall. Structure SU 12 that was assembled of significantly smaller stones could be interpreted as the foundation for a bigger construction that was not necessarily made of stones. The huge rock (SU 4) in the middle of the trench prevented further observations that could clarify the relation between the structures SU 12 and 21. It seems, however, that this roughly rectangular rock was once in an upright position.

An interesting fact in this regard is also that the stone construction SU 12 is, like the stone layer SU 11, stretching under wall no. 2 (SU 20) (Fig. 8, 10). This indicates not only a later construction period for the wall, but also a dating into the fourth century BC because of the Certosa fibula that was found at the lower edge of the wall in quadrant A1.

The upper layers, which include an increasing amount of ancient pottery fragments, might be dated to subsequent centuries, although the character of the occupation of Monbrodo's plateau still remains unclear, due to the lack of further hints.

Comments on selected findings from trench 1

The first excavation campaign on the hillfort of Monbrodo in trench 1 yielded a large quantity of pottery[5], in addition to animal bones[6] and, in particular,

[5] The comparatively scanty amount of ceramic fragments from trench 2 contained hardly any diagnostic pieces and is therefore not included in the following discussion.

[6] The bones and teeth of mammals were mainly collected, but fish bones and fish scales were discovered as well.

Gornji slojevi s povećanom količinom ulomaka antičke keramike mogli bi datirati iz kasnijih stoljeća, dok način korištenja platoa Monbroda, zbog nedostatka dodatnih tragova, ostaje nejasan.

Odabrani sitni nalazi iz sonde 1

Tijekom prve kampanje iskopavanja na gradini Monbrodo, u sondi 1 sakupljena je velika količina keramike[5] i životinjskih kostiju[6], a posebno su brojni bili morski puževi[7]. Ostali nalazi od keramike, kosti, željeza, bronce, stakla i jantara predstavljaju iznimke. U nastavku donosimo kratak preliminarni pregled nekih karakterističnih artefakata koji pružaju prvu naznaku kronološkog okvira različitih horizonata naselja.

Kao karakteristični tip nalaza za rano i srednje brončano doba u Istri mogu se navesti takozvane trokutaste ručke s pločicom (Lonza 1977, 66ff.; Moretti 1977; Cardarelli 1983, 93, T.18,113.; Karoušková-Soper 1983, 225ff.; Urban 1993, 188; Buršić-Matijašić 1998, 68-69; Mihovilić 2001, 42; Hellmuth Kramberger 2017, 244ff., sl. 215-217) (sl. 11A). Ovaj se oblik ručke pojavljuje na različitim tipovima posuda[8], pri čemu je moguće razlikovati finu i grubu varijantu. Nekoliko trokutastih ručki s pločicom pronađeno je u SJ 13 (T.3:5-7). Dok su od dvije ručke očuvane samo dvije zaobljene pločice, na trećem, nešto većem i gotovo potpuno očuvanom primjerku vidljiv je i dio profila tijela posude (T.3:7). Čini se da se ručka nalazila na posudi izrazito konveksne, sferične stijenke. Za pretpostaviti je da se radi o karakterističnim amforastim loncima i pithosima na kojima su se trokutaste ručke sa zaobljenom pločicom nalazile na najširem dijelu posude (Hellmuth Kramberger 2017, 176ff., 202ff) (sl. 11B). Za dva manja primjerka se može pretpostaviti da su bila dio dubokih šalica kakve su nađene na susjednoj rano- i srednjobrončanodobnoj gradini Monkodonji (sl. 12A).

Pri uklanjanju najgornjeg sloja SJ 02, koji je sadržavao i ručno izrađenu prapovijesnu keramiku te keramiku izrađenu na lončarskom kolu (T.1:1-2), otkriven je fragment debele stijenke s bradavičastim ukrasom ("tutulom") (T.1:3). Vrlo vjerojatno se radi o ulomku zdjele s ukrašenim dnom, kakve su nađene na

[5] Relativno mala količina keramičkih ulomaka iz sonde 2 gotovo da nije sadržavala dijagnostičke primjerke, stoga nije uključena u raspravu koja slijedi.

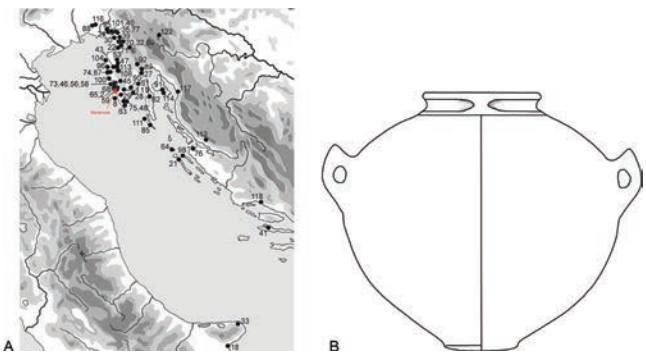
[6] Uglavnom su prikupljene kosti i zubi sisavaca, no otkrivene su i kosti i ljuske riba.

[7] Usp. bilj. 4.

[8] Trokutaste ručke s pločastim završetkom nalaze se na plitkim i dubokim šalicama, cjedilima, vrčevima, zdjelama i loncima svih veličina, kao i u minijaturnoj verziji (usp. Hellmuth Kramberger 2017, 245).

numerous sea snails[7]. Small finds made of ceramic, bone, iron, bronze, glass and amber are the exception. In the following section a brief, preliminary overview of some characteristic artifacts, which provide a first indication for the chronological setting of the different settlement-horizons, will be given.

As a commonly occurring type of relic of the Early and Middle Bronze Age in Istria the so-called triangular handles with end plates can be cited (Lonza 1977, 66ff.; Moretti 1977; Cardarelli 1983, 93, T. 18,113; Karoušková-Soper 1983, 225ff.; Urban 1993, 188; Buršić-Matijašić 1998, 68-69; Mihovilić 2001, 42; Hellmuth Kramberger 2017, 244ff., fig. 215-217) (Fig. 11A). This handle shape occurs on various vessel types[8] and it can be distinguished in a fine and a robust variant. Several triangular handles with end plates came to light in SU 13 (T. 3:5-7). While for two handles only the rounded end plates have been preserved, on the third somewhat larger and almost completely preserved specimen, a part of the vessel profile is observable (T. 3:7). Apparently the handle was attached to a vessel with a strongly convex, spherical wall, which might be identified as part of the characteristic amphora-shaped pots and pithoi. These vessels carry triangular handles with rounded end plates on the widest part of the body (Hellmuth Kramberger 2017, 176ff., 202ff.) (Fig. 11B). For the two smaller specimens it can be assumed that they were attached to deep cups, as they were found in the neighboring Early and Middle Bronze Age hillfort of Monkodonja (Fig. 12A).



Sl. 11 A: Distribucija trokutastih ručki sa zaobljenom pločicom u Istri i susjednim područjima (prema Hellmuth Kramberger 2017, 246, sl. 216, Popis 31 - crveni kvadrat = Monbrodo); B: Amforasti pithos s trokutastim i X-ručkama s Monkodonje (prema Hellmuth 2014, 71, sl. 4).
Fig. 11 A: Distribution of triangular handles with rounded end plate in Istria and neighboring regions (after Hellmuth Kramberger 2017, 246, Fig. 216, List 31 - red quadrat = Monbrodo); B: Amphora-shaped pithos with triangular handles and x-shaped handles from Monkodonja (after Hellmuth 2014, 71, Fig. 4).

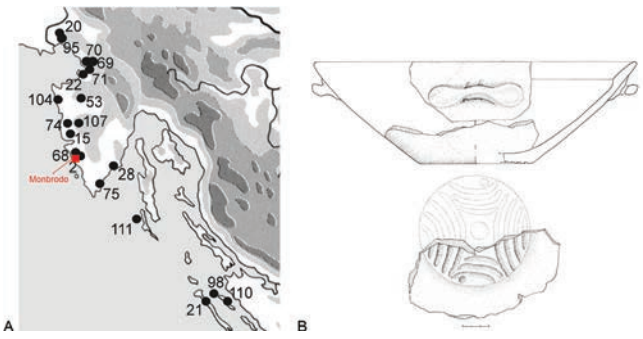
[7] Compare footnote 4.

[8] Triangular handles with an end plate are found on shallow and deep cups, sieves, jugs, bowls and pots of all sizes and in a miniature version as well (compare Hellmuth Kramberger 2017, 245).

Sl. 12 A: Šalica s trokutastom ručkom sa zaobljenom pločicom; B: Zdjela s tutulom na donjoj strani dna s Monkodonje (prema Hellmuth Kramberger 2017, T. 153, 2.13).
Fig. 12 A: Cup with triangular handle with rounded end plate; B: Bowl with "Tutulus" on the bottom underside from Monkodonja (after Hellmuth Kramberger 2017, T. 153, 2.13).

Monkodonji (Hellmuth Kramberger 2017, 152ff., sl. 124, a.c.). (sl. 12B). Karakteristika ovih zdjela je razmjerno debela stijenka te ukras izveden u vidu koncentričnih kanelura oko središnje bradavice. Pretpostavlja se da su ove posude korištene kao poklopci, s obzirom na to da spomenuti bradavičasti ukras s donje strane ne pokazuje znakove trošenja stijenke, dakle ukrašeno dno nije stajalo na tlu (Hellmuth Kramberger 2017, 399, sl. 281 (b)).

Drugi oblik zdjela s ukrašenim dnom poznat s istarskih gradina iz brončanog doba ima konični ili blago kupolasti oblik. Donja strana zdjele ukrašena je motivima paralelnih kutova, lukova, križeva, koncentričnih krugova i točaka (Hellmuth Kramberger 2017, 161ff., sl. 133) (sl. 13B). Vrlo mali fragment takvog dna također je pronađen na Monbrodu. Dokazano je da su se na posude s ukrašenim dnom ponekad pričvršćivale leptiraste drške (sl. 13B). Te su drške također karakteristični oblik, poznat s brojnih



Sl. 13 A: Distribucija leptirastih drški (prema Hellmuth Kramberger 2017, 261, sl. 227, Popis 34 - crveni kvadrat = Monbrodo); B: Zdjela s leptirastim drškama i ukrašenom donjom stranom dna s Monkodonje, sonda VIII (prema Hellmuth Kramberger 2017, 86, 235, T. 141, 4).
Fig. 13 A: Distribution of butterfly-shaped handles (after Hellmuth Kramberger 2017, 261, Fig. 227, List 34 - red quadrat = Monbrodo); B: Bowl with butterfly-shaped handles and decorated bottom underside from Monkodonja, Sonda VIII (after Hellmuth Kramberger 2017, 86, 235, T. 141, 4).

While removing the uppermost layer SU 02, which contained both hand-made prehistoric pottery and wheel-made ceramics (T.1:1-2), a thick-walled fragment with a round bulge ("Tutulus") was discovered (T.1:3). It is very likely that it belonged to a bowl with an ornamented bottom, as these were found in Monkodonja (Hellmuth Kramberger 2017, 152ff., fig. 124,a.c.). (Fig. 12B). The characteristic of these bowls is a proportionally thick wall and ornamentation on the bottom made of concentric flutes around a central bulge. It is assumable that these bowls were used as covers, since the bulge on the underside usually shows no abrasion, indicating that they were not placed with the decorated bottom on the ground (Hellmuth Kramberger 2017, 399, fig. 281,b).

Another form of bowl with a decorated bottom from Istrian Bronze Age hillforts have a conical or slightly dome-shaped appearance. The underside of the bottom is decorated with parallel angles, arches, crosses, concentric circles and dots (Hellmuth Kramberger 2017, 161ff., fig. 133) (Fig. 13B). A very small fragment of such a bottom was also found on Monbrodo. It has been proven that on the bowls with a decorated bottom sometimes butterfly-shaped handles were attached (Fig. 13B). These handles are another characteristic form, which is known from numerous hillforts in Istria and the Carso (Trieste Karst) (Hellmuth Kramberger 2017, 160f., 260f., Fig. 226,g, Fig. 227) (Fig. 13A). In SU 15 the fragment of a bowl with butterfly-shaped handles was discovered (T. 5:2) which represents a very fine-pored, hard-burned pottery on the inside and in the break/cross-section of black color, whilst the outside is black with orange stains[9].

In SU 13 and SU 15 other fragments of handles, gripping ridges and plastic/applied ornaments were found, which show similarities to finds from the hillfort of Monkodonja and other sites in Istria. A slightly curved angular gripping ridge[10] (T. 3:1), a tongue-shaped gripping ridge found in quadrant C1[11] (T. 3:4), a tapered gripping ridge with finger impression[12] from quadrant A1/B1 (T. 3:2) as well as a curved ridge[13] found in quadrant B1 (T. 5:4) can be mentioned. The various shapes of handles and ridges could have been combined with anthropomorphic ornamentations, as observed for the first time in Monkodonja. These decorations represent a characteristic ornamental form of pots and pithoi in Istria and the Carso (Hellmuth 2012; Hellmuth 2015; Hellmuth

[9] The fabric corresponds entirely to comparable bowls from the hillfort of Monkodonja.
[10] Compare Hellmuth Kramberger 2017, 258, Fig. 226,b.
[11] Compare ibid., 259f., Fig. 226,e.
[12] Compare ibid., 259, Fig. 226,c.
[13] Compare ibid., 268f.

gradina Istre i tršćanskog Krasa (Hellmuth Kramberger 2017, 160f., 260f., sl. 226., g, sl. 227) (sl. 13A). U SJ 15 pronađen je ulomak zdjele s leptirastom drškom (T.5:2). Riječ je o vrlo finoj, jako pečenoj keramici, čiji su unutrašnjost i presjek crne boje, a izvana je crne boje s narančastim mrljama[9].

