

**HOČEVARICA. ENEOLITSKO KOLIŠČE NA LJUBLJANSKEM BARJU. Ur. ANTON VELUŠČEK
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RESNIKOV PREKOP, NAJSTAREJŠA KOLIŠČARSKA NASELBINA NA LJUBLJANSKEM BARJU. Ur. ANTON VELUŠČEK

RESNIKOV PREKOP. THE OLDEST PILE-DWELLING SETTLEMENT IN LJUBLJANSKO BARJE. ED. ANTON VELUŠČEK

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Godina 1875. zapisana je kao godina prvih planskih arheoloških istraživanja u Sloveniji. Proveo ih je Karl Deschmann, odnosno Dragotin Dežman, prirodoslovac, političar, kustos i ravnatelj Zemaljskog muzeja u Ljubljani. Lokalitet je Ljubljansko barje, poznato još u 17. st. kao vrijedna prirodna znamenitost tj. najjužnija europska duboka močvara. (spominje ga znameniti polihistoričar Janez Vajkard Valvasor). Duboka močvara označava prirodni okoliš u kojemu se zbog određenih geoloških i klimatskih uvjeta razvija i posebna vegetacija. Planskim isušivanjem, kopanjem kanala i iskorištavanjem treseta u posljednjih dvjestotinjak godina ta je izuzetnost Ljubljanskog barja smanjena, ali su ti zahvati otkrili važne arheološke nalaze. Tako je 17. srpnja 1875. dojavljeno u Zemaljski muzej da su radnici, čisteći cestovne jarke kraj sela Studenec (danas Ig), naišli na drvene grede zabijene u tlo i ostatke glinenih posuda. Kako je tada već bio poznat pojam sojenica i sojeničke kulture (zahvaljujući nalazima iz švicarskih, koruških i salzburških jezera), Dežman je odmah pravilno procijenio značenje spomenutih nalaza i počeo provoditi sustavna iskopavanja koja su trajala do 1877. god. Utvrdio je postojanje 5 sojeničkih naselja, a djelomice je istražio dva od njih. S obzirom na nedostatnu dokumentaciju kasnije je bilo teško utvrditi točne položaje njegovih istraživanja, no analizom svih dostupnih dokumenata istraživači su zaključili da su Dežmanovi lokaliteti bili smješteni sjeverno od današnjeg Iga, uz rijeku Ižicu i obližnje kanale. Iako je Dežman redovito izvještavao o svojim iskopavanjima, nikada nije objavio cjelokupnu građu (osim pojedinih primjeraka). Ona je objavljena gotovo sto godina poslije (Korošec, Korošec 1969) – i tada se nije uvijek sa sigurnošću mogla utvrditi pripadnost građe određenom sojeničkom naselju. Ipak, Dežmanovi izvještaji su u bečkim časopisima skrenuli pozornost europskih arheologa na Ljubljansko barje. Tako je ove nalaze Moritz Hoernes uvrstio u svoju kapitalnu sintezu «Urgeschichte der bildenden Kunst in Europa» (prvo izdanje 1898), a potom i M. Wosinsky godine 1904. u svoje djelo o inkrustiranoj keramici «Die inkrustierte Keramik der Stein- und Bronzezeit».

Kao što vidimo, Ljubljansko barje ima dugu i gotovo neprekinutu povijest arheoloških istraživanja. Njihov intenzitet je varirao, ali se slovenski arheolozi uvijek ponovno vraćaju Barju

The year 1875 went down in history as the year of the first planned archaeological excavations in Slovenia. They were carried out by Karl Deschmann, otherwise known as Dragotin Dežman, natural historian, politician, curator and director of the National Museum in Ljubljana. The site was Ljubljansko Barje, well-known even in the 17th century as a valuable natural sight – the southernmost European deep swamp (mentioned by the famous polyhistorian Janez Vajkard Valvasor). A deep swamp is a natural habitat in which, because of certain geological and climatic conditions, special vegetation thrives. Due to drainage work, canal digging and the exploitation of peat over the past 200 years, this particular feature of Ljubljansko Barje has been reduced. However, the mentioned works also revealed important archaeological finds. On 17 July 1875 the National Museum received information that workers who were cleaning ditches near the road in the vicinity of the village of Studenec (nowadays Ig) came across wooden posts driven in the ground, and some pottery fragments. Given that the concept of pile-dwellings and a pile-dwelling culture were already known at the time (thanks to finds from lakes in Switzerland, Corinthia and around Salzburg), Dežman immediately – and quite rightly – attached great importance to these finds and initiated systematic excavation which was completed in 1877. He discovered five pile-dwelling settlements and partly explored two of them. Due to insufficient documentation, it was subsequently difficult to determine the exact site of his excavations, but on the basis of all available documents, it was concluded that Dežman's localities were situated north of the present-day village of Ig, by the river Ižica and nearby canals. Although Dežman reported regularly on his excavations, he never published the comprehensive results (apart from several finds). The comprehensive results of his research were published nearly a hundred years later (Korošec, Korošec 1969), and even then it was not always possible to determine with certainty whether a particular find belonged to one or another pile-dwelling settlement. However, Dežman's reports published in Viennese journals drew the attention of European archaeologists to Ljubljansko Barje. Moritz Hoernes included them in his great synthesis "Urgeschichte der bildenden Kunst in Europa" (first edition in 1898), and then in 1904 M. Wosinsky included them in his work on encrusted pottery "Die inkrustierte Keramik der Stein- und Bronzezeit".

