

KOZJA PEĆ

Kozja peć nova je u nizu pećina Dugog otoka s bogatim arheološkim slojevima. Veliki speleološki objekt, nastao urušavanjem podzemne dvorane, zbog znatne količine urušenih kamenih blokova tek na mjestima pruža mogućnost za neometano arheološko iskopavanje. Probna istraživanja manje sonde na jugoistočnom rubu dvorane usmjerila su sustavna iskopavanja upravo na taj dio i otkrila kulturne naslage koje se u gotovo neprekinutoj stratigrafskoj sekvenciji mogu pratiti od antičkih sve do ranih prapovijesnih razdoblja (Vujević, Čelhar 2024). Nakon dviju uspješnih kampanja sustavnih iskopavanja, 2024. godina donijela je nastavak iskopavanja.

U proteklim kampanjama dosegnuta je dubina od 135 cm, a sveukupno su istražene 23 razine, tj. hodne površine iz razdoblja od rane antike do početka kasnoga brončanog doba. Tijekom nove, kratke kampanje u lipnju 2024. godine definirano je još šest hodnih površina koje se i dalje u pravilnom ritmu izmjene tankih, tamnih slojeva gareži i svijetle zemlje i pepela protežu sve do 165-170 cm dubine. Ovakva sedimentacija rezultat je periodičnog čišćenja pećine i spaljivanja stajskog otpada. Očito je da se funkcija pećine nije mijenjala ni u starijim fazama korištenja, tj. da je pećina redovito upotrebljavana za čuvanje stada ovikaprda. U to se uklapaju i nalazi faune koji se gotovo isključivo mogu pripisati ovikapidima.

Za razliku od proteklih godina teren nije bio u stanju u kakvom smo ga ostavili; urušio se dio sjevernog profila. Točnije, došlo je do urušavanja suhozidnog objekta čiji je dio ostao vidljiv u profilu. Veliki kameni blokovi povukli su za sobom i dio slojeva tako da je, iako neplanski, istraživački prostor proširen za gotovo pola metra.

Unutar istraživačkog prostora slojevi se nastavljaju već poznatim tempom. Hodne površine čine 5 do 10 cm tanki slojevi zemlje i pepela s dnom

Kozja peć is a new cave in the series of caves on Dugi otok with rich archaeological layers. The large speleological structure, created by the collapse of an underground hall, provides the possibility for undisturbed archaeological excavations only in places due to the significant amount of collapsed stone blocks. Trial investigation of a smaller trial trench on the southeastern edge of the hall directed systematic excavations to that part and discovered cultural deposits that can be traced in an almost uninterrupted stratigraphic sequence from the ancient to the early prehistoric periods (Vujević, Čelhar 2024). After two successful campaigns of systematic excavations, 2024 brought the continuation of excavations.

In previous campaigns a depth of 135 cm was reached and a total of 23 levels, i.e. walking surfaces from the period from early antiquity to the beginning of the Late Bronze Age were explored. During the new, short campaign in June 2024, six more walking surfaces were defined, which continue to extend in the regular rhythm of the alternation of thin, dark layers of soot and light soil and ash up to a

depth of 165-170 cm. This sedimentation is the result of periodic cleaning of the cave and the burning of livestock waste. It is obvious that the function of the cave did not change even in the older phases of use, i.e. that the cave was regularly used for keeping herds of sheep and goats. This is also consistent with the faunal finds that can almost exclusively be attributed to ovicaprids.

Unlike in previous years, the terrain was not in the condition we had left it; part of the northern profile had collapsed. More precisely, a dry stone wall structure had collapsed, part of which remained visible in the profile. Large stone blocks had dragged along part of the layers, so that, although unplanned, the research area had been expanded by almost half a meter.



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Kozja peć (foto / photo: D. Vujević)



izloženim gorenju zbog čega na kontaktu ostaje karakterističan leopard uzorak. Jedina promjena u inače ujednačenoj sedimentaciji vidljiva je uz sam rub pećine. Tamo se na gotovo svakoj razini javlja 10-15 cm debela traka izrazito rahle pjeskovite zemlje. Stratigrafski, riječ je o istom sloju koji pratimo na ostatku hodne površine, samo se vjerojatno nije mogao kompaktnije formirati zbog pećinske stijene koja se na ovom dijelu kosi, pa su i aktivnosti uz rub bile manjeg intenziteta. U prilog tomu idu i nalazi. U rahlom sloju pronalazimo manju količinu nalaza, koja u pravilu odgovara onima na ostatku prostora.