U SJ 13 i SJ 15 pronađeni su i drugi ulomci ručki, drški i plastičnih ukrasa koji pokazuju sličnosti s nalazima s gradine Monkodonje, kao i s drugih lokaliteta u Istri: primjerice, blago savijena, trakasta drška[10] (T.3:1), jezičasta drška iz kvadranta C1[11] (T.3:4), šiljasta drška s otiskom prsta[12] iz kvadranta A1/B1 (T.3:2) te savijena plastična traka[13] iz kvadranta B1 (T.5:4). Različiti oblici ručki i traka mogli su se kombinirati u antropomorfne ornamente kakvi su prvi put zabilježeni na Monkodonji i predstavljaju karakteristične ukrase lonaca i pithosa u Istri i na Krasu (Hellmuth 2012; Hellmuth 2015; Hellmuth Kramberger 2017, 214f., sl. 182). Mali ulomak iz kvadranta B1, iz SJ 15, ima tri paralelne plastične trake koje su vjerojatno bile u obliku slova V (T.5:3) i pričvršćene na posudu. Kako prikazuju primjerci s Monkodonje (Hellmuth Kramberger 2017, 272, sl. 75,1, sl. 235) i gradine Brijuni (Vitasović 2000, 55, T. 9,2) (sl. 14), trake su mogle biti postavljene uspravno ili pak biti viseće.

Značajni i karakteristični tip nalaza na brončanodobnim gradinama Istre i tršćanskog Krasa su tronošci ili ploče na tri noge (Lonza 1977, 71ff.; Moretti 1977; Cardarelli 1983, 93, T. 18, 191; Karoušková-Soper 1983, 225ff.; Urban 1993, 188; Mihovilić 1995; Buršić-Matijašić 1998, 77-79; Hänsel, Teržan 2000, 172-178; Mihovilić 2001, 47f.; Hellmuth Kramberger 2017, 215ff., sl. 183-187) (sl. 15A-B). Ovi su tronošci vjerojatno nastali po istočnomediteranskim uzorima. Kod tronožaca iz Monkodonje tragovi izlaganja toplini na gornjim stranama ploča ukazuju da su korišteni za pripremanje hrane nakon prethodnog zagrijavanja[14]. Ulomci tronožaca (ploča i nogu) sakupljeni su i u iskopavanju na Monbrodu, i to u djelomično mješovitim kulturnim slojevima blizu površine, kao i u dubljim slojevima (T.1:4; T.2:4). Ulomak koničnog oblika i profilirane stope dna (T.2:3) iz kvadranta B1, SJ 09, također bi mogao pripadati ploči tronošca, iako je ovakav, izduženi i zakošeni obod prilično neuobičajen.

[9] Materijal u potpunosti odgovara sličnim zdjelama s gradine Monkodonje.

[10] Usp. Hellmuth Kramberger 2017, 258, sl. 226, b.

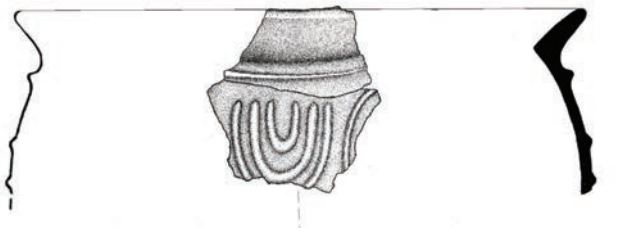
[11] Usp. ibid., 259f., sl. 226, e.

[12] Usp. ibid., 259, sl. 226, c.

[13] Usp. ibid., 268f.

[14] Usp. ibid., 215, sl. 183, b i 186.

Kramberger 2017, 214 f., Fig. 182). A small fragment from quadrant B1 in SU 15 shows three parallel plastic ridges that probably formed a V-shape (T. 5:3) and were applied on a pot. As similar examples from Monkodonja (Hellmuth Kramberger 2017, 272, T. 75,1, Fig. 235) and Gradina on Brijuni (Vitasović 2000, 55, T. 9,2) (Fig. 14) demonstrate, the ridges could be applied either upright or hanging.



Sl. 14 Posuda s ukrasom od paralelnih plastičnih traka u obliku slova V s gradine Brijuni (prema Vitasović 2000, 55, T. 9, 2).
Fig. 14 Pot with decoration made of parallel v-shaped plastic ledges from Gradina Brijuni (after Vitasović 2000, 55, T. 9, 2).

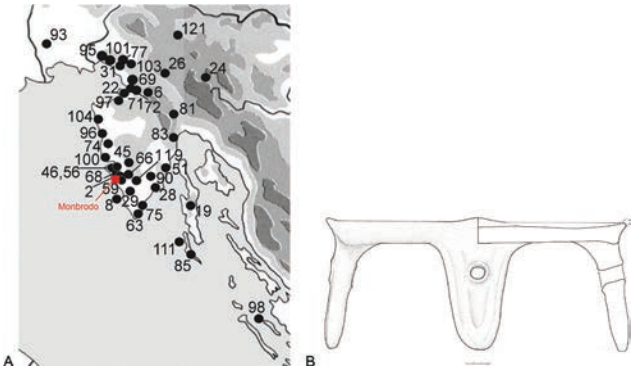
An important index relic of the Bronze Age hillfort settlements of Istria and the Trieste Karst are tripods or plates on three legs (Lonza 1977, 71ff.; Moretti 1977; Cardarelli 1983, 93, T. 18,191; Karoušková-Soper 1983, 225ff.; Urban 1993, 188; Mihovilić 1995; Buršić-Matijašić 1998, 77-79; Hänsel, Teržan 2000, 172-178; Mihovilić 2001, 47f.; Hellmuth Kramberger 2017, 215ff., Figs. 183-187) (Fig. 15A-B). It is very likely that these tripods go back to Eastern Mediterranean models. In the case of tripods from Monkodonja traces of heat exposure on the top of the plates seem to indicate that they were used after preheating for food preparation[14]. Fragments of tripods, from plates and legs/feet, have been discovered in Monbrodo as well, namely in the partially mixed cultural layers near the surface and in deeper layers (T. 1:4; T. 2:4). A fragment with conical wall-profile and protruding bottom (T. 2:3) from quadrant B1 in SU 09 could belong to a tripod-plate, although the elongated and steep rim is rather unusual.

As mentioned above, the uppermost dark-brown layers contained a mixed assemblage of hand-made and wheel-made pottery. Regarding the wheel-made pottery, in the following section only two findings are discussed.

While cleaning the eastern profile between quadrant B1 and the later quadrant C1, two fragments of a fine beige-colored, wheel-made pottery with dark paint came to light (T. 6:1). The pieces were determined to be ceramics of the so-called "Alto-Adriatico" type[15] and are therefore

[14] Compare Hellmuth Kramberger 2017, 215, Figs. 183,b and 186.

[15] We cordially thank Kristina Mihovilić for the determination.



Sl. 15 A: Distribucija tronožaca u Istri i susjednim područjima (prema Hellmuth Kramberger 2017, 218, sl. 187, Popis 27 - crveni kvadrat = Monbrodo); B: Tronožac s gradine Monkodonje, sonda III (prema Hellmuth Kramberger 2017, 72, 206, T. 112, 2).
Fig. 15 A: Distribution of tripods in Istria and the neighboring regions (after Hellmuth Kramberger 2017, 218, Fig. 187, List 27 - red quadrat = Monbrodo); B: Tripod from the Gradina Monkodonja, Sonda III (after Hellmuth Kramberger 2017, 72, 206, T. 112, 2).

Kako je prethodno spomenuto, najgornji, tamnosmeđi slojevi sadržavali su pomiješanu ručno izrađenu keramiku i onu izrađenu na kolu. Od potonje ćemo u nastavku razmotriti samo dva nalaza.

Tijekom čišćenja istočnog profila između kvadranta B1 i kasnijeg kvadranta C1, pojavila su se dva ulomka fine, bež keramike izrađene na kolu, s tamnim premazom (T.6:1). Ulomci su određeni kao keramika takozvanog "Alto-Adriatico" tipa[15] te je stoga riječ o uvezenoj keramici. Keramika tipa "Alto-Adriatico" pojavljuje se od kraja 4. i početka 3. stoljeća nadalje, na čitavom području Jadrana, a pretpostavlja se da su se radionički centri nalazili u okolici Spine (Mihovilić 1996, 44, s referencom na Kirigin 1992; vidi i Landolfi 1996) (sl. 16A). Dosad je keramika tipa "Alto-Adriatico" u Istri bila poznata samo s nekoliko lokaliteta, na primjer iz Nezakcija (Mihovilić 1996, 32-33, sl. 44-47, 49-50) (sl. 16B) i Rovinja (Matošević, Mihovilić 2004, 16).

Drugi ulomak također predstavlja uvezenu keramiku. Ulomak ručke amfore[16] (T.1:1) pripada grčko-italskim amforama koje su bile raširene na čitavom Jadranu od kraja 4. do kraja 2. stoljeća pr. n. e. (Kirigin 1994) (sl. 17A-B). U Istri su nalazišta ove keramike poznata ponajviše na zapadnoj obali. Nalazi grčko-italskih amfora, kao i keramike tipa "Alto-Adriatico", naglašavaju integraciju Monbroda u pomorsku trgovačku mrežu kasnog željeznog doba.

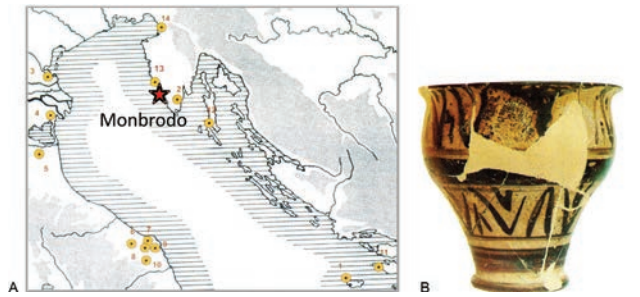
Keramički nalazi uključuju i konični pršljen za vreteno (T.3:3) pronađen u kvadrantu C1, u SJ 13,

[15] Srdačno zahvaljujemo Kristini Mihovilić na determinaciji.

[16] Obod amfore pronađen je u sondi 2. Srdačno zahvaljujemo Kristini Mihovilić na determinaciji i referencama.

considered to be imported pottery. Ceramics of the "Alto-Adriatico" type appear from the end of the fourth and beginning of the third century onwards throughout the entire Adriatic region. The manufacturing centers are assumed to be located around Spina (Mihovilić 1996, 44 with reference to Kirigin 1992; see also Landolfi 1996) (Fig. 16A). So far, ceramics of the "Alto Adriatico" type were known for Istria only from a few sites such as Nesactium (Mihovilić 1996, 32-33, Figs. 44-47, 49-50) (Fig. 16B) and Rovinj (Matošević, Mihovilić 2004, 16).

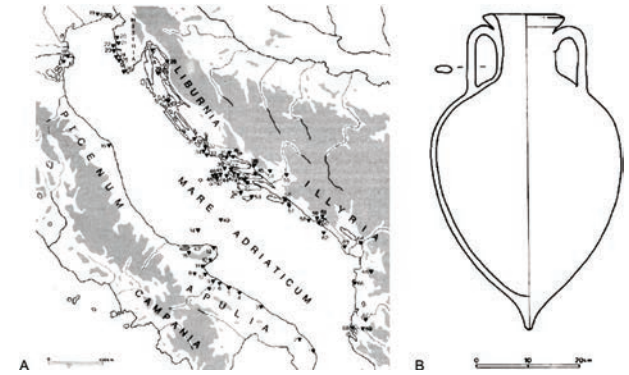
The second find to be discussed here represents imported pottery too. The fragment of an amphora handle[16] (T. 1:1) belongs to the sphere of Greek-Italian amphorae, which were widespread throughout the Adriatic Sea from the end of the fourth to the end of the second century BC (Kirigin 1994) (Fig. 17A-B). In Istria, the sites where such pottery is found are primarily on the west coast. The finds of Greek-Italian amphorae as well as ceramics of the "Alto Adriatico" type highlight the integration of Monbrodo into the late Iron Age sea trade network.



Sl. 16 A: Distribucija keramike tipa "Alto Adriatico" (prema Matošević, Mihovilić 2004, 16, karta 4: 1 Vis, 2 Nesactium, 3 Adria, 4 Spina, 5 Bologna, 6 Montefortino, 7 Ancona, 8 Camarano, 9 Numana, 10 Osimo, 11 Hvar, 12 Osor, 13 Rovinj, 14 Sermin, zvijezda = Monbrodo); B: Skifos iz Nezakcija, tip "Alto Adriatico" (prema Mihovilić 1996, 32, sl. 45).
Fig. 16 A: Distribution of ceramics of the type "Alto Adriatico" (after Matošević, Mihovilić 2004, 16, map 4: 1 Vis, 2 Nesactium, 3 Adria, 4 Spina, 5 Bologna, 6 Montefortino, 7 Ancona, 8 Camarano, 9 Numana, 10 Osimo, 11 Hvar, 12 Osor, 13 Rovinj, 14 Sermin, Star = Monbrodo); B: Skyphos from Nesactium, type "Alto Adriatico" (after Mihovilić 1996, 32, Fig. 45).