s novim projektima. Godine 1995., dakle 120 godina nakon prvih istraživanja, Institut za arheologiju Znanstveno-raziskovalnega centra SAZU-a, u suradnji s Dendrokronološkim laboratorijem iz Oddelka za lesarstvo Biotehničke fakultete, pokrenuo je intenzivna multidisciplinarna istraživanja Ljubljanskoga barja, primjenjujući nove metode. Prvi je korak u tom projektu bilo sondiranje na području sojeničkog naselja na Hočevarici. Zahvaljujući spomenutom drukčijem pristupu istraživanju, rezultati su bili iznenađujući – s površine od svega 8 m² prikupljeno je toliko podataka da se njima moglo posvetiti čak 16 istraživača različitih disciplina, a svoje rezultate predočiti u impozantnoj publikaciji koja je predmet ovog razmatranja. Najveći dio arheološkog posla obavio je Anton Velušček koji je i urednik monografije. Uvod u monografiju čini opis glavnih zemljopisnih obilježja regije u kojoj se nalazi Ljubljansko barje, a to je središnja Slovenija. U vrijeme osnutka i egzistencije sojeničkih naselja Barje je bilo veliko, ali plitko jezero. Autor nas upoznaje i s ostalim zemljopisnim cjelinama središnje Slovenije što okružuju Ljubljansko barje i koje su svaka na svoj način utjecale na nastanak i razvoj života na Ljubljanskom barju.

U narednom poglavlju, također iz pera A. Veluščeka, slijedi iscrpan pregled neolitičko-eneolitičkih nalazišta središnje Slovenije, također razvrstanih po užim zemljopisnim cjelinama. Smjestivši tako zemljopisno i arheološki čitavo Ljubljansko barje, Velušček prelazi na opis terenskih istraživanja, stratigrafije i nalaza samoga lokaliteta Hočevarice. Detaljno je prikazan položaj sonde, tehnika iskopavanja i stratigrafija. Osobito je zanimljiva tehnika iskopavanja – istraživači su se, naime, koristili posebnom drveno-čeličnom platformom koju su postavili preko sonde i s nje provodili iskopavanje. Na taj su način onemogućili bilo kakvo nekontrolirano zadiranje i suvremeno “onečišćenje” kulturnog sloja. Sonda, 2 m široka i 4 m dugačka, bila je razdijeljena u 8 mikrokvadrata veličine 1x1 m. Sediment iz mikrokvadrata 1, 4, 5 i 8 čitav je ispiran kroz metalna sita, dok je onaj iz preostalih kvadrata razgrnut, temeljito pregledan i arheološki dokumentiran. Uzorci za palinološke analize uzeti su i iz sjevernog profila sonde koji najbolje ilustrira stratigrafsku situaciju na nalazištu. U nastavku poglavlja A. Velušček detaljno prikazuje nekeramičke nalaze, a to su drveni, koštani i kameni predmeti te nalazi koji se mogu povezati s metalurgijom bakra. Dakako, posebno su zanimljivi drveni nalazi, koji su se očuvali zahvaljujući činjenici da je riječ o močvari. Najviše je drvenih zrna za ogrlice, no posebnu pozornost privlači gotovo u cijelosti očuvan luk od tišovine, prvi nalaz te vrste u Sloveniji. Predmeti od kosti, roga i životinjskih zuba upotpunjavaju sliku nalaza. Pronađeno je i nekoliko ljudskih zuba (kojima je kasnije posvećeno zasebno poglavlje). Kameni nalazi su tipološki određeni i opisani dok je petrografskim analizama posvećeno posebno poglavlje. Od izuzetnog su značenja tri mala, naoko neugledna nalaza, - dva gotovo bezoblična ulomka keramičke posude debelih stijenki te kovinska kapljica. Za keramičke je ulomke utvrđeno da pripadaju posudi za lijevanje metala, a kovinska kapljica je ostatak pri izradi bakrenih predmeta. Izvanredno je to svjedočanstvo o domaćoj proizvodnji bakrenih predmeta! Na kraju su prikliučeni i nalazi koje su prikupili ronionci u Ljubljani tik od toka Hočevarice, a za koje se može pretpostaviti da također potječu iz iste naseobine.

As we can see, Ljubljansko Barje has had a long and almost uninterrupted history of archaeological excavations. The research intensity has varied, but Slovenian archaeologists always keep coming back to Ljubljansko Barje with new projects. In 1995, that is, 120 years after the first excavations, the Institut za arheologiju Znanstveno-raziskovalnega centra SAZU (Archaeological Institute of the Scientific-Research Centre of the Slovenian Academy of Arts and Sciences), in cooperation with the Dendrological Laboratory of the Department of Wood Science and Technology of the Biotechnical Faculty, launched an intensive multidisciplinary exploration of Ljubljansko Barje, applying new methodology. The first step of the project was the opening of test pits in the area of a pile-dwelling settlement at Hočevarica. Thanks to the already mentioned new approach, the results were surprising: an uncovered surface area of only 8 m² yielded so much information that 16 researchers of various specialities studied them and published their findings in an imposing volume which is the subject of this review. The largest part of the archaeological work was carried out by Anton Velušček, who also edited the monograph. The introduction consists of a description of the main geographical features of Central Slovenia, the region in which Ljubljansko Barje is situated. At the time the pile-dwelling settlements were established and inhabited, Barje was a large, albeit shallow, lake. The author also introduces us to other geographical zones of Central Slovenia surrounding Ljubljansko Barje, which led to the creation and development of settlements in Ljubljansko Barje.

