

# Prehistoric Schematic Rock Art in the Eastern Adriatic: the discovery of Rock Art at the Badanj II rock shelter (Bosnia and Herzegovina) viewed from the Western Mediterranean

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# PREHISTORIC SCHEMATIC ROCK ART IN THE EASTERN ADRIATIC: THE DISCOVERY OF ROCK ART AT THE BADANJ II ROCK SHELTER (BOSNIA AND HERZEGOVINA) VIEWED FROM THE WESTERN MEDITERRANEAN PRAPOVIJESNA SHEMATSKA STIJENSKA UMJETNOST ISTOČNOG JADRANA: OTKRIĆE STIJENSKE UMJETNOSTI U PRIPEĆKU BADANJ II (BOSNA I HERCEGOVINA) IZ PERSPEKTIVE ZAPADNOG MEDITERANA

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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.

Research on post-Palaeolithic schematic rock art has changed substantially since its identification and definition almost a century ago. In the areas where this phenomenon is extensively studied (such as South and East Iberia), a chronological and cultural sequence has been established. This is due to the large number of rock art finds and the study of their archaeological context, which includes numerous portable art analogies. Based on this documentation, it has been proposed that its origins lie in the Early Neolithic and that it persisted until the Chalcolithic (c. 6<sup>th</sup> – 3<sup>rd</sup> millennium cal BC) or even, in some areas, until the Bronze Age. In this paper, we present the recent discovery of graphic motifs with similar characteristics in the Badanj II rock shelter. In the context of other finds in the Western and Central Mediterranean, this is an interesting indicator that leads us to suggest a connection between this graphic expression and the dispersion, establishment, and consolidation of Neolithic groups in Europe.

**KEY WORDS:** Schematic rock art, Neolithic, Western and Central Mediterranean, Eastern Adriatic

Istraživanje postpaleolitičke shematske stijenske umjetnosti značajno se promijenilo otkako je ova umjetnost otkrivena i definirana prije gotovo jednog stoljeća. Kronološka i kulturna sekvenca uspostavljena je u područjima gdje je ovaj fenomen opsežno proučavan (kao što su južni i istočni dijelovi Pirenejskog poluotoka), što je rezultat velikog broja nalaza stijenske umjetnosti i proučavanja njihovog arheološkog konteksta, koji uključuje brojne analogije s prijenosnom umjetnošću. Na temelju ovoga, predloženo je da počeci stijenske umjetnosti potječu iz ranog neolitika i da je opstala sve do bakrenog doba (otprilike 6. – 3. tisućljeće pr. Kr.), a u nekim područjima čak i do brončanog doba. U ovom članku predstavljamo nedavno otkriće grafičkih motiva sličnih karakteristika u pipečku Badanj II. Ovo otkriće, u kontekstu drugih u zapadnom i središnjem Mediteranu, predstavlja zanimljiv pokazatelj koji nas navodi na pretpostavku o povezanosti ovakvog grafičkog izražavanja sa širenjem, uspostavljanjem i konsolidacijom neolitičkih skupina u Europi.

**KLJUČNE RIJEČI:** shematska stijenska umjetnost, neolitik, zapadni i središnji Mediteran, istočni Jadran

## Introduction

In the second half of the 19<sup>th</sup> century and the early 20<sup>th</sup> century, several sites of what is now known as 'Schematic Rock Art' (SRA) were discovered on the Iberian Peninsula. Many of these were recorded by H. Breuil in his monumental work on schematic paintings on the Iberian Peninsula (Breuil 1933; 1935). The French prehistorian was the first to define this graphic phenomenon based on its unique characteristics, leading to its differentiation from both Palaeolithic art and what was then-called 'Levantine paintings'.<sup>1</sup> Apart from the work of H. Breuil and the mono-

1 Currently, this type of rock art is called 'Levantine art'. It is characterised by the naturalism of its representations and a profusion of scenes in which the human figure plays a prominent role. It is located in Eastern Iberia, from the Pyrenees to Eastern Andalusia, with some penetration into the interior.

## Uvod

U drugoj polovici 19. i početkom 20. stoljeća na Pirenejskom poluotoku otkriven je niz lokaliteta s onime što danas zovemo 'shematskom stijenskom umjetnošću' (SSU). Mnoge od tih lokaliteta zabilježio je H. Breuil u svom monumentalnom djelu o shematskim slikarijama na Pirenejskom poluotoku (Breuil 1933; 1935). Ovaj francuski prapovjesničar bio je prvi koji je definirao taj grafički fenomen na temelju njegovih jedinstvenih karakteristika, čime ga je razlikovao od paleolitičke umjetnosti i tada nazvanih 'levantinskih slikarija'.<sup>1</sup> Osim djela H. Breuila i monografije P. Acoste o shematskim slikarijama u Španjolskoj (Acosta 1968), većina regi-

1 Ova vrsta stijenske umjetnosti naziva se 'levantinska umjetnost'. Karakterizira je naturalizam prikaza i obilje scena u kojima ljudska figura ima istaknutu ulogu. Nalazi se duž istočnog dijela Pirenejskog poluotoka, od Pireneja do istočne Andaluzije, s određenim širenjem prema unutrašnjosti.

graph by P. Acosta on schematic painting in Spain (Acosta 1968), most regional syntheses until the 1980s focused on and highlighted the Levantine art, due to its naturalistic character and profusion of scenes, as opposed to the more static and less narrative SRA. For decades, schematic art was one of the most overlooked cultural phenomena of Late Prehistory in Europe.

In the late 20<sup>th</sup> century, there was a significant shift in research following the discovery of numerous assemblages in different areas, particularly in the east and south of Iberia. In the Valencian Country (Central-Eastern Mediterranean Spain), numerous schematic images on portable objects were discovered in chronologically reliable archaeological contexts, primarily from Cova de l'Or and Cova de la Sarsa, but also from others like Cova de les Cendres (see Hernández Pérez 2016; Martí Oliver et al. 2018). This referential corpus was completed with materials from other sites for more recent periods (see Torregrosa Giménez, Galiana Botella 2001; Soler Díaz, Barciela González 2018). These figurative representations have not only confirmed an ancient origin within the Neolithic sequence for some iconographies of the SRA, but have also established a whole sequence of painted images for the Neolithic cycle, with different phases and stages.

In other areas of Mediterranean Spain, from Andalusia to the Pyrenees, significant evidence of decorated portable art also began to be exhaustively documented, yielding similar results regarding the origin of these symbolic manifestations (see Carrasco Rus et al. 2006; Martí Oliver 2006; Utrilla 2013; Oms Arias et al. 2016). Since then, their cultural and temporal contextualisation has deepened, allowing the proposition of a post-Palaeolithic schematic art in the South and East of Iberia that spans several techno-complexes.<sup>2</sup> This phenomenon began in the mid-6<sup>th</sup> millennium cal BC with the earliest SRA (which includes the 'macro-schematic' sub-type), and clearly continued to persist in some areas until the Bell Beaker Chalcolithic contexts from the late 3<sup>rd</sup> millennium cal BC. Other scant evidence might indicate some marginal persistence during the Bronze Age and even the Iron Age (Hernández Pérez 2009; 2015).

2 Considering the chronological breadth and variability of 'schematic rock art', it is worth questioning the validity of this unitary concept. Following P. Acosta (1984), it might be more appropriate to speak of schematic rock 'arts' (in the plural) that correspond to diverse cultural horizons and may present different facies and phases throughout their cycles, even if they could have a common origin.

onalnih sinteza do 1980-ih godina usmjeravala se na levantinsku umjetnost, ističući je zbog njenog naturalističkog karaktera i obilja scena, za razliku od statičnije i manje narativne shematske stijenske umjetnosti. Desetljećima je shematska stijenska umjetnost bila jedan od najzanemarenijih kulturnih fenomena kasne prapovijesti u Europi.

Krajem 20. stoljeća dolazi do značajnog pomaka u istraživanjima nakon otkrića brojnih nalaza u različitim područjima, osobito na istoku i jugu Pirenejskog poluostrva. U regiji Valencia (središnje područje istočnog dijela mediteranske Španjolske) otkriven je veliki broj shematskih prikaza na prijenosnim predmetima u kronološki pouzdanim arheološkim kontekstima prvenstveno s nalazišta Cova de l'Or i Cova de la Sarsa, ali i s drugih drugih poput Cova de les Cendres (vidjeti Hernández Pérez 2016; Martí Oliver et al. 2018). Ovaj referentni korpus dopunjen je materijalima s drugih nalazišta za kasnija razdoblja (vidjeti Torregrosa Giménez, Galiana Botella 2001; Soler Díaz, Barciela González 2018). Ovi prikazi nisu samo potvrdili neolitičko porijeklo nekih ikonografija shematske stijenske umjetnosti, već su također uspostavili cijelu sekvencu slikanih prikaza za neolitik, s različitim fazama i stupnjevima.

U drugim područjima mediteranske Španjolske, od Andaluzije do Pireneja, također je provedeno iscrpno dokumentiranje značajnih dokaza o prijenosnoj umjetnosti, sa sličnim rezultatima u pogledu porijekla tih simboličkih manifestacija (vidjeti Carrasco Rus et al. 2006; Martí Oliver 2006; Utrilla 2013; Oms Arias et al. 2016). Od tada je njihova kulturna i vremenska kontekstualizacija značajno razrađena, omogućujući predlaganje postpaleolitičke shematske umjetnosti na jugu i istoku Pirenejskog poluostrva, koja obuhvaća nekoliko tehnoloških kompleksa.<sup>2</sup> Ovaj fenomen započeo je sredinom 6. tisućljeća pr. Kr. s najranijom shematskom stijenskom umjetnošću (koja uključuje 'makro-shematski' podtip), i očito je nastavio postojati u nekim područjima sve do bakrenodobnih konteksta kulture zvonolikih pehara iz kasnog 3. tisućljeća pr. Kr. Oskudni dokazi mogu ukazivati na marginalno postojanje ovog fenomena tijekom brončanog, pa čak i željeznog doba (Hernández Pérez 2009; 2015).

2 S obzirom na kronološku širinu i varijabilnost 'shematske stijenske umjetnosti', vrijedi postaviti pitanje o valjanosti ovog jedinstvenog koncepta. Slijedeći P. Acosta (1984), moglo bi biti primjerenije govoriti o shematskim stijenskim 'umjetnostima' (u množini), koje odgovaraju različitim kulturnim horizontima te mogu pokazivati različite facijese i faze, čak i ako imaju zajedničko porijeklo.



The lines of research regarding its dating, besides the mentioned portable art analogies from chronologically reliable contexts, have included the study of superimpositions and component analyses, the external archaeological context, and, exceptionally, the internal archaeological context, especially concerning some habitats and, particularly, funerary sites. It should be noted that, due to their technical features—mostly red-painted art with inorganic pigments—most assemblages have not been directly dated (López-Montalvo et al. 2017), with some exceptions in Andalusia, where motifs were made with black pigments based on organic elements (Sanchidrián Torti et al. 2001; Morgado et al. 2018). Other relative dates for schematic art have been obtained from oxalate dating, but not without problems (Ruiz López et al. 2006).

The progress of research has allowed for the characterisation of this sequence of schematic graphic expressions in terms of their location, technique, iconography, and composition, highlighting significant structural changes in the schematic symbolic background between ancient and more recent times (Barciela González et al. 2019; Martínez García 2023). Thus, the SRA of this area is characterised by its placement in rock shelters, only exceptionally inside caves, and in the more southern areas, inside megalithic monuments. Its geographical distribution varies throughout the sequence, in relation to the new territorial organisation that emerged from the late Neolithic and, especially, the Chalcolithic period. From a technical perspective, it is painted art, generally in reddish or orange tones. In its earliest phase, it features irregular outlines with pigments of varying density, indicating digital or manual application or the use of crude instruments. Its iconography includes anthropomorphic motifs, notably the so-called 'orants' with raised arms, or their simplification into 'Y', 'X', and double 'Y' figures, which play an important role as chronological indicators in some regions. There are also figures with legs spread in a zig-zag manner, clearly connected to the central bars from which the series of parallel horizontal zig-zags emerge. Accompanying these figures are other anthropomorphic, zoomorphic, vegetal (ramiform), sunburst/starburst, and geometric representations, which are less diagnostic, except for their technical or compositional relation to the former.

In the most recent phase, the outlined contours of some figures indicate the incorporation of the use of brushes and more diluted pigments, with documented greater use of black paint. From an

Istraživanja povezana s datiranjem, osim već spomenutih analogija s prijenosnom umjetnošću iz kronološki pouzdanih konteksta, uključuju proučavanje superimpozicija i analize komponenti, vanjskog arheološkog konteksta, te iznimno unutarnjeg arheološkog konteksta, posebno u svezi s nekim stambenim i grobnim nalazištima. Treba napomenuti da zbog tehničkih karakteristika (uglavnom crvene boje s anorganskim pigmentima) većina skupova nalaza nije izravno datirana (López-Montalvo et al., 2017), uz nekoliko iznimaka u Andaluziji, gdje su motivi izrađeni crnim pigmentima na bazi organskih elemenata (Sanchidrián Torti et al. 2001; Morgado et al. 2018). Ostali relativni datumi za shematsku umjetnost dobiveni su i datiranjem oksalata, uz određene probleme (Ruiz López et al. 2006).

Napredak istraživanja omogućio je karakterizaciju ove sekvence shematskih grafičkih prikaza u smislu njihove lokacije, tehnike, ikonografije i kompozicije, ističući značajne strukturne promjene u shematskoj simbolici između starijih i mlađih razdoblja (Barciela González et al. 2019; Martínez García 2023). Tako je shematska stijenska umjetnost u ovom području okarakterizirana svojim smještajem u pripećcima, samo iznimno unutar špilja, a u južnijim područjima unutar megalitičkih spomenika. Geografska distribucija varira tijekom vremena, a povezana je s novom teritorijalnom organizacijom koja se pojavila od kasnog neolitika, a posebno tijekom bakrenog doba. Iz tehničke perspektive, radi se o slikanju, općenito u crvenim ili narančastim tonovima. U svojoj najranijoj fazi, prikazuje nepravilne konture s pigmentima različite gustoće, što ukazuje na nanošenje boje prstom ili rukom ili korištenjem grubih instrumenata. Ikonografija shematske stijenske umjetnosti uključuje antropomorfne motive, osobito takozvane 'orante' s podignutim rukama, ili njihovu jednostavniju varijantu u obliku 'Y', 'X' i dvostrukih 'Y' figura, koji imaju važnu ulogu kronoloških indikatora u nekim regijama. Tu su i figure s nogama raširenim u cik-cak obliku, jasno povezane s centralnim stupcima iz kojih se pojavljuje niz paralelnih horizontalnih cik-cakova. Uz ove figure nalaze se i drugi antropomorfni, zoomorfni, vegetabilni (u formi grane), prikazi sunčevih/zvezdanih zraka i geometrijski prikazi, koji su manje dijagnostički, osim u svojoj tehničkoj ili kompozicijskoj vezi s prethodnima.

U najrecentnijoj fazi, konture nekih figura upućuju na korištenje četkica i razrjeđenijih pigmenta, uz dokumentirano veće korištenje crne boje. S ikonografskog stajališta, ističu se

iconographic perspective, the anthropomorphic representations known as idols stand out, especially the types so-called 'bi-triangular' and 'eye-idols', although these are only present in the central and southern territories of this Mediterranean area (Barciela González 2021). These figures are associated with astral symbols, geometric shapes, and zoomorphs, especially deer. The complexity of the compositions also seems to vary based on chronological and cultural aspects, undoubtedly associated with the significant socioeconomic and symbolic transformations occurring in the later Neolithic period. For the earlier periods, the panels have been classified as 'ambiguously structured', with no dominant spatial structure and the absence of scenes. Conversely, horizontally and vertically hierarchical panels predominate in the more recent periods (Martínez García 2002), along with compositions with marked conventionalisms and scenes.

In recent decades, other schematic phenomena have been defined outside the Iberian Peninsula, with notable differences in results. All of them face chronological challenges due to the absence of direct dating and, in many cases, unequivocal portable parallels. Significant work has been conducted in Italy, southern France, the islands of the Western Mediterranean, and the Balkans (see Hameau 2002; Fossati 2010; Huet 2017; Defrasne et al. 2019; Mattioli 2019; Komšo, Kuzmanović 2021; Spanedda 2021).

The identification of different phases for these artistic cycles and their characterisation not only expands our knowledge of the variability of phenomena observed within the SRA graphic expression, but also allows us to propose the existence of a similar origin for some of these sequences and, therefore, a diffusion of the oldest SRA alongside the Neolithic itself in the Mediterranean area. This is based on the existence of similar criteria in terms of location, technique, and iconography, as well as the archaeological context and its relationship with the portable parallels.

## Material and methods

Badanj II is a small and shallow rock shelter located in the cliffs on the right side of the river Bregava canyon, in the municipality of Stolac, at UTM 33T 734789X 4773878Y, and 87 m a.s.l. (Fig. 1). It measures 6.62 m in length and 4.48 metres in height, with a shallow overhang (a maximum depth of 2 m), and oriented to the west. From a spatial perspective, the rock shelter is located ne-

antropomorfni prikazi poznati kao idoli, posebno tipovi koji se nazivaju 'bi-triangularni' i 'oko-idoli', iako su oni prisutni samo u središnjim i južnim dijelovima spomenutog mediteranskog područja (Barciela González 2021). Ove figure povezane su s astralnim simbolima, geometrijskim oblicima i zoomorfima, osobito jelenom. Složenost kompozicija također se čini da varira kronološki i kulturno, što je nedvojbeno povezano sa značajnim socioekonomskim i simboličkim transformacijama koje su se događale tijekom kasnog neolitika. Za ranija razdoblja, paneli su klasificirani kao 'nejasno strukturirani', bez dominantne prostorne strukture i bez prisutnosti scena. Suprotno tome, horizontalno i vertikalno hijerarhijski paneli prevladavaju u kasnijim razdobljima (Martínez García 2002), zajedno s kompozicijama s izraženim konvencionalizmima i scenama.

U posljednjim desetljećima definirani su drugi shematski fenomeni izvan Pirenejskog poluotoka, sa značajnim razlikama u njihovim rezultatima. Svi se suočavaju s kronološkim izazovima zbog odsutnosti izravnih datiranja i, u mnogim slučajevima, nedvosmislenih paralela u prijenosnoj umjetnosti. Značajna istraživanja provedena su u Italiji, južnoj Francuskoj, otocima zapadnog Mediterana i na Balkanskom poluotoku (vidi Hameau 2002; Fossati 2010; Huet 2017; Defrasne et al. 2019; Mattioli 2019; Komšo, Kuzmanović 2021; Spanedda 2021).

Uspostava različitih faza i njihova karakterizacija ne samo da proširuju naše znanje o varijabilnosti fenomena promatranih unutar grafičkog izražavanja shematske stijenske umjetnosti, već nam također omogućuju da predložimo postojanje sličnog porijekla za neke od ovih sekvenci i, stoga, difuziju najstarije shematske stijenske umjetnosti povežemo sa širenjem neolitika na Mediteranu. Ova pretpostavka temelji se na postojanju sličnih kriterija u pogledu lokacije, tehnike i ikonografije, kao i arheološkog konteksta i paralela s prijenosnom umjetnošću.

## Materijal i metode

Badanj II je mali i plitki pripećak smješten na desnoj strani litica kanjona rijeke Bregave, u općini Stolac, (UTM 33T 734789X 4773878Y), na nadmorskoj visini od 87 m (sl. 1). Pripećak je dug 6,62 m, visok 4,48 m, s plitkim prevjesom (maksimalne dubine od 2 m), i orijentiran je prema zapadu. Prostorno gledano, pripećak se nalazi blizu vrha kanjona, u prirodnom prola-

ar the top of the canyon, in a natural passage area, and has limited visibility, restricted to the river Bregava canyon. It is worth noting that the Badanj shelter is part of a larger geographical feature, a rocky escarpment which undoubtedly constitutes a prominent landmark. The paintings in Badanj II were discovered in the context of the research project that our team has been carrying out since 2019 at the main site of Badanj, located approximately 15 m from Badanj II (Fig. 2).

Badanj is a major Upper Palaeolithic ('UP') site in south-eastern Europe. It was first reported in 1974, when some lithic artefacts were discovered by the locals and subsequently reported to Đ. Basler, an archaeologist from the National Museum in Sarajevo (Zemaljski muzej u Sarajevu), who imme-

znom području, s ograničenom vidljivošću koja je usmjerena na kanjon rijeke Bregave. Važno je napomenuti da je pripećak dio veće geografske cjeline koju čini stjenovita strmina čiji je dio i pripećak Badanj, a koja nesumnjivo predstavlja istaknuti pejzažni orijentir. Slikarije u Badnju II otkrivene su u kontekstu istraživačkog projekta koji naš tim provodi od 2019. godine na glavnom lokalitetu Badanj, koji se nalazi otprilike 15 m od Badnja II (sl. 2).

Badanj je značajno gornjopaleolitičko nalazište u jugoistočnoj Europi. Prvi put se spominje 1974. godine, kada su lokalni mještani otkrili nekoliko litičkih artefakata, koji su kasnije prijavljeni Đ. Basleru, arheologu Zemaljskog muzeja u Sarajevu, koji je odmah prepoznao potencijal nalazišta i za-



Fig. 1 – Badanj II rock shelter location (physical map: <https://maps-for-free.com/>; made by: N. Vukosavljević)  
Sl. 1 – Lokacija pripećka Badanj II (reljefna karta: <https://maps-for-free.com/>; izradio: N. Vukosavljević)

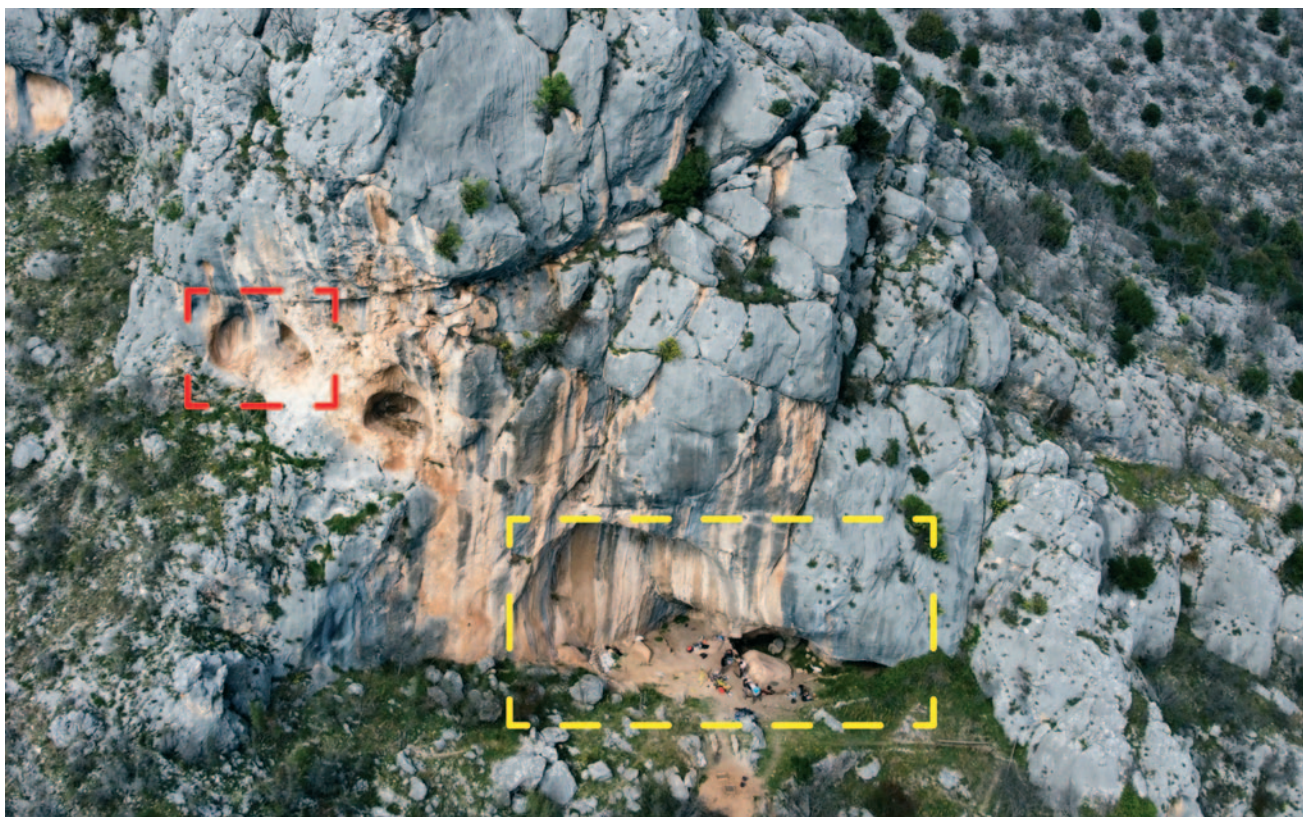


Fig. 2 – Image of the top of the river Bregava canyon with the location of Badanj (marked in yellow) and Badanj II (marked in red) (photo: A. Vujnović; made by: A. Ruiz-Redondo)

Sl. 2 – Vrh kanjona rijeke Bregave s lokacijom Badnja (označeno žutom bojom) i Badnja II (označeno crvenom bojom) (snimio: A. Vujnović; izradio: A. Ruiz-Redondo)

diately recognised the potential of the site and began excavations (Basler 1976; 1979). The site is a large, open rock shelter on a slope some thirty metres above the base of a steep canyon. The first excavations revealed an extremely rich site, with more than 20,000 lithic remains recovered during the initial campaign, dating from the end of the Pleistocene (Late Epigravettian). The finds included hundreds of personal ornaments and dozens of engraved bone fragments, which were rare elements within the known Palaeolithic record in the Balkan Peninsula at the time, and are such even today (see Borić, Cristiani 2019; Ruiz-Redondo et al. 2020; Borić et al. 2023). This first campaign led to an even more exceptional discovery: a large engraved boulder. The carvings are located on the upper face, whose surface dimensions are approximately 4 x 2.7 m, and the maximum height of the boulder is 2.3 m. Hundreds of deeply engraved features were found on the boulder; as a great portion of it was covered by 'untouched' UP layers, the Palaeolithic age of the discovery is secure (Basler 1976; 1979). In this way, Badanj became the first UP rock art site discovered in the Bal-

počeo iskopavanja (Basler 1976; 1979). Nalazište je veliki otvoreni pripećak smješten na padini otprilike trideset metara iznad podnožja strmog kanjona. Prva iskopavanja otkrila su izuzetno bogato nalazište, s više od 20000 litičkih artefakata pronađenih tijekom početne kampanje, datiranih na kraj pleistocena (kasni epigravetijen). Nalazi također uključuju stotine osobnih ukrasa i desetine ugraviranih fragmenata kostiju, koji su bili rijetki nalazi unutar tada poznatih paleolitičkih izvora, pa čak i danas na Balkanskom poluotoku (vidjeti Borić, Cristiani 2019; Ruiz-Redondo et al. 2020; Borić et al. 2023). Ova prva kampanja dovela je i do još izuzetnijeg otkrića – velikog kamenog bloka s urezima. Urezi se nalaze na gornjoj površini kamenog bloka čije su dimenzije približno 4 x 2,7 m, dok je maksimalna visina kamena 2,3 m. Na kamenom bloku su pronađene stotine dubokih ureza, a s obzirom na to da je veliki dio bio pokriven 'netaknutim' gornjopaleolitičkim slojevima, sigurna je paleolitička starost otkrića (Basler 1976; 1979). S ovim otkrićem, Badanj je postao prvo gornjopaleolitičko nalazište stijenske umjetnosti otkriveno na Balkanskom poluotoku. Nakon dvije terenske

kan Peninsula. After two excavation campaigns in the 1980s (Whallon 1989; 1999), we resumed the fieldwork at the site in 2019. So far, we have revealed a sequence that spans from ~20 ka to ~12.7 ka cal BP, having obtained 22 new radiocarbon dates for the UP human habitation of the site. Nonetheless, the presence of some remains of an archaeologically rich breccia attached to a wall and some pottery fragments on the surface points to the existence of a later prehistoric settlement, now almost vanished (Basler 1976; Marijanović 1978). It was during the 2019 fieldwork campaign that the paintings in Badanj II were first noticed by D. Komšo who briefly reported the discovery (Komšo, Kuzmanović 2021). The paintings were documented and studied during the 2023 campaign.

The photographic documentation was carried out with a Canon R5 using Canon RF 24-70mm F2.8L IS USM and Canon RF 35mm F1.8 IS Macro STM lenses. We also created 3D models with the help of portable LiDAR and the Scaniverse software for iPad Pro. When necessary, we used colour temperature and power-adjustable lights controllable via the Bluetooth network: four Aputure MCs with a range of 3200 to 6500K. This allows for maximum control over the lighting used for photographic documentation. The interpretation of the parietal motifs was performed *in situ*, with the naked eye, with the help of portable magnifying glasses, and through image enhancement using the Dstretch Plug-In for ImageJ. The tracings were made using the infographic method (Fritz, Tosello 2007) with the Affinity Photo software.

## Results

### Description of the paintings

The Badanj II rock shelter consists of three cavities sharing the same overhang. The walls have an irregular surface, affected by calcitic veils, detachments, and fungi that affect the motifs to varying degrees. Three panels have been identified on the basis of the location of the paintings and their spatial relationship (Fig. 3).

#### Panel I

Located in the first cavity, measuring 1.95 m in width by 3 m in height. It has an irregular, highly-calcited surface, affected by calcitic veils, flaking, and fungi.

**Graphic unit I.1.** Located 1.14 m above the floor of the cavity, on the right side. Remains of red

kampanje tijekom 1980-ih (Whallon 1989; 1999), terenska istraživanja su ponovno započela na lokalitetu 2019. godine. Do sada smo otkrili sekvencu koja se proteže od ~20 ka do ~12,7 ka cal BP, te smo dobili 22 nova radiokarbonska datuma za gornjopaleolitičku ljudsku prisutnost na nalazištu. Prisutnost nekih ostataka arheološki bogate brečče pričvršćene na zid i nekoliko ulomaka keramike na površini ukazuju na postojanje kasnijeg prapovijesnog naselja, sada gotovo nestalog (Basler 1976; Marijanović 1978). Slikarije u Badnju II prvi je primijetio D. Komšo tijekom terenske kampanje 2019. godine, koji je kratko izvijestio o ovom otkriću (Komšo, Kuzmanović 2021). Dokumentiranje i proučavanje slikarija provedeni su tijekom terenskog istraživanja 2023. godine.

Fotografska dokumentacija izrađena je fotoaparatom Canon R5, koristeći objektivne Canon RF 24-70mm F2.8L IS USM i Canon RF 35mm F1.8 IS Macro STM. Također smo kreirali 3D modele uz pomoć prijenosnog LiDAR-a i softvera Scaniverse za iPad Pro. Kada je to bilo potrebno, koristili smo svjetla s podesivom temperaturom boje i snagom, kojima se upravlja putem Bluetooth mreže. Radi se o četiri Aputure MC reflektora sa rasponom od 3200 do 6500K. Na ovaj način omogućena je maksimalna kontrola rasvjete korištene za grafičku dokumentaciju. Interpretacija motiva na stijeni izvedena je *in situ*, golim okom, uz pomoć prijenosnih povećala i putem poboljšanja slike korištenjem Dstretch Plug-In for ImageJ. Ocrtavanja su napravljena pomoću infografičke metode (Fritz, Tosello 2007) u softveru Affinity Photo.

## Rezultati

### Opis slikarija

Pripečak Badanj II sastoji se od tri šupljine koje dijele isti prevjes. Zidovi imaju nepravilnu površinu, zahvaćenu kalcitnim naslagama, ljuštenjem i gljivicama koje u različitoj mjeri utječu na motive. Na temelju lokacije slikarija i njihovog prostornog odnosa definirana su tri panela (sl. 3).

#### Panel I

Smješten u prvoj šupljini, dimenzija 1,95 x 3 m (širina x visina, dalje Š x V). Površina je nepravilna sa značajnim naslagama kalcita, zahvaćena ljuštenjem i gljivicama.

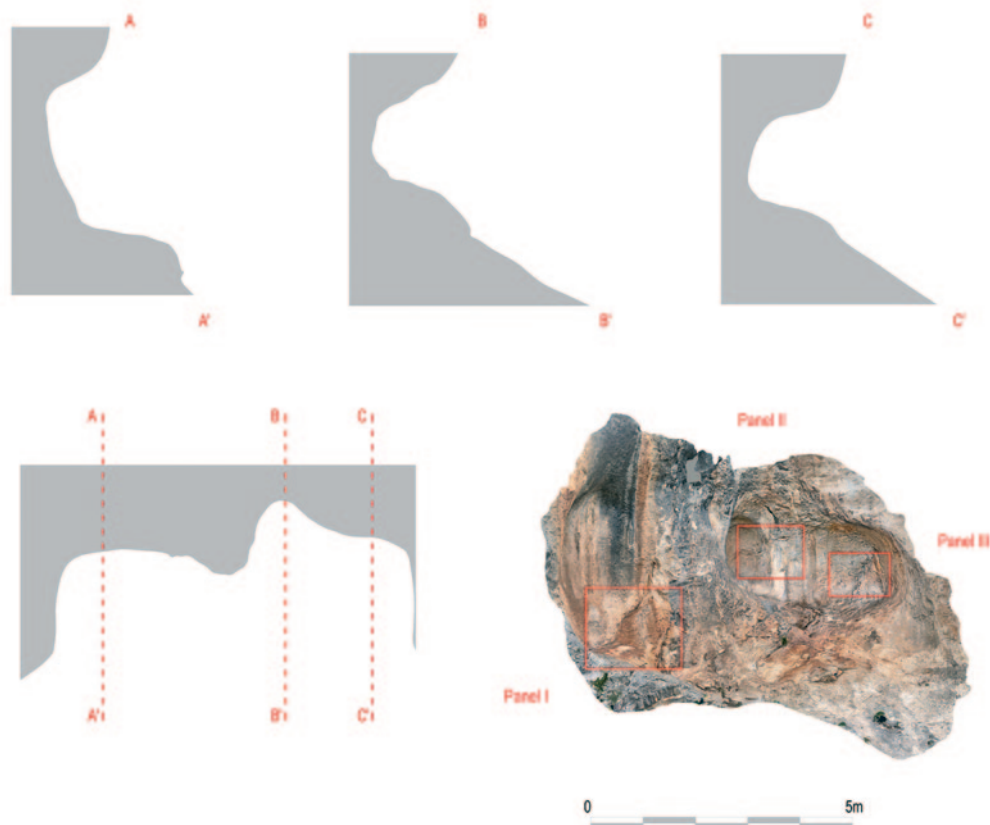


Fig. 3 – Plan of the site, sections of the three cavities, and location of decorated panels (photo and drawings: V. Barciela González and A. Ruiz-Redondo)

Sl. 3 – Plan nalazišta, presjeci triju šupljina i položaj ukrašenih panela (snimili i nacrtali: V. Barciela González i A. Ruiz-Redondo)

paint. The motifs are below a calcitic veil affected by small flakes. For this reason, it is not possible to identify the number or type of representations.

**Graphic unit I.2.** Located at the base of the first cavity of the shelter, on a small rocky step significantly affected by surface flaking. Remains of red paint. It is not possible to identify the number or type of representations, although the rectilinear trend of some lines and their arrangement and location could correspond to a finger gesture or tool cleaning. No pigment has been documented on the negatives of the fallen areas. This fact is important because it supports the relatively old chronology of the paintings.

### Panel II

Located in the second cavity, measuring 1.25 m in width by 1.90 m in height, in the most recessed area and on the prominence between cavities 2 and 3. It has an irregular, highly-calcified surface, affected by calcitic veils, flaking, and fungi.

**Grafička jedinica I.1.** Smještena 1,14 m iznad podla šupljine, na njevoj desnoj strani. Ostaci crvene boje. Motivi su ispod kalcitne naslage, pod utjecajem malog ljuštenja, zbog čega nije moguće odrediti broj ili vrstu prikaza.

**Grafička jedinica I.2.** Smještena u podnožju prve šupljine pripečka, na malom kamenitom izbočenju značajno pogodanom površinskim ljuštenjem. Ostaci crvene boje. Nije moguće odrediti broj ili vrstu prikaza, iako bi pravocrtni trend nekih linija te njihov raspored i položaj mogli odgovarati pokretu čišćenja prsta ili alata. Pigment nije dokumentiran na negativima otpalih dijelova. Ova činjenica je važna jer podupire relativno staru kronologiju slikarija.

### Panel II

Smješten je u drugoj šupljini, dimenzija 1,25 x 1,90 m (Š x V), u najdubljem dijelu i na izbočenju između šupljina 2 i 3. Površina je nepravilna sa značajnim naslagama kalcita, zahvaćena ljuštenjem i gljivicama.

**Graphic unit II.1.** In the central part of the cavity, 1.17 m from the ground. Remains of a thick line, 25 x 2.5 cm at its widest point, horizontally oriented though slightly oblique. Red in colour.

**Graphic unit II.2.** On the outer right side of the cavity, 1.4 m from the ground. Remains of red paint.

**Graphic unit II.3.** On the outer right side of the cavity, 1.5 m from the ground. Remains of a thick line, 8.5 x 1.5 cm at its widest point, vertically oriented. Red in colour.

**Graphic unit II.4.** On the outer right side of the cavity, 1.03 m from the ground. Remains of a thick line, 17.5 x 2 cm at its widest point, vertically oriented. Red in colour. It appears to follow the contour of a speleothem.

**Graphic unit II.5.** On the outer right side of the cavity, 0.9 m from the ground. Remains of a possible sunburst/starburst motif, approximately 6 x 6 cm. Red in colour. It appears to follow the contour of a circular speleothem from which six radial lines extend, also marked with pigment (Fig. 4).

### Panel III

Located in the third cavity, measuring 2.20 m in width and 1.80 m in height. It has an irregular, highly-calcified surface, affected by calcitic veils and flaking.

**Graphic unit III.1.** On the left side of the cavity, 1.35 m from the ground. Remains of a small line, 3 x 1 cm at its widest point, horizontally oriented. Red in colour.

**Graphic unit III.2.** On the left side of the cavity, 0.98 m from the ground. Remains of a possible anthropomorphic 'Y-shaped' motif, 21 cm in length, leaning to the left. The trunk is represented by a thick vertical bar, 3 cm at its widest point, which opens at an angle to represent the raised upper limbs, drawn with two narrower lines. Red in colour (Fig. 5).

**Graphic unit III.3.** On the left side of the cavity, 0.75 m from the ground. Vertical line, 5 x 1 cm at its widest point. Red in colour (Fig. 6).

**Graphic unit III.4.** On the left side of the cavity, 0.75 m from the ground. Remains of pigment on the edge and inside a small cavity. Red in colour.

**Graphic unit III.5.** On the right side of the cavity, 0.80 m from the ground. Remains of a possible vertical ramiform, 12 cm in length. The central part consists of a bar about 2 cm at its widest point from which other narrower perpendicular lines seem to branch out. Two of these lines appear to be finger-made. Red in colour (Fig. 7).

**Grafička jedinica II.1.** U središnjem dijelu šupljine, 1,17 m od poda. Ostaci debele linije crvene boje, dimenzija 25 x 2,5 cm na najširem dijelu, vodoravno orijentirane, iako blago koso.

**Grafička jedinica II.2.** Na vanjskoj desnoj strani šupljine, 1,4 m od poda. Ostaci crvene boje.

**Grafička jedinica II.3.** Na vanjskoj desnoj strani šupljine, 1,5 m od poda. Ostaci debele linije crvene boje, dimenzija 8,5 x 1,5 cm na najširem dijelu, okomito orijentirane.

**Grafička jedinica II.4.** Na vanjskoj desnoj strani šupljine, 1,03 m od poda. Ostaci debele linije crvene boje, dimenzija 17,5 x 2 cm na najširem dijelu, okomito orijentirane. Čini se da prati obris speleotema.

**Grafička jedinica II.5.** Na vanjskoj desnoj strani šupljine, 0,9 m od poda. Ostaci mogućeg motiva sunčevih/zvezdanih zraka, dimenzija približno 6 x 6 cm. Crvene boje. Čini se da prati obris kružnog speleotema iz kojeg se proteže šest radijalnih linija, također označenih pigmentom (sl. 4).

### Panel III

Smješten u trećoj šupljini, dimenzija 2,20 x 1,80 m (Š x V). Površina je nepravilna sa značajnim naslagama kalcita, zahvaćena ljuštenjem.

**Grafička jedinica III.1.** Na lijevoj strani šupljine, 1,35 m od poda. Ostaci male linije crvene boje, dimenzija 3 x 1 cm na najširem dijelu, vodoravno orijentirane.

**Grafička jedinica III.2.** Na lijevoj strani šupljine, 0,98 m od poda. Ostaci mogućeg antropomorfog motiva u obliku slova 'Y', duljine 21 cm, nagnutog ulijevo. Trup je predstavljen debelim stupcem najveće širine 3 cm, koji se otvara pod kutom predstavljajući podignute gornje udove, nacrtane s dvije uže linije. Crvene boje (sl. 5).

**Grafička jedinica III.3.** Na lijevoj strani šupljine, 0,75 m od poda. Okomita linija crvene boje, dimenzija 5 x 1 cm na najširem dijelu (sl. 6).

**Grafička jedinica III.4.** Na lijevoj strani šupljine, 0,75 m od poda. Ostaci crvenog pigmenta na rubu i unutar male šupljine.

**Grafička jedinica III.5.** Na desnoj strani šupljine, 0,80 m od poda. Ostaci mogućeg okomitog motiva u formi grane, duljine 12 cm. Središnji dio sastoji se od stupca širokog oko 2 cm na najširem dijelu, iz kojeg se čini da se okomito granaju druge uže linije. Dvije od ovih linija čini se da su napravljene prstom. Crvene boje (sl. 7).

**Graphic unit III.6.** On the right side of the cavity, 1.1 m from the ground. Remains of red paint. It is not possible to identify the number or type of representations.

**Grafička jedinica III.6.** Na desnoj strani šupljine, 1,1 m od poda. Ostaci crvene boje. Nije moguće odrediti broj ili vrstu prikaza.

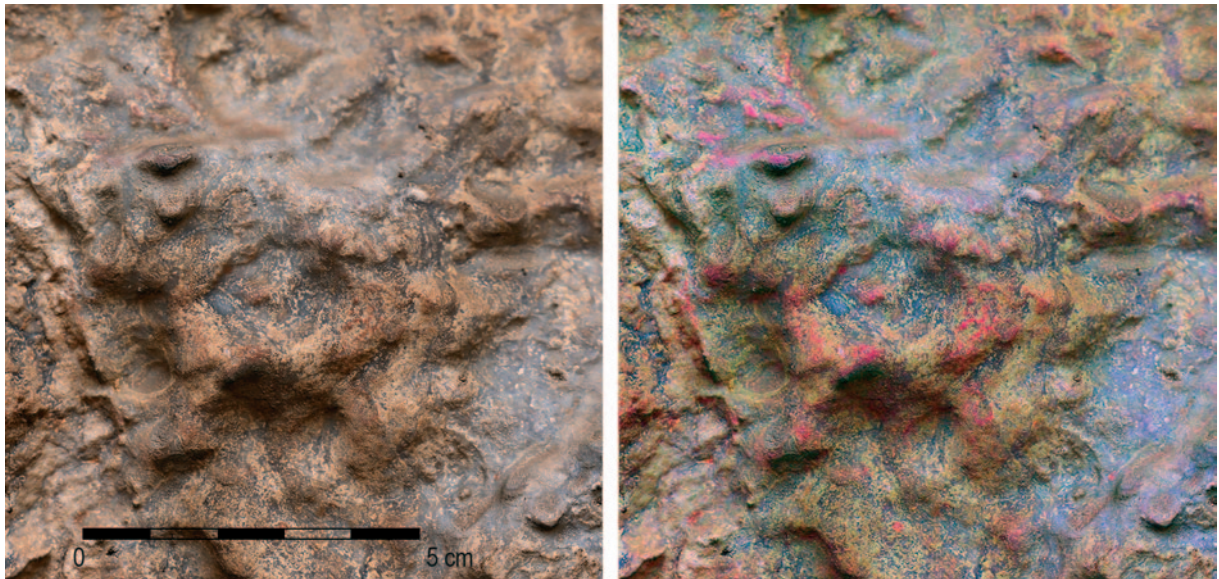


Fig. 4 – Regular and D-Stretch-enhanced picture from GU II.5. Sunburst/starburst motif following the contour of speleothem (photo and made by: V. Barciela González and A. Ruiz-Redondo)

Sl. 4 – Standardna i D-Stretch poboljšana slika grafičke jedinice II.5. Motiv sunčevih/zvjezdanih zraka slijedi obris speleotema (snimili i izradili: V. Barciela González i A. Ruiz-Redondo)



Fig. 5 – Tracing and photo from GU III.2. 'Y'-shaped anthropomorphic motif (photo and made by: V. Barciela González and A. Ruiz-Redondo)

Sl. 5 – Ocrtavanje i fotografija grafičke jedinice III.2. Antropomorfni motiv u obliku slova 'Y' (snimili i izradili: V. Barciela González i A. Ruiz-Redondo)



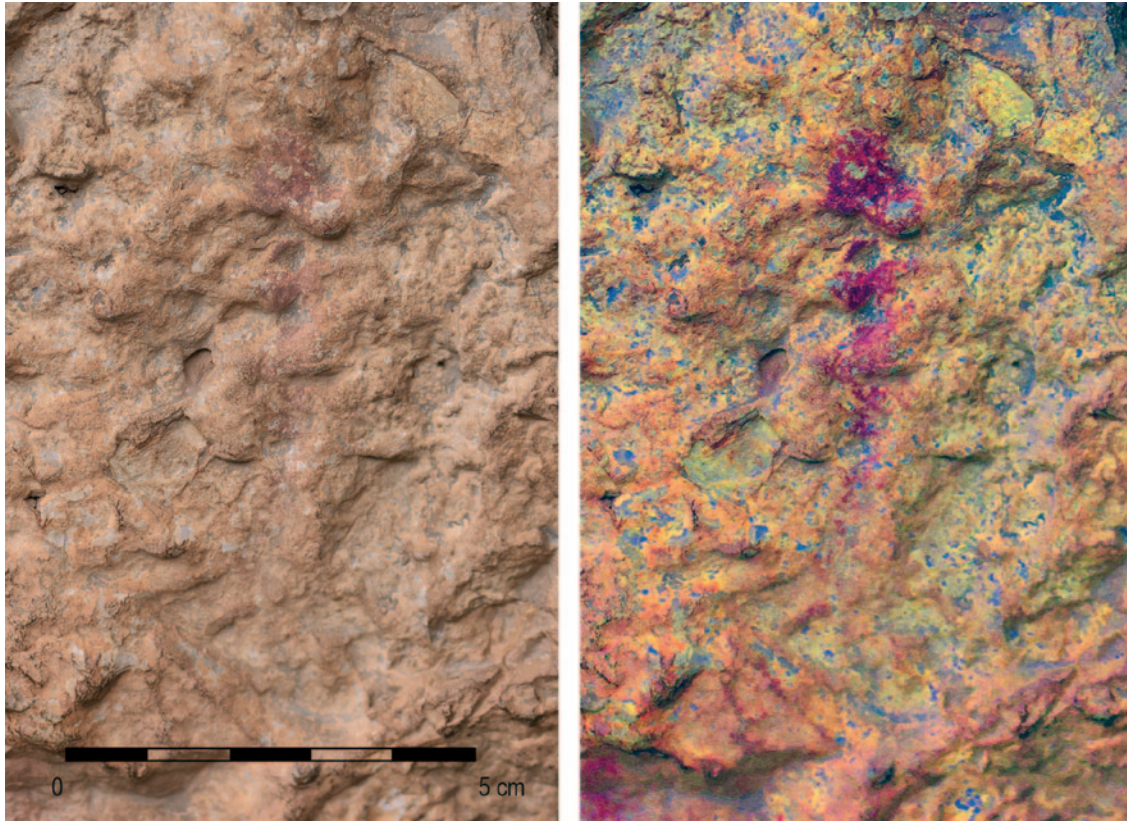


Fig. 6 – Regular and D-Stretch-enhanced picture from GU III.3. Vertical line (photo and made by: V. Barciela González and A. Ruiz-Redondo)

Sl. 6 – Standardna i D-Stretch poboljšana slika grafičke jedinice III.3. Okomita linija (snimili i izradili: V. Barciela González i A. Ruiz-Redondo)

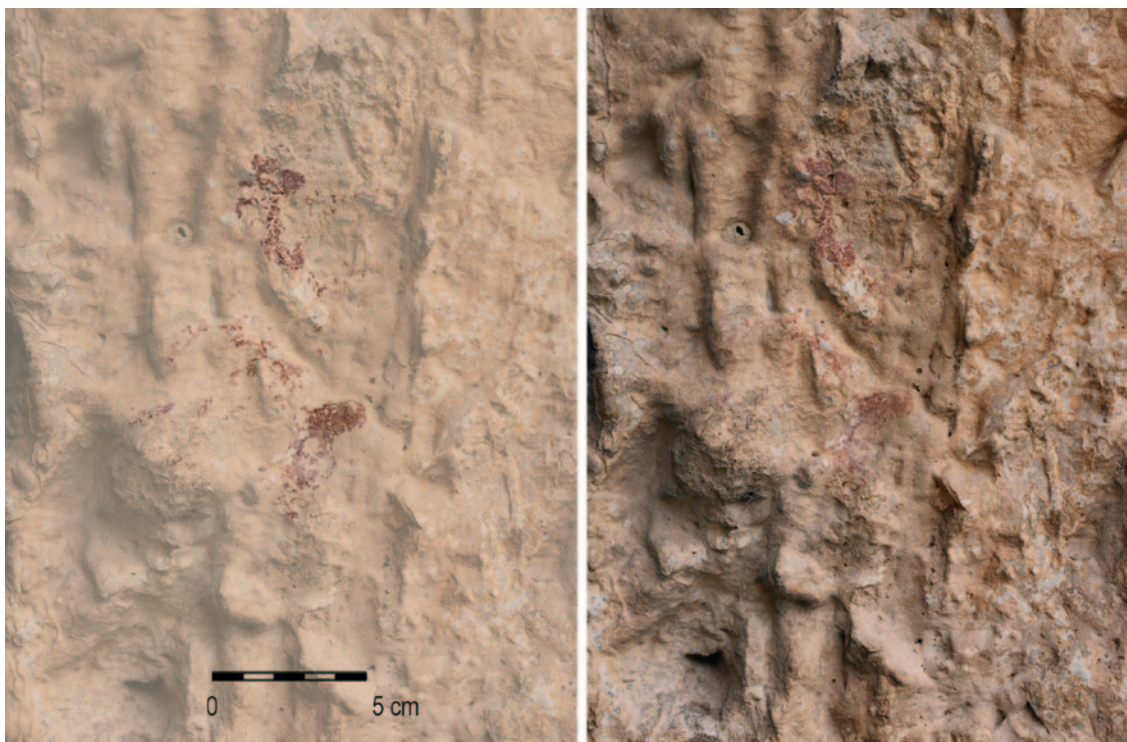


Fig. 7 – Tracing and photo from GU III.5. Possible one or more ramiform figures (photo and made by: V. Barciela González and A. Ruiz-Redondo)

Sl. 7 – Ocrtavanje i fotografija grafičke jedinice III.5. Moguće jedan ili više prikaza u formi grane (snimili i izradili: V. Barciela González i A. Ruiz-Redondo)

## Iconographic analysis

The Badanj II rock shelter contains at least 13 graphic units (GU); however, the poor state of preservation of some areas points to the fact that originally there may have been more. The typological variability is limited. Lines predominate; three are vertical and one horizontal (Fig. 6). Of the remaining paintings, only three seem to be complex figurative representations, though this is uncertain due to their condition. The clearest one is motif III.2, interpreted as a 'Y-shaped' anthropomorphic motif. It consists of an elongated body with upper limbs raised and open at an angle. The ends of the two upper limbs seem to terminate in small lines, which may represent fingers (Fig. 5). GU II.5 could correspond to a possible sunburst/starburst motif. It appears to consist of a circular line from which six radial lines extend (Fig. 4). Finally, GU III.5 is undoubtedly a complex motif comprising a vertical line and several transversal lines. Its poor condition prevents a definitive interpretation, but it might represent one or more ramiform figures (Fig. 7).

## Analysis of the techniques, composition, and use of the support

Regarding the technique employed, the figures are painted using red pigments. The differences in tone are not significant, as they seem to be determined by the state of preservation. In fact, some figures display different shades of red due to calcitic veils. What does appear to vary is the density of the pigment. While the pigment is diluted and penetrates the support in most motifs, in four of these GUs (I.1, I.2, II.1, III.2), the pigment density is higher, leaving the lower areas of the rocky canvas uncovered (Fig. 8). The broad, poorly defined strokes suggest the use of fingers or hands in their execution, particularly in GU III.5, where two of the transversal lines appear to be finger-made (Fig. 7).

The composition of the graphic ensemble, along with the technical features and absence of superimpositions, suggests a contemporaneous execution with an ambiguous arrangement, without any dominant spatial structure. The figures mainly occupy the central parts of the cavities and one of the prominences between them, at mid-height. Noteworthy is the use of the natural relief in the execution of some figures, especially II.4 and II.5, which follow the contour of two speleothems (Fig. 4).

## Ikonografska analiza

Pripečak Badanj II sadrži najmanje 13 grafičkih jedinica. Međutim, slaba očuvanost nekih područja ukazuje na to da ih je izvorno moglo biti više. Tipološka varijabilnost je ograničena. Dominiraju linije, od kojih su tri okomite, a jedna vodoravna (sl. 6). Od preostalih slikarija, samo se tri čine složenim figurativnim prikazima, iako je to dvojbeno zbog njihovog stanja. Najjasniji je motiv grafičke jedinice III.2, koji se tumači kao antropomorfnu motiv u obliku slova 'Y'. Sastoji se od izduženog tijela s podignutim gornjim udovima otvorenim pod kutom. Kraj dvaju gornjih udova čini se da završava u malim linijama, koje bi mogle predstavljati prste (sl. 5). Grafička jedinica II.5 mogla bi odgovarati mogućem motivu sunčevih/zvjezdanih zraka. Čini se da se sastoji od kružne linije iz koje se proteže šest radijalnih linija (sl. 4). Konačno, grafička jedinica III.5 nedvojbeno je složeni motiv koji se sastoji od okomite linije i nekoliko poprečnih linija. Njeno loše stanje sprječava definitivnu interpretaciju, ali se može raditi o jednom ili više prikaza u formi grane (sl. 7).

## Analiza tehnika, kompozicija i korištenja podloge

Što se tiče korištene tehnike, figure su oslikane crvenim pigmentima. Razlike u tonu nisu značajne, jer se čini da su određene stanjem očuvanosti. Naime, neke figure prikazuju različite nijanse crvene boje zbog kalcitnih naslaga. Ono što se čini da varira je gustoća pigmenta. Dok je pigment razrijeđen i prodire u podlogu kod većine motiva, kod četiri grafičke jedinice (I.1, I.2, II.1, III.2) gustoća pigmenta je veća, ostavljajući donje dijelove stjenovite podloge nepokrivenima (sl. 8). Široki, slabo definirani potezi sugeriraju korištenje prstiju ili ruku u njihovoj izvedbi, osobito kod grafičke jedinice III.5, gdje se čini da su dvije od poprečnih linija napravljene prstom (sl. 7).

Kompozicija grafičke cjeline, zajedno s tehničkim značajkama i odsustvom superimpozicija, sugerira istovremenu izvedbu s nejasnim rasporedom, bez dominirajuće prostorne strukture. Prikazi uglavnom zauzimaju središnje dijelove šupljina i jednu od izbočina između njih, na srednjoj visini. Značajno je primijetiti korištenje prirodnog reljefa u izvedbi nekih prikaza, osobito grafičkih jedinica II.4 i II.5 koje su kreirane praćenjem obriisa dvaju speleotema (sl. 4).



Fig. 8 – Details of the micromorphology of different paintings and the characteristics of the stroke depending on the density of the pigment: A graphic unit II.1; B graphic unit III.2; C graphic unit III.3; D graphic unit III.5 (photo and made by: V. Barciela González and A. Ruiz-Redondo)

Sl. 8 – Detalji mikromorfologije različitih slikarija i karakteristike poteza ovisno o gustoći pigmenta: A grafička jedinica II.1; B grafička jedinica III.2; C grafička jedinica III.3; D grafička jedinica III.5 (snimili i izradili: V. Barciela i A. Ruiz-Redondo)

## Discussion – stylistic and iconographic context

Since 2009, 122 rock art sites, spanning different chronological and cultural horizons, have been identified in Croatia in the frame of the CRO-RA (CROatian Rock Art) project. Twelve of these were attributed to the SRA, based on similarities with others found in Italy, France, Portugal, or Spain (Komšo, Kuzmanović 2021). In the Central Eastern Adriatic and its hinterland, the sites of Pisana Stijena near the village of Žlijeb (also known as “Stijena pod pismom kod Žlijeba”) (Stratimirović 1891) in Bosnia and Herzegovina and Lipci in Montenegro (Pušić 1966) exhibit paintings within the variability of the SRA, albeit stylistically recent within the cycle (Bronze or Iron Age). This interpretation is based on the inspections of one

## Rasprava – stilski i ikonografski kontekst

Od 2009. godine u Hrvatskoj su, u okviru projekta CRO-RA (CROatian Rock Art), identificirana 122 nalazišta stijenske umjetnosti, koja obuhvaćaju različite kronološke i kulturne horizonte. Dvanaest njih pripisano je shematskoj stijenskoj umjetnosti, temeljem sličnosti s drugim nalazištima pronađenim u Italiji, Francuskoj, Portugalu ili Španjolskoj (Komšo, Kuzmanović 2021). U središnjem dijelu istočnog Jadrana i u njegovom zaleđu, lokaliteti Pisana stijena blizu naselja Žlijeb (poznata i kao „Stijena pod pismom” kod Žlijeba) (Стратимировић 1891) u Bosni i Hercegovini i Lipci u Crnoj Gori (Pušić 1966) pokazuju slikarije unutar varijabilnosti shematske stijenske umjetnosti, iako su stilski recentne unutar shematske

of the authors (A. Ruiz-Redondo). Most of these sites are located in rock shelters, and the representations are mainly painted using red or white pigment (in the cases of Pisana Stijena and Lipci), although some engraved elements are also observed. Iconographically, a wide variety of motifs are documented, including abstract symbols, dots and lines, wild animals, weapons, anthropomorphic figures, eye-idols, handprints, and sunburst/starburst motifs.

Consistently with these sites, we find three of these types at Badanj II. Two of them are very common in the SRA: vertical and horizontal lines; and sunburst/starburst motifs, present since the early stages of the Neolithic sequence. Among the figures at Badanj II, the third type stands out, the 'Y-shaped' anthropomorphic figure or 'orant' (Fig. 9). Similar motifs, albeit with variations, are found in three sites on the Istrian Peninsula: The Niche in Jankova Cave, with three anthropomorphic figures with open arms and legs; Abri pod Steni 00, with a human figure with raised arms and indicated head; and Hude Stene 2, with 'Y'-shaped and 'T'-shaped anthropomorphic figures (Komšo, Kuzmanović 2021). Vertical lines, 'reversed Y-shaped' anthropomorphic figures, and other geometric motifs painted with red ochre have been also documented in Bestažovca Cave, Slovenia, in the main passage located in the lower part of the cave. In addition to the drawings with red ochre, the ceiling in this part of the cave includes 28 black dots made with charcoal. One of them was sampled and has been dated to 6920–6730 cal BP, corroborating, together with the internal archaeological context, the more than probable Neolithic age of the whole graphic set (Mihevc 2022).

As previously noted, these types of representations are common in ancient schematic art and their macro-schematic facies in the eastern Iberian Peninsula. They are indirectly dated, through portable art analogies, to the Early Neolithic (ca. 5600–4800 cal BC) (e.g. Martí Oliver et al. 2018). Examples are also documented in Italian context, south of the Alps, where a tradition of painted schematic art is evident. An outstanding example is Riparo di Pale, where one of these 'orants' painted in red appears covered by a thick layer of calcite indicating the antiquity of the figure. The AMS dating analysis of three samples of carbonaceous accretions sealing the paint of this motif indicates a very wide execution range, from the mid-6<sup>th</sup> millennium BC to the mid-2<sup>nd</sup> millennium BC (Mattioli 2012; 2019). However, some studies

stijenske umjetnosti (brončano ili željezno doba). Ova interpretacija temelji se na uvidu jednog od autora (A. Ruiz-Redondo). Većina ovih nalazišta nalazi se u pripećcima, a prikazi su uglavnom oslikani crvenim ili bijelim pigmentom (kao što je slučaj sa Pisanom stijenom i Lipcima), iako su također zabilježeni i neki urezani elementi. Ikonografski, dokumentirana je široka raznolikost motiva, uključujući apstraktne simbole, točke i linije, divlje životinje, oružje, antropomorfne figure, 'oko-idole', otiske ruku i motive sunčevih/zvjezdanih zraka.

U Badnju II nalazimo tri motiva od gore navedenih što je konzistentno sa spomenutim nalazištima. Od njih su dva motiva vrlo uobičajena u shematskoj stijenskoj umjetnosti. To su okomite i vodoravne linije, te motivi sunčevih/zvjezdanih zraka, prisutni od ranih faza neolitika. Među prikazima u Badnju II ističe se treći motiv, antropomorfna figura u obliku slova 'Y' ili „orant“ (sl. 9). Slični motivi, iako s varijacijama, nalaze se na tri nalazišta u Istri, a to su: Niša u Jankovoj pećini s tri antropomorfne figure s otvorenim rukama i nogama, Abri pod Steni 00 s ljudskom figurom podignutih ruku i naznačenom glavom te Hude stene 2 s antropomorfni figurama u obliku slova 'Y' i 'T' (Komšo, Kuzmanović 2021). Okomite linije, antropomorfne figure u obliku „preokrenutog slova Y“ i drugi geometrijski motivi oslikani crvenim okerom također su dokumentirani u špilji Bestažovca u Sloveniji, u glavnom prolazu smještenom u donjem dijelu špilje. Osim crteža izvedenih crvenim okerom, na stropu u ovom dijelu špilje nalazi se 28 crnih točaka napravljenih ugljenom. Jedna od njih je uzorkovana i datirana između 6920 – 6730 cal BP, što zajedno s unutarnjim arheološkim kontekstom potvrđuje više nego vjerojatnu neolitičku starost cijelog grafičkog skupa (Mihevc 2022).

Kao što je ranije napomenuto, ovakve vrste prikaza česte su u starijoj shematskoj umjetnosti i njenom makroshematskom facijesu na istočnom dijelu Pirenejskog poluotoka. One se neizravno datiraju, putem analogija prijenosne umjetnosti, u rani neolitik (oko 5600. – 4800. g. pr. Kr.) (e.g. Martí Oliver et al. 2018). Primjeri su također dokumentirani u talijanskom kontekstu južno od Alpa, gdje je prisutna tradicija oslikane shematske umjetnosti. Izvanredan primjer je nalazište Riparo di Pale, gdje je jedan od ovih 'oranta', oslikan crvenom bojom, izgleda prekriven debelim slojem kalcita, što ukazuje na starost prikaza. AMS <sup>14</sup>C datiranje triju uzoraka karbonatnih naslaga koje prekrivaju ovu slikariju ukazalo je na vrlo širok vremenski raspon nastanka, od sredine 6. tisućljeća pr. Kr. do sredine 2. tisućljeća pr. Kr. (Mattioli

of these painted figures in Western Alpine contexts, such as Balma dei Cervi in Italy, suggest a possible Neolithic attribution based on technical and iconographic similarities with the Iberian Peninsula, as well as comparisons with some portable parallels dated to the early 5<sup>th</sup> millennium BC (Arcà et al. 2022). This attribution is not shared by the study of other engraved sites in Valcamonica, where 'orants' are attributed to the Bronze and Iron Ages (Fossati 2010). Nevertheless, it should be noted that these sites in Valcamonica have few similarities with the painted schematic art observed in the Western Alps, the Iberian Peninsula, the Italian Peninsula south of the Alps, and, judging by recent discoveries, the Istrian Peninsula (Komšo, Kuzmanović 2021: 65, Fig. 12).

Finally, within the Badanj II graphic ensemble, we find another type of figurative representation: a possible ramiform motif. These are common in SRA in the eastern Iberian Peninsula, spanning a broad chronology of portable art from the Early Neolithic to the Bronze Age. It should be noted that, despite this continuity, their association with clearly ancient rock art motifs like 'orants' is typical in that region.

2012; 2019). Međutim, neka istraživanja ovih oslikanih figura u zapadnoalpskim kontekstima, poput onih u Balma dei Cervi u Italiji, sugeriraju moguću neolitičku atribuciju na temelju tehničkih i ikonografskih sličnosti s Pirenejskim poluotokom, kao i na temelju usporedbi s prijenosnom umjetnošću datiranom u rano 5. tisućljeće pr. Kr. (Arcà et al. 2022). Ova atribucija nije prihvaćena u istraživanju drugih nalazišta s gravurama u Valcamonici, gdje se 'oranti' pripisuju brončanom i željeznom dobu (Fossati 2010). Ipak, treba napomenuti da ova nalazišta u Valcamonici imaju malo sličnosti s oslikanom shematskom umjetnošću zabilježenom u zapadnim Alpama, na Pirenejskom poluotoku, talijanskom poluotoku južno od Alpa, te sudeći po nedavnim otkrićima, na istarskom poluotoku (Komšo, Kuzmanović 2021: 65, Fig. 12).

Konačno, unutar grafičkog skupa Badanj II nalazimo i drugu vrstu figurativnog prikaza: mogući ramiformni motiv (u obliku grane). Ovi su motivi česti u shematskoj stijenskoj umjetnosti na istočnom dijelu Pirenejskog poluotoka, a na prijenosnoj umjetnosti obuhvaćaju široki vremenski raspon, od ranog neolitika do brončanog doba. Važno je napomenuti da, usprkos ovom kontinuitetu, njio-

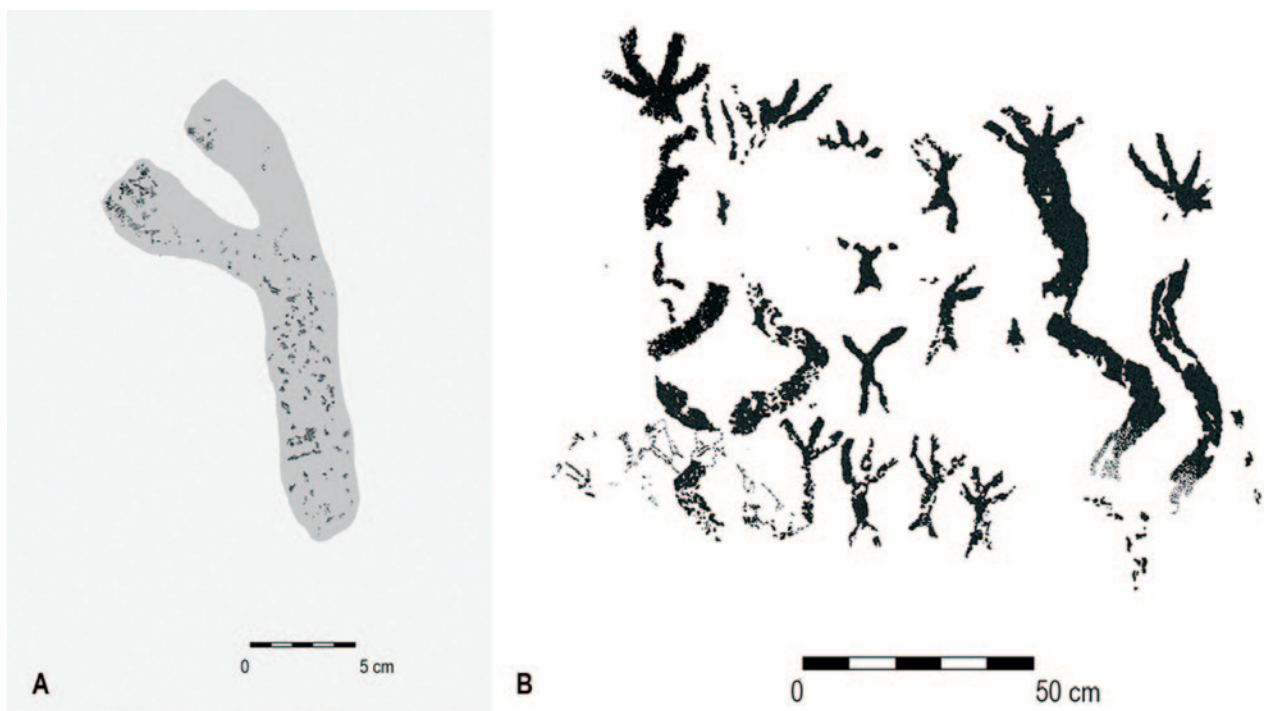


Fig. 9 – Comparison between the Badanj II 'Y-shaped' motif and other variants of 'orants': A proposal for the reconstruction of the Badanj II motif, Bosnia and Herzegovina; B set of different variants of 'orants' surrounded by other geometric representations from Benialí IV, Spain (adapted from Hernández et al. 1988: 174, Fig. 240) (made by: V. Barciela González)

Sl. 9 – Usporedba motiva 'Y-oblika' s nalazišta Badanj II i drugih varijanti 'oranta': A prijedlog za rekonstrukciju motiva iz Badnja II, Bosna i Hercegovina; B različite varijante 'oranta' okružene drugim geometrijskim prikazima sa španjolskog nalazišta Benialí IV (prilagođeno prema Hernández et al. 1988: 174, Fig. 240) (izradila: V. Barciela González)

In the absence of dating of the paintings and an internal archaeological context for this site, the chronological attribution of the graphic ensemble can only be inferred, with due caution, based on stylistic analysis and iconographic comparisons. Undoubtedly, some motifs show strong similarities with early Neolithic schematic art on the eastern Iberian Peninsula. This idea is reinforced by the execution of the figures using the finger and with red pigment; the association of motifs present in the early stages of this sequence, such as sunburst/starburst motifs, lines, and especially 'Y'-shaped anthropomorphic figures; the ambiguous arrangement in panels with an apparent absence of explicit scenes; and the absence of representations clearly attributed to more recent periods, i.e. 'eye-idols', weapons, carts, or riders, among others. Furthermore, their location in a small shelter in a river valley, like many ancient Neolithic rock art ensembles on the eastern Iberian Peninsula, may indicate a settlement pattern from the coast towards inland territories using these corridors. In these places, symbolic marking may have played a significant role in the establishment and consolidation of those early and scarce Neolithic communities, as a mechanism of social cohesion, clearly evident in macro-schematic art (García Atiénzar et al. 2022). In this regard, it should be noted that the site is close to the documented habitation sites of Rivine, Čairi, Zelena Pećina, and Hateljska Pećina, whose materials indicate they belong to the Impresa culture and, therefore, to Early Neolithic contexts in the Adriatic basin (Marijanović 2000; 2018).

If this association is further substantiated, SRA as known in the Western Mediterranean by the mid-6<sup>th</sup> millennium cal BC in classic Cardial contexts could have its roots in earlier symbolic expressions that appeared in areas of the Central Mediterranean, with the implantation of the first Neolithic groups at the turn of 7<sup>th</sup> to 6<sup>th</sup> millennium cal BC (Forenbaher, Miracle 2005; Forenbaher et al. 2013; 2024a; 2024b) as seems to be corroborated by other evidence on portable supports (see López-Montalvo et al. 2021).

## Conclusion

The discovery of sites with SRA in the Central Mediterranean and their stylistic connections with more western areas, especially the eastern Iberian Peninsula, have raised the possibility of a different scenario for the origin of

vo povezivanje s očito drevnim motivima stijenske umjetnosti poput 'oranta' je tipično za tu regiju.

U nedostatku datiranja slikarija i internog arheološkog konteksta za nalazište Badanj II, kronološka atribucija grafičkog skupa može se izvoditi samo na temelju stilske analize i ikonografskih usporedbi, s nužnim oprezom. Nesumnjivo je da neki motivi pokazuju velike sličnosti s ranoneolitičkom shematskom umjetnošću istočnog dijela Pirenejskog poluotoka. Izvedba prikaza pomoću prsta i crvenog pigmenta, povezanost motiva prisutnih u ranim fazama shematske stijenske umjetnosti, kao što su motivi sunčevih/zvjezdanih zraka, linije, a posebno antropomorfne figure u obliku slova 'Y', nejasan raspored na panelima s očitom odsutnošću eksplicitnih scena, te odsutnost prikaza koji se jasno pripisuju novijim razdobljima, tj. 'oko-idola', oružja, kola ili jahača, među ostalima, dodatno podržavaju ovu ideju. Štoviše, njihovo smještanje u malom pripečku u riječnoj dolini, poput mnogih ranoneolitičkih skupova stijenske umjetnosti na istočnom dijelu Pirenejskog poluotoka, može ukazivati na obrazac naseljavanja od obale prema unutrašnjosti kroz ovakve koridore. Simboličko označavanje na takvim mjestima moglo je igrati značajnu ulogu u uspostavljanju i konsolidaciji tih ranih i rijetkih neolitičkih zajednica, kao mehanizam društvene kohezije, što je jasno vidljivo u makroshematskoj umjetnosti (García Atiénzar et al. 2022). U tom smislu, važno je napomenuti da su u blizini Badnja II dokumentirana nalazišta Rivine, Čairi, Zelena pećina i Hateljska pećina, čiji arheološki nalazi ukazuju na njihovu pripadnost Impresa kulturi, a time i kontekstu ranog neolitika u jadranskom prostoru (Marijanović 2000; 2018).

Ako se ova povezanost dodatno potkrijepi, shematska stijenska umjetnost kakvu znamo na zapadnom Mediteranu sredinom 6. tisućljeća pr. Kr. u klasičnim *Cardium* kontekstima mogla bi imati svoje korijene u ranijim simboličkim izrazima koji su se pojavili u područjima središnjeg Mediterana s dolaskom prvih neolitičkih grupa na prijelazu iz 7. u 6. tisućljeće pr. Kr. (Forenbaher, Miracle 2005; Forenbaher et al. 2013; 2024a; 2024b), što je čini se potvrđeno drugim dokazima na prijenosnim podlogama (vidjeti López-Montalvo et al. 2021).

## Zaključak

Otkriće nalazišta sa shematskom stijenskom umjetnošću na središnjem Mediteranu i njihove stilske povezanosti sa zapadnijim područjima, posebno s istočnim dijelom Pirenejskog poluo-

this Neolithic schematic art. In this regard, the study of the Badanj II rock shelter constitutes a detailed approach to the technical, iconographic, and compositional aspects that may contribute to better defining the interaction of different territories, from a symbolic point of view, in the process of Neolithization. The documentation of motifs in this site that refer to iconography from the Early Neolithic of the Iberian Mediterranean allows us to explore the hypothesis of the origin of this symbolic culture in more eastern territories and link its dispersal to the Neolithisation process.

However, there are many aspects that future research must address to extract more conclusive data on this type of practices. Firstly, a thorough and systematic study of the sites with this type of art is needed, taking into account their spatial distribution with all the variables related to the landscape, as well as technical, iconographic, and compositional aspects. A better typological characterisation of the figures, incorporating precise tracings and considering internal variability, is also essential. Additionally, a proposed chronological sequencing based on compositional analysis and superimpositions is required.

Similarly, systematic surveys in different territories, especially in those areas relevant to the Neolithization process, are necessary. The presence of a single site with this ancient style of SRA in Bosnia and Herzegovina clearly indicates the potential of unexplored areas in this regard. Finally, it is essential to search for chronological arguments for SRA paintings that go beyond style or iconography. An analysis of internal (where possible) and external archaeological contexts, framing these symbolic expressions within the context of material remains that corroborate processes of cultural interaction in the Mediterranean region, must be the main goal in the coming years.

## Acknowledgements

Our fieldwork in the rock shelters of Badanj and Badanj II is financially and logistically supported by the Town of Stolac, the institutional projects of the Faculty of Humanities and Social Sciences from University of Zagreb, the University of Zaragoza, the University of Southampton, and British Academy. We are deeply grateful to all of them.

toka, otvorilo je mogućnost postojanja drugačijeg scenarija o porijeklu ove neolitičke shematske umjetnosti. U tom pogledu, proučavanje pripećka Badanj II predstavlja detaljan pristup tehničkim, ikonografskim i kompozicijskim aspektima koji mogu doprinijeti boljem definiranju interakcije različitih teritorija u procesu neolitizacije. Dokumentiranje motiva na nalazištu Badanj II koji se mogu povezati s ikonografijom ranog neolitika mediteranskog dijela Pirenejskog poluotoka omogućava nam istraživanje hipoteze o porijeklu ove simboličke kulture u područjima istočno od Pirenejskog poluotoka i povezivanje njezinog širenja s procesom neolitizacije.

Postoji mnogo aspekata koje buduća istraživanja moraju obraditi kako bi se dobili konkretniji podaci o ovoj vrsti shematske stijenske umjetnosti. Prije svega, potreban je temeljit i sustavan pregled nalazišta s ovom vrstom umjetnosti, uzimajući u obzir prostornu distribuciju nalazišta sa svim varijablama povezanim s krajolikom, kao i tehničke, ikonografske i kompozicijske aspekte. Također je nužna bolja tipološka karakterizacija prikaza, koja uključuje precizna ocrtavanja i unutarnju varijabilnost. Osim toga, potrebno je definiranje kronološke sekvence temeljene na kompozicijskoj analizi i superimpozicijama.

Slično tome, potrebna su i sustavna istraživanja u različitim područjima, osobito u onim koja su važna za proces neolitizacije. Prisutnost samo jednog nalazišta s ovim drevnim stilom shematske stijenske umjetnosti u Bosni i Hercegovini jasno ukazuje na potencijal neistraženih područja u tom pogledu. Konačno, ključno je tražiti kronološke argumente za slikarije shematske stijenske umjetnosti koji nadilaze stil ili ikonografiju. Analiza vanjskih te unutarnjih arheoloških konteksta gdje god je to moguće, kojom bi se smjestili ovi simbolički izrazi u kontekst ostataka materijalne kulture koji potvrđuju procese kulturne interakcije u mediteranskoj regiji, mora biti glavni cilj u nadolazećim godinama.

## Zahvale

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## INTERNETSKI IZVOR INTERNET SOURCE

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