Among the ceramic finds there is also a conical spinning whorl (T. 3:3) which was found in quadrant C1 in SU 13 among an accumulation of animal bones and vessel shards, including an almost completely preserved egg-shaped pot (T. 3:8). What is striking about this vessel is the thick wall. Two others vessels found in SU 13, discovered in quadrants B1 and C1 (T.4:3-4), are characterized by thick walls as well. None of these vessels showed any sign of

[16] An amphora-rim was found in the area of trench 2. We thank Kristina Mihovilić for the determination and reference.



Sl. 17 A: Grčko-italska amfora, Maun; B: Distribucija grčko-italskih amfora (prema Kirigin 1994, 17-18, sl. 3-4).
Fig. 17 A: Greek-Italian amphora, Maun; B: Distribution of Greek-Italian amphorae (after Kirigin 1994, 17-18, Fig. 3-4).

unutar nakupine životinjskih kostiju i ulomaka posuda, uključujući gotovo potpuno očuvanu jajoliku posudu (T.3:8), koja ima naročito debele stijenke. Druge dvije posude iz SJ 13, otkrivene u kvadrantima B1 i C1 (T.4:3-4), također imaju debele stijenke. Ni na jednoj od tih posuda nije uočen ikakav ukras. Treba napomenuti da na izrazito dobro istraženoj gradini Monkodonji, smještenoj samo nekoliko kilometara od Monbroda, a koja se smatra središnjim naseljem brončanog doba (Hänsel, Matošević, Mihovilić, Teržan 2009, 154ff.; Hänsel, Mihovilić, Teržan 2015, 496ff., sl. 331), među tisućama posuda nema primjeraka s tako debelim stijenkama. Buduće studije pokazat će može li navedeno biti kronološka odrednica. Nalazi iz kvadranta B1 i C1 u SJ 13 uključuju i dvije male posude debelih stijenki koje se mogu odrediti kao mužari, zbog polukružne šupljine u donjem dijelu[17].

U kvadrantu A1, SJ 15, otkriveno je nekoliko ulomaka velikog glinenog predmeta prstenastog oblika, promjera oko 32 cm (T.5:5). Analiza materijala pokazuje da se radi o slabo pečenoj glini u koju je prethodno dodana pljeva, a površina je samo ugrubo zaglađena. Takav je način izrade zabilježen na velikom predmetu oblika kade s Monkodonje (Hellmuth Kramberger 2017, 328, T. 119,10), odnosno na grčkim kadama za pečenje iz brončanog doba (primjerice Hochstetter 1984, 164). U pogledu samog oblika, prstenasti predmet podsjeća na glinene prstenove pronađene u kontekstima kasnog brončanog doba i ranog željeznog doba u Sloveniji[18] koji se, budući da su često pronađeni u blizini ognjišta, ornamentation. It is worth mentioning that in the very well-researched hillfort of Monkodonja, situated only a few kilometers from Monbrodo and considered to be a Bronze Age central settlement (Hänsel, Matošević, Mihovilić, Teržan 2009, 154ff.; Hänsel, Mihovilić, Teržan 2015, 496ff., Fig. 331), among thousands of vessels no examples with such proportionally thick walls are known. Future studies will prove whether this is a chronological characteristic. The finds from quadrants B1 and C1 in SU 13 also included two small, thick-walled vessels, which may be classified as mortar due to a hemispherical cavity on the lower part[17].

In quadrant A1, SU 15, several fragments of a large ring-shaped clay object with a diameter of 32 cm were discovered (T. 5:5). The ware of the object stands out through its low firing and a tempering of straw chaff, so the surface was only roughly spread. This ware has been observed on a large tub-shaped object from Monkodonja (Hellmuth Kramberger 2017, 328, T. 119,10) and on Bronze Age baking-tubs from Greece (e.g. Hochstetter 1984, 164). From a formal point of view the ring-shaped object resembles clay rings which are especially found in late-Bronze Age and Early-Iron Age contexts in Slovenia[18] and which are, since frequently found near the hearth, interpreted as vessel stands[19]. It should be noted that the find from Monbrodo is much larger, albeit an interpretation as a vessel stand seems quite likely.

In the following section, a few selected small finds from various materials will be briefly discussed. Two fragmented Certosa fibulae discovered in quadrants A1 and B2 are of particular importance due to their chronological relevance (T. 1:5-6; T. 6:2,5). Whilst one piece was located in the immediate vicinity of the wall's inner side (T. 1:5; T.6:5) in SU 06, the other one (T. 1:6; T.6:2) came to light a little deeper in SU 09 near a stone, which was adjacent to the monumental block SU 04. Both fibulae are Certosa fibulae of type VII, probably in variant h (Teržan 1977, 383, 436f., 371 map 42). It is therefore a late form of the Certosa fibulae which came in fashion from the late fourth century onwards. This type is also known from other sites in Istria (Fig. 18A). The fibula from quadrant A1 has a fine incised ornament in the shape of a triangle

[17] Mužar pronađen na Monkodonji u sondi III, na akropoli (Hellmuth Kramberger 2017, 235, T.113:4) sličan je jednom od dva primjerka s Monbroda (T.4:2).

[18] Nekoliko glinenih prstenova okruglog presjeka pronađeno je i u Nezakciju (Mihovilić 2001, 261, 400, T. 102, 16-18).

[17] A mortar found in Monkodonja in trench III on the Acropolis (Hellmuth Kramberger 2017, 235, T. 113,4) is similar to one of the two pieces from Monbrodo (T. 4:2).

[18] Several clay rings with a round cross-section were also found in Nesactium (Mihovilić 2001, 261, 400, T. 102, 16-18).

[19] See for example: Mihovilić 2001, 261 - A finding situation near the hearth is for example documented in the north-eastern Slovenian site Grajski grič (Dular 2013, 154, T. 44,11). Another interpretation relates the clay rings to textile manufacture (loom weights) (Tecco Hvala, Dular, Kocuvan 2004, 16).

tumače kao stalci za posude[19]. Treba napomenuti da je nalaz iz Monbroda mnogo veći, no tumačenje predmeta kao stalka za posudu čini se poprilično vjerojatnim.

U sljedećem dijelu teksta ukratko ćemo obraditi nekoliko odabranih nalaza od različitih materijala.

Zbog svog kronološkog značaja, posebno su važni nalazi dvaju fragmenata certosa fibula (T.1:5-6; T.6:2,5) iz kvadranata A1 i B2. Dok je fragment jedne fibule nađen u neposrednoj blizini unutarnje strane zida (T.1:5; T.6:5) u SJ 06, drugi (T.1:6; T.6:2) je nađen malo dublje, u SJ 09 u blizini kamena, nedaleko od monumentalnog kamenog bloka SJ 04. Obje su certosa fibule tip VII, vjerojatno varijante h (Teržan 1977, 383, 436f., 371, karta 42). Riječ je o kasnom obliku certosa fibule, zastupljene od kraja 4. st. nadalje, također poznatom s drugih lokaliteta u Istri (sl. 18A). Fibula iz kvadranta A1 ima fino urezani ukras u obliku trokuta na gumbu. Sličan urezani ukras također se nalazi na primjerku iz Nezakcija (Mihovilić 2001, 353, T. 55, 40) (sl. 18B).

U posebne nalaze ubraja se perla od jantara pronađena na području kvadranta C1 u SJ 09 (T.6:4). Perla je oštećena s jedne strane, promjera je otprilike 1,5 cm i ovalnog je presjeka. Vrlo slična, iako nešto veća jantarna perla pronađena u Nezakciju, otkrivena je u razdoblju od 1901. do 1953. i više se ne može pripisati točnom arheološkom kontekstu (Mihovilić 2001, 233, 375, T. 77, 2) (sl. 19,2).

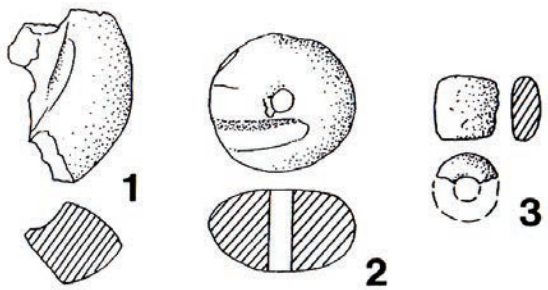
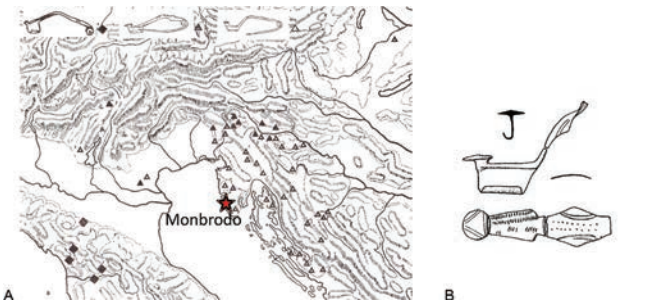


Fig. 19 Jantarne perle iz Nezakcija (prema Mihovilić 2001, 233, 375, T. 77, 2).
Fig. 19 Amber beads from Nesactium (after Mihovilić 2001, 233, 375, T. 77, 2).

Komad brončane troske (T.6:8) nalazi se u SJ 13, pokraj jedne od dviju malih posuda debelih stijenki (T.4:2) u kvadrantu B1. Na istom je mjestu nađen koštani alat/spatula (T.6:9), koji ima analogiju u primjerku s

[19] Vidi npr.: Mihovilić 2001, 261 - kontekst nalaza u blizini ognjišta zabilježen je, primjerice, na lokalitetu Grajski grič u sjeveroistočnoj Sloveniji (Dular 2013, 154, T. 44,11). Prema drugom tumačenju, glineni se prstenovi vezuju uz proizvodnju tekstila (utezi za tkanje) (Tecco Hvala, Dular, Kocuvan 2004, 16).

on the button. A similar incised decoration is also found on an example from Nesactium (Mihovilić 2001, 353, T. 55, 40) (Fig. 18B).



Sl. 18 A: Distribucija certosa fibula, tipa VII, varijanata e-h (prema Teržan 1977, 371, karta 42 - zvijezda = Monbrodo); B: certosa fibula s urezanim trokutom na dugmetu, Nezakcij (prema Mihovilić 2001, 353, T. 55, 40).
Fig. 18 A: Distribution of Certosa fibulae of type VII, variants e-h (after Teržan 1977, 371, map 42 - star = Monbrodo); B: Certosa fibula with incised triangle on the button, Nesactium (after Mihovilić 2001, 353, T. 55, 40).

An amber bead, found in the area of quadrant C1 in SU 09 belongs to the special small finds (Plate 6,4). The bead is damaged on one side. The diameter is approx. 1.5 cm and the cross-section has an oval shape. A very similar but somewhat larger amber bead is known from Nesactium, which was discovered between 1901 and 1953 and can no longer be assigned to an exact finding context (Mihovilić 2001, 233, 375, T. 77, 2) (Fig. 19,2).

A piece of bronze slag (T. 6:8) appeared in SU 13 close to one of the two small thick-walled vessels (T. 4:2) in quadrant B1. A bone tool/spatula (T. 6:9) that has a counterpart in Monkodonja[20] was discovered in the same area. During the removal of the uppermost layers (SU 01-03) two forged iron nails (T. 6:6-7) and a dark-blue glass bead (T. 6:3) came to light. The latter are possibly Roman shoe nails, as they were found, for example, on the surface of the hillfort of Monkodonja (Hänsel, Mihovilić, Teržan 2015, 441).

Trench 2

Trench 2 was placed at the inner edge of wall no. 4, which exists only as a semicircular structure at the western slope of Monbrodo on the border of a terrace of approximately 10 m width (Fig. 2). The size of the trench measured 1×4 m. The rectangular shape was chosen due to the dense vegetation along the wall, containing also bigger trees. The trench was divided in 4 quadrants (A1-A4) measuring 1 sq. m. The northern edge of the trench was initially placed a few centimeters before wall no. 4 but

[20] Mlakar 1998, 164, 185, No. 2 - The piece from Monkodonja was made from the metacarpus of a beef.

Monkodonje[20]. Tijekom uklanjanja najviših slojeva (SJ 01-03) pronađena su dva kovana željezna čavla (T.6:6-7) i tamnoplava staklena perla (T.6:3). Moguće je da je riječ o rimskim čavlima za cipele, kakvi su pronađeni, primjerice, na površini gradine Monkodonja (Hänsel, Mihovilić, Teržan 2015, 441).