Kao i kod mlađih razina, i dalje pronalazimo tragove različitih intervencija u prostor. Kamenja u nizu svjedoče o postojanju struktura koje su dijelile ili ogradile određeni prostor. Jedna od takvih pojavila se na Razini 26. Po sredini se nalazi niz kamenja raspoređen u kosoj liniji (u odnosu na orijentaciju sonde). Trenutačni raspored amorfnog kamenja ne odaje dojam da je bilo slagano, ali činjenica da je kamenje koncentrirano samo na središnjem dijelu sonde i da prati liniju u smjeru sjeverozapad-jug-istok govori nam da je zaista riječ o ostatku nekakve strukture. Sudeći po količini kamena i njegovu rasporedu, kakva god da je struktura bila, nije bila visoka. Mogla bi odgovarati sličnim objektima koje smo već istražili u mlađim fazama, ili onima koji su i danas vidljivi na drugim dijelovima Kozje peći, a koji su služili prije svega da ograde određeni prostor i odvoje ga od ostatka pećine.

Slojevi iz ove kampanje još uvijek nisu dobili pripadajuće radiokarbonske datume. O njihovoj kronologiji možemo govoriti tek na osnovi stratigrafskog položaja; nalaze se ispod sloja s kronološkim rasponom od 14. do posljednje četvrtine 12. st. pr. Kr. No s obzirom na njihov položaj, sasvim je jasno da su u ovoj kampanji istraženi slojevi koji pripadaju srednjemu brončanom dobu ili, eventualno, početnom dijelu kasnoga brončanog doba.

U ovakvu dataciju uklapaju se i arheološki nalazi. Njima dominiraju keramički ulomci i kosti domaćih životinja. Općenita slika keramičkih nalaza sugerira i dalje izrazitu zastupljenost lončarije glačane površine, i to najčešće obiju stijenki. Glačanje je dominantno prisutno kod manjih oblika, vrčeva, zdjelica i šalica, iako je zabilježeno i na posuđu većih dimenzija. Makroskopski je uočljiva prisutnost veće ili manje

Within the research area, the layers continue at a familiar pace. The walking surfaces consist of 5 to 10 cm thin layers of soil and ash with the bottom exposed to burning, which leaves a characteristic leopard pattern at the contact. The only change in the otherwise uniform sedimentation is visible along the very edge of the cave. There, at almost every level, a 10-15 cm thick strip of extremely loose sandy soil

koncentracije sitnijih ili krupnijih neplastičnih pri-mjesa, odnosno litoklasta u glini, a precizniji podatci o karakteristikama glinovite sirovine te vrsti i udjelu neplastičnih sirovina očekuju se nakon dovršetka mineraloško-petrografskih analiza koje su u tijeku. Boja keramike varira u rasponu od svjetlijih bež i narančastih do tamnosmeđih nijansi, dok je ona tamnosive do crne boje iznimno slabo zastupljena.

appears. In terms of stratigraphy, this is the same layer that we follow on the rest of the walking surface, but it probably could not have formed more compactly due to the cave rock that slopes in this part, so the activities along the edge were less intense. The finds also support this. In the loose layer, we find a smaller amount of finds, which generally correspond to those in the rest of the space.



Rad na situ (foto: D. Vujević)
Sieving (photo: D. Vujević)



Tipološki dominiraju zaobljeni obodi više ili manje izvijeni prema van, no javljaju se i zaravnjeni i oni zadebljani trokutasto prema van. Posude nešto manjih dimenzija i užeg promjera oboda, koje se mogu uvrstiti u kategoriju vrčeva, odlikuje prisutnost trakaste ručke. Riječ je o okomito postavljanim trakastim ručkama koje se neznatno sužavaju prema vrhu, a smještene su neposredno

As with the younger levels, we continue to find traces of various interventions in the space. Stones in a row testify to the existence of structures that divided or enclosed a certain space. One of these appeared at Level 26. In the middle there is a row of stones arranged in an oblique line (in relation to the orientation of the trial trench). The current arrangement of the amorphous stones does not give

ispod oboda. Iznimno su dobro zastupljene i šalice S-profilacije, površine uglačane do visokog sjaja. Na potonjim su očuvane i ručke koje se spajaju s obodom.

Trakaste ručke koje su spajane na obod te imaju katkad i zaobljenu ili pravokutnu pločicu, odnosno jezičac na gornjem spoju, karakteristika su dinarske kulture (Arena, Barbarić, Radić Ro-

the impression that they were stacked, but the fact that the stones are concentrated only in the central part of the trial trench and that they follow a line in the northwest-southeast direction tells us that these are indeed the remains of some kind of structure. Judging by the amount of stone and its arrangement, whatever the structure was, it was not high. It could correspond to similar structures that we have already explored in the younger phases, or those that are still visible today in other parts of Kozja peć, and which served primarily to enclose a certain space and separate it from the rest of the cave.

The layers from this campaign have not yet been assigned radiocarbon dates. We can only speak about their chronology based on their stratigraphic position; they are located below a layer with a chronological range from the 14th to the last quarter of the 12th century BC. However, given their position, it is quite clear that the layers explored in this campaign belong to the Middle Bronze Age, or possibly, the early part of the Late Bronze Age.

Archaeological finds also correspond to this dating. They are dominated by ceramic fragments and bones of domestic animals. The general picture of the ceramic finds suggests that pottery with a polished surface is still prominent, most often polished on both sides. Polishing is dominantly present on smaller shapes, jugs, bowls and cups, although it has also been recorded on larger vessels. Macroscopically, the presence of a greater or lesser concentration of smaller or larger non-plastic impurities, i.e. lithoclasts in the clay, is noticeable, and more precise data on the characteristics of the clay raw material and the type and proportion of non-plastic raw materials are expected after the completion of the mineralogical and petrographic analyses that are in progress. The color of the pottery varies in the range from lighter beige and orange to dark brown shades, while dark gray to black is extremely rare.

In terms of typology, rounded rims, more or less curved outwards, dominate, but flattened ones and those with a triangular thickening outwards also occur. Vessels of somewhat smaller dimensions and a narrower rim diameter, which can be



Čišćenje prapovijesne razine (foto: M. Grgurić Srzentić)
Cleaning prehistoric level (photo: M. Grgurić Srzentić)



ssi 2020: 26, Fig. 2/3,7-8,10, 3/12-14, 4/22). Upravo takve pronađene su u slojevima istraženim u ovoj kampanji. S obzirom na navedeno, pripadaju lončariji srednjega ili, eventualno, početnoga kasnog brončanog doba. Identična je situacija i s ručkama koje se postupno sužavaju prema vrhu te na taj način zadobivaju trokutastu formu. Osim onih na obodima šalica, zabilježene su i dvije takve ručke koje su se izvorno nalazile na tijelima posuda, a obje odlikuje trokutast izgled s frontalne strane pri čemu jedna masivna ručka u bokocrtu ima izrazit koljenast prijelom, a druga i

classified as jugs, are characterized by the presence of a strap handle. These are vertically placed strap handles that taper slightly towards the top and are located directly below the rim. Cups with S-shaped profile are also exceptionally well represented, with surfaces polished to a high shine. The latter also have preserved handles that connect to the rim.

Strap handles attached to the rim, sometimes with a rounded or rectangular plate, or a tongue at the upper joint are characteristic of the Dinaric culture (Arena, Barbarić, Radić Rossi 2020: 26,



... Pregledavanje depozita (foto: D. Vujević)
... Surveying the deposit (photo: D. Vujević)



... Izrada terenske dokumentacije (foto: M. Grgurić Srzentić)
... Making field documentation (photo: M. Grgurić Srzentić)

dodatno izbočenje, roščić neposredno prije mjesta prijeloma. Različite varijante trokutastih ručki karakteristična su forma istarske kašteljerske kulture iako se nalaze i u Dalmaciji i Hercegovini te na zapadnoj jadranskoj obali (Apulija, Marche) (Hellmuth Kramberger 2017: 244–248, Fig. 217; Arena, Barbarić, Radić Rossi 2020: 26, Fig. 2/2,4, 3/11,18-19).