The following chapter, also written by A. Velušček, gives a comprehensive overview of Neolithic and Eneolithic sites in Central Slovenia, divided into different geographical areas. After outlining the geographical and archaeological position of Ljubljansko Barje, Velušček proceeds by describing the field exploration, stratigraphy and the finds from the Hočevarica site. The position of the test pit, digging technique and stratigraphy are presented in detail. The digging technique is particularly interesting – the researchers used a special wood-and-steel platform placed over the test pit on which the researchers could stand. In this way, they prevented any uncontrolled entry and contemporary “contamination” of the cultural stratum. The test pit (2m wide and 4 m long) was divided into eight microsquares of 1x1 m. The sediment from microsquares 1, 4, 5 and 8 was rinsed through metal sieves, while the sediment from the remaining squares was spread out, thoroughly inspected and archaeologically documented. Samples for palinological analysis were also taken from the northern profile of the test pit which best illustrates the stratigraphic situation on the site. In the following pages, A. Velušček presents in detail the non-pottery finds, consisting of wooden, bone and stone items and finds that can be linked to copper metallurgy. The wooden finds are particularly interesting – they have been preserved thanks to being buried in marshland. They mostly consist of wooden necklace beads, but there is also an almost entirely preserved yew-wood bow, the first such find in Slovenia. Items made of bone, antler and animal teeth complete the picture of the discovered artefacts. Among the finds there were also several human teeth (to which a separate chapter is dedicated later in the book). The stone finds are typologically determined and described, and a separate chapter is dedicated to petrographic analyses. Three small and seemingly irrelevant finds are particularly significant: two almost shapeless fragments of a thick-walled clay pot and a metal drop. It has been confirmed that the pottery fragments belonged to a metal casting

Ovo izrazito arheološko poglavlje slijede poglavlja koja nalazište i nalaze analiziraju i iz motrišta drugih znanstvenih disciplina. Marjeta Jeraj piše o paleobotaničkim istraživanjima na Hočevarici. Ona su obuhvatila analize biljnih makroostataka iz sedimenta te peluda iz profila sonde. Organski sediment iz dubine 142,5 cm te koštice grožđa i zrna žita radiokarbonski su datirani. U kulturnom sloju Hočevarice između više od 30 000 sjemenki i plodova, mahom dobro očuvanih, utvrđena je prisutnost loboda, hrastovog žira, sjemenki vinove loze, koštice drijenka, maline, vodenog oraščića, sjemenke maka, zrna ječma i pšenice, lupine lješnjaka itd. Analizirani su i komadi ugljena koji potječu ponajviše od lijeske, crne joha i jasena, ali bilo je tu i javora, ruža, gloga, bukve, hrasta, oraha, no vrlo malo crnogorice. Utvrđene su i razne vrste mahovina, algi, guba. Dobiveni je peludni dijagram pokazao da je u okolici Hočevarice neposredno pred njezino naseljavanje, ili na samom početku naseljavanja uspijevala miješana listopadna šuma joha, lijeske, bukve, hrasta i lipe. Nedrvni pelud pokazuje niske vrijednosti žitarica, loboda i trava. Mlađi odsjek, pak, pokazuje oštar prijelaz od drvene prema travnoj vegetaciji, što znači da su u okolici naselja prevladavale otvorene površine tj. polja i pašnjaci. Visoke peludne vrijednosti žita i lobode jasno ukazuju na prisutnost čovjeka i njegovo mijenjanje okoliša. Radikarbonski datumi dobiveni iz karboniziranog žita i iz sedimenta stavljaju naseljavanje Hočevarice u sredinu 4. tisućljeća pr. Kr. Dragomir Skaberne i Ana Mladenović analizirali su nekoliko vrlo lijepo obrađenih kamenih obruča koji su bili nanizani u ogrlicu. Riječ je o tamnosivoj, gotovo crnoj fino-zrnatoj stijeni. Primijenivši nekoliko metoda ispitivanja zaključeno je da su obruči izrađeni od metamorfne stijene koje nema u bližoj okolici Hočevarice. Slična se sirovina može naći u sjevernim Karavankama, na Pohorju i Kozjaku ili, pak, na području Austrije i Italije. Očito su već u vrijeme naseljavanja Hočevarice postojali određeni komunikacijski putovi u smjeru sjever-jug i istok-zapad kojima se odvijala razmjena među prapovijesnim zajednicama. Žiga Šmit ispitaio je metodom protonski navođenih rendgenskih zraka površinu glinene posude i kovinsku kaplju. Posudica je analizirana na tri točke, dvije na unutarnjoj strani i jednoj na vanjskoj. Rezultati su pokazali bakrom obogaćenu unutarnju površinu, što upućuje na uporabu posudice za lijevanje bakra. Nešto veći sadržaj sumpora na unutarnjoj strani ostavlja otvorenu mogućnost korištenja sulfidne rudače. Metalna kaplja analizirana je najprije s patinom, a zatim i nakon nje-na odstranjivanja. Rezultati govore da je načinjena iz gotovo čistog bakra s tek nešto primjesa srebra i arsena. Zoran Milić analizirao je dvije bakrene sjekire, slučajne nalaze iz korita Ljubljanice u neposrednoj blizini Hočevarice. I u tom se slučaju pokazalo da su sjekire izrađene iz bakra s tek malim primjesama u jednom slučaju olova, a u drugom arsena. Petra Leben-Seljak analizirala je tri ljudska zuba i ustanovila da je riječ o mliječnim zubima djeteta. Borut Toškan i Janez Dirjec u opsežnom su poglavlju obradili ostatke makrofaune, što je važan doprinos poznavanju načina života prapovijesnih zajednica, poglavito njihove gospodarske osnovice. Na početku poglavlja autori predstavljaju metodu primijenjenu u analizi uzoraka, potom slijedi opis uzoraka i vrlo detaljna taksonomija. Arheolozima, koji su u tom području ipak lai-

vessel, while the metal drop is a residue of the production of copper artefacts. This is remarkable proof of domestic copperware production! At the end of the chapter, an overview is given of the finds discovered by divers in Ljubljanica River in the immediate vicinity of the mouth of the Hočevarica, which can be assumed to have originated from the same settlement.

Following this markedly archaeological chapter, in other chapters the site and finds are analysed from the point of view of other scientific disciplines. Marjeta Jeraj writes about the paleobotanical research of Hočevarica. The plant macro-remains from the sediment and the pollen from the test-pit profile were analysed. The organic sediment from a depth of 142.5 m and grape pips and wheat kernels were radiocarbon dated. In the Hočevarica cultural stratum, among more than 30,000 seeds and fruits, mostly well-preserved, there were lamb's-quarters, acorns, vine seeds, cornel-cherry kernels, raspberries, water chestnuts, poppy seeds, rye and wheat kernels, hazelnuts, etc. The charcoal remains were also analysed: they mostly belonged to hazel, black alder and ash trees, but there were also maple, rose tree, hawthorn, beech, oak, walnut tree and a very small quantity of coniferous wood. The remains of different kinds of mosses, algae and hoof fungus were also discovered. The resulting pollen diagram indicates that in the area surrounding Hočevarica at the time when it began to be settled, or just before, there were mixed deciduous woods of alder, hazel, beech, oak and lime. Among non-tree pollen, there were low values of pollen belonging to corn, lamb's-quarters and grasses. However, in the later section, a clear transition is observable from trees to grass vegetation, suggesting that in the surroundings of the settlement there were abundant open areas, i.e. fields and pastures. The high values of corn and lamb's-quarters pollen clearly indicate that man was present and that he had changed the environment. The radiocarbon dating of carbonised corn and sediments placed the settling of Hočevarica in the middle of the 4th millennium BC. Dragomir Skaberne and Ana Mladenović analysed several neatly worked stone rings that were threaded on a necklace. The rings were made of dark-grey, almost black fine-grain rock. They applied several research methods and came to the conclusion that the rings were made of a metamorphous rock, such as does not exist in the vicinity of Hočevarica. Similar raw material can be found in northern Karawanken, on Pohorje and on Kozjak, or in the territory of Austria and Italy. It is obvious that already at the time when Hočevarica was settled certain communications linking north to south and east to west existed, and were used for the first exchanges among the prehistoric communities.

Žiga Šmit used the method of proton-guided x-ray emission to analyse the surface of the clay vessel and the metal drop. The vessel was analysed at three points, two of them on the inside, and one on the outside surface. The results show that the inside surface was enriched with copper, indicating that the vessel was used for casting copper. A somewhat higher content of sulphur on the inside suggests that a sulphide ore was used. The metal drop was analysed twice: once with its patina, and then after it was removed. The results indicate that it consists of almost pure copper with just a few traces of silver and arsenic. Zoran Milić analysed two copper axes – accidental finds from the Ljubljanica River in the immediate vicinity of Hočevarica. Once again, it was proven that the axes were made of copper with a small admixture of lead in one case, and arsenic in the other case. Petra Leben-Seljak analysed three human teeth and determined that these were a child's milk teeth. In

ci, najzanimljivija je rasprava iz koje je razvidno da je broj nalaza relativno skroman, a malen uzorak umanjuje vjerodostojnost prije svega statističkih metoda. U tom kontekstu autori naglašavaju i činjenicu da istražena sonda predstavlja tek 0,1 % pretpostavljene površine naselja pa dobiveni rezultati ne moraju biti relevantni za čitavo naselje. Očuvanost, pak, uzorka uvjetovana je nizom različitih čimbenika koje također treba uzeti u obzir (fizičko i kemijsko raspadanje, selektivni transport, čovjekovo klanje i komadanje životinja, aktivnosti pasa i drugih zvijeri itd.).