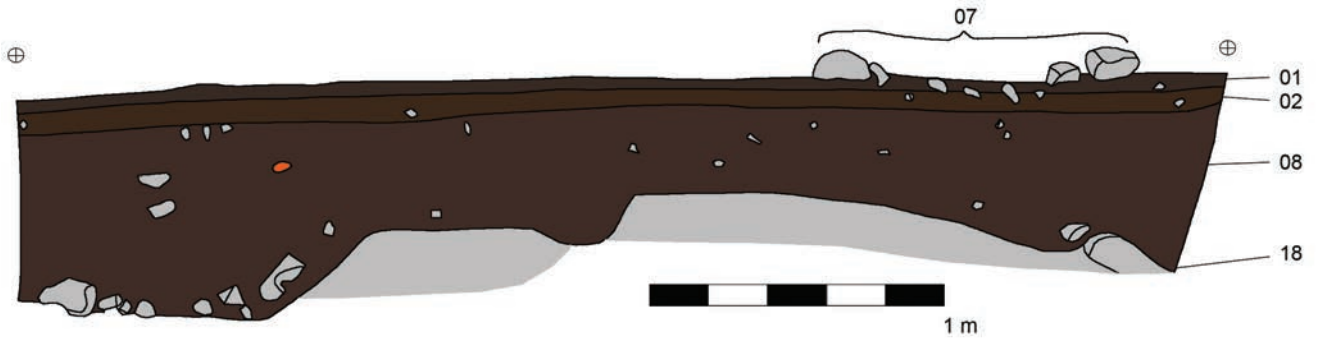
Sonda 2

Sonda 2 postavljena je uz unutarnji rub zida br. 4, koji se, kao polukružna struktura, nalazi samo na zapadnoj padini Monbroda, na rubu terase široke oko 10 m (sl. 2). Dimenzije sonde iznosile su 1×4 m. Pravokutni oblik sonde odabran je zbog guste vegetacije u kojoj je bilo i većeg drveća. Sonda je bila podijeljena u 4 kvadranta (A1-A4) veličine po 1 m². Sjeverni rub sonde početno je postavljen nekoliko centimetara ispred zida br. 4, ali je kasnije proširen kako bi uključio i unutarnji rub te strukture u profilu pa je tako kvadrant A1 povećan na nešto više od 1 m². Zid br. 4 dobro je očuvana struktura koja sadrži najmanje dvije faze gradnje. Dok visina zida na unutrašnjoj strani, prema terasi, iznosi otprilike do 1 m, zid je na vanjskoj strani viši i barem djelomično leži na matičnoj stijeni brda. U najistočnijem kvadrantu A4 sonda je obuhvatila i konstrukciju (SJ 7) koja je bila vidljiva na površini u sredini terase i koja se pružala od sjevera prema jugu, paralelno sa zidom br. 4. Struktura SJ 7 bila je vidljiva kao dva paralelna niza kamenja između kojih je bio oko 1 m široki međuprostor ispunjen popločenjem od gusto postavljenog manjeg kamenja.

Situacija definirana tijekom iskopavanja može se sumirati na sljedeći način: gornji, tamniji slojevi (SJ 01; SJ 02) bili su razmjerno tanki i poprilično prožeti korijenjem. Što se tiče strukture na površini kvadranta A4 (SJ 7), ispostavilo se da se vanjski nizovi kamenja i ispuna ne protežu ispod sloja SJ 02 već da se radi samo o jednom sloju kamenja, koje se ne nastavlja dublje u

later extended to include the inner edge of the structure in the profile, thus stretching quadrant A1 a little bit beyond 1 sq. m. Wall no. 4 is a well preserved structure consisting of at least two construction phases. Whilst the height of the wall from the inside of the terrace is approximately up to 1 m, the wall is higher from the outside, resting at least partly upon the bedrock of the hill. The outline of the trench included also in the easternmost quadrant A4 a structure visible on the surface (SU 7) proceeding from north to south, parallel to wall no. 4 in the middle of the terrace. The structure was visible as two parallel lines of limestone rocks leaving an interspace of ca. 1 m which was filled with a paving of densely packed smaller limestone rocks.

The situation during the excavation can be briefly summarized as follows: The upper darker layers (SU 01; SU 02) were comparatively thin and strongly pervaded by roots. Regarding the structure on the surface in quadrant A4 (SU 7) it turned out that the outer stones and the filling did not extend below layer (SU 02) and the stones were only placed in one level and not stacked vertically (Fig. 20). The following layer (SU 8) was distinguishable through its change in color into a dark reddish-brown but it kept the same characteristics as the layer above, except for the fact that the soil appeared to be more compressed. Besides a small amount of smaller limestone rocks, the layer occasionally contained pottery fragments of prehistoric and ancient dating. Additionally, scattered pieces of charcoal and very tiny pieces of clay were observed. This layer, between 50 and 70 cm thick, extended down to the bedrock of the hill (SU 18) which appeared to be completely untouched in this area (Fig. 21). As has been already visible from the outside of wall no. 4, it was possible to confirm that its dry stone construction rested upon the bedrock without any traces of later disturbances caused by digging (Fig. 22).



Sl. 20 Sonda 2, sjeverni profil (numeracija se odnosi na stratigrafske jedinice u tekstu).
Fig. 20 Trench 2, north-profile (numbering according to SU in the text).

[20] Mlakar 1998, 164, 185, br. 2 - primjerak s Monkodonje izrađen je od metakarpalne kosti goveda.

Sl. 21 Sonda 2, nakon uklanjanja SJ 2.
Fig. 21 Trench 2, after removing SU 2.

Sl. 22 Sonda 2, matična stijena.
Fig. 22 Trench 2, bedrock.

vertikali (sl. 20). Sljedeći sloj (SJ 8) započeo je promjenom boje sedimenta u tamnu crvenkastosmeđu (5 YR 2.5/2), ali je zadržao jednaka svojstva kao i gornji sloj, osim činjenice da se zemlja doimala zbijenije. Osim skromne količine manjeg kamenja, sloj je mjestimično sadržavao ulomke prapovijesne i antičke keramike. Pored toga, uočeni su razbacani komadi drvenog ugljena i sićušnih komadića gline. Ovaj sloj, debeo između 50 i 70 cm, protezao se sve do matične stijene brda (SJ 18), koja se činila posve netaknuta u ovom području (sl. 21). Kako je već bilo vidljivo s vanjske strane zida br. 4, potvrđeno je da suhozidna konstrukcija leži na matičnoj stijeni te da nema pokazatelja naknadnih narušavanja uzrokovanih kopanjem (sl. 22).

Interpretacija sonde 2

Na temelju spoznaja prikupljenih tijekom istraživanja sonde 2, gotovo posve sigurno možemo pretpostaviti da se na prostoru iza zida br. 4 nisu nalazile ikakve naseobinske strukture. Relativno malen broj prapovijesnih i antičkih

Interpretation of trench 2

Based upon the insights gathered through the examination of trench 2, it is quite safe to assume that the area behind wall no. 4 was not occupied by any settlement structures. The existence of comparatively few finds of prehistoric and ancient sherds in this area are best explainable by erosive processes that transported material downhill from the plateau. Sporadic disposal of trash by the inhabitants of the settlement in this area is also a possible explanation. It is, furthermore, not excludable that the entire terrace was artificially filled up. This would match with the observation that wall no. 4 rested directly on the bedrock. In this scenario the wall would have been erected first and then the sloping space between the wall and the hillside were filled up with soil which might have come from another area of Monbrodo. In any case, the paved path on the surface and the semicircular wall no. 4 can be understood as rather recent constructions for agricultural purposes or as supply structures from the Second World War.

keramičkih nalaza na ovome mjestu može se najbolje objasniti erozivnim procesima koji su prenosili materijal s platoa nizbrdo. Moguće je i da je na ovome mjestu sporadično završavao otpadni materijal iz naselja. Nadalje, nije isključeno ni da je čitava terasa zapunjena umjetno, što bi odgovaralo premisi da je zid br. 4 postavljen izravno na matičnoj stijeni. U tom je slučaju prvo bio sagrađen zid, a potom je prostor padine između zida i brda bio ispunjen zemljom, koja je mogla biti donesena s drugog mjesta na Monbrodu. U svakom slučaju, popločeni put koji se nalazio na površini i polukružni zid br. 4 mogu se interpretirati kao razmjerno recentne konstrukcije izgrađene u poljoprivredne svrhe ili za potrebe opskrbe položaja u Drugom svjetskom ratu.

4. SAŽETAK I PREGLED

Iskopavanje dviju relativno malih sondi na brdskom lokalitetu Monbrodu pružilo je vrijedne podatke važne za razumijevanje naseljenosti lokaliteta i položaja Monbroda unutar lokalnog sustava naselja.

U pogledu postavljenih ciljeva iskopavanja, može se zaključiti da je Monbrodo bio naseljen od srednjeg brončanog doba do kasnog željeznog doba (4. stoljeće pr. n. e.), no u trenutačnoj fazi istraženosti nije moguće ustvrditi je li lokalitet bio naseljen kontinuirano ili u nekoliko faza. Aktivnosti na brdu također su potvrđene i za kasnija razdoblja.

Iako točan opseg područja prapovijesnog naselja još uvijek nije jasno ustanovljen, čini se da je bilo ograničeno na prostor opasan kružnim zidovima. Na budućim je istraživanjima da utvrde je li dio brda između zidova br. 2 i 3 pripadao prostoru naselja.

Rezultati iskopavanja pokazuju da je Monbrodo potencijalno ključan lokalitet ovog područja, s obzirom na to da se radi o prvoj lokaciji koja pruža jasan stratigrafski slijed. Također će poboljšati naše spoznaje o kasnom brončanom dobu te možda razjasniti prijelaz u rano željezno doba.

Sudeći po keramici, Monbrodo i Monkodonja mogli su biti istodobno nastanjeni barem kroz određeno vrijeme, što podupire ideju o hijerarhijskom sustavu naselja. Jesu li se brončanodobni stanovnici Monbroda u političkom i društvenom smislu oslanjali na mnogo veće naselje Monkodonju, pitanje je na koje mogu odgovoriti samo buduća intenzivna istraživanja.

4. SUMMARY AND OUTLOOK

The excavation of two comparatively small trenches on the hill site of Monbrodo has provided a number of valuable insights that are of great significance for understanding the occupation of the site and the position of Monbrodo within the local settlement system.

In regard to the formulated objectives of the excavation, it can be asserted that Monbrodo was occupied from the Middle Bronze Age up to the Late Iron Age (fourth century BC), although at the current state of research it is not possible to ascertain whether the site was occupied continuously or in several stages. General activities on the hill are also confirmed for later periods.

Even though the exact extent of the prehistoric settlement area is not clear yet, it seems that it was limited to the area confined by the circular walls. It is up to future research to ascertain whether the section of the hill between wall no. 2 and 3 belonged to the settlement area.

The excavation results show that Monbrodo is a potential key site for the region since it is the first location that provides a clear stratigraphic sequence. It will also increase our knowledge on the Late Bronze Age and perhaps even clarify the transition to the Early Iron Age.

Judging by the pottery, Monbrodo and Monkodonja could have been occupied simultaneously, at least for a particular time, which supports the idea of a hierarchical settlement system. Whether the Bronze Age inhabitants of Monbrodo relied in political and social terms on the much bigger settlement of Monkodonja is, however, a question that can be only answered after intensified future investigations.

KATALOG NALAZA

T. 1

1. Sonda 1, kvadrant A1, SJ 02
Ulomak ručke amfore, keramika izrađena na lončarskom kolu. Bež boja unutarnje i vanjske površine, kao i presjeka. Poroznost je vrlo fina, keramika je vrlo čvrsta. Promjer vrata amfore iznosi otprilike 12 cm, maksimalna debljina stijenke iznosi 1,5 cm, maksimalna visina je 6 cm.

2. Sonda 1, kvadrant D2, SJ 02
Ulomak oboda vrča, keramika izrađena na lončarskom kolu. Crni premaz na unutarnjoj i vanjskoj površini, bež-siva boja presjeka. Poroznost je vrlo fina, keramika je vrlo čvrsta. Promjer vrča iznosi otprilike 21 cm, maksimalna debljina stijenke iznosi 0,6 cm, maksimalna visina je 2,6 cm.

3. Sonda 1, kvadrant A2, SJ 02
Plastična aplikacija, bradavica (tutul), ručno izrađena keramika, vjerojatno dio dna velike zdjele. Površina unutarnje i vanjske strane zbog erozije nije očuvana, bež boja unutarnje i vanjske površine, presjek crne boje. Poroznost je gruba, keramika je čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina iznosi 2,3 cm, maksimalna visina je 4 cm.

4. Sonda 1, kvadrant C1, SJ 05
Podnožje tronošca, ručno izrađena keramika. Površina unutarnje i vanjske strane vrlo grubo zaglađena, boja unutarnje i vanjske površine crvenkasto-narančasta, kao i presjeka. Poroznost je gruba, keramika je čvrsta. Sastav gline GA c (Hellmuth Kramberger 2017, sl. 25, 31). Maksimalna debljina iznosi 5,8 cm, maksimalna visina je 9,4 cm.

5. Sonda 1, kvadrant A1, SJ 06
Certosa fibula, bronca, ukrašeno urezanim trokutom, igla nije očuvana. Maksimalna duljina iznosi 3,7 cm, maksimalna visina je 1,6 cm.

6. Sonda 1, kvadrant B2, SJ 09
Certosa fibula, bronca, igla nije očuvana. Maksimalna duljina iznosi 4,5 cm, maksimalna visina je 1,8 cm.

T. 2

1. Sonda 1, kvadrant A1, SJ 09
Ulomci duboke zdjele, ručno izrađena keramika. Površina unutarnje i vanjske strane zbog erozije nije očuvana, boja unutarnje i vanjske površine crvenkasto-

CATALOGUE OF FINDS

T. 1

1. Trench 1, Quadrant A1, SU 02
Fragment of an amphora-handle, wheel-made pottery. Beige color on internal and external surface as well as in the core. Porosity is very fine, the pottery is very hard. The diameter of the amphora-neck is app. 12 cm, the maximum wall thickness is 1.5 cm, the maximum height is 6 cm.

2. Trench 1, Quadrant D2, SU 02
Rim-fragment of a jar, wheel-made pottery. Black varnish on internal and external surface, beige-gray color in the cross-section. Porosity is very fine, the pottery is hard. The diameter of the jar is app. 21 cm, the maximum wall thickness is 0.6 cm, the maximum height is 2.6 cm.

3. Trench 1, Quadrant A2, SU 02
Plastic application, bulge (Tutulus), hand-made pottery, probably part of a bottom from a large bowl. Surface on the internal and external side not preserved due to erosion, color on the internal and external surface beige, core of black color. Porosity is course, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum thickness is 2.3 cm, the maximum height is 4 cm.

4. Trench 1, Quadrant C1, SU 05
Foot of a tripod, hand-made pottery. Surface on the internal and external side very roughly smoothed, color on the internal and external surface reddish-orange as well as in the core. Porosity is coarse, the pottery is hard. Clay fabric GA c (Hellmuth Kramberger 2017, fig. 25, 31). The maximum thickness is 5.8 cm, the maximum height is 9.4 cm.

5. Trench 1, Quadrant A1, SU 06
Certosa-fibula, bronze, ornamented with an incised triangle, needle not preserved. The maximum length is 3.7 cm, the maximum height is 1.6 cm.

6. Trench 1, Quadrant B2, SU 09
Certosa-fibula, bronze, needle not preserved. The maximum length is 4.5 cm, the maximum height is 1.8 cm.

T. 2

1. Trench 1, Quadrant A1, SU 09
Fragments of a deep bowl, hand-made pottery. Surface on the internal and external side not preserved due to erosion, color on the internal and external surface reddish-

smeđa, presjek crne boje. Poroznost je fina, keramika je čvrsta. Sastav gline MA b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer duboke zdjele iznosi otprilike 12,4 cm, maksimalna debljina stijenke iznosi 0,9 cm, maksimalna visina je 5,7 cm.

2. Sonda 1, kvadrant A1, SJ 09
Ulomci vrča, ručno izrađena keramika. Površina unutarnje i vanjske strane grubo zaglađena, unutarnja i vanjska površina u nijansama smeđe boje, presjek crno-smeđi. Poroznost je fina, keramika je čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 17,4 cm, promjer dna iznosi otprilike 11 cm, maksimalna debljina stijenke iznosi 1,4 cm, maksimalna visina (rekonstruirana) je 21,7 cm.

3. Sonda 1, kvadrant B1, SJ 09
Ulomak oboda, vjerojatno tronošca, ručno izrađena keramika. Površina unutarnje strane polirana, vanjska strana zaglađena, boja unutarnje površine crna, vanjske površine tamonosmeđa, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MB b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda nije moguće odrediti (vjerojatno vrlo velik), maksimalna debljina stijenke iznosi 1,3 cm, maksimalna visina iznosi 5,4 cm.

4. Sonda 1, kvadrant A1, SJ 09
Ulomak oboda tronošca, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine narančasto-bež, kao i u presjeku. Poroznost je gruba, keramika je čvrsta. Sastav gline GC b (Hellmuth Kramberger 2017, sl. 25, 31). Promjer oboda iznosi otprilike 43 cm, maksimalna debljina stijenke iznosi 3,5 cm, maksimalna visina je 5,2 cm.

T. 3

1. Sonda 1, kvadrant B1, SJ 13
Ukrašeni ulomak stijenke s plosnatom drškom, vjerojatno dio vrča ili pithosa, ručno izrađena keramika. Površina unutarnje strane zbog erozije nije očuvana, boja unutarnje površine crna, vanjske površine bež, boja presjeka bež i crna. Poroznost je fina, keramika je čvrsta. Sastav gline MB a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina stijenke iznosi 1 cm, maksimalna visina je 4,7 cm.

2. Sonda 1, kvadrant A1/B1, SJ 13
Ulomak stijenke s drškom, otisak prsta, vjerojatno dio

brown, core of black color. Porosity is fine, the pottery is hard. Clay fabric MA b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the deep bowl is app. 12.4 cm, the maximum wall thickness is 0.9 cm, the maximum height is 5.7 cm.

2. Trench 1, Quadrant A1, SU 09
Fragments of a jar, hand-made pottery. Surface on the internal and external side roughly smoothed, color on the internal and external surface shades of brown, color in the cross-section black-brown. Porosity is fine, the pottery is hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 17.4 cm, the diameter of the bottom is app. 11 cm, the maximum wall thickness is 1.4 cm, the maximum height (reconstructed) is 21.7 cm.

3. Trench 1, Quadrant B1, SU 09
Rim-fragment, probably of a tripod, hand-made pottery. Surface on the internal side burnished, smoothed on the external surface, color on the internal surface black and on the external surface dark brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MB b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is not defined (probably very large), the maximum wall thickness is 1.3 cm, the maximum height is 5.4 cm.

4. Trench 1, Quadrant A1, SU 09
Rim-fragment of a tripod, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface orange-beige as well as in the core. Porosity is coarse, the pottery is hard. Clay fabric GC b (Hellmuth Kramberger 2017, fig. 25, 31). The diameter of the rim is app. 43 cm, the maximum wall thickness is 3.5 cm, the maximum height is 5.2 cm.

T. 3

1. Trench 1, Quadrant B1, SU 13
Ornamented wall-shard with a flat grip, probably from a jar or pithos, hand-made pottery. Surface on the internal and external side not preserved due to erosion, color on the internal surface black and on the external surface beige, color in the cross-section beige and black. Porosity is fine, the pottery is hard. Clay fabric MB a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum wall thickness is 1 cm, the maximum height is 4.7 cm.

2. Trench 1, Quadrant A1/B1, SU 13
Wall-shard with grip, finger-imprint, probably from a jar,

vrča, ručno izrađena keramika. Površina unutarnje strane polirana, vanjska površina zaglađena, boja unutarnje površine crna, vanjske površine bež, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina stijenke iznosi 0,8 cm, maksimalna visina je 2,8 cm.

3. Sonda 1, kvadrant C1, SJ 13
Ulomak pršljena za vreteno, pečena glina. Boja unutarnje i vanjske površine narančasta, kao i u presjeku. Poroznost vrlo fina, čestice su gotovo nevidljive golim okom. Maksimalna debljina iznosi 1,4 cm, maksimalna visina je 1,4 cm.

4. Sonda 1, kvadrant C1, SJ 13
Ulomak stijenke s plosnatom lučnom drškom, vjerojatno dio vrča ili pithosa, ručno izrađena keramika. Površina unutarnje i vanjske strane zbog erozije nije očuvana, boja unutarnje površine crna, vanjske površine tamnosmeđa, boja presjeka crna s nijansom sive. Poroznost je fina, keramika je čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina stijenke iznosi 0,9 cm, maksimalna visina je 5,2 cm.

5. Sonda 1, kvadrant D1, SJ 13
Ulomak trokutaste ručke, izvorno pričvršćene na posudu pomoću malog prstena, ručno izrađena keramika. Površina unutarnje i vanjske strane polirana, boja unutarnje i vanjske površine narančasta, kao i u presjeku. Poroznost je fina, keramika je čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna visina iznosi 3,2 cm, maksimalni presjek ručke je 1,5 cm.

6. Sonda 1, kvadrant B1, SJ 13
Ulomak trokutaste ručke, izvorno pričvršćene na posudu pomoću malog prstena, ručno izrađena keramika. Površina unutarnje i vanjske strane polirana, boja unutarnje i vanjske površine smeđa, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna visina iznosi 3,5 cm, maksimalni presjek ručke je 1,9 cm.

7. Sonda 1, kvadrant B1, SJ 13
Ulomak masivne trokutaste ručke, vjerojatno dio amforastog pithosa, ručno izrađena keramika. Površina unutarnje i vanjske strane vrlo dobro polirana, boja unutarnje i vanjske površini bež, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MA a

hand-made pottery. Surface on the internal side burnished, smoothed on the external surface, color on the internal surface black and on the external surface beige, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum wall thickness is 0.8 cm, the maximum height is 2.8 cm.

3. Trench 1, Quadrant C1, SU 13
Fragment of a spindle whorl, burnt clay. Color on the internal and external surface orange as well as in the core. Porosity very fine, with the naked eye almost no particles visible. The maximum thickness is 1.4 cm, the maximum height is 1.4 cm.

4. Trench 1, Quadrant C1, SU 13
Wall-shard with a flat arched grip, probably from a jar, hand-made pottery. Surface on the internal and external side due to erosion not preserved, color on the internal surface black and on the external surface dark-brown, color in the cross-section black with a shade of gray. Porosity is fine, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum wall thickness is 0.9 cm, the maximum height is 5.2 cm.

5. Trench 1, Quadrant D1, SU 13
Fragment of a triangular-handle, originally connected to the vessel with a small spigot, hand-made pottery. Surface on the internal and external side burnished, color on the internal and external surface orange as well as in the core. Porosity is fine, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum height is 3.2 cm, the maximum cross-section of the handle is 1.5 cm.

6. Trench 1, Quadrant B1, SU 13
Fragment of a triangular-handle, originally connected to the vessel with a small spigot, hand-made pottery. Surface on the internal and external side burnished, color on the internal and external surface brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum height is 3.5 cm, the maximum cross-section of the handle is 1.9 cm.

7. Trench 1, Quadrant B1, SU 13
Fragment of a massive triangular-handle, probably from an amphora-shaped pithos, hand-made pottery. Surface on the internal and external side very well burnished, color on the internal and external surface beige, color in the cross-section black. Porosity is fine, the pottery is

(Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna visina iznosi 5,8 cm, maksimalni presjek ručke je 1,6 cm.

8. Sonda 1, kvadrant C1, SJ 13
Gotovo čitav vrč okruglog oblika, dno u potpunosti očuvano, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine crvenkasto-smeđe nijanse, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MB b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 19 cm, promjer dna iznosi 9 cm, maksimalna debljina stijenke iznosi 1,5 cm, maksimalna visina (rekonstruirana) iznosi 18,2 cm.

T. 4

1. Sonda 1, kvadrant C1, SJ 13
Dio male posude s izvijenim obodom i masivnim dnom, gornji rub oboda vrlo nepravilan, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine crna, kao i u presjeku. Poroznost je fina, keramika je čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 8,6 cm, maksimalna debljina stijenke iznosi 1,4 cm, maksimalna visina je 4,8 cm.

2. Sonda 1, kvadrant B1, SJ 13
Dio male posude s okomitim obodom i masivnim dnom, očuvan je čitav profil, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine smeđa, kao i u presjeku. Poroznost je fina, keramika je čvrsta. Sastav gline MC a (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 6,6 cm, maksimalna debljina stijenke iznosi 1,8 cm, maksimalna visina je 4,5 cm.

3. Sonda 1, kvadrant B1, SJ 13
Ulomak oboda i ramena jajolikog vrča s uskim otvorom, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine smeđa s nijansama crne, kao i u presjeku. Poroznost je fina, keramika je vrlo čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 11 cm, maksimalna debljina stijenke iznosi 1,3 cm, maksimalna visina je 6,4 cm.

4. Sonda 1, kvadrant C1, SJ 13
Ulomak oboda i trbuha jajolikog vrča s uskim otvorom, prijelaz iz oboda u rame stepenasto profiliran, ručno izrađena keramika. Površina unutarnje i vanjske strane grubo zaglađena, boja unutarnje i vanjske površine

hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum height is 5.8 cm, the maximum cross-section of the handle is 1.6 cm.

8. Trench 1, Quadrant C1, SU 13
Almost complete jar of a globular shape, bottom entirely preserved, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface shades of reddish-brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MB b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 19 cm, the diameter of the bottom is 9 cm, the maximum wall thickness is 1.5 cm, the maximum height (reconstructed) is 18.2 cm.

T. 4

1. Trench 1, Quadrant C1, SU 13
Part of a small vessel with everted rim and massive bottom, upper edge of the rim very irregular, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface black as well as in the core. Porosity is fine, the pottery is hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 8.6 cm, the maximum wall thickness is 1.4 cm, the maximum height is 4.8 cm.

2. Trench 1, Quadrant B1, SU 13
Part of a small vessel with vertical rim and massive bottom, entire profile preserved, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface brown as well as in the core. Porosity is fine, the pottery is hard. Clay fabric MC a (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 6.6 cm, the maximum wall thickness is 1.8 cm, the maximum height is 4.5 cm.

3. Trench 1, Quadrant B1, SU 13
Rim- and shoulder-fragment of an ovoid jar with narrow opening, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface brown with shades of black as well as in the core. Porosity is fine, the pottery is very hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 11 cm, the maximum wall thickness is 1.3 cm, the maximum height is 6.4 cm.

4. Trench 1, Quadrant C1, SU 13
Rim- and belly-fragment of an ovoid jar with narrow opening, rim shows ledge on the outside, hand-made pottery. Surface on the internal and external side roughly

smeđa, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 12,8 cm, maksimalna debljina stijenke iznosi 1,6 cm, maksimalna visina je 11,7 cm.

5. Sonda 1, kvadrant B1, SJ 13
Ulomak oboda vrča, gornji rub oboda vrlo nepravilan, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine smeđa s nijansama crne, boja presjeka crna. Poroznost je fina, keramika je vrlo čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 17,6 cm, maksimalna debljina stijenke iznosi 1,2 cm, maksimalna visina je 6,3 cm.

T. 5

1. Sonda 1, kvadrant C1, SJ 16-17
Ulomak oboda i trbuha male kuglaste posude, vjerojatno šalice, ručno izrađena keramika. Površina unutarnje strane polirana, vanjska površina uglačana, boja unutarnje i vanjske površine siva, kao i u presjeku. Poroznost je vrlo fina, keramika je vrlo čvrsta. Sastav gline FA (Hellmuth Kramberger 2017, sl. 23, 31). Promjer oboda iznosi otprilike 6,4 cm, maksimalna debljina stijenke iznosi 0,3 cm, maksimalna visina je 4,2 cm.

2. Sonda 1, kvadrant A1, SJ 15
Ulomak stijenke s dijelom leptiraste drške, vjerojatno dio zdjele, ručno izrađena keramika. Površina unutarnje i vanjske strane dobro polirana, boja unutarnje površine crna, vanjske površine mrljavo narančasto-crna, boja presjeka crna. Poroznost je vrlo fina, keramika je vrlo čvrsta. Sastav gline MA a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina stijenke iznosi 0,7 cm, maksimalna visina je 4 cm.

3. Sonda 1, kvadrant B1, SJ 15
Ulomak stijenke s tri paralelne plastične trake u obliku slova V, vjerojatno dio vrča ili pithosa, ručno izrađena keramika. Površina unutarnje i vanjske strane polirana, vanjska površina sjajna i s tragovima poliranja, boja unutarnje površine crna, vanjske površine svjetlosmeđa, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline FA (Hellmuth Kramberger 2017, sl. 23, 31). Maksimalna debljina stijenke iznosi 1,2 cm, maksimalna visina je 3,3 cm.

4. Sonda 1, kvadrant B1, SJ 15
Ulomak stijenke s lučnom plastičnom trakom, vjerojatno dio vrča ili pithosa, ručno izrađena keramika. Površina unutarnje i vanjske strane zbog erozije nije očuvana,

smoothed, color on the internal and external surface brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 12.8 cm, the maximum wall thickness is 1.6 cm, the maximum height is 11.7 cm.

5. Trench 1, Quadrant B1, SU 13
Rim-fragment of jar, upper edge of the rim very irregular, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface brown with shades of black, color in the cross-section black. Porosity is fine, the pottery is very hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 17.6 cm, the maximum wall thickness is 1.2 cm, the maximum height is 6.3 cm.

T. 5

1. Trench 1, Quadrant C1, SU 16-17
Rim- and belly-fragment of a small spherical vessel, probably a cup, hand-made pottery. Surface on the internal side burnished, polished on the external surface, color on the internal and external surface gray as well as in the core. Porosity is very fine, the pottery is hard. Clay fabric FA (Hellmuth Kramberger 2017, fig. 23, 31). The diameter of the rim is app. 6.4 cm, the maximum wall thickness is 0.3 cm, the maximum height is 4.2 cm.

2. Trench 1, Quadrant A1, SU 15
Wall-shard with part of a "butterfly-shaped" grip, probably from a bowl, hand-made pottery. Surface on the internal and external side well burnished, color on the internal surface black and on the external surface blotchy orange-black, color in the cross-section black. Porosity is very fine, the pottery is hard. Clay fabric MA a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum wall thickness is 0.7 cm, the maximum height is 4 cm.

3. Trench 1, Quadrant B1, SU 15
Wall-shard with three parallel v-shaped plastic ledges, probably from a jar or pithos, hand-made pottery. Surface on the internal and external side burnished, gloss and traces of burnishing on the external side, color on the internal surface black and on the external surface light brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric FA (Hellmuth Kramberger 2017, fig. 23, 31). The maximum wall thickness is 1.2 cm, the maximum height is 3.3 cm.

4. Trench 1, Quadrant B1, SU 15
Wall-shard with arched plastic ledge, probably from a jar or pithos, hand-made pottery. Surface on the internal

tragovi sekundarnog pečenja, boja unutarnje površine siva, vanjske površine bež-ružičasta, boja presjeka siva. Poroznost je fina, keramika je čvrsta. Sastav gline MB a (Hellmuth Kramberger 2017, sl. 24, 31). Maksimalna debljina stijenke iznosi 0,8 cm, maksimalna visina je 5,7 cm.

5. Sonda 1, kvadrant A1, SJ 15
Dio glinenog predmeta u obliku prstena pravokutnog presjeka, slabo pečen, ručno izrađen. Površina unutarnje i vanjske strane vrlo grubo zaglađena, boja unutarnje i vanjske površine smeđa, boja presjeka crna. Poroznost je gruba, keramika je čvrsta. Glini je dodana velika količina organskog materijala (slame). Promjer otprilike iznosi 32 cm, maksimalna debljina iznosi 5,7 cm.

6. Sonda 1, kvadrant B1, SJ 15
Ulomak oboda i ramena cilindričnog vrča, ostaci odlomljene drške ili plastičnog ukrasa, ručno izrađena keramika. Površina unutarnje i vanjske strane grubo zaglađena, boja unutarnje i vanjske površine smeđa, boja presjeka crna. Poroznost je fina, keramika je čvrsta. Sastav gline MB b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 16,4 cm, maksimalna debljina stijenke iznosi 1,4 cm, maksimalna visina je 7,2 cm.

7. Sonda 1, kvadrant B1, SJ 15
Ulomak oboda i ramena vrča, ručno izrađena keramika. Površina unutarnje i vanjske strane zaglađena, boja unutarnje i vanjske površine smeđa s nijansama narančaste, kao i u presjeku. Poroznost je fina, keramika je čvrsta. Sastav gline MC b (Hellmuth Kramberger 2017, sl. 24, 31). Promjer oboda iznosi otprilike 22,6 cm, maksimalna debljina stijenke iznosi 1,4 cm, maksimalna visina je 11,3 cm.

T. 6

1. Sonda 1, kvadrant B1/C1, iz čišćenja istočnog profila
Dva ulomka posude izrađene na lončarskom kolu, tip "Alto-Adriatico". Površina unutarnje i vanjske strane svjetlobež boje, slikano tamnosmeđim pigmentom. Poroznost je fina, keramika je vrlo čvrsta.

2. Sonda 1, kvadrant A1, SJ 06
Certosa fibula, bronca, ukrašena urezanim trokutom, igla nije očuvana. Maksimalna duljina iznosi 3,7 cm, maksimalna visina je 1,6 cm.

3. Sonda 1, kvadrant A1-B1, SJ 03
Staklena perla. Tamnoplava boja, s okomitim brazdama. Promjer iznosi otprilike 0,8 cm.

and external side not preserved due to erosion, traces of secondary burning, color on the internal surface gray and on the external surface beige-pink, color in the cross-section gray. Porosity is fine, the pottery is hard. Clay fabric MB a (Hellmuth Kramberger 2017, fig. 24, 31). The maximum wall thickness is 0.8 cm, the maximum height is 5.7 cm.

5. Trench 1, Quadrant A1, SU 15
Part of a ring-shaped clay-object with rectangular cross-section, badly burned, hand-made. Surface on the internal and external side very roughly smoothed, color on the internal and external surface brown, color in the cross-section black. Porosity is coarse, the pottery is hard. Clay is tempered with a significant amount of organic pieces (straw). The diameter is app. 32 cm, the maximum thickness is 5.7 cm.

6. Trench 1, Quadrant B1, SU 15
Rim- and shoulder-fragment of a cylindrical jar, traces of broken-off grip or plastic ornamentation, hand-made pottery. Surface on the internal and external side roughly smoothed, color on the internal and external surface brown, color in the cross-section black. Porosity is fine, the pottery is hard. Clay fabric MB b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 16.4 cm, the maximum wall thickness is 1.4 cm, the maximum height is 7.2 cm.

7. Trench 1, Quadrant B1, SU 15
Rim- and shoulder-fragment of jar, hand-made pottery. Surface on the internal and external side smoothed, color on the internal and external surface brown with shades of orange as well as in the core. Porosity is fine, the pottery is hard. Clay fabric MC b (Hellmuth Kramberger 2017, fig. 24, 31). The diameter of the rim is app. 22.6 cm, the maximum wall thickness is 1.4 cm, the maximum height is 11.3 cm.

T. 6

1. Trench 1, Quadrant B1/C1, found while cleaning the eastern profile
Two fragments of a wheel-made vessel, "Alto-Adriatico" type. Surface on the internal and external side of bright beige color, dark brown paint. Porosity is fine, the pottery is very hard.

2. Trench 1, Quadrant A1, SU 06
Certosa-fibula, bronze, ornamented with an incised triangle, needle not preserved. The maximum length is 3.7 cm, the maximum hight is 1.6 cm.

4. Sonda 1, kvadrant C1, SJ 09
Jantarna perla. Ovalni presjek, oštećena na jednoj strani. Promjer iznosi otprilike 1,5 cm.

5. Sonda 1, kvadrant B2, SJ 09
Certosa fibula, bronca, igla nije očuvana. Maksimalna duljina iznosi 4,5 cm, maksimalna visina je 1,8 cm.

6. Sonda 1, kvadrant A1-B1, SJ 03
Kovani željezni čavao. Duljina oko 3 cm.

7. Sonda 1, kvadrant A1-B1, nalaz izvan intaktnog sloja
Kovani željezni čavao. Duljina iznosi otprilike 1 cm.

8. Sonda 1, kvadrant B1, SJ 13
Brončana troska. Maksimalna duljina iznosi otprilike 2 cm.

9. Sonda 1, kvadrant B1, SJ 13
Koštani alat/spatula. Maksimalna duljina iznosi otprilike 10 cm, širina iznosi otprilike 4,5 cm.

3. Trench 1, Quadrant A1-B2, SU 03
Glass-bead. Dark-Blue color with vertical grooves. Diameter is app. 0,8 cm.

4. Trench 1, Quadrant C1, SU 09
Amber bead. Oval cross-section, damaged on one side. Diameter is app. 1,5 cm.

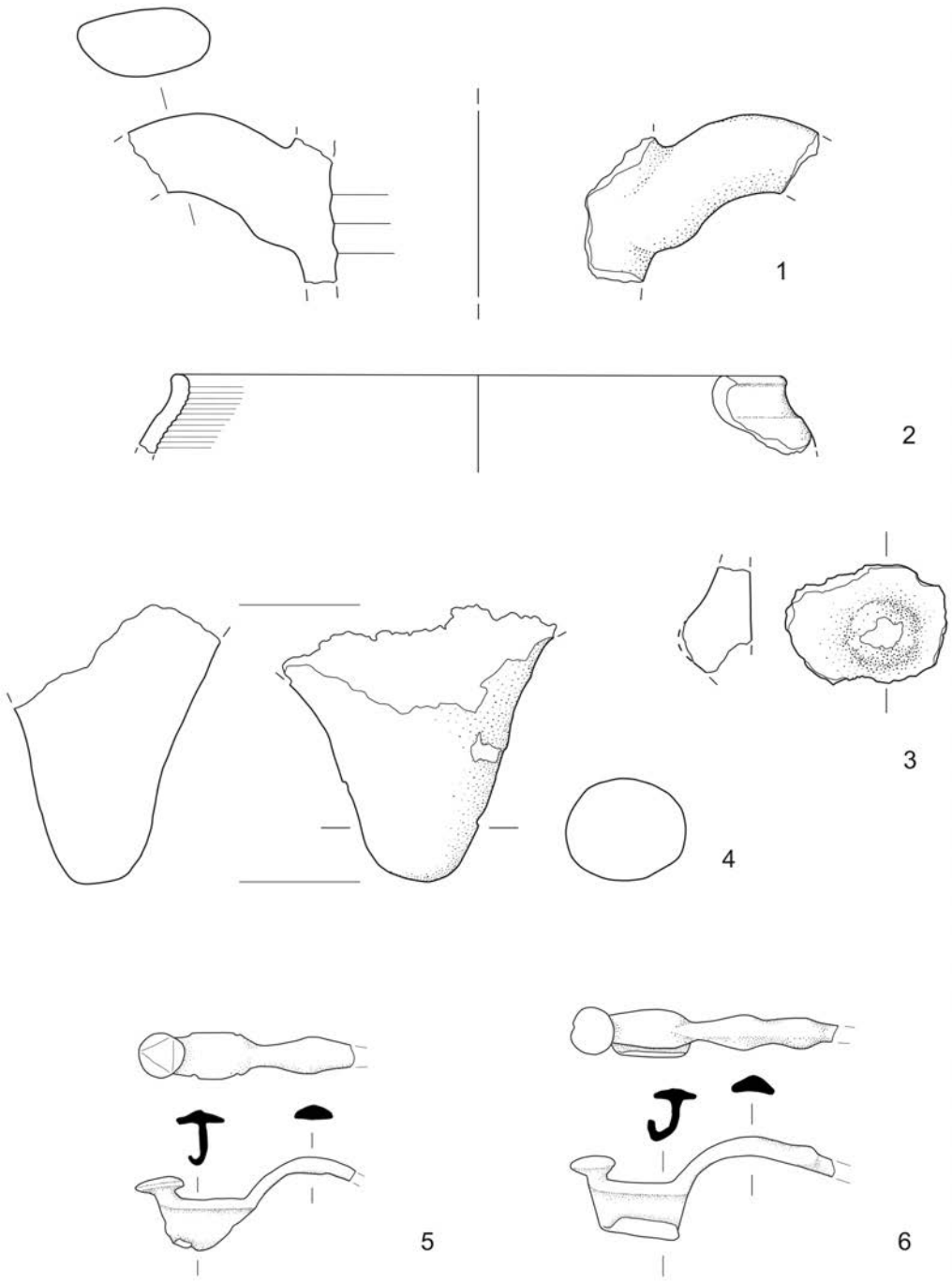
5. Trench 1, Quadrant B2, SU 09
Certosa-fibula, bronze, needle not preserved. The maximum length is 4.5 cm, the maximum height is 1.8 cm.

6. Trench 1, Quadrant A1-B2, SU 03
Forged iron nail. Length app. 3 cm.

7. Trench 1, Quadrant A1-B2, scattered find
Forged iron nail. Length is app. 1 cm.

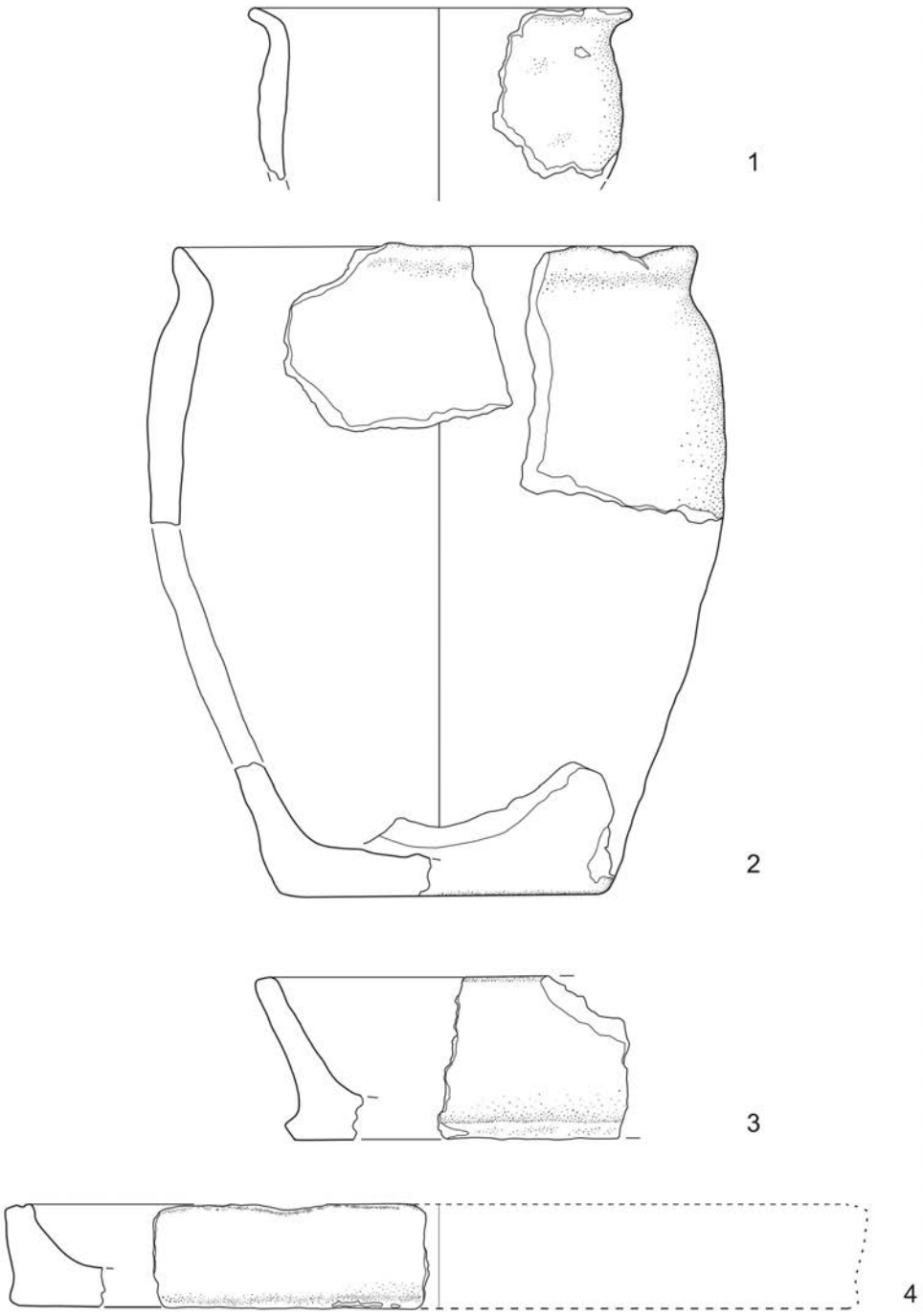
8. Trench 1, Quadrant B1, SU 13
Bronze slag. The maximum length is app. 2 cm.

9. Trench 1, Quadrant B1, SU 13
Bone tool/spatula. The maximum length is app. 10 cm, width is app. 4,5 cm.

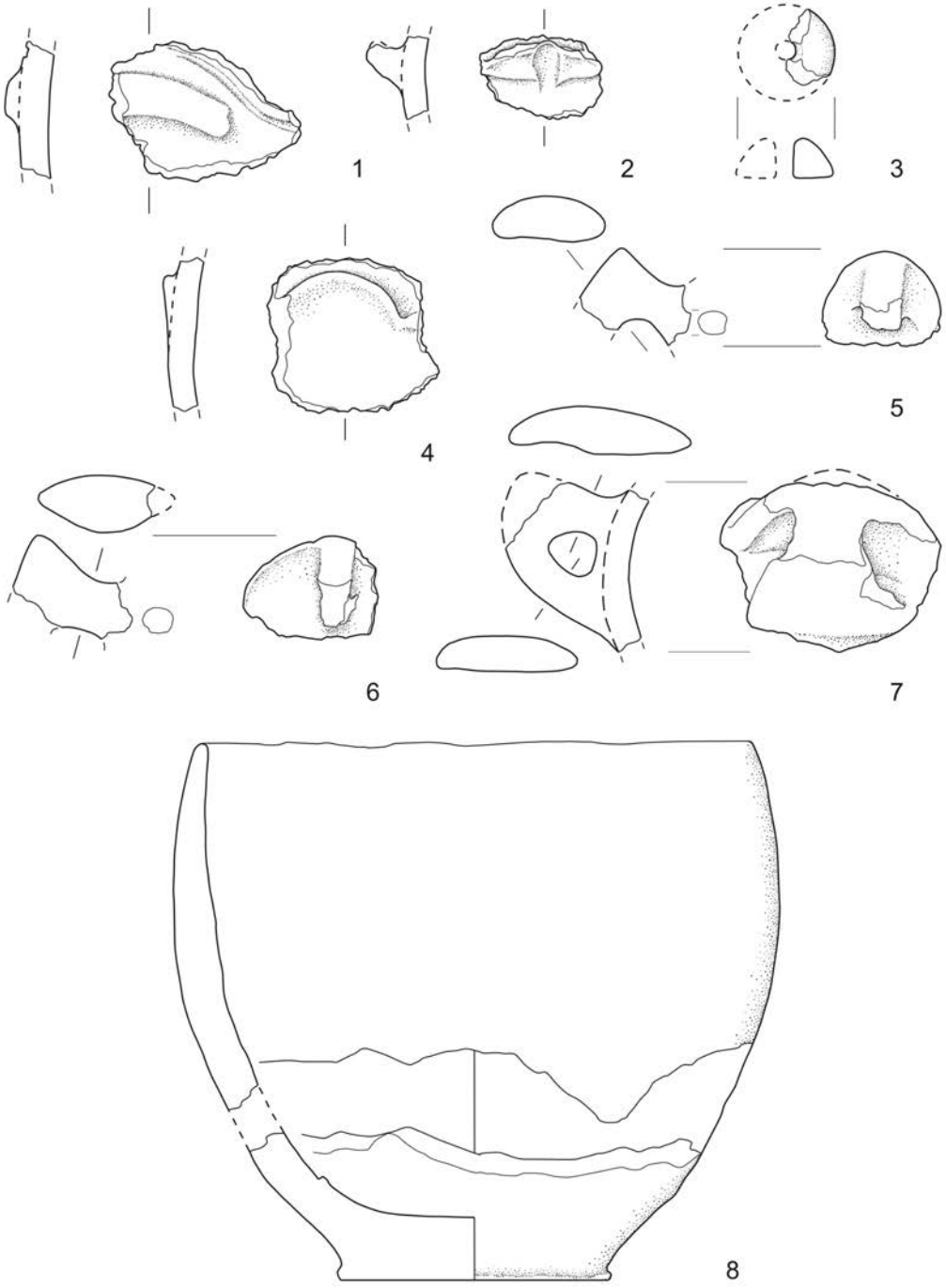


Monbrodo Sonda 1/Monbrodo Probe 1 - 1: SJ/SU 02; 2: SJ/SU 02; 3: SJ/SU 02; 4: SJ/SU 05;
5: SJ/SU 06; 6: SJ/SU 09. 1-4: Mjerilo 50% izvorne veličine/Scale 50% of original size, 5-6: 100%.

T. I

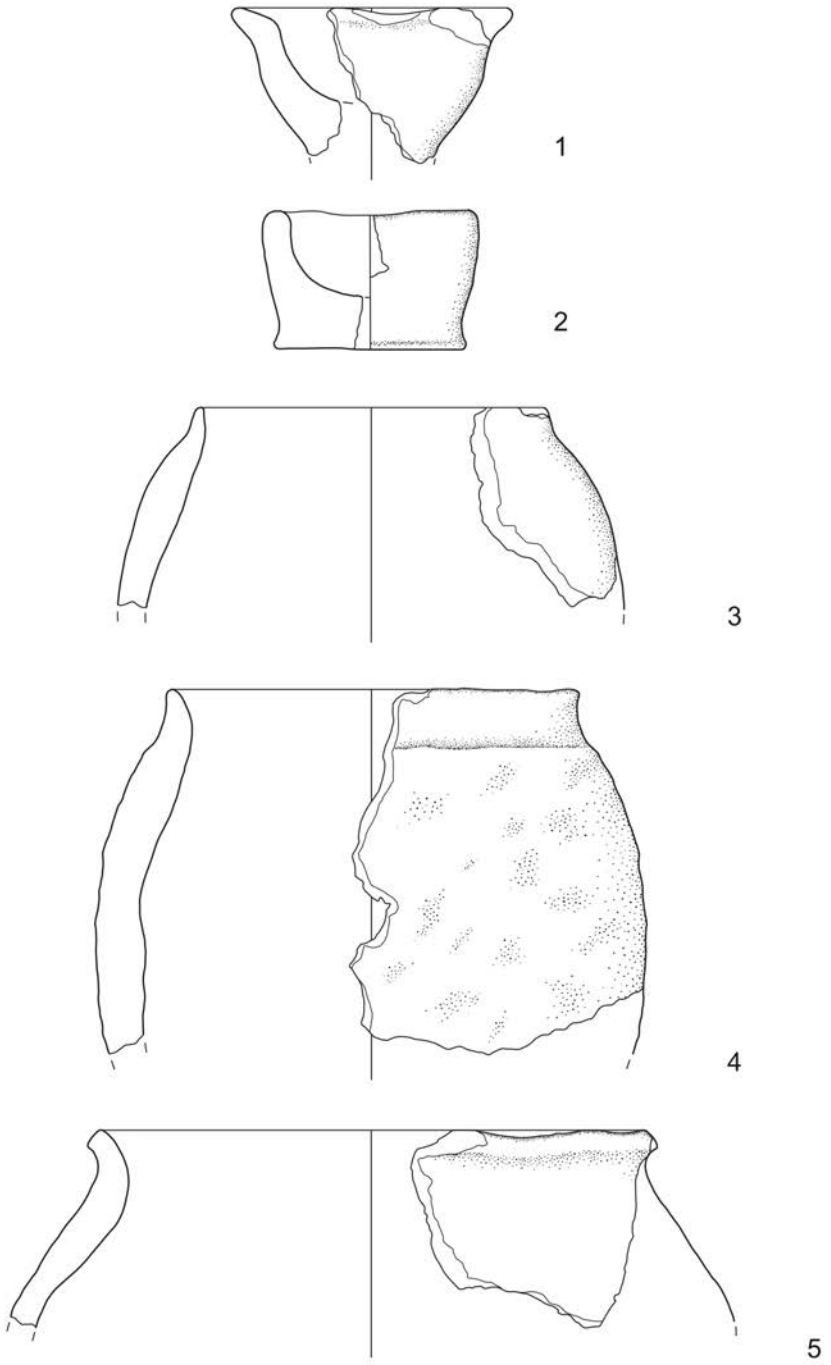


Monbrodo Sonda 1/Monbrodo Probe 1 - 1: SJ/SU 09; 2: SJ/SU 09; 3: SJ/SU 09; 4: SJ/SU 09.
1-3: Mjerilo 50% izvorne veličine/Scale 50% of original size, 4: Mjerilo 33% izvorne veličine/Scale 33% of original size.



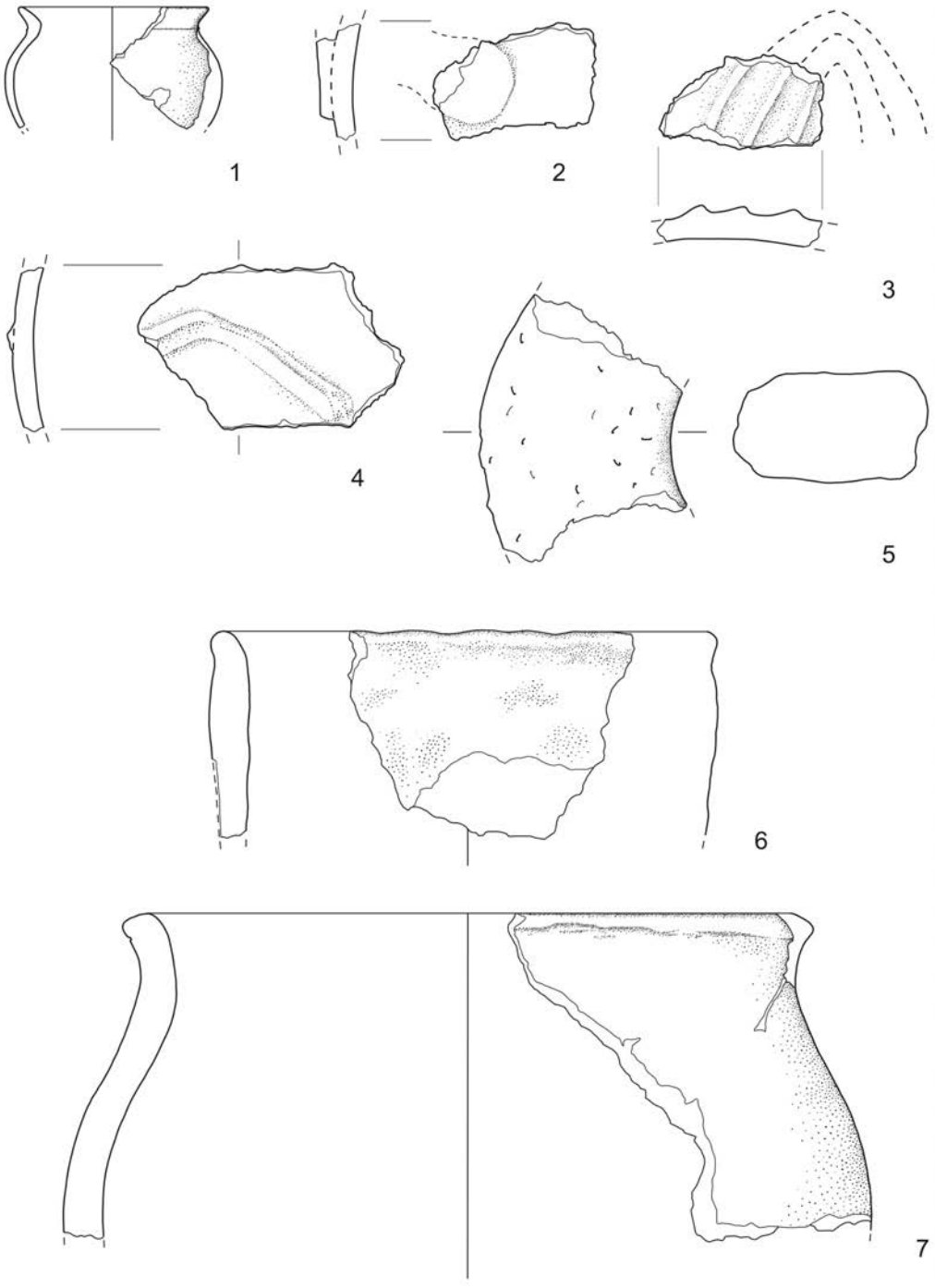
Monbrodo Sonda 1/Monbrodo Probe 1 - 1: SJ/SU 13; 2: SJ/SU 13; 3: SJ/SU 13; 4: SJ/SU 13; 5: SJ/SU: 13; 6: SJ/SU 13; 7: SJ/SU 13; 7: SJ/SU 13; 8: SJ/SU 13.
Mjerilo 50% izvorne veličine/Scale 50% of original size.

T. III



Monbrodo Sonda 1/Monbrodo Probe 1 - 1: SJ/SU 13; 2: SJ/SU 13; 3: SJ/SU 13; 4: SJ/SU 13; 5: SJ/SU: 13. Mjerilo 50% izvorne veličine/Scale 50% of original size.

T. IV



Monbrodo Sonda 1/Monbrodo Probe 1 - 1: SJ/SU 16-17; 2: SJ/SU 15; 3: SJ/SU 15; 4: SJ/SU 15; 5: SJ/SU: 15; 6: SJ/SU 15; 7: SJ/SU 15. 1-4, 6-7: Mjerilo 50% izvorne veličine/Scale 50% of original size, 5: 33% izvorne veličine/Scale 33% of original size.

T. V

T. VI

LITERATURA / LITERATURE

BEKIĆ, L. 1996. Sustav gradina na rovinjskom području. *Histria archaeologica* 27, 19-92.

BURŠIĆ-MATIJAŠIĆ, K. 1997. Ceramica del Castelliere di Monte Orcino in Istria/Keramika gradine Vrčin u Istri. *Histria archaeologica* 28, 108-134.

BURŠIĆ-MATIJAŠIĆ, K. 1998. *Gradina Monkodonja. Tipološko-statistička obrada keramičkih nalaza srednjobrončanodobne istarske gradine Monkodonja kod Rovinja/The Monkodonja Hillfort. A Typological and Statistical Analysis of Pottery Finds from the Middle Bronze Age Hillfort of Monkodonja near Rovinj.* Monografije i katalozi 9. Arheološki muzej Istre, Pula.

BURŠIĆ-MATIJAŠIĆ, K. 2007. *Gradine Istre. Povijest prije povijesti.* Žakan Juri, Pula.

BURŠIĆ-MATIJAŠIĆ, K. 2010. Bale i keramički materijal iz palače Soardo-Bembo (Istraživanje 2000-2003.)/ Bale and the pottery from the Soardo-Bembo castle (Research 2000-2003). *Opuscula Archaeologica* 34, 7-35.

CARDARELLI, A. 1983. Castellieri nel Carso e nell´Istria: Cronologia degli insediamenti fra media età del bronzo e prima età del ferro. U*: Preistoria del Caput Adriae, Catalogo della Mostra, Trieste*, 87-112. Udine.

DULAR, J. 2013. *Severovzhodna Slovenija v pozni bronasti dobi / Nordostslowenien in der späten Bronzezeit.* Opera Instituti Archaeologici Sloveniae 27. Ljubljana.

HÄNSEL, B., TERŽAN, B. 2000. Ein bronzezeitliches Kuppelgrab außerhalb der mykenischen Welt im Norden der Adria. *Prähistorische Zeitschrift* 75, 161-183.

HÄNSEL, B., MATOŠEVIĆ, D., MIHOVILIĆ, K., TERŽAN, B. 2009. Zur Sozialarchäologie der befestigten Siedlung von Monkodonja (Istrien) und ihrer Gräber am Tor. *Prähistorische Zeitschrift* 84, 2009, 151-180.

HÄNSEL, B., MIHOVILIĆ, K., TERŽAN, B. 2015. *Monkodonja. Istraživanje protourbanog naselja brončanog doba Istre. Knjiga 1—Iskopavanje i nalazi građevina/ Forschungen zu einer protourbanen Siedlung der Bronzezeit Istriens. Teil 1—Die Grabung und der Baubefund.* Monografije i katalozi 25. Arheološki muzej Istre, Pula.

HELLMUTH, A. 2012. Čuvari hrane i pića. O antropomorfnim ukrasima na posudama iz ranog i srednjeg brončanog doba s gradine Monkodonja u Istri/Guardians of food and drink. About anthropomorphic vessel decorations of the Early and Middle Bronze Age from Monkodonja hillfort in Istria. *Histria archaeologica* 43, 19-46.

HELLMUTH, A. 2014. Butter, Wein oder Honig? Betrachtungen zu einer besonderen Gefäßbodenform aus der Gradina von Monkodonja bei Rovinj in Istrien. U: S. Tecco Hvala (Hrsg.), *Studia Praehistorica in Honorem Janez Dular.* Opera Instituti Archaeologici Sloveniae 30, 65-79. Ljubljana.

HELLMUTH, A. 2015. Apotropaic Elements on Ceramics from the Early and Middle Bronze Age in the Northern Adriatic Region (Caput Adriae). *Mediterranean Review* 8-1, 1-28.

HELLMUTH KRAMBERGER, A. 2017. *Monkodonja. Istraživanje protourbanog naselja brončanog doba Istre, Knjiga 2 - Keramika s brončanodobne gradine Monkodonja /Forschungen zu einer protourbanen Siedlung der Bronzezeit Istriens Teil 2 - Die Keramik aus der bronzezeitlichen Gradina Monkodonja.* Monografije i katalozi 28. Arheološki muzej Istre, Pula.

HOCHSTETTER, A. 1984. *Kastanas. Ausgrabungen in einem Siedlungshügel der Bronze- und Eisenzeit Makedoniens 1975-1979.* Die handgemachte Keramik Schichten 19-1. Prähistorische Archäologie in Südosteuropa 3. Berlin.

KAROUŠKOVÁ-SOPER, V. 1983. *The Castellieri of Venezia Giulia, North-eastern Italy (2nd-1st millenium B.C.).* BAR International Series 192. Oxford.

KIRIGIN, B. 1992. Vaze tipa "Alto-Adriatico" iz Isse. *Prijateljev zbornik I. Prilozi povijesti umjetnosti u Dalmaciji* 32, 79-98.

KIRIGIN, B. 1994. Grčko-italske amfore na Jadranu. *Arheološki vestnik* 45, 15-24.

LANDOLFI, M. 1996. I vasi alto-adriatici da Numana e dal Piceno, u: F. Berti, S. Bonomi, M. Landolfi (eds.), *Classico e Anticlassico. Vasi alto adriatici tre Piceno, Spina e Adria*, 13-33. Bologna.

LONZA, B. 1977. *Appunti sui castellieri dell´Istria e della provincia di Trieste*. Società per la Preistoria e Protostoria della regione Friuli-Venezia Giulia. Quaderno 2. Trieste.

MATOŠEVIĆ, D., MIHOVILIĆ, K. 2004. *Prapovijesni nalazi na Trgu G. Matteottija u Rovinju/Reperti preistorici di Piazza G. Matteotti a Rovigno*, Rovinj.

MIHOVILIĆ, K. 1995. Školjić (Funtana) i tragovi prapovijesnih obalnih i otočnih lokaliteta Istre. *Histria archaeologica* 26, 28-57.

MIHOVILIĆ, K. 1996. *Nezakcij - nalaz grobnice 1981. godine/Nesactium - The Discovery of a Grave Vault in 1981.* Monografije i katalozi 6. Arheološki muzej Istre, Pula.

MIHOVILIĆ, K. 1997. *Fortifikacija gradine Gradac-Turan iznad Koromačna/The fortification of Gradac or Turan hill-fort above Koromačno.* Izdanja Hrvatskog arheološkog društva 18, 39-59.

MIHOVILIĆ, K. 2001. *Nezakcij - Prapovijesni nalazi 1900.-1953./Nesactium - Prehistoric finds 1900-1953.* Monografije i katalozi 11, Arheološki muzej Istre. Pula.

MLAKAR, M. 1998. Bone Artifacts from the Bronze Age Hillfort Monkodonja near Rovinj. U: Buršić-Matijašić, K., *Gradina Monkodonja. Tipološko-statistička obrada keramičkih nalaza srednjobrončanodobne istarske gradine Monkodonja kod Rovinja/The Monkodonja Hillfort. A Typological and Statistical Analysis of Pottery Finds from the Middle Bronze Age Hillfort of Monkodonja near Rovinj.* Monografije i katalozi 9, Arheološki muzej Istre. Pula, 157-190.

MORETTI, M. 1977. *Note sulla tipologia delle anse nella ceramica die castelliere del Carso Triestino.* Atti del Convegno di studi "L´età del bronzo e del ferro nell´Isontino". Gorizia, 57-77.

TECCO HVALA, S., DULAR, J., KOCUVAN, E. 2004. Železnobne *gomile na Magdalenski gori/Eisenzeitliche Grabhügel auf der Magdalenska gora.* Katalogi in monografije 36, Ljubljana.

TERŽAN, B. 1977. Certoška fibula/Die Certosafibel. *Arheološki vestnik* 27, 317-536.

URBAN, T. 1993. *Studien zur mittleren Bronzezeit in Norditalien*. Universitätsforschungen zur prähistorischen Archäologie 14, Bonn.

VITASOVIĆ, A. 2000. Gradina. *Histria archaeologica* 31, 2000, 5-60.