Od posebnih nalaza treba spomenuti jedno koštano ubadalo (jednostavno napravljeno od kosti ovikaprida kojoj se tek dio kosti grubo zašiljio) i koštani držak (ravno zasječena metakarpalna kost ovikaprida s rupom na proksimalnom dijelu).

Uz keramičke nalaze, najbrojniji su korpus nalaza ulomci životinjskih kostiju. Preliminarnom zooarheološkom analizom utvrđena je prisutnost isključivo domaćih životinja, izuzev nekoliko ulomaka kostiju ptica i glodavaca koji su u pećinu najvjerojatnije dospjeli slučajno, bez izravnoga ljudskog utjecaja. Najzastupljenije su kosti koza, zatim slijede ovca i svinja. Većinom je riječ o vrlo mladim jedinkama, mlađima od šest mjeseci. Kao i u prethodnoj kampanji, ostaci fetalnih i neonatalnih ovikaprida brojčano znatno premašuju očekivane vrijednosti. Od malakološkog materijala najčešći su ogrci, uz manji broj priljepaka i rakova. Tragovi

Fig. 2/3,7-8,10, 3/12-14, 4/22). These are exactly the ones found in the layers explored in this campaign. Given the above, they belong to the pottery of the middle or, possibly, the initial phase of the Late Bronze Age. The situation is identical with the handles that gradually narrow towards the top and thus acquire a triangular shape. In addition to those on the rims of cups, two such handles were also recorded that were originally located on the bodies of the vessels, and both are characterized by a triangular appearance from the front side, with one massive handle having a distinct knee-shaped form in the side view, and the other an additional protrusion, a horn immediately before the bending point. Different variants of triangular handles are a characteristic form of the Istrian Castellieri culture, although they are also found in Dalmatia and Herzegovina and on the western Adriatic coast (Apulia, Marche) (Hellmuth Kramberger 2017: 244-248, Fig. 217; Arena, Barbarić, Radić Rossi 2020: 26, Fig. 2/2,4, 3/11,18-19).

Special finds include one bone awl (simply made of ovicaprid bone with only part of the bone roughly pointed) and a bone handle (a flat-cut ovicaprid metacarpal bone with a hole in the proximal part).





Ulomak posude (foto: D. Vujević)
Pottery sherd (photo: D. Vujević)

izlaganja vatri na koštanom materijalu prisutni su u većini izdvojenih faza. Na dijelu kostiju uočeni su tragovi rezanja, što potvrđuje prisutnost i djelovanja ljudi. Međutim, urezi za sada nisu identificirani ni na jednoj kosti fetalnih ili neonatalnih jedinki. Prisutnost fetalnih i neonatalnih jedinki predstavlja jasan pokazatelj sezonalnosti korištenja pećine. Ipak, ostaje otvoreno pitanje je li riječ o životinjama koje je u vrijeme janjenja ili jarenja u pećinu doveo čovjek, ili o životinjama lualicama koje su same pronašle prirodni zaklon.

In addition to ceramic finds, the most numerous assemblage of finds are fragments of animal bones. Preliminary zooarchaeological analysis has determined the presence of exclusively domestic animals, with the exception of a few fragments of bird and rodent bones that most likely got in the cave by chance, without direct human influence. Goat bones are the most abundant, followed by sheep and pigs. Most of these are very young individuals, younger than six months. As in the previous campaign, the remains of fetal and neonatal ovicaprids significantly exceed the expected values in number. Of the malacological material, the most common are turbinate monodonts, with a smaller number of limpets and crustaceans. Traces of fire exposure on the bone material are present in most of the isolated phases. Traces of cutting were observed on some of the bones, which confirms the presence and activity of humans. However, incisions have not yet been identified on any bones of fetal or neonatal individuals. The presence of fetal and neonatal individuals is a clear indicator of the seasonality of the cave use. Nevertheless, it remains an open question whether these were animals that were brought to the cave by humans during lambing or kidding, or stray animals that found natural shelter.

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