Na spomenuto se poglavlje logično nadovezuje sljedeće, Marijana Govediča, u kojemu su analizirani ostaci riba. Utvrđeno je postojanje 5 vrsta slatkovodnih riba. Njihovi ostaci, zajedno s nalazima različitih utega za mreže, harpuna, udica, jasno svjedoče da su barjanski stanovnici ribolovom značajno dopunjavali svoju prehranu. Iz prikupljenog materijala izdvojene su one strukture koje su komparativnom metodom omogućile utvrđivanje vrsta riba. Najbrojniji i najmanje oštećeni su kralješci i ždrijelna kost, dok su krljušti rijetke. Utvrđena je, dakle, prisutnost šarana, crvenoperke, crvenooke, štuke i običnoga grgeča. Sve su to autohtone vrste riba koje još i danas žive u slovenskim vodama. No jedan mali nalaz (3 cm dugačak) repne bodlje morskoga goluba upućuje i na prisutnosti morske faune. Poznato je da u Jadranu živi nekoliko vrsta morskih golubova, no kojoj od njih pripada primjerak s Hočevarice, nije moguće utvrditi s obzirom da je očuvana samo repna bodlja koja u tom smislu nije signifikantna. Bitno je, međutim, da se u Hočevarici na Ljubljanskom barju pronašlo nešto što potječe vjerojatno iz sjevernog Jadrana i što nedvojbeno potvrđuje kontakte, odnosno trgovinu ili razmjenu ondašnjih stanovnika s područjem Jadrana. Etnografske paralele pokazuju da se neki narodi indonezijskih otoka koriste bodljama tih morskih riba kao vršcima strjelica ili harpuna. Zašto takvu funkciju ne pretpostaviti i za ovaj nalaz u Hočevarici? To proizlazi iz analiza koje su obavili Jernej Pavšič i Janez Dirjec. U istrazenoj sondi na Hočevarici pronađeno je i 515 ptičjih kostiju, o čemu pišu Franc Janžekovič i Vesna Malez. S obzirom na malu istraženu površinu to je velik broj kostiju, što znači da je najvjerojatnije riječ o kuhinjskim otpacima, odnosno ostacima prehrane stanovnika Hočevarice. U prilog tome govori i činjenica da je uglavnom riječ o oštećenim i polomljenim kostima, a da nema cjelovitih kostura. Iz cjelokupnog je materijala bilo moguće prepoznati 143 ptice koje pripadaju 16 vrsta. Slično kao ostaci riba i ostaci avifaune omogućuju rekonstrukciju životnog okoliša eneolitičkih žitelja. Među pticama pretežito su zastupljene vrste koje kao životni prostor izabiru vodena i močvarna područja. Prevladavaju razne vrste pataka koje žive na vodama stajaćicama, no neke od njih hranu traže u većim dubinama, druge u manjim ili pak plićacima obraslim gustom močvarnom vegetacijom. Izuzetak je poljska vrana, a njezina prisutnost u naselju ukazuje na to da je oko Hočevarice bilo otvorenih travnatih i obrađenih površina. Dakle, nalazi ptica govore da je eneolitički stanovnik Hočevarice bio vješt lovac na vodi, kako u plićacima tako i na dubini. Čime je i kako lovio ptice nije poznato. Vjerojatno mrežama i zamkama, ali materijalni dokazi o tome ne postoje. Možda je u te svrhe rabljena 3

an extensive chapter, Borut Toškan and Janez Dirjec analysed the macro-fauna remains, thus contributing significantly to our understanding of the way of life of prehistoric communities, especially in terms of their economy. At the beginning of the chapter, the authors present the method applied in analysing samples, then they describe the samples and provide very detailed taxonomy. For archaeologists, who are not experts in this particular field, the most interesting part is the discussion, which reveals that the number of finds was relatively modest, and the small number of samples undermines the credibility of the study, particularly of statistical methods. In this context, the authors underline the fact that the explored test pit accounts for only 0.1% of the assumed settlement surface, and that the results received thus far are not necessarily relevant for the entire settlement. The state of preservation of the samples depends on a range of different factors that should also be taken into consideration (physical and chemical decomposition, selective transportation, slaughtering and butchering of animals by man, activities of dogs and other wild animals, etc.).

In the next chapter, following in logical sequence, Marijan Govedič analyses fish remains. He determined that there were five kinds of freshwater fish. Their remains, together with various net weights, harpoons and hooks, clearly show that the inhabitants of Barje caught fish and thus supplied their diet. Certain elements were isolated from the collected material, which allowed the different kinds of fish to be determined on the basis of a comparative method. The most numerous and best preserved were vertebra and pharyngeal bones, while scales were very rare. The remains belonged to carp, rudd, roach, pike and perch. All of them are autochthonous fish species that live in Slovenian waters up to this day. However, a tiny find (3 cm long) of the tail spike of an eagle ray indicates that sea animals were also present there. It is well known that several kinds of eagle rays live in the Adriatic Sea, but it is impossible to determine which kind the specimen found in Hočevarica belongs to, because it was only the tail spike that was discovered. What matters, though, is the fact that something was found at Hočevarica in Ljubljansko Barje that probably originated from the northern Adriatic, which removes any doubt that there were contacts, that is, trade or some kind of exchange, between that population and the inhabitants of the Adriatic region. Ethnographic parallels show that some communities living on the Indonesian islands used eagle ray spikes as arrow heads or harpoons. Why not assume that the find from Hočevarica served the same purpose? Such a conclusion derives from the analyses carried out by Jernej Pavšič and Janez Dirjec. In the explored test pit at Hočevarica, there were 515 bird bones, described by Franc Janžekovič and Vesna Malez. Bearing in mind the small surface area researched, the number of bones is very high, and they were most probably kitchen waste, that is, the remains of food of the Hočevarica inhabitants. This is further confirmed by the fact that the bones are mostly damaged and broken, and there are no complete skeletons. On the basis of the discovered material, it was possible to discern 143 birds that belong to 16 different species. Similar to the fish remains, the remains of avifauna make it possible to reconstruct the environment in which the Eneolithic population lived. The majority of the discovered bird species are those that live in water habitats and marshland. The prevailing number of bones belongs to various kinds of ducks that live on still water, some of them searching for food in deep waters and some in small or shallow bodies of water surrounded by thick marshland

cm dugačka ravna udica na koju se mogao nataknuti mamac. Takav lov na močvarne ptice pomoću udice s mamcima još je početkom 20. st. prakticiran na Bodenskom jezeru.

Keramičke je nalaze obradio Anton Velušček donijevši najprije katalog svih nalaza koji su crtežom i fotografijom ilustrirani na 12 tabli. Slijedi njihova tipologija u koju je, međutim, autor uvrstio i nalaze iz Maharskog prekopa. To opravdava činjenicom da je u istraženjima sondi na Hočevarici za tu svrhu bilo premalo nalaza, a keramika iz Maharskog prekopa na prvi je pogled bila srodna s onom iz Hočevarice. Analiza gline od koje je izrađena keramika na Maharskom prekopu pokazala je da je korištena lokalna sirovina, pronađena na Ljubljanskom barju, a rabila se čak i jezerska kreda pa je kalcit najčešća primjesa u keramici. Na podlozi keramičkih ostataka s Maharskog prekopa i Hočevarice A. Velušček je tipove posuda podijelio na duboke, plitke, viseće, minijature i na skupinu posebnih oblika. U duboke posude svrstava lonce i kupe, u plitke zdjele, dok visećim posudama smatra različite oblike posuda koje su opremljene karakterističnim ručkama. U ukrašavanju posuda primjenjivane su tehnike urezivanja, žlijebljenja, kaneliranja, metličastog i češljastog prevlačenja, glačanja, premazivanja, utiskivanja te plastično ukrašavanje. Sve su tehnike detaljno opisane i popraćene odgovarajućim primjerima.

Tipološku analizu slijedi valorizacija keramičkih nalaza. Kako bi Hočevaricu relativno-kronološki smjestio, proveo je komparativnu analizu srodnih nalaza s ostalih lokaliteta Ljubljanskog barja, kao što su Maharski prekop, Blatna Brezovica i Notranje Gorice. Što se tiče fature i primjene redukcijskog načina pečenja keramike, razlike među naseobinama gotovo da i nema. Ono što Hočevaricu izdvaja jest brazdasto urezivanje kao važna tehnika ukrašavanja. Na ostalim naseobinama takva ukrasa nema. Maharski prekop, Blatnu Brezovicu i Notranje Gorice smjestio je H. Parzinger u horizonte Ljubljansko barje III i IV, koji su paralelni s razvojem badenske kulture u srednjem Podunavlju (Parzinger 1984, 50-51). Hočevaricu, pak, A. Velušček smješta u horizont keramike s brazdastim urezivanjem u središnjoj Sloveniji i susjednim pokrajinama. Riječ je, dakako o pojavi koju je S. Dimitrijević svojedobno odredio kao Retz-Gajary kulturu. No iako je sintezni prikaz ove kulture objavio i u Praistoriji jugoslavenskih zemalja III i u uglednom Berichtu RGK, naziv Retz-Gajary kultura nije šire prihvaćen (Dimitrijević 1979; Dimitrijević 1980). Tako većina autora, poput A. Veluščeka, i dalje rabi opisni izraz keramika s brazdastim urezivanjem (tj. Furchenstichkeramik), iako taj izraz nije baš najsretniji jer na taj način ukrašenu keramiku poznaju i neke druge kulture, primjerice kostolačke i vučedolska, a koje nikako ne možemo izjednačiti sa spomenutom pojavom. No inzistiranje na opisnom nazivu pokazuje da većina prapovjesničara nije uvjerena kako je riječ o jedinstvenoj kulturnoj pojavi. Nedvojbeno je, međutim, da postoji više regionalnih skupina koje pokazuju jasan unutar-nji lokalni razvoj. Slovenskim nalazima keramike s brazdastim urezivanjima ponajviše se bavio S. Dimitrijević koji je na području Slovenije vidio prisutnost dva regionalna tipa, slično kao i u Hrvatskoj, Višnjica i Kevderc-Hrnjevac. No S. Dimitrijević je umro prije 25 godina, a otada se broj na-

vegetation. An exception to this is the field crow; its presence in the settlement indicates that Hočevarica was surrounded by open grassland and cultivated fields. In other words, the bird finds show that the inhabitant of Hočevarica was a skilled hunter in waters, both in shallow water and in deeper lakes. The tools and methods he used to hunt birds are not known. It is probable that there were some kinds of nets and traps, but there is no material evidence to confirm this. It is possible that the 3-cm straight hook, where bait could be attached, was used for this purpose. The hunting of swamp birds with hooks and bait was a regular practice on Boden Lake even at the beginning of the 20th century.

The pottery finds were analysed by Anton Velušček who first of all provides a catalogue of all finds, illustrated with drawings and photographs on 12 plates. After the catalogue, the author discusses their typology, but here he also includes finds from Maharski Prekop. He justifies such a decision by the fact that there were too few finds in the explored test pit in Hočevarica, while pottery from Maharski Prekop appeared at first sight to be similar to that from Hočevarica. The analysis of clay used for the pottery production at Maharski Prekop showed that local raw material was used, which could also be found in Ljubljansko Barje. Lacustrine chalk was also used, so that calcite is the most frequently found admixture in the clay. On the basis of the pottery remains from Maharski Prekop and Hočevarica, Velušček divided earthenware types into deep, shallow, hanging and miniature ones, and a group of special shapes. The deep vessels consist of pots and cups, the shallow vessels are bowls, while the hanging vessels are different kinds of vessels with characteristic handles. The wares were decorated with incision, grooving, channelling, brushing with brush-like or comb-like instruments, polishing, coating, impressing and plastic ornaments. All the techniques are described in detail and illustrated with corresponding examples.

After the typological analysis, the author attempts to evaluate the pottery finds. In order to attach a relative date to the Hočevarica site, he carried out a comparative analysis of similar finds from other archaeological sites in Ljubljansko Barje, such as Maharski Prekop, Blatna Brezovica and Notranje Gorice. As for the working and application of the reduction firing technique, there are almost no differences among those settlements. What sets Hočevarica apart, though, is groove-incising as an important decorating technique. In other settlements, such decorations are not found. H. Parzinger placed Maharski Prekop, Blatna Brezovica and Notranje Gorice in the horizons Ljubljansko Barje III and IV, which were parallel to the development of the Baden Culture in the central Danubian region (Parzinger 1984, 50-51). According to A. Velušček, Hočevarica should be placed in the horizon of pottery with furrowed incisions in Central Slovenia and neighbouring provinces. This phenomenon was named the Retz-Gajary Culture by S. Dimitrijević. However, although he published a summary presentation of this culture in Praistorija jugoslavenskih zemalja III and in the esteemed Bericht RGK, the name Retz-Gajary Culture has never been widely accepted (Dimitrijević 1979; Dimitrijević 1980). Therefore, most authors, including A. Velušček, still use the descriptive phrase "pottery with furrowed incising" (i.e. Furchenstichkeramik), although it is not the best solution, since the same decorating technique was used by some other cultures, for example the Kostolac and Vučedol cultures, which certainly cannot be defined only by this phenomenon. Insistence on the descriptive name indicates that most prehistorians are still not convinced that this was a unique cultural phenomenon. However,

laza, odnosno nalazišta keramike s brazdastim urezivanjem u Sloveniji bitno povećao, a time su se značajno promijenila i saznanja o spomenutoj pojavi. Nalazi potječu iz prirodno zaštićenih naselja, bilo močvarnih bilo nizinskih, iz jamskih naseobina, ali i iz grobova, štoviše čitavih grobalja. Takav raspored nalaza govori kako nije riječ o isključivo nomadskoj populaciji (kako je to pretpostavljao S. Dimitrijević), nego i o izrazito sjedilačkim zajednicama. A. Velušček naglašava kako su do sličnih spoznaja o sedentizmu došli i istraživači tella Pepelana kod Virovitice (Minichreiter 1989; Marković 1994). Nažalost, ti nalazi kao i sveukupni rezultati istraživanja, još uvijek nisu u potpunosti i primjereno objavljeni. A upravo će oni biti vrlo važni u oblikovanju nove slike Retz-Gajary kulture. Ovo je poglavlje, zapravo, temeljit prikaz i analiza cjelokupne arheološke građe vezane uz Retz-Gajary kulturu na području središnje Slovenije, od one iz starih iskopavanja do najnovijih istraživanja. Posebnu pozornost privlači činjenica da je pri reviziji materijala iz Kevderca utvrđena prisutnost keramičkih ulomaka ukrašenih brazdastim urezivanjem (a upravo je nedostatak takva načina ukrašavanja naveo S. Dimitrijevića da izdvoji zasebni Kevderc-Hrnjevac tip). Sve u svemu, trenutačno je na širem području Slovenije evidentirano 15 nalazišta: 1 sojeničko naselje, 6 visinskih i 8 jamskih. U određenju kronološkog položaja keramike s brazdastim urezivanjem A. Velušček se poziva na stratigrafske pokazatelje s Gradca pri Mirni i iz Ajdovske jame. Na oba se nalazišta s ovom pojavom završava eneolitička naseobinska sekvenca. Također, na oba lokaliteta keramika s brazdastim urezivanjem leži iznad one lasinjskog obilježja, a A. Velušček sličnu situaciju prepoznaje i u Movernoj Vasi, gdje fazu 7 poistovjećuje s Lasinjom 3 prema S. Dimitrijeviću, a za keramiku faza 8 i 9 vidi mnogo analogija upravo u horizontu keramike s brazdastim urezivanjem na nalazištima središnje Slovenije. To, dakako, dovodi u pitanje relativnokronološki odnos lasinjske i retz-gajarske kulture, kako ga je definirao S. Dimitrijević. On je, naime, Višnjica tip Retz-Gajary kulture sinkronizirao s ranoklasičnom lasinjskom kulturom tj. Ila stupnjem, a Kevderc-Hrnjevac s kasnoklasičnom, odnosno Lasinjom III. (Dimitrijević 1979, 361-364). Z. Marković, pak, na temelju stratigrafije Pepelane predmnijeva korelaciju kasna lasinjska kultura (tj. Lasinja III prema Dimitrijeviću) – početak Retz-Gajary kulture (Marković 1994, 100), dok A. Velušček misli da situacija iz Drljanovca ne podupire ni takvu korelaciju nego da se ondje kasna lasinjska kultura jasno iskazuje starijom od Retz-Gajary kulture. Ipak, zaključci koji se temelje na stratigrafiji lokaliteta Gradec pri Mirni, Ajdovska jama, Pepelana, Oberburgstall, Schlossberg i Kögelberg, govore s jedne strane o vremenskom prioritetu lasinjske kulture, ali s druge strane i o mogućoj djelomičnoj istodobnosti obje kulture. Lokaliteti, pak, poput Hočevarice i Drljanovca, prema A. Veluščeku svjedoče da lasinjska i retz-gajarska kultura nisu istodobne. No valja ponovno naglasiti, na posljednja dva lokaliteta nema vertikalne stratigrafije koja bi to jasno dokazivala. U rješavanju spomenutog problema opet valja istaknuti nužnost potpune i detaljne objave nalaza iz Pepelane, ali i novih, osobito u tom pravcu ciljanih istraživanja spomenutog lokaliteta. U razmatranju teritorijal-

there were undoubtedly several regional groups showing clear internal local development. The Slovenian pottery finds with furrowed incisions were analysed most extensively by S. Dimitrijević who discerned two regional types in the territory of Slovenia (similar to the situation in Croatia): the Višnjica and Kevderc-Hrnjevac types. But S. Dimitrijević died 25 years ago, and in the meantime the number of finds and sites with pottery showing furrowed incising discovered in Slovenia has increased significantly, modifying our understanding of this phenomenon. The finds originate from naturally protected settlements, situated either in marshland or low land, from cave dwellings, but also from graves and even entire cemeteries. Such a distribution of finds suggests that these were not just nomadic populations (as assumed by S. Dimitrijević), but rather distinctively sedentary communities. A. Velušček underlines that a similar conclusion regarding the sedentary lifestyle was reached by the researcher of Pepelana Tell near Virovitica (Minichreiter 1989; Marković 1994). Unfortunately, the finds and the overall results of that research have still not been published in their entirety in an appropriate manner. Those finds in particular will be very significant for a new perception of the Retz-Gajary Culture. This chapter provides a thorough presentation and analysis of the entire archaeological material related to the Retz-Gajary Culture from the territory of Central Slovenia, originating from some older excavations to the most recent ones. Particular attention is drawn to the fact that during the review of material from Kevderc, pottery fragments were discovered that are decorated with furrowed incising (and the lack of such decorating technique was precisely what allowed S. Dimitrijević to isolate a separate Kevderc-Hrnjevac type). Generally speaking, according to the current state of research, in the wider area of Slovenia there are 15 sites: 1 pile-dwelling settlement, 6 high-altitude settlements and 8 cave settlements. When determining the chronological date for the pottery with furrowed incising, A. Velušček quotes the stratigraphic indicators from Gradec pri Mirni and from the Ajdovska Jama cave. In both sites, this type of pottery marks the end of the Eneolithic settlement sequence. Equally, in both sites the pottery with furrowed incising lay on top of the pottery with Lasinja features, and A. Velušček recognises a similar situation in Moverna Vas, where he identifies phase 7 with Lasinja 3 according to S. Dimitrijević, and finds numerous analogies for the pottery of phases 8 and 9 in the horizon of the pottery with furrowed incising in the Central Slovenian sites. Obviously, this raises the issue of relative chronological relations between the Lasinja Culture and the Retz-Gajary Culture, as defined by S. Dimitrijević. Namely, he put the Višnjica type of the Retz-Gajary Culture at the same time as the Early Classical Lasinja Culture, i.e. its Ila phase, and did the same with the Kevderc-Hrnjevac Culture and the Late Classical Lasinja, that is, Lasinja III (Dimitrijević 1979, 361-364). However, Z. Marković, on the basis of the Pepelana stratigraphy, believes that there is a correlation between the Late Lasinja Culture (i.e. Lasinja III according to Dimitrijević) and the beginning of the Retz-Gajary Culture (Marković 1994, 100), while A. Velušček thinks that the Drljanovci situation does not support such a correlation, but rather suggests that, there, the Late Lasinja Culture is clearly older than the Retz-Gajary Culture. Still, conclusions founded on the stratigraphy of the sites Gradec pri Mirni, Ajdovska Jama, Pepelana, Oberburgstall, Schlossberg and Kögelberg suggest on one hand that the Lasinja Culture preceded the other, but on the other hand that it is also possible that the two cultures were partially contemporaneous. However, A. Velušček considers that the Hočevarica

nog širenja Retz-Gajary kulture prema jugu, A. Velušček se dotiče i keramičke bočice iz Vrlovke, koju Z. Marković pripisuje Retz-Gajary, a ne lasinjskoj kulturi (Marković 1986, 22) te Kiringrada koji L. Čučković također pripisuje Retz-Gajary kulturi (Čučković 1986, 9). Međutim, i jedan i drugi primjer su kao takvi tek uzgredno navedeni i zaslužuju temeljitije razmatranje. Što se tiče bočice iz Vrlovke, smatram da je ipak lasinjska – naime, takav karakterističan oblik susreće se isključivo u lasinjskom kontekstu (Homen 1985), a i ukras na koji se Z. Marković poziva nije nepoznat lasinjskom stilu. Kiringradski, pak, materijal zahtijeva ozbiljnu revalorizaciju kako bi se konačno odgovorilo na pitanje što je ondje halštatsko, lasinjsko ili retzgajarsko.

Nakon podrobne obrade svih vrsta nalaza slijedi poglavlje o apsolutnom datiranju autora Katarine Čufar i Antona Veluščeka. Uvod je posvećen općenito dendrokronologiji i dendrokronološkim istraživanjima u Sloveniji (koja se ondje provode tek desetak godina, ali kao što se vidi iz ove monografije, već donose određene rezultate), s posebnim težištem na Ljubljanskom barju da bi se na kraju autori zaustavili na konkretnim rezultatima dobivenim na Hočevarici. Ukazano nam je na raznovrsne poteškoće koje prate istraživače u radu, prije svega nepostojanje referentnih kronologija, odnosno referentnih krivulja za prapovijesno razdoblje, iz čega proizlazi sve veći broj nedatiranih plivajućih kronologija. No zato se istraživači služe telekonekcijom, odnosno sinkronizacijom kronologija na velike udaljenosti kao i heterokonekcijom, tj. sinkronizacijom i datiranjem kronologija različitih vrsta drveta. Primjer telekonekcije predstavljen je u poglavlju «Telekonekcija kronologija iz naseobina Hočevarica i Palù di Livenza u Italiji», nastalom u suradnji Katarine Čufar i Nicolette Martinelli. Posebna je pozornost posvