

UDK 902
ISSN 1330-0644
Vol. 41/1
ZAGREB, 2024.

PRILOZI

Instituta za arheologiju u Zagrebu

Pril. Inst. arheol. Zagrebu
Str./Pages 1-182, Zagreb, 2024.

**PRILOZI INSTITUTA ZA ARHEOLOGIJU
U ZAGREBU, 41/1/2024
STR./PAGES 1–182, ZAGREB, 2024.**

Izdavač/Publisher
INSTITUT ZA ARHEOLOGIJU
INSTITUTE OF ARCHAEOLOGY

Adresa uredništva/
Address of the editor's office
Institut za arheologiju/Institute of archaeology
HR-10000 Zagreb, Jurjevska ulica 15
Hrvatska/Croatia
Telefon/Phone ++385/(0)1 61 50 250
Fax ++385(0)1 60 55 806
e-mail: urednistvo.prilozi@iarh.hr
<http://www.iarh.hr>

Glavni i odgovorni urednik/Editor in chief
Marko DIZDAR

Tehnički urednici/Technical editors
Marko DIZDAR
Katarina BOTIĆ

Uredništvo/Editorial board
Prapovijest/Prehistory:
Marko DIZDAR, Institut za arheologiju, Zagreb,
Hrvatska
Snježana VRDOLJAK, Institut za arheologiju, Zagreb,
Hrvatska
Viktória KISS, Hungarian Academy of Sciences,
Institute of Archaeology, Budapest, Hungary
Antika/Antiquities:
Goranka LIPOVAC VRKLJAN, Institut za arheologiju,
Zagreb, Hrvatska
Ivan RADMAN-LIVAJA, Arheološki muzej u Zagrebu,
Zagreb, Hrvatska
Srednji vijek i novi vijek/Middle Ages and Modern era:
Tajana SEKELJ IVANČAN, Institut za arheologiju,
Zagreb, Hrvatska
Katarina Katja PREDOVNIK, University of Ljubljana,
Faculty of Arts, Ljubljana, Slovenia
Natascha MEHLER, Eberhard Karls University of
Tübingen, Tübingen, Germany
Tatjana TKALČEC, Institut za arheologiju, Zagreb,
Hrvatska
Juraj BELAJ, Institut za arheologiju, Zagreb, Hrvatska
Metodologija/Methodology
Predrag NOVAKOVIĆ, University of Ljubljana, Faculty
of Arts, Ljubljana, Slovenia

Izdavački savjet/Editorial advisory board
Dunja GLOGOVIĆ, Zagreb, Hrvatska
Ivor KARAVANIĆ, Sveučilište u Zagrebu, Filozofski
fakultet, Odsjek za arheologiju, Zagreb, Hrvatska
Kornelija MINICHREITER, Zagreb, Hrvatska
Alexander T. RUTTKAY, Nitra, Slovakia
Ivančica SCHRUNK, University of St. Thomas, St. Paul,
Minnesota, USA
Željko TOMIČIĆ, Hrvatska Akademija znanosti i
umjetnosti, Zagreb, Hrvatska
Ante UGLEŠIĆ, Sveučilište u Zadru, Odjel za
arheologiju, Zadar, Hrvatska

Prijevod na engleski/English translation
Teo ČAVAR, Ivan MATIJEVIĆ, Marija KOSTIĆ,
Marin MATKOVIĆ, Marko MARAS, Miroslav VUKOVIĆ,
Franka OVČARIĆ

Lektura/Language editor
Marko DIZDAR (hrvatski jezik/Croatian)
Marko MARAS, Katarina BOTIĆ (engleski jezik/English)

Korektura/Proofreads
Katarina BOTIĆ

Grafičko oblikovanje/Graphic design
Umjetnička organizacija OAZA

Računalni slog/Layout
Hrvoje JAMBREK

Tisak/Printed by
Tiskara Zelina d.d., Sv. I. Zelina

Naklada/Issued
400 primjeraka/400 copies

Prilozi Instituta za arheologiju u Zagrebu indeksirani su u/
Prilozi Instituta za arheologiju u Zagrebu are indexed by:
DYABOLA – Sachkatalog der Bibliothek – Römisch-
Germanische Kommission des Deutschen
Archaeologischen Instituts, Frankfurt a. Main
Clarivate Analytics services – Web of Science Core
Collection
CNRS/INIST – Centre National de la Recherche
Scientifi que/L'Institut de l'Information Scientifi que et
Technique, Vandoeuvre-lès-Nancy
EBSCO – Information services, Ipswich
ERIH PLUS – European Reference Index for the
Humanities and Social Sciences, Norwegian
Directorate for Higher Education and Skills, Bergen
SciVerse Scopus – Elsevier, Amsterdam

E-izdanja. Publikacija je dostupna u digitalnom obliku i
otvorenom pristupu na
<https://hrcak.srce.hr/prilozi-iaz>
E-edition. The publication is available in digital and
open access form at
<https://hrcak.srce.hr/prilozi-iaz?lang=en>

DOI 10.33254

Ovaj rad licenciran je pod Creative Commons
Attribution By 4.0 međunarodnom licencom/
this work is licenced under a Creative Commons
attribution By 4.0 international licence
<https://creativecommons.org/licenses/by/4.0/>



SADRŽAJ

CONTENTS

Izvorni znanstveni radovi

Original scientific papers

5

DANIJELA ROKSANDIĆ VUKADIN
SLAVICA BOŠNJAK

Bakar u prapovijesnim zajednicama sjeverne Hrvatske s posebnim osvrtom na vučedolsku kulturu

DANIJELA ROKSANDIĆ VUKADIN
SLAVICA BOŠNJAK

Copper in the prehistoric communities of northern Croatia with special emphasis on the Vučedol culture

49

IVAN MATIJEVIĆ
Rimska vojska u sjeverozapadnom dijelu provincije Dalmacije

IVAN MATIJEVIĆ
The Roman army in the northwestern part of the Province of Dalmatia

67

IVANA JADRIČ-KUČAN
IVANA BANOVAČ
Štovanje Lara (*Lares*) i nove spoznaje o Larima iz Salone

IVANA JADRIČ-KUČAN
IVANA BANOVAČ
The worship of the Lares and new insight about the Lares from Salona

87

MARIN MATKOVIĆ
Između Kine, islamskog svijeta i Europe: *šalice za kavu* iz Osijeka

MARIN MATKOVIĆ
Between China, the Islamic world, and Europe: *coffee cups* from Osijek

| | | |
|------------|---|--|
| | Prethodna priopćenja | Preliminary reports |
| 119 | <p>IVOR JANKOVIĆ JAMES C. M. AHERN RORY BECKER DARKO KOMŠO SINIŠA RADOVIĆ NIKOLA VUKOSAVLJEVIĆ LIA VIDAS</p> <p>Terenska istraživanja na nalazištu Abri Kontija 002 u sezoni 2022. i 2023.</p> | <p>IVOR JANKOVIĆ JAMES C. M. AHERN RORY BECKER DARKO KOMŠO SINIŠA RADOVIĆ NIKOLA VUKOSAVLJEVIĆ LIA VIDAS</p> <p>Field research at the site of Abri Kontija 002 in the seasons of 2022 and 2023</p> |
| 139 | <p>MIROSLAV VUKOVIĆ JANJA MAVROVIĆ MOKOS FRANKA OVČARIĆ</p> <p>Rezultati LiDAR-skog snimanja i terenskih pregleda prostora Prigorja</p> | <p>MIROSLAV VUKOVIĆ JANJA MAVROVIĆ MOKOS FRANKA OVČARIĆ</p> <p>Results of LiDAR and field surveys of the Prigorje area</p> |
| 175 | Upute autorima | Guidelines for contributors |

TERENSKA ISTRAŽIVANJA NA NALAZIŠTU ABRI KONTIJA 002 U SEZONI 2022. I 2023. FIELD RESEARCH AT THE SITE OF ABRI KONTIJA 002 IN THE SEASONS OF 2022 AND 2023

Prethodno priopćenje / prapovijesna arheologija

Preliminary report / Prehistoric archaeology

UDK UDC 902.2(497.571) "628.62"

Primljeno / Received: 09. 02. 2024. Prihvaćeno / Accepted: 03. 06. 2024.

doi.org/10.33254/piaz.41.1.5

IVOR JANKOVIĆ

Institut za antropologiju
Centar za primijenjenu
bioantropologiju
Ulica Ljudevita Gaja 32
HR-10000 Zagreb
ivor.jankovic@inantro.hr
ORCID 0000-0001-5175-6885

JAMES C. M. AHERN

University of Wyoming
Department of Anthropology
12th and Lewis Streets
Laramie, WY 82071, USA
jahern@uwyo.edu

RORY BECKER

Eastern Oregon University
Department of Anthropology and
Sociology
One University Boulevard
La Grande, OR 97850, USA
rbecker@eou.edu
ORCID 0000-0003-4727-0932

DARKO KOMŠO

Arheološki Muzej Istre u Puli
Carrarina ulica 3
HR-52100 Pula
darko.komso@ami-pula.hr

SINIŠA RADOVIĆ

Hrvatska akademija znanosti i
umjetnosti
Zavod za paleontologiju i
geologiju kvartara
Ante Kovačića 5
HR-10000 Zagreb
sradovic@hazu.hr
ORCID 0000-0001-7838-7952

NIKOLA VUKOSAVLJEVIĆ

Sveučilište u Zagrebu
Filozofski fakultet
Odsjek za arheologiju
Ivana Lučića 3
HR-10000 Zagreb
nvukosav@ffzg.unizg.hr
ORCID 0000-0002-9369-2813

LIA VIDAS

Institut za antropologiju
Centar za primijenjenu
bioantropologiju
Ulica Ljudevita Gaja 32
HR-10000 Zagreb
lia.vidas@inantro.hr
ORCID 0000-0001-6686-7086

Rad donosi rezultate arheoloških istraživanja nalazišta Abri Kontija 002 u sezoni 2022. i 2023. Istraživanja su provedena u sklopu projekta „Prapovijesni lovci i sakupljači u Istri i obližnjim regijama: obrasci života tijekom kasnog pleistocena“ (PREHISTRIA). Tijekom istraživanja pronađen je broj arheološki materijal iz vremena kasnog pleistocena, uzeti su uzorci za provođenje različitih vrsta analiza (radiometrijsko datiranje, sediment za aDNA analize, geoarheološki uzorci), provedena su geofizikalna mjerenja i dr. Preliminarni rezultati ukazuju na visok intenzitet i određen kontinuitet u korištenju nalazišta tijekom nekoliko tisuća godina. Velika zastupljenost određenih životinjskih vrsta na čijim kostima su uočeni tragovi antropogenih modifikacija (tragovi mesarenja, fragmentiranost te tragovi vatre) ukazuje na mogućnost selekcije, odnosno usmjerenosti na određene vrste (poput konja). Brojnost litičkih nalaza, koji uključuju sve dijelove lanca operacija, upućuju na proizvodnju kamenog oruđa in situ, a nalazi gotovog oruđa i na njihovo odbacivanje na samom nalazištu. Dosadašnji rezultati analiza, kao i radiokarbonski datumi, ukazuju na ljudsku aktivnost na ovom dijelu Jadrana u razdoblju srednjeg gornjeg paleolitika.

KLJUČNE RIJEČI: gornji paleolitik, pleistocen, prapovijesna arheologija, Istra, kasni glacijal, PREHISTRIA



Copyright © Autor(i)
The Author(s) 2024

Open Access This work is distributed under the terms and conditions of the Creative Commons Attribution 4.0 International license (<https://creativecommons.org/licenses/by/4.0/>) which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited. Open Access Ovaj rad dijeli se prema odredbama i uvjetima licence Creative Commons Attribution 4.0 International license (<https://creativecommons.org/licenses/by/4.0/>), koja dopušta neograničenu ponovnu upotrebu, dijeljenje i reprodukciju u bilo kojem mediju, pod uvjetom da je izvorno djelo ispravno citirano.

The paper presents the results of archaeological research at the site of Abri Kontija 002 during the seasons of 2022 and 2023. The research was conducted as part of the project "Prehistoric hunter-gatherers in Istria and adjacent regions: Patterns of Late Pleistocene lifestyle and mobility" (PREHISTRIA). During the excavations, numerous archaeological materials from the Late Pleistocene were found, samples were taken for various kinds of analyses (radiometric dating, sediment for aDNA analyses, geoarchaeological samples), geophysical measurements were conducted, etc. Preliminary results indicate a high intensity and certain continuity in the use of the site over several thousand years. The large presence of certain animal species, with bones showing signs of anthropogenic modifications (butchering marks, fragmentation, traces of fire), suggests a selection or focus on certain species (such as horses). The abundance of lithic finds which include all parts of the operational chain, points to the production of stone tools *in situ*; the finds of finished tools indicate their disposal at the site itself. The results of the analyses so far, as well as radiocarbon dates, indicate human activity in this part of the Adriatic during the Middle Upper Palaeolithic.

KEY WORDS: Upper Palaeolithic, Pleistocene, prehistoric archaeology, Istria, Late Glacial, PREHISTRIA

Uvod

U razdoblju od 20. lipnja do 29. srpnja 2022. te od 29. svibnja do 01. srpnja 2023. provedena su terenska arheološka istraživanja pripećka Abri Kontija 002 u Limskom zaljevu. Istraživanja su provedena u sklopu projekta Hrvatske zaklade za znanost pod nazivom „Prapovijesni lovci i sakupljači u Istri i obližnjim regijama: obrasci života tijekom kasnog pleistocena“ (PREHISTRIA; IP-2019-04-7821) i nastavak su ranijih istraživanja istog lokaliteta koji se pokazao izuzetno bogatim arheološkim materijalom te jednim od ključnih nalazišta za bolje razumijevanje kulturnih prilagodbi i obrazaca ponašanja kasnopleistocenskih lovaca-skupljača na tom prostoru.

Pripećak Abri Kontija 002 otkriven je prilikom terenskog pregleda 2007. godine kada su tamo postavljene dvije manje sonde dimenzija 40 x 40 cm (Komšo 2008) u kojima je pronađena manja količina litičkih nalaza, a koji su na temelju tipoloških odlika pripisani razdoblju gornjeg paleolitika (Komšo 2008). S obzirom na potencijalan značaj nalazišta, u sklopu projekta „Arheološka istraživanja kasnog pleistocena i ranog holoцена na prostoru Limskog kanala“ (ARCHAEOLIM, UIP-2013-11-7789) između 2014. i 2017. godine na lokalitetu su započeta sustavna istraživanja i postavljena je manja sonda (1,5 x 1,5 m, kasnije proširena na 1,5 x 3 m). Arheološka iskopavanja u potpunosti su opravdala istraživanja i sakupljen je broj materijal koji je na osnovu

Introduction

From 20 June to 29 July 2022, and from 29 May to 1 July 2023, archaeological field research was carried out at the rock shelter of Abri Kontija 002 in the Lim Bay. The research was carried out as part of the Croatian Science Foundation's project entitled "Prehistoric hunter-gatherers in Istria and adjacent regions: Patterns of Late Pleistocene lifestyle and mobility" (PREHISTRIA; IP-2019-04-7821) and is a continuation of earlier research on the same site. Revealing great wealth of archaeological material, it is one of the key sites for a better understanding of the cultural adaptations and behavioural patterns of Late Pleistocene hunter-gatherers in the region.

Abri Kontija 002 is a rock shelter that was discovered in 2007, during a field survey which included two small trenches measuring 40 x 40 cm (Komšo 2008) that revealed a small quantity of lithic finds, which were associated with the Upper Palaeolithic period on the basis of their typological characteristics (Komšo 2008). Considering the potential importance of the site, the project "Archaeological investigations into the Late Pleistocene and Early Holocene of the Lim Channel" (ARCHAEOLIM; UIP-2013-11-7789) started systematic research at the site between 2014 and 2017, digging a small trench (1.5 x 1.5 m, later expanded to 1.5 x 3 m). The archaeological excavations fully justified the research, collecting a large amount of material which can be confidently attributed to the Upper Paleolithic on the basis

apsolutnih (radiometrijskih) datacija, kao i preliminarnih tipološko-tehnoloških analiza litike i arheozooloških (taksonomskih) analiza sa sigurnošću moguće pripisati gornjem paleolitiku. U slojevima su pronađeni brojni nalazi pleistocenske faune, tragovi gorenja i brojni litički nalazi (Janković et al. 2017a; 2017b; 2022).

U sklopu projekta „Prapovijesni lovci i sakupljači u Istri i obližnjim regijama: obrasci života tijekom kasnog pleistocena“ (PREHISTRIA; IP-2019-04-7821) odlučeno je nastaviti sustavna istraživanja ovog nalazišta, uz uzimanje ciljanih uzoraka (npr. sedimentna DNA, ZooMS i dr.), u svrhu prikupljanja materijala za bolju kronološku usporedbu razvoja gornjeg paleolitika u regiji te usporedbu s nalazištima u obližnjim regijama (npr. Dalmacija, Crna Gora, Italija i dr.; vidjeti: Mihailović 1999; 2009; Peresani et al. 2021; Vukosavljević, Karavanić 2017; Vukosavljević, Perhoč 2017; Vukosavljević et al. 2014; 2022). Stoga je istraživanje lokaliteta nastavljeno u 2021. godini (Janković et al. 2022), a u ovom radu donose se rezultati istraživanja u 2022. i 2023.

Istraživanje lokaliteta Abri Kontija u sezoni 2022. i 2023.

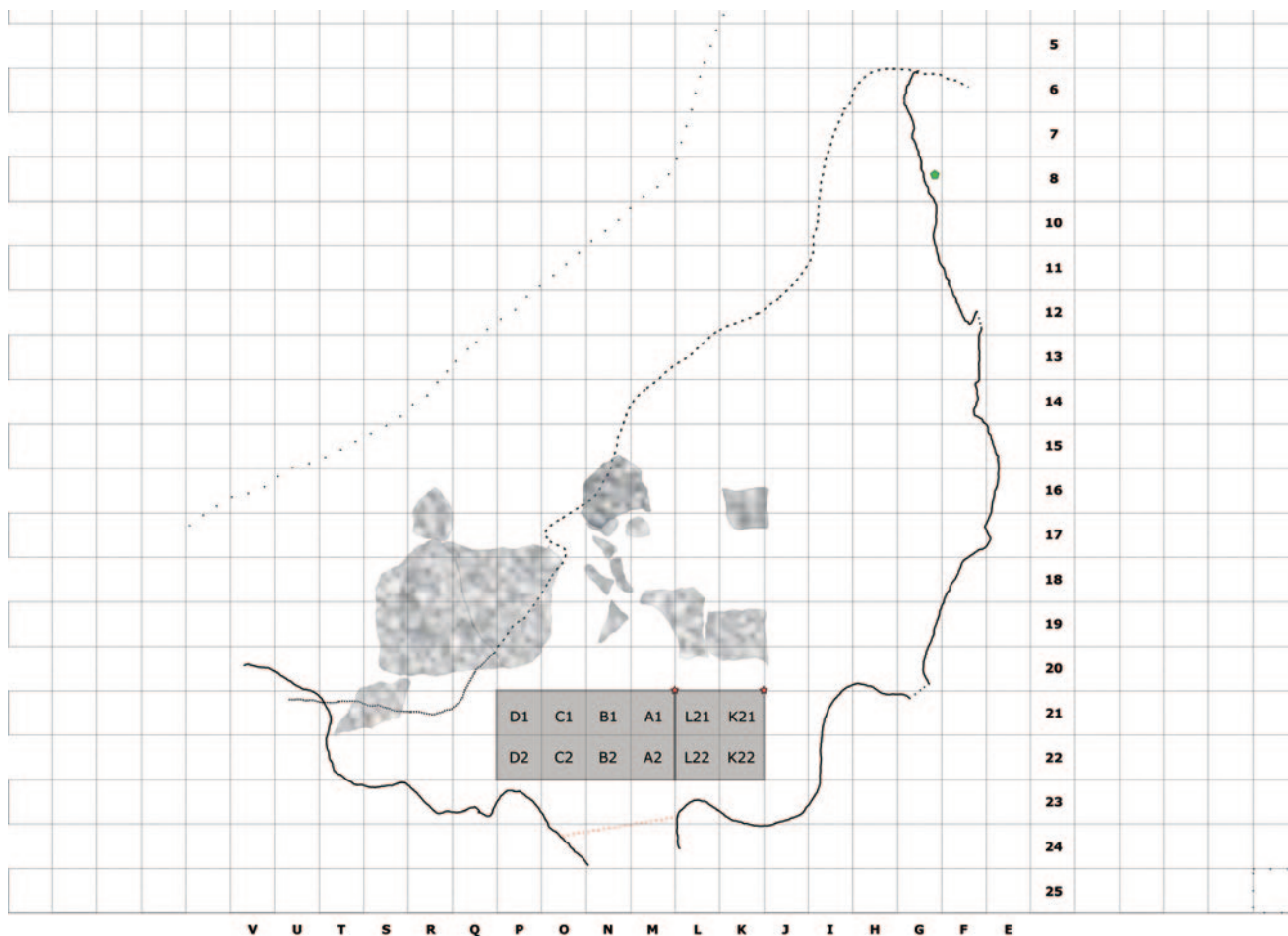
Tijekom istraživanja u 2022., nastavljeno je stratigrafsko iskopavanje slojeva u postojećoj sondi (kvadranti C1–2 i D1–2), a sonda je proširena u smjeru sjevera za 1,5 x 1,5 m, čime njene ukupne dimenzije sada iznose 1,5 x 4,5 m. Novi kvadrant podijeljen je na podkvadrante dimenzija 75 x 75 cm. Kako bi se novi kvadrant mogao korelirati s kvadrantima iz ranijih sezona istraživanja, prije početka istraživanja čitav predpečinski plato smješten je u koordinatni sustav (sl. 1). Na taj način će se i u budućnosti moći provoditi nova istraživanja bez mogućnosti ponavljanja oznaka kvadranta, a materijal dovesti u odnose s materijalom iz ranijih iskopavanja. Novi kvadranti, čije je istraživanje započelo 2022. godine, označeni su kao K21–22 i L21–22. Iako u novom koordinatnom sustavu ranije istraživani kvadranti A–D imaju nove nazive (M–P/21–22), materijal otkriven za vrijeme istraživanja u istima neće se preimenovati, budući da su kvadranti u potpunosti istraženi do matične stijene (sl. 2), a da novi koordinatni sustav stavlja (nove, hipotetičke) kvadrante A–D sasvim izvan platoa, gdje nije moguće provesti arheološka istraživanja. U spomenutim kvadrantima za vrijeme terenskog rada u ove dvije

of absolute (radiometric) dating and preliminary typological-technological analyses of the lithics and archaeozoological (taxonomic) analyses. The layers contained numerous finds of Pleistocene fauna, traces of burning, and numerous lithic finds (Janković et al. 2017a; 2017b; 2022).

Within the project “Prehistoric hunter-gatherers in Istria and adjacent regions: Patterns of Late Pleistocene lifestyle and mobility” (PREHISTRIA; IP-2019-04-7821), it was decided to continue systematic research at the site and collect targeted samples (e.g., sedimentary DNA, ZooMS, etc.) to gather material for a better chronological comparison of the Upper Palaeolithic development in the region and to compare it with sites in neighbouring regions (e.g. Dalmatia, Montenegro, Italy, etc.; see: Mihailović 1999; 2009; Peresani et al. 2021; Vukosavljević, Karavanić 2017; Vukosavljević, Perhoč 2017; Vukosavljević et al. 2014; 2022). Therefore, research at the site continued in 2021 (Janković et al. 2022), and this paper presents the results of research from 2022 and 2023.

Research at the site of Abri Kontija in the seasons of 2022 and 2023

The research in 2022 continued the stratigraphic excavation of layers in the existing trench (quadrants C1–2 and D1–2); the trench was extended northward by 1.5 x 1.5 m, thereby increasing its overall dimensions to 1.5 x 4.5 m. The new quadrant was divided into sub-quadrants measuring 75 x 75 cm. To facilitate the correlation of the new quadrant with those from previous excavation seasons, the entire plateau in front of the rock shelter was placed in a coordinate system (Fig. 1). This will enable future research to proceed without the risk of duplicating quadrant designations and will allow for the integration of material with that from previous excavations. The new quadrants, which began to be excavated in 2022, are designated as K21–22 and L21–22. While the previously excavated quadrants A–D have new names (M–P/21–22) within the new coordinate system, the material uncovered during their excavation will retain its original names, since the quadrants have been fully excavated to bedrock (Fig. 2), and the new coordinate system places the (new, hypothetical) quadrants A–D entirely outside the plateau, where archaeological research is not feasible. During the fieldwork in these two seasons, the following layers were explored within the mentioned quadrants: layers 7.1,



Sl. 1 – Tlocrt platoa, kvadratna mreža i položaj sonde na nalazištu (izradio: J. C. M. Ahern, 2022.)
 Fig. 1 – Plan of the plateau, the square grid, and location of the trench on the site (made by: J. C. M. Ahern, 2022)



Sl. 2 – Sonda na kraju istraživanja sezone 2022 (snimila: L. Vidas, 2022.)
 Fig. 2 – Trench at the end of the 2022 excavating season (photo by: L. Vidas, 2022)

sezona istraženi su sljedeći slojevi: kvadranti C i D: slojevi 7.1, 8, 9, F5 i F6; kvadranti L i K: slojevi 1, 2.1, 2.3, 3, 4, 5, 6 te F7 i F8.

Također, u sezoni 2022., provedeno je i geofizičko istraživanje lokaliteta metodom električne rezistentne tomografije (eng. *Electrical Resistance Tomography*, kraće ERT; detaljnije o metodi vidi Janković et al. 2019). Podaci su prikupljeni GeoScan RM85 uređajem mjerenjem pol-pol niza u intervalima po 0,10 m duž linije profila s maksimalnim razmakom od 3 m. Mjerenje je obuhvatilo sjeverozapadni dio nalazišta trokutastog oblika, a istraženo je oko 39 m² podijeljenih na osam pojedinačnih ERT linija profila dugih između 14 i 4,7 m. Svaka od osam paralelnih linija profila bila je razmaknuta od susjedne za 0,5 m. Ovo istraživanje provedeno je u nadi da će prikupljeni ERT podaci omogućiti izradu 3D modela sedimenata i njihove dubine do matične stijene na istraženom području. Terenski podaci preuzeti su s RM85 uređaja korištenjem *TerraSurveyor2* softvera te su izvezeni u excel formatu za daljnju obradu. Nadalje, prikladno formatirani podaci su izvezeni za obradu u *Geotomo's Res2Dinv* softveru za inverziju. Svaki profil je prije daljnje obrade pregledan u 2D formi. Nažalost, individualni skupovi podataka pokazali su se vrlo loše kvalitete za izradu pouzdanih invertiranih 2D rezultata te stoga prijenos i obrada podataka u 3D formi nije izvršena budući da bi krajnji rezultati bili vrlo nepouzdana. Uzrok vrlo lošoj kvaliteti prikupljenih podataka uvelike se može pripisati iznimnoj suši koja je pogodila istarski poluotok tijekom istraživanja 2022. godine. Valja naglasiti kako je tijekom iskopavanja na snazi bila redukcija vode za čitavu regiju. Samo nalazište je otvorenog tipa te orijentirano jugu što uzrokuje iznimno visoke temperature tijekom ljetnih mjeseci, pa time i iznimnu suhoću površinskih sedimenata. Postoji mogućnost da bi sakupljanje podataka ovog tipa bilo uspješnije u hladnijim mjesecima godine ili tijekom vlažnijeg ljeta.

Stratigrafija

Za opis slojeva korištene su standardizirane boje i opis prema *Munsell soil-color charts*.

Sloj 1: 10YR 4/4 dark yellowish brown, 7.5YR 4/4 brown, 10YR 3/3 dark brown. Prašinast, rastresit sediment koji sadrži manje kršje i kameenje te recentne otpatke. Radi se o površinskom sloju u kojem nije moguće odrediti točan položaj nalaza.

Sloj 2.1: 10YR 5/4 yellowish, brown, 7.5YR

8, 9, F5, and F6 in quadrants C and D; layers 1, 2.1, 2.3, 3, 4, 5, 6, and F7 and F8, in quadrants L and K.

Also, a geophysical survey of the site was done in the 2022 season using the Electrical Resistance Tomography (ERT) method (for more details on the method, see Janković et al. 2019). Data were collected using a GeoScan RM85 device by measuring pole-pole arrays at intervals of 0.10 m along profile lines with a maximum spacing of 3 m. The survey covered the northwestern triangular portion of the site, investigating approximately 39 m² divided into eight individual ERT profile lines ranging in length from 14 to 4.7 m. Each of the eight parallel profile lines was spaced 0.5 m from the adjacent one. This survey was conducted with the hope that the collected ERT data would allow for the creation of a 3D model of the sediments and their depth to bedrock in the investigated area. The field data were taken from the RM85 device with *TerraSurveyor2* software and exported in Excel format for further processing. The appropriately formatted data were then exported for processing in *Geotomo's Res2Dinv* software for inversion. Each profile was reviewed in 2D form before further processing. Unfortunately, the individual datasets were found to be of very poor quality for generating reliable inverted 2D results. Consequently, the transfer and processing of data in 3D form were not performed, as the final results would have been very unreliable. The very poor quality of the collected data is largely attributed to the exceptional drought that affected the Istrian peninsula during the 2022 fieldwork. Water restrictions were in place for the entire region during the excavations. The site itself is open-air and south-facing, leading to extremely high temperatures during the summer months and consequently extreme dryness of the surface sediments. There is a possibility that data collection of this type could be more successful in the cooler months of the year or during a wetter summer.

Stratigraphy

Standardized colours and descriptions according to the *Munsell soil-colour charts* were used for layer descriptions.

Layer 1: 10YR 4/4 dark yellowish brown, 7.5YR 4/4 brown, 10YR 3/3 dark brown. Dusty, loose sediment containing small debris and rocks, as well as recent waste. It is a surface layer in which it is not possible to determine the exact location of the finds.

3/3 dark brown (tamniji dio), 10YR 6/4 light yellowish brown. Sediment je kompaktniji od sedimenta sloja 1, rahli, sadrži puno oštrobridog i lomljenog kamenja (manjeg, srednje veličine i nešto većih preko 10 cm). Malo litike, više kostiju, sporadični tragovi gorenja.

Sloj 2.3: 7.5YR 4/4 brown. Sličan je sloju 2.1 s nešto manje sedimenta i više oštrobridog kršja manjih dimenzija.

Sloj 3: 10YR 5/4 yellowish brown. Sloj s puno manje sitnog oštrobridog kršja i s puno više sedimenta nego sloj 2.3. Nešto tamniji sloj, pjeskasto-siltast. U sloju ima nekoliko većih stijena, palih s krova pećine. Relativno rahli, nešto manjeg kamenja (cca 20 %).

Sloj 4: 10YR 5/3 brown. Relativno suh, glinast sediment koji sadrži oko 30–40 % oštrobridog kamenja veličine 2–5 cm u promjeru. Nalazi uključuju veće fragmente kostiju (veći preživvači), a puno manje litičkih nalaza. Prisutni su i sporadični tragovi gorenja.

Sloj 5: 10YR 5/4 yellow brown. Pjeskast sloj koji sadrži oko 50 % manjih kamenčića promjera od 2–5 cm te oko 5 % većeg kamenja od 10 cm i više. Vidljivo je povećanje broja litičkih nalaza u usporedbi sa slojem 4, a kosti su manjih dimenzija i više fragmentirane. Javljaju se i nalazi okera.

Sloj 6: 10YR 4/2 dark greyish brown. Dio sloja 4 koji sadrži više tragova gorenja je 7.5YR 6/3 light brown. Sediment je pjeskovito siltast. Sloj je tamniji od sloja 5, sadrži oko 5–10 % manjeg kršja, promjera od 2–5 cm. Nalazi uključuju puno više litike, dok su kosti i dalje vrlo male i fragmentirane, kao i nalaze okera. Tijekom sezone 2023. nije završeno istraživanje ovog sloja.

F7: 10YR 5/3 brown. Dio sedimenta koji sadrži intenzivnije tragove gorenja unutar sloja 4. Prisutan u dijelovima kvadranta K21 i K22. Sediment istih karakteristika kao sloj 4, kao i nalazi – gotovo nema litike, fragmentirane nagorjele kosti, komadići ugljena i pepela. Radi se o vatrištu unutar sloja 4.

F8: 10YR 4/3 dark grey brown. Dio sloja 5 koji sadrži intenzivnije tragove gorenja. Sediment je jako siltast. Kao i u slučaju F7, radi se o vatrištu, u dijelovima kvadranta K21 i K22. Nalazi uključuju manje fragmente nagorjelih kostiju, malo litike.

Sloj 7.1: 10YR 4/3 brown do 7.5YR 5/3 brown. Tamniji sediment, sličan sloju 6. Sadrži tragove gorenja, brojni nalazi životinjskih kostiju i litike.

F5: 7.5YR 2.3/3 very dark brown. Tamni-

Layer 2.1: 10YR 5/4 yellowish brown, 7.5YR 3/3 dark brown (darker part), 10YR 6/4 light yellowish brown. The sediment is more compact than the sediment in layer 1, loose, and contains a lot of sharp-edged and broken stones (small, medium-sized, and some larger than 10 cm). Few lithics, more bones, sporadic traces of burning.

Layer 2.3: 7.5YR 4/4 brown. It is similar to layer 2.1, with less sediment and more sharp-edged debris of smaller size.

Layer 3: 10YR 5/4 yellowish brown. Layer with much less small, sharp-edged debris and much more sediment than layer 2.3. Slightly darker layer, sandy-silty. It contains several larger rocks that fell from the cave ceiling. Relatively loose, with some small stones (approx. 20%).

Layer 4: 10YR 5/3 brown. Relatively dry, clayey sediment containing about 30–40% sharp-edged stones 2–5 cm in diameter. Finds include large bone fragments (large herbivores), and much fewer lithic finds. Sporadic traces of burning are also present.

Layer 5: 10YR 5/4 yellow brown. Sandy layer containing about 50% of smaller stones 2–5 cm in diameter and about 5% of larger stones measuring 10 cm and more. There is a visible increase in the number of lithic finds compared to layer 4, and the bones are smaller and more fragmented. Finds of ochre also occur.

Layer 6: 10YR 4/2 dark greyish brown. The part of layer 4 which contains multiple burning traces is 7.5YR 6/3 light brown. The sediment is sandy silt. The layer is darker than layer 5 and contains about 5–10% of small debris, with a diameter of 2–5 cm. The finds include much more lithics, while the bones are still very small and fragmented, as well as ochre finds. The research of this layer was not completed during the 2023 season.

F7: 10YR 5/3 brown. Part of the sediment containing more intensive burning traces within layer 4. Present in parts of quadrants K21 and K22. Sediment of the same characteristics as layer 4, as well as finds – almost no lithics, fragmented burnt bones, pieces of charcoal and ash. It is a fireside within layer 4.

F8: 10YR 4/3 dark grey brown. Part of layer 5 containing more intensive burning traces. The sediment is very silty. As in the case of F7, it is a fireside, in parts of quadrants K21 and K22. Finds include small fragments of burnt bones and a few lithics.

Layer 7.1: 10YR 4/3 brown to 7.5YR 5/3 brown. Darker sediment, similar to layer 6. It contains traces of burning, numerous finds of animal bones and lithics.

ji vlažni sediment unutar sloja 7.1 u kojem ima manje kamenja (10–20 %). Fragmenti ugljena, puno litike. Prisutan u kvadrantima A2, B2, C2 i vrlo malo u D2, vjerojatno vatrište, dijelom siječe i sloj 8.

Sloj 8: 7.5YR 4/6 strong brown. Sediment koji se sastoji od dijelom vlažnog i glinastijeg, a dijelom rastresitog i sušeg sloja smeđkasto-narančaste boje. Sadrži 50–70 % kamenja dimenzija do cca 10 cm te nekoliko većih kamenih blokova. Litika, životinjske kosti, oker, školjke.

Sloj 9: 7.5YR 3/3 dark brown. Tamnosmeđi rahli sediment, s puno manje kamenja nego sloj 8, radi se o sloju koji ispunjava pukotine u matičnoj stijeni, vrlo fragmentirani nalazi kostiju, litike (količina opada s dubinom), okera i par školjki. Tragovi djelovanja vode (popucala stijena, tanka sigovina, rupe u sedimentu). Zadnja stratigrafska jedinica u sondi ispod koje se nalazi matična stijena.

F6: 10YR 5/3 brown. Rahli, smeđe do sivi sediment s jednom većom koncentracijom crvenkaste zemlje (oker?), u kvadrantima C1, D1 i D2, nepravilnog kružnog oblika. Rahli, u razini sloja 9, leži na matičnoj stijeni. Vjerojatno vatrište, uzet uzorak za flotaciju, fragmentirani nalazi kostiju, litike, okera i 2 školjke.

Arheološki nalazi u sezoni 2022.

Tijekom arheoloških istraživanja u 2022. godini, kao i ranijih godina, otkrivena je velika količina arheološke građe koju na temelju tipološko-tehnoloških odlika (za litičku građu), taksonomskih odrednica (faunski nalazi) te druge vrste materijala i zapažanja kod istraživanja (nalazi probušenih ljuštura puževa i školjaka, oker, i dr.) možemo pripisati razdoblju kasnog pleistocena. Nadalje, rezultati apsolutne datacije dijela slojeva (3, 3.1, 4, 5, 6, 7.1) to u potpunosti potvrđuju. Uzeti su uzorci za provođenje apsolutne datacije slojeva za koje to nije provedeno u ranijim istraživanjima (2, 2.3, 8, 9, F5, F6), čime će se dobiti pouzdana kronologija čitavog stratigrafskog slijeda na nalazištu i omogućiti precizan kronološki okvir, što će, osim za dataciju ovog nalazišta, pružiti i oslonac za komparativne analize obližnjih kao i nalazišta u široj okolici.

Najbrojnija kategorija arheološke građe pripada koštanim ostacima. Koštani ostaci uglavnom su manji fragmenti od kojih mnogi nose tragove ljudskog djelovanja (i.e. tragovi mesarenja, lomljenja i gorenja). Brojni su i litički na-

F5: 7.5YR 2.3/3 very dark brown. Darker, moist sediment within layer 7.1 containing less stone (10–20%). Charcoal fragments, many lithics. Present in quadrants A2, B2, C2, and very little in D2, possibly a fireside, partially cutting into layer 8.

Layer 8: 7.5YR 4/6 strong brown. Sediment consisting partly of a moist and clayey layer, and partly of a loose and drier layer of a brownish-orange colour. It contains 50–70% of stones up to about 10 cm in size, as well as several larger stone blocks. Lithics, animal bones, ochre, and shells.

Layer 9: 7.5YR 3/3 dark brown. Dark brown loose sediment, with much fewer stones than layer 8. It is a layer that fills the cracks in the bedrock. Very fragmented finds of bones, lithics (quantity decreases with depth), ochre, and a few shells. Traces of water action (cracked rock, thin flowstone, holes in the sediment). The last stratigraphic unit in the trench, below which lies the bedrock.

F6: 10YR 5/3 brown. Loose, brown to grey sediment with one larger concentration of reddish earth (ochre?), in quadrants C1, D1, and D2, of an irregular circular shape. Loose, at the level of layer 9, lies on the bedrock. Probably a fireside. A flotation sample was taken. Fragmented finds of bones, lithics, ochre, and 2 shells.

Archaeological finds in season 2022

During the archaeological investigations in 2022, as in previous years, a large quantity of archaeological material was discovered. Based on its typological-technological characteristics (for lithic material), taxonomic determinations (faunal finds), and other types of material and observations during the research (finds of perforated snail and mollusc shells, ochre, etc.), this material can be attributed to the Late Pleistocene period. Furthermore, this is fully confirmed by the results of absolute dating of a part of the layers (3, 3.1, 4, 5, 6, 7.1). Samples were taken for absolute dating of the layers for which this was not done in prior research (2, 2.3, 8, 9, F5, F6), which will provide a reliable chronology of the entire stratigraphic sequence at the site and enable a precise chronological framework. This will not only provide dating for the site but also a basis for comparative analyses of nearby sites and sites in the wider region.

The most numerous category of archaeological material belongs to bone remains. Bone remains are mainly small fragments, many of which bear

lazi koji uključuju gotova oruđa, kao i lomljevinu. Brojna lomljevinu i jezgre sugeriraju litičku proizvodnju na nalazištu (T. 1). Među lomljevinom su brojna sječiva i pločice. Prisutnost nodularne i valutične okorine na kamenim izradevinama pokazatelj je eksploatacije sirovine iz autohtonih i alohtonih ležišta (T. 1: 4–5). Među oruđima su zabilježena grebala (T. 1: 2) i pločice s hrptom.

U donjim slojevima (slojevi 8, 9, F5 i F6) pronađena je velika količina okera (uglavnom manjih dimenzija). To je posebice važno uzimajući u obzir nedavno otkriće paleolitičkih pećinskih slikarija u Romualdovoj pećini, smještenoj u neposrednoj blizini lokaliteta Abri Kontija 002 (na drugoj strani, odnosno južnim obroncima Limskog kanala, vidjeti: Ruiz-Redondo et al. 2022). Iako za sada spomenute slikarije nisu apsolutno datirane, te je teško uspostaviti čvrstu kronološku poveznicu tih nalaza i lokaliteta Abri Kontija, postoji mogućnost da je barem dio stratigrafske sekvence na lokalitetu Abri Kontija 002 nastao istovremeno kada su oslikani zidovi Romualdove pećine (vidjeti: Ruiz-Redondo et al. 2019 za potencijalnu starost slikarija iz Romualdove pećine). Dodatne analize i istraživanja će, nadamo se, doći bliže odgovoru na ta zanimljiva pitanja i sferi života drevnih stanovnika Istre.

Tijekom istraživanja u sezoni 2022. godine najbrojniji su nalazi iz kategorije kosti, pri čemu treba naglasiti da su u istu ubrojani i dentalni nalazi (tab. 1; sl. 3). Nadalje, u većini slučajeva radi se o manjim fragmentima koštanih nalaza, a ne cjelovitim kostima.

Tijekom samog istraživanja, kao i tijekom terenske laboratorijske obrade i preliminarne analize nalaza, uočene su određene razlike u odlikama nalaza iz kvadranta C i D (u kojima je istraživani donji dio sekvence, odnosno slojevi 7.1, 8, 9 te F5 i F6) u usporedbi s nalazima iz kvadranta L i K gdje je istraživani gornji dio sekvence, odnosno slojevi 1, 2.1, 2.3 i 3).

Na osnovi preliminarne analize, uključujući i usporedbu rezultata deskriptivne statistike, moguće je zamijetiti da su donji slojevi puno bogatiji nalazima litike, okera i školjki (sl. 4). Tijekom istraživanja zamijećeno je i da je fragmentiranost koštanih nalaza u donjim slojevima puno veća. Dok su u gornjim slojevima nalazišta pronađeni veći fragmenti kostiju, a u više slučajeva i čitave kosti, u donjim slojevima uglavnom se radi o vrlo malim fragmentima. Nadalje, iako je

traces of human activity (i.e., traces of butchering, breaking, or burning). There are also numerous lithic finds, which include finished tools as well as debitage. Numerous items of debitage and cores suggest lithic production at the site (T. 1). Debitage includes numerous blades and bladelets. The presence of nodular and pebble rind on the stone artifacts is an indicator of the exploitation of raw materials from both local and non-local deposits (T. 1: 4–5). Tools include scrapers (T. 1: 2) and backed bladelets.

A large quantity of ochre (mostly small pieces) was found in the lower layers (layers 8, 9, F5, and F6). This is particularly significant in light of the recent discovery of Palaeolithic cave paintings in Romuald's Cave, located in the immediate vicinity of the Abri Kontija 002 site (on the opposite side, or the southern slopes of Lim Bay; see: Ruiz-Redondo et al. 2022). While these paintings have no absolute dating yet, and it is difficult to establish a firm chronological link between these finds and the Abri Kontija site, there is a possibility that at least part of the stratigraphic sequence at the Abri Kontija 002 site dates to the same time as the wall paintings in Romuald's Cave (see: Ruiz-Redondo et al. 2019 for the potential age of the paintings in Romuald's Cave). Further analysis and research will hopefully bring us closer to answering these intriguing questions and to the sphere of life of the ancient inhabitants of Istria.

During the 2022 research season, the most numerous finds belonged to the category of bones; it should be pointed out that this category includes dental finds (Tab. 1; Fig. 3). In most cases, these are small bone fragments rather than whole bones.

During the excavation itself, and during the field laboratory processing and preliminary analysis of the finds, it was observed that the characteristics of the finds from quadrants C and D (where the lower part of the sequence was investigated, i.e. layers 7.1, 8, 9, and F5 and F6) differ from the finds from quadrants L and K, where the upper part of the sequence was investigated, i.e. layers 1, 2.1, 2.3, and 3.

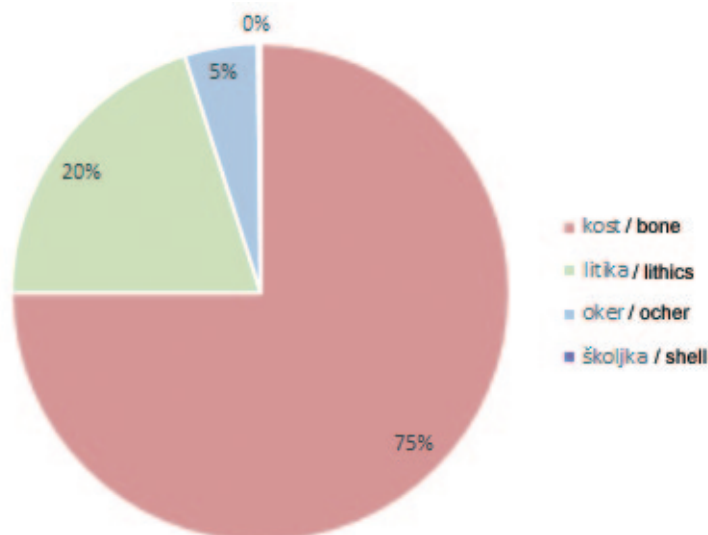
Based on the preliminary analysis, including comparisons of descriptive statistics results, it can be seen that the lower layers are much richer in finds of lithics, ochre, and shells (Fig. 4). During the excavations, it was also noticed that the fragmentation of bone finds is much greater in the lower layers. While the upper layers of the site contained large bone fragments, and often whole bones, the lower layers mostly contained very small frag-

| Sloj / Layer | Vrsta nalaza / Type of find | Količina / Quantity |
|-------------------------------------|-----------------------------|---------------------|
| 1 | kost / bone | 104 |
| 1 | litika / lithic | 10 |
| 1 | oker / ochre | 3 |
| 2.1 | kost / bone | 1125 |
| 2.1 | litika / lithic | 113 |
| 2.1 | školjka / mollusc | 1 |
| 2.3 | kost / bone | 908 |
| 2.3 | litika / lithic | 31 |
| 3 | kost / bone | 2544 |
| 3 | litika / lithic | 57 |
| 7.1 | kost / bone | 268 |
| 7.1 | litika / lithic | 117 |
| 7.1 | oker / ochre | 26 |
| 7.1 | školjka / mollusc | 2 |
| 8 | kost / bone | 1445 |
| 8 | litika / lithic | 544 |
| 8 | oker / ochre | 156 |
| 8 | školjka / mollusc | 8 |
| 9 | kost / bone | 6036 |
| 9 | litika / lithic | 1845 |
| 9 | oker / ochre | 560 |
| 9 | školjka / mollusc | 1 |
| F5 | kost / bone | 1292 |
| F5 | litika / lithic | 903 |
| F5 | oker / ochre | 56 |
| F5 | školjka / mollusc | 20 |
| F6 | kost / bone | 496 |
| F6 | litika / lithic | 252 |
| F6 | oker / ochre | 104 |
| F6 | školjka / mollusc | 2 |
| čišćenja profila / profile cleaning | kost / bone | 605 |
| čišćenja profila / profile cleaning | litika / lithic | 150 |
| čišćenja profila / profile cleaning | oker / ochre | 80 |
| čišćenja profila / profile cleaning | školjka / mollusc | 2 |
| Ukupno / Total | kost / bone | 14 823 |
| Ukupno / Total | litika / lithic | 3958 |
| Ukupno / Total | oker / ochre | 985 |
| Ukupno / Total | školjka / mollusc | 36 |

| Sloj / Layer | Vrsta nalaza / Type of find | Količina / Quantity |
|-------------------------------------|-----------------------------|---------------------|
| F7 | kost / bone | 197 |
| F7 | litika / lithic | 7 |
| 4 | kost / bone | 1749 |
| 4 | litika / lithic | 71 |
| 5 | kost / bone | 5 357 |
| 5 | litika / lithic | 404 |
| 5 | oker / ochre | 35 |
| F8 | kost / bone | 573 |
| F8 | litika / lithic | 20 |
| 6 | kost / bone | 1987 |
| 6 | litika / lithic | 674 |
| 6 | oker / ochre | 41 |
| čišćenja profila / profile cleaning | kost / bone | 174 |
| čišćenja profila / profile cleaning | litika / lithic | 8 |
| Ukupno / Total | kost / bone | 10 037 |
| Ukupno / Total | litika / lithic | 1184 |
| Ukupno / Total | oker / ochre | 76 |

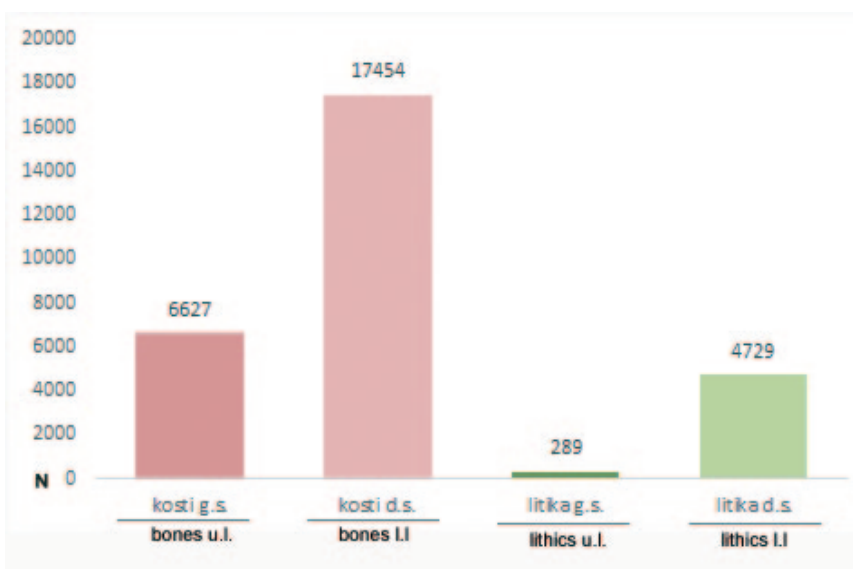
Tab. 2 – Učestalost arheoloških nalaza s nalazišta Abri Kontija 002 iz sezone 2023. po slojevima. Istraživanje sloja 6 nije završeno u ovoj sezoni (izradila L. Vidas, 2023.)
 Tab. 2 – Frequency of archaeological finds from the Abri Kontija 002 site from season 2023 by layers. Excavations of layer 6 have not been completed in this season (made by: L. Vidas, 2023)

Tab. 1 – Količinski odnosi arheoloških nalaza s nalazišta Abri Kontija 002 iz sezone 2022. (izradila L. Vidas, 2023.)
 Tab. 1 – Quantity relationships of archaeological finds from the Abri Kontija 002 site from season 2022 (made by: L. Vidas, 2023)



Sl. 3 – Zastupljenost arheoloških nalaza iz 2022. prema vrsti. U kategoriju kosti ubrojeni su i dentalni nalazi (izradila: L. Vidas, 2023.)

Fig. 3 – Representation of archaeological finds from 2022 by type. The category of bones includes dental finds (made by: L. Vidas, 2023)



Sl. 4 – Učestalost nalaza iz gornjih (g.s., 1–4) i donjih slojeva (d.s., 5–9) sonde, ne uključuje nalaze iz čišćenja profila (izradila: L. Vidas, 2023.)

Fig. 4 – Frequency of finds from the upper (u.l., 1–4) and lower layers (l.l., 5–9) of the trench, excluding finds from the cleaning of the profile (made by: L. Vidas, 2023)

i na dijelu koštanih, kao i litičkih nalaza iz gornjih slojeva također zamijećeno prisustvo vatre, kao i procesuiranje kostiju od strane ljudi (npr. tragovi rezanja i lomljenja), u donjim slojevima intenzitet gorenja je puno izraženiji. Također je zanimljivo napomenuti da je u donjim slojevima (a posebice najdonjim slojevima) pronađena najveća količina okera (od ukupne količine okera, samo su tri fragmenta pronađena u sloju 1).

Arheološki nalazi u sezoni 2023.

Tijekom arheoloških istraživanja u 2023. godini, kao i ranijih godina, otkrivena je velika količina arheološke građe koja se na temelju već navedenog također pripisuje razdoblju kasnog pleistocena.

Najbrojnija kategorija arheološke građe

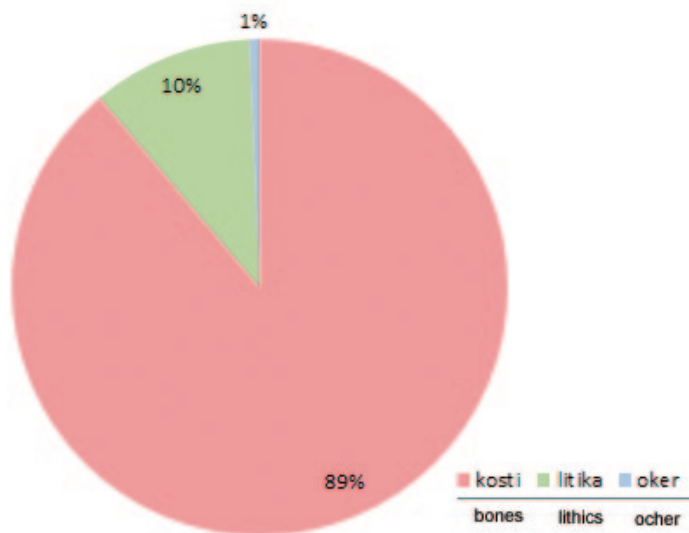
ments. Furthermore, although some of the bone and lithic finds from the upper layers showed traces of fire, as well as the processing of bones by humans (e.g. traces of cutting and breaking), the intensity of burning is much more pronounced in the lower layers. It is also interesting to note that the largest amount of ochre was found in the lower layers (and especially the lowest layers) (out of the total amount of ochre, only three fragments were found in layer 1).

Archaeological finds in season 2023

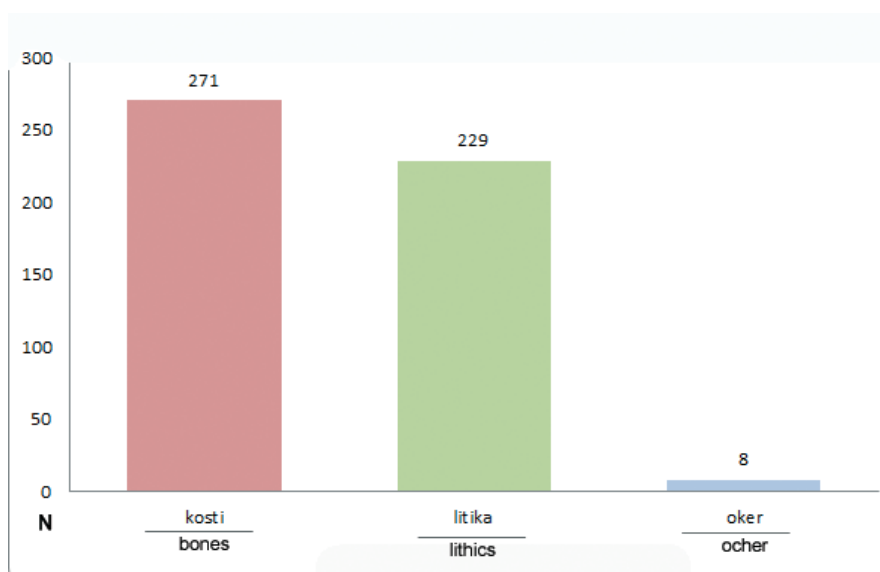
The archaeological excavations in 2023, as in previous years, discovered a large quantity of archaeological material that can also be associated with the Late Pleistocene period on the aforementioned basis.

ponovno pripada koštanim ostacima. Treba naglasiti da je to svakako rezultat visokog stupnja fragmentiranosti koštanih nalaza kao rezultat ljudske aktivnosti, koja je vidljiva na većem broju nalaza (tragovi gorenja, lomljenja i rezanja). Iduća kategorija prema zastupljenosti nalaza pripada litici. Prisutne su sve faze proizvodnje koje upućuju na izradu artefakata *in situ* (jezgre, lomljevine, krhotine kao i gotovi proizvodi s tragovima obradbe) (T. 2). Valja naglasiti da postoji razlika u nalazima gornjeg sloja (sloj 4), gdje dominiraju faunski ostaci pretežito većih dimenzija; litički nalazi su manje zastupljeni, a okera nema. Za razliku od spomenutog, među nalazima sloja 5, a posebice sloja 6 količina litičkih nalaza iznimno se povećava, kosti su puno fragmentiranije i manjih dimenzija, a javljaju se nalazi okera (sl. 5–6; T. 3). Tijekom samog iskopavanja sloja

Again, bone remains are the most numerous category of archaeological material. This is certainly the result of the high degree of fragmentation of bone finds because of human activity, which is visible on a large number of finds (traces of burning, breaking, and cutting). Lithics are the second most represented category of finds. All phases of production are present, indicating the manufacture of artifacts *in situ* (cores, debitage, flakes, and finished products with traces of processing) (T. 2). Notably, the finds from the upper layer (layer 4) show differences: they are dominated by faunal remains of mostly large size, there are fewer lithic finds, and there is no ochre. On the other hand, in layer 5, and especially in layer 6, the amount of lithic finds greatly increases, the bones are much more fragmented and smaller, and ochre finds appear (Figs. 5–6; T. 3). During the excavations, it was noticed that



Sl. 5 – Zastupljenost arheoloških nalaza iz 2023. prema vrsti. U kategoriju kosti ubrojani su i dentalni nalazi (izradila: L. Vidas, 2023.)
Fig. 5 – Representation of archaeological finds from 2023 by type. The category of bones includes dental finds (made by: L. Vidas, 2023)



Sl. 6 – Učestalost mapiranih arheoloških nalaza iz 2023. prema vrsti. U kategoriju kosti ubrojani su i dentalni nalazi (izradila: L. Vidas, 2023.)
Fig. 6 – Frequency of mapped archaeological finds from 2023 by type. The category of bones includes dental finds (made by: L. Vidas, 2023)

6, zamijećena je vrlo visoka prisutnost alati izrađenih na sječivima od rožnjaka visoke kvalitete. Svi kameni nalazi, a pogotovo oruđe, pronađeni *in situ*, tretirani su kao uzorci drevne DNA (zbog mogućnosti tragova ljudske DNA na samom oruđu) te su stoga pohranjeni u vrećice bez diranja rukom. Nakon povratka s istraživanja započeta je njihova analiza koja je još uvijek u tijeku. Također, pri detaljnoj arheozoološkoj analizi treba uzeti u obzir moguću epizodu mesarenja većeg sisavca (moguće konja) tijekom okupacije sloja 4, te rezultate usporediti s onima za sloj 5 i sloj 6. Uzeti su uzorci za radiometrijsko datiranje, sedimentnu DNA te za paleoproteomske analize, a sve navedeno još uvijek je u tijeku.

Preliminarni rezultati

Preliminarne analize arheološke građe uključuju standardne litičke, kao i arheozoološke analize, uključujući i dio provedenih paleoproteomskih analiza. Budući da je 2023. godina ujedno i završna godina terenskih istraživanja predviđenih projektnom PREHISTRIA, u tijeku su i dodatne analize (detaljna geoarheološka analiza, analize sedimentne DNA, analiza sirovinskog materijala, dodatne litičke i arheozoološke analize različitim metodologijom, analize stabilnih izotopa, i dr.). Budući da je ovaj lokalitet istraživan i tijekom ranijeg projekta Hrvatske zaklade za znanost „Arheološka istraživanja kasnog pleistocena i ranog holocena u Limskom kanalu“ (ARCHAEOLIM; UIP-11-2013-7789), za dio nalaza (svi nalazi s točnim položajem u koordinatnom sustavu) usporedili smo količinu građe prema kategorijama (sl. 7). Najbrojnija kategorija pripada litičkim nalazima, što je rezultat, s jedne strane, intenziteta korištenja nalazišta i proizvodnje oruđa *in situ* (o čemu svjedoče ostaci svih produkcijskih faza, npr. jezgre, lomljevina, krhotine kao i gotovi proizvodi s tragovima obradbe), a s druge strane prakse bilježenja svih litičkih nalaza u njihovoj prostornoj distribuciji. Što se tiče faunskih nalaza, valja napomenuti da je u grafu (sl. 7) prikazan samo brojčani odnos nalaza za koje je zabilježen točan položaj u koordinatnom sustavu i jedinstveni broj nalaza. Vodeći se uobičajenom praksom za istraživanje sličnih lokaliteta, ti podaci su zabilježeni za dijagnostičke nalaze te fragmente duže od 2 cm. Ukoliko usporedimo učestalost svih sakuplje-

layer 6 had a very high number of tools made on high-quality flint blades. All the stone finds *in situ*, and especially tools, were treated as ancient DNA samples (due to the possibility of traces of human DNA on the tool itself) and were therefore stored in bags and untouched by hand. Their analysis, which started after returning from the excavations, is still ongoing. Also, the detailed archaeozoological analysis should take into account a possible episode of butchering a large mammal (possibly a horse) during the occupation of layer 4, and the results should be compared with those for layer 5 and layer 6. Samples were taken for radiometric dating, sedimentary DNA, and palaeoproteomic analyses; all of this is still ongoing.

Preliminary results

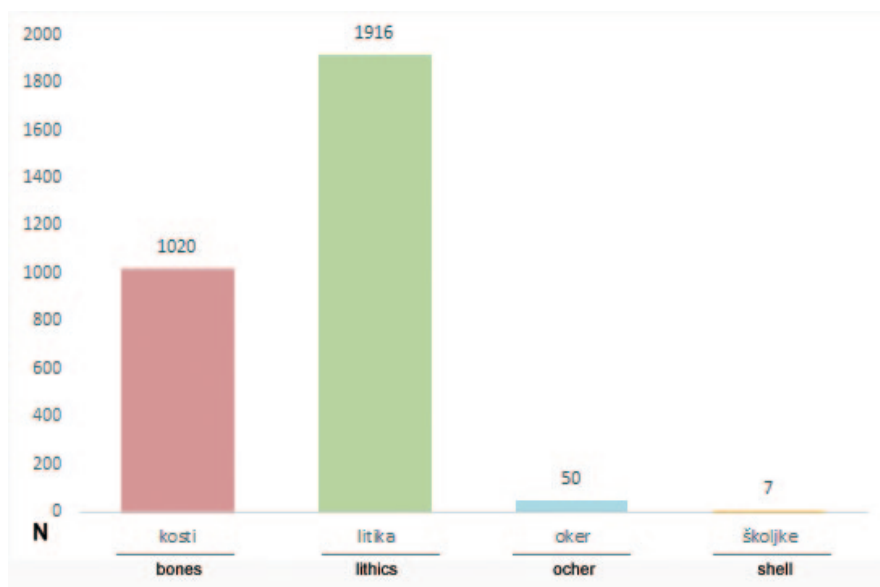
Preliminary analyses of the archaeological material include standard lithic analyses and archaeozoological analyses, including some of the conducted palaeoproteomic analyses. Since 2023 is also the final year of field research planned for the PREHISTRIA project, there are ongoing additional analyses (detailed geoarchaeological analysis, sedimentary DNA analyses, raw material analysis, additional lithic and archaeozoological analyses using different methodologies, stable isotope analyses, etc). Since this site was also investigated during the earlier Croatian Science Foundation project “Archaeological investigations into the Late Pleistocene and Early Holocene of the Lim Channel” (ARCHAEOLIM; UIP-11-2013-7789), we compared the amount of material by category (Fig. 7) for a part of the finds (all finds with an exact position in the coordinate system). Lithic finds are the most numerous category, which is a result, on the one hand, of the intensity of site use and tool production *in situ* (as evidenced by the remains of all production phases, e.g. cores, debitage, flakes, and finished products with traces of processing), and on the other hand, of the practice of recording all lithic finds in their spatial distribution. As far as faunal finds are concerned, it should be noted that the graph (Fig. 7) only shows the numerical ratio of the finds which have the exact position in the coordinate system and a unique find number. Following the usual research practice for similar sites, these data were recorded for diagnostic finds and fragments longer than 2 cm. If we compare the frequency of all collected finds

nih nalaza iz istraživanja provedenih u sklopu projekta PREHISTRIA po kategorijama (sl. 8), vidljivo je da koštani nalazi (uključujući i dentalne) daleko premašuju ostale kategorije, iako je broj litičkih nalaza jako velik s obzirom na istraženu površinu. To je još jedan prilog tezi o intenzivnom korištenju nalazišta.

S obzirom na istraživanja iz sezona 2022. i 2023., preliminarnе analize litičkog skupa nalaza ukazale su na važnost proizvodnje sječiva/pločica kao prvotnih oblika koji su kasnije korišteni u proizvodnji oruđa. Sječiva/pločice proizvedene su direktnim lomljenjem jezgara s jednom udarnom plohom. Dio prvotnih oblika sječiva/pločica dotjeran je strmom ili polustrmom obradom u tip oruđa koji označavamo kao sječivo/pločica s hrpom.

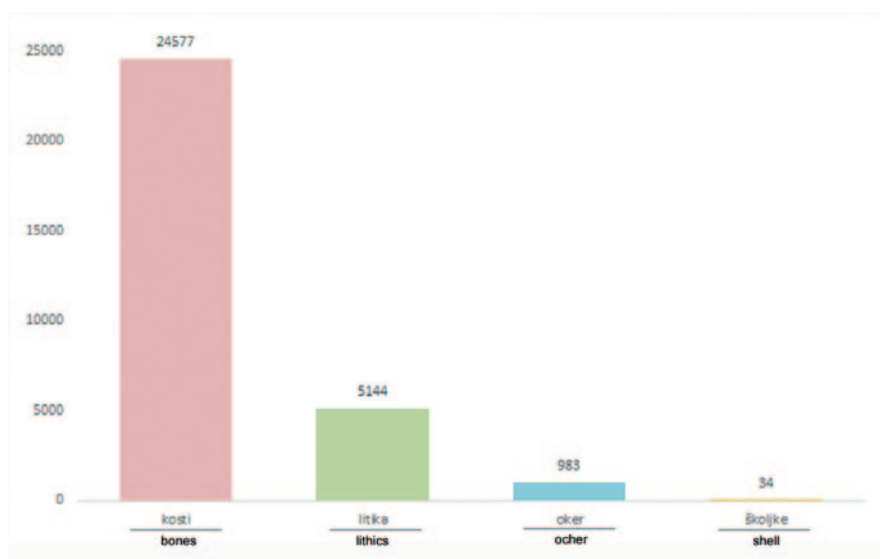
from the research carried out within the PREHISTRIA project by category (Fig. 8), it can be seen that bone finds (including dental finds) far exceed other categories, although the number of lithic finds is very large relative to the investigated area. This is another argument in favour of the thesis of intensive use of the site.

Based on the research from the seasons of 2022 and 2023, preliminary analyses of the lithic assemblage indicate the importance of the production of blades/bladelets as the primary forms that were later used in tool production. Blades/bladelets were produced by direct flaking of cores with a single striking platform. A portion of the primary forms of blades/bladelets was retouched using abrupt or semi-abrupt retouch into the tool type that we designate as a blade/bladelet with a back.



Sl. 7 – Učestalost mapiranih arheoloških nalaza od 2014. do 2023. prema vrsti. U kategoriju kosti ubrojani su i dentalni nalazi (izradila: L. Vidas, 2023.)

Fig. 7 – Frequency of mapped archaeological finds from 2014 to 2023 by type. The category of bones includes dental finds (made by: L. Vidas, 2023)



Sl. 8 – Učestalost svih arheoloških nalaza tijekom projekta PREHISTRIA prema vrsti. U kategoriju kosti ubrojani su i dentalni nalazi (izradila: L. Vidas, 2023.)

Fig. 8 – Frequency of all archaeological finds during the PREHISTRIA project by type. The category of bones includes dental finds (made by: L. Vidas, 2023)

Skup faunskih ostataka sastoji se gotovo u potpunosti od koštanih ostataka kralješnjaka, uz svega nekoliko ostataka ljuštura mekušaca (tab. 1). Preliminarnim pregledom ustanovljeno je da je uglavnom riječ o ulomcima kostiju i zuba sisavaca (T. 4–5), dok su ostaci drugih kralješnjaka rijetki (ptice, ribe, vodozemci). Većina pripada srednje velikim i velikim biljojedima, među kojima su najbrojniji ostaci pripadnika roda *Equus* (konj). Osim konja u manjem broju evidentirane su i druge vrste (jelen, medvjed, jazavac, svizac). Među taksonomski odredivim ostacima konja prevladavaju zubi, a čini se da su zastupljene obje izumrle vrste: *E. ferus* i *E. hydruntinus*. Osim tragova rezanja i gorenja, izuzetna razlomljenost koštanog materijala ukazuje na intenzivno procesuiranje trupala ulovljenih životinja, ali zasad nije moguće detaljnije razmatrati odnos u učestalosti između spomenutih taksona i njihovoj ulozi u lovnim strategijama gornjopaleolitičkih lovaca skupljača.

Obzirom na veliku količinu nedijagnostičkih fragmenata kostiju koja je pronađena u svim sezonama istraživanja, u tijeku su i paleoproteomske (ZooMS) analize dvjestotinjak uzoraka s nalazišta Abri Kontija 002. Preliminarni rezultati ukazuju na lošu očuvanost kolagena među nalazima iz gornjeg dijela stratigrafije (slojevi 1–3), dok su uzorci iz ostatka stratigrafske sekvence ovom metodom uglavnom uspješno determinirani minimalno na razini roda, a neki i na razini vrste. Za sada se može reći da u analiziranom skupu prevladavaju ostaci konja (*Equus* sp.), a prisutni su i drugi srednji do veliki biljojedi poput jelena (*Cervus elaphus*) i bovida (*Bos/bison*). Tragovi ljudskih aktivnosti na navedenim nalazima, ali i gustoća i brojnost kamenih nalaza te prisutnost nekolicine vatrišta, upućuju da su upravo zajednice lovaca-skupljača bile primarni čimbenik akumulacije brojnih životinjskih kostiju pronađenih na ovom nalazištu.

Zaključna razmatranja

Istraživanja nalazišta Abri Kontija 002 2022. i 2023. godine nastavak su ranije započetih sustavnih istraživanja lokaliteta. U okviru projekta PREHISTRIA, postojeća sonda veličine 1,5 x 3 m istražena je do matične stijene, a zatim i

The faunal assemblage consists almost entirely of vertebrate bone remains, with only a few mollusc shell remains (Tab. 1). Preliminary examination has determined that most of the remains are fragments of mammalian bones and teeth (T. 4–5), while remains of other vertebrates (birds, fish, amphibians) are rare. Most of them belong to medium-sized and large herbivores, among which the most numerous are remains of members of the genus *Equus* (horses). There are smaller numbers of other species (deer, bear, badger, marmot). Most of the taxonomically identifiable horse remains are teeth; it seems that both extinct species are represented: *E. ferus* and *E. hydruntinus*. In addition to traces of cutting and burning, the exceptional fragmentation of the bone material indicates intensive processing of the carcasses of hunted animals, but it is still impossible to discuss in more detail the relationship between the frequency of the mentioned taxa and their role in the hunting strategies of Upper Palaeolithic hunter-gatherers.

Given the large quantity of undiagnostic bone fragments found in all the excavating seasons, there are also ongoing palaeoproteomic (ZooMS) analyses of around two hundred samples from the Abri Kontija 002 site. Preliminary results indicate poor collagen preservation among the finds from the upper part of the stratigraphy (layers 1–3), while samples from the rest of the stratigraphic sequence have been for the most part successfully determined by this method, at least to the genus level, and some to the species level. For now, it can be said that the analysed assemblage is dominated by remains of horses (*Equus* sp.), but there are also other medium to large herbivores such as red deer (*Cervus elaphus*) and bovids (*Bos/bison*). Traces of human activity on these finds, as well as the density and number of stone finds and the presence of several firesides, indicate that hunter-gatherer communities were the primary factor in the accumulation of the numerous animal bones found at this site.

Concluding remarks

The 2022 and 2023 excavations at the Abri Kontija 002 site were a continuation of the previously initiated systematic excavations of the site. Within the PREHISTRIA project, the existing trench measuring 1.5 x 3 m was investigated to

proširena novim kvadrantom (1,5 x 1,5 m). Širenjem arheološke sonde dobivena je veća površina, koja će pružiti bolji uvid u prostornu distribuciju te omogućiti uvid u način korištenja predšpiljskog prostora u različitim fazama (slojevima) korištenja lokaliteta. Nadalje, rezultati gearheoloških analiza (u tijeku) pružit će detaljniji uvid u formaciju slojeva te intenzitet i moguće razlike korištenja prostora za različite djelatnosti u pojedinim slojevima. Već na temelju preliminarnih arheozooloških analiza, te brojčanoj zastupljenosti litičkih i drugih nalaza, moguće je uočiti jači intenzitet korištenja nalazišta u donjim (starijim) slojevima (tj. slojevi od 5 nadalje), dok je u gornjim slojevima (posebice sloj 4) intenzitet korištenja slabiji, a fragmentiranost nalaza manja. Povećanje u intenzitetu korištenja nalazišta u starijim slojevima sukladno je preliminarnim rezultatima gearheoloških analiza (K. Gerometta, usmeno priopćenje). No, dok nisu završene detaljne arheozoološke analize (uključujući i paleoproteomske analize), ove rezultate valja uzeti s određenom zadržkom.

Nadalje, određene kategorije nalaza puno su rjeđe u gornjim slojevima. Nalazi poput školjki ili okera gotovo sasvim nedostaju, a broj im se povećava što dublje idemo u stratigrafsku sekvencu. S obzirom da su rezultati radiometrijskog datiranja najstarijih slojeva dali rezultate od oko 31 000 godina prije sadašnjosti (rad u pripremi), moguće je zaključiti da lokalitet Abri Kontija 002 predstavlja za sada najraniju zabilježenu pojavu industrije pločica s hrptom na istočnoj jadranskoj obali. Zanimljivo je spomenuti i veću količinu okera pronađenog u starijim slojevima nalazišta, posebno uzimajući u obzir moguću starost pećinskih slikarija otkrivenih u Romualdovoj pećini pretpostavljenu na temelju stilskih obilježja slikarije bizona (Ruiz-Redondo et al. 2019; 2020).

Rad na analizama izuzetno vrijedne arheološke građe otkrivene na nalazištu Abri Kontija 002 nije završen. U tijeku su detaljne analize cjelokupnog materijala kao i biomolekularne analize brojnih uzoraka koji su prikupljeni tijekom istraživanja. Njihovi rezultati omogućit će nam nove spoznaje o životu u kasnom pleistocenu u ovom dijelu Istre, ali bit će i temelj za usporedbe s drugim nalazištima u regiji (Ljubićeva pećina, Šandalja II, Pupićina peć i dr.) i širem jadranskom prostoru.

the bedrock and then expanded with a new quadrant (1.5 x 1.5 m). The expansion of the archaeological trench has resulted in a larger area that will provide a better insight into the spatial distribution and help understand how the space in front of the cave was used in different phases (layers) of the use of the site. Furthermore, the results of the geoarchaeological analyses (in progress) will provide a more detailed insight into the formation of the layers and the intensity and possible differences in the use of space for different activities in the individual layers. The preliminary zooarchaeological analyses, and the numerical representation of lithic and other finds, show greater intensity of site use in the lower (older) layers (i.e. the layers from 5 onwards), while the upper layers (especially layer 4) have a weaker intensity of use and lower fragmentation of finds. The increase in the intensity of site use in the older layers is consistent with the preliminary results of geoarchaeological analyses (K. Gerometta, personal communication). However, these results should be taken with some caution until detailed zooarchaeological analyses (including palaeoproteomic analyses) are completed.

Furthermore, certain categories of finds are much rarer in the upper layers. Finds such as shells or ochre are almost completely absent, but their number increases the deeper we go in the stratigraphic sequence. Since radiometric dating of the oldest layers has given results of around 31,000 years before present (a paper is forthcoming), it can be concluded that the Abri Kontija 002 site represents the earliest recorded occurrence of the industry of bladelets with a back on the eastern Adriatic coast. A great amount of ochre was found in the older layers of the site, which is especially interesting when we consider the possible age of the cave paintings discovered in Romuald's Cave, which is based on the stylistic features of the bison paintings (Ruiz-Redondo et al. 2019; 2020).

The work on analysing the exceptionally valuable archaeological material discovered at the Abri Kontija 002 site is still in progress. There are ongoing detailed analyses of the entire material and biomolecular analyses of numerous samples that were collected during the excavations. Their results will provide new insights into life in the Late Pleistocene in this part of Istria, but will also serve as the basis for comparisons with other sites in the region (Ljubićeva Pećina, Šandalja II, Pupićina Peć etc.) and the wider Adriatic region.

Zahvale

Arheološka istraživanja u Ljubićevoj pećini i Abri Kontija 002 u sezoni 2022. i 2023. financirana su projektom Hrvatske zaklade za znanost „Prapovijesni lovci i sakupljači u Istri i obližnjim regijama: obrasci života tijekom kasnog pleistocena“ (PREHISTRIA; IP-2019-04-7821).

Acknowledgements

The archaeological excavations in Ljubićeva Pećina and Abri Kontija 002 in the seasons of 2022 and 2023 were financed as part of the Croatian Science Foundation's project entitled "Prehistoric hunter-gatherers in Istria and adjacent regions: Patterns of Late Pleistocene lifestyle and mobility" (PREHISTRIA; IP-2019-04-7821).

Prijevod Translation **MARKO MARAS**
Lektura Proofreading **MARKO MARAS**

LITERATURA BIBLIOGRAPHY

- Janković, I., Komšo, D., Ahern, J. C. M., Becker, R., Gerometta, K., Weinstock, J., Barbir, A., Vukosavljević, N., Cvitkušić, B., Zubčić, K., Mihelić, S., Smith, F. H.** 2017a, New Research on the Late Pleistocene and Early Holocene in the Lim Channel, Istria, *Antiquity*, Vol. 91(359): e4. <https://doi.org/10.15184/aqy.2017.170>
- Janković, I., Komšo, D., Mihelić, S., Ahern, J. C. M.** (eds.) 2017b, *Projekt ARCHAEOOLIM. Arheološka istraživanja kasnog pleistocena i ranog holocena na prostoru Limskog kanala / The ARCHAEOOLIM Project. Archaeological investigations into the Late Pleistocene and Early Holocene of the Lim Channel*, Arheološki muzej u Zagrebu, Arheološki muzej Istre, Institut za antropologiju, Zagreb.
- Janković, I., Ahern, J. C. M., Becker, R., Percan, T., Komšo, D.** 2019, Ljubićeva pećina: Lasersko skeniranje i geofizikalna mjerenja u sezoni 2019. / Ljubićeva pećina: Laser scanning and geophysical work in the 2019 season, *Histria archaeologica*, Vol. 49, 5–11.
- Janković, I., Ahern, J. C. M., Becker, R., Komšo, D., Radović, I., Čuka, M., Vukosavljević, N., Vidas, L., Gerometta, K., Novak, M.** 2022, Terenska istraživanja na nalazištima Ljubićeva Pećina I Abri Kontija 002 u okviru projekta PREHISTRIA tijekom 2021. / Field research at the sites of Ljubčeva pećina and Abri Kontija 002 as a part of the PREHISTRIA project during 2021, *Vjesnik arheološkog muzeja u Zagrebu*, 3.s. Vol. LV(2), 155–173. <https://doi.org/10.52064/vamz.55.2.1>
- Komšo, D.** 2008, Limski kanal, *Hrvatski arheološki godišnjak*, Vol. 4 (2007), 264–268.
- Mihailović, D.** 1999, The Upper Palaeolithic and Mesolithic stone industries of Montenegro, in: *The Palaeolithic Archaeology of Greece and adjacent areas*, Proceedings of the International Conference of Public Administration and Governance (ICOPAG), Ioannina 1994, Bailey G. N., Adam E., Panagopoulou E., Perlès C., Zachos K. (eds.), British School at Athens Studies 3, The British School at Athens, London, 343–356.
- Mihailović, D.** 2009, *Upper Palaeolithic and Mesolithic chipped stone industries from Crvena stijena*, Prehistoric settlements in caves and rock-shelters of Serbia and Montenegro Fascicule II, Center for Archaeological Research, Faculty of Philosophy of the University of Belgrade, Beograd.
- Munsell Color** 2013, *Munsell soil color charts: revised 2009*, Munsell Color, Grand Rapids.
- Peresani, M., Monegato, G., Ravazzi, C., Bertola, S., Margaritora, D., Breda, M., Fontana, A., Fontana, F., Janković, I., Karavanić, I., Komšo, D., Mozzi, P., Pini, R., Furlanetto, G., De Amicis, M. G. A., Perhoč, Z., Posth, C., Ronchi, C., Rossato, S., Vukosavljević, N., Zerbini, A.** 2021, Hunter-gatherers across the Great Adriatic-Po region during the Last Glacial Maximum: environmental and cultural dynamics, *Quaternary International*, Vol. 581–582, 128–163. <https://doi.org/10.1016/j.quaint.2020.10.007>
- Ruiz-Redondo, A., Komšo, D., Garate Maidagan, D., Moro-Abadía, O., González-Morales, M. R., Jaubert, J., Karavanić, I.** 2019, Expanding the horizons of Palaeolithic rock art: the site of Romualdova Pećina, *Antiquity*, Vol. 93(368), 297–312. <https://doi.org/10.15184/aqy.2019.36>
- Ruiz-Redondo, A., Garate, D., Gonzalez-Morales, M. R., Janković, I., Jaubert, J., Karavanić, I., Komšo, D., Kuhn, S. L., Mihailović, D., Abadía, O. M., Vander Linden, M., Vukosavljević, N.** 2020, Beyond the bounds of Western Europe: Paleolithic Art in the Balkan Peninsula, *Journal of World Prehistory*, Vol. 33, 425–455. <https://doi.org/10.1007/s10963-020-09147-z>
- Ruiz-Redondo, A., Vukosavljević, N., Tomasso, A., Peresani, M., Davies, M., Vander Linden, M.** 2022, Mid and Late Upper Palaeolithic in the Adriatic Basin: Chronology, transitions and human adaptations to a changing landscape, *Quaternary Science Reviews*, Vol. 276: 107319. <https://doi.org/10.1016/j.quascirev.2021.107319>
- Vukosavljević, N., Karavanić, I.** 2017, Epigravettian shouldered points in the Eastern Adriatic and its hinterland: Reconsidering their chronological position, *Acta Archaeologica Carpathica*, Vol. LII, 5–21.
- Vukosavljević, N., Perhoč, Z.** 2017, Lithic raw material procurement of the Late Epigravettian hunter-gatherers from Kopačina cave (island of Brač, Dalmatia, Croatia), *Quaternary International*, Vol. 450, 164–185. <https://doi.org/10.1016/j.quaint.2016.09.017>
- Vukosavljević, N., Perhoč, Z., Altherr, R.** 2014, Prijelaz iz pleistocena u holocen u pećini Vlakno na Dugom otoku (Dalmacija, Hrvatska) – litička perspektiva / Pleistocene-Holocene transition in the Vlakno Cave on the island of Dugi otok (Dalmatia, Croatia) – lithic perspective, *Prilozi Instituta za arheologiju u Zagrebu*, Vol. 31, 5–72.
- Vukosavljević, N., Perhoč, Z., Radić, D.** 2022, *Vela spila na Korčuli. Litička tehnologija i strategije nabave kamene sirovine epigravetijenskih i mezolitičkih zajednica*, FF Press, Centar za kulturu Vela Luka, Zagreb.



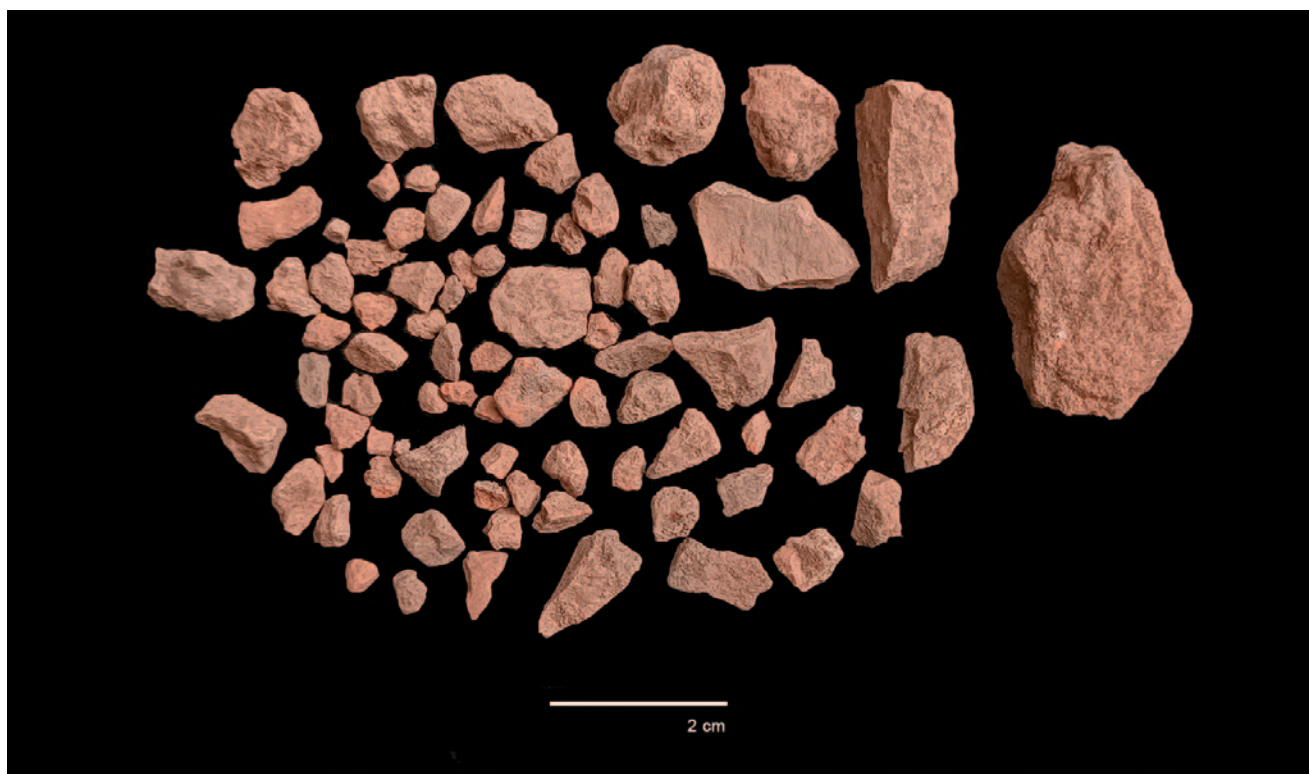
T. 1 – Litički nalazi iz sezone 2022: 1 jezgra; 2 grebalo; 3 iver dubila; 4–5 ulomci s okorinom (izradila: L. Vidas, 2023.)

T. 1 – Lithic finds from season 2022: 1 core; 2 endscraper; 3 burin spall; 4–5 fragments with rind (made by: L. Vidas, 2023)



T. 2 – Litički nalazi iz sezone 2023: 1 jezgra; 2–5 sječiva; 6 pločica s hrptom (izradila: L. Vidas, 2023.)

T. 2 – Lithic finds from season 2023: 1 core; 2–5 blades; 6 bladelet with back (made by: L. Vidas, 2023)



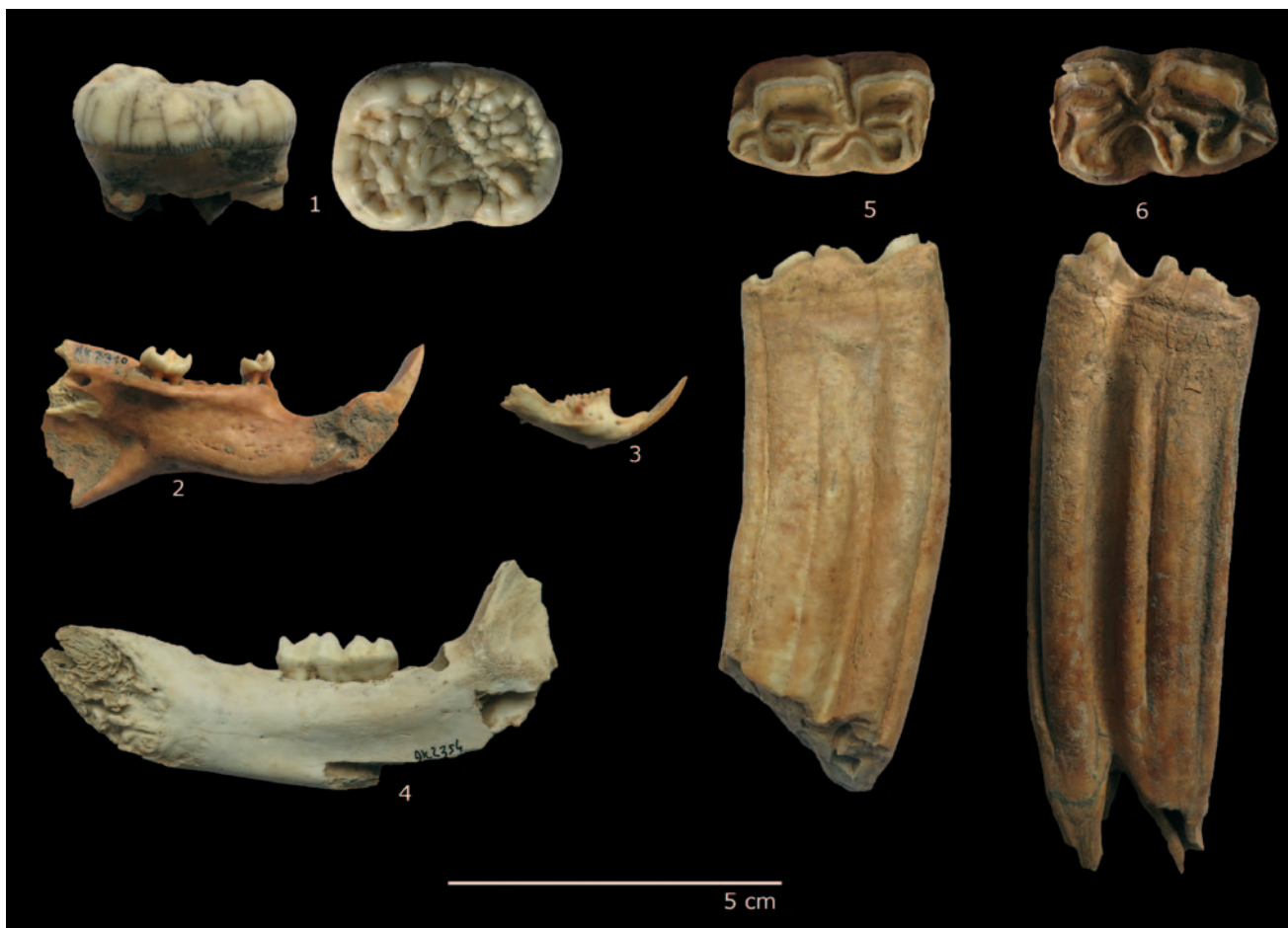
T. 3 – Dio nalaza okera iz sezone 2022. (izradila: L.Vidas, 2023.)

T. 3 – Part of the ochre found in season 2022 (made by: L. Vidas, 2023)



T. 4 – Koštani ostaci sisavaca: 1 cervid (*Cervidae*) (tibia); 2 konj (*Equus* sp.) (proksimalna falanga); 3 veliki cervid (*Megaloceros giganteus* ili *Alces alces*) (proksimalna falanga); 4 konj (*Equus* sp.) (srednja falanga) (izradila L.Vidas, 2023.)

T. 4 – Mammal bone remains: 1 cervid (*Cervidae*) (tibia); 2 horse (*Equus* sp.) (proximal phalanx); 3 large cervid (*Megaloceros giganteus* or *Alces alces*) (proximal phalanx); 4 horse (*Equus* sp.) (middle phalanx) (made by: L. Vidas, 2023)



T. 5 – Ostaci zuba sisavaca: 1 medvjed (*Ursus* sp.); 2 svizac (*Marmota marmota*); 3 glodavac (Rodentia); 4 jazavac (*Meles meles*); 5–6 konj (*Equus* sp.) (izradila: L.Vidas, 2023.)

T. 5 – Mammal tooth remains: 1 bear (*Ursus* sp.); 2 marmot (*Marmota marmota*); 3 rodent (Rodentia); 4 badger (*Meles meles*); 5–6 horse (*Equus* sp.) (made by: L. Vidas, 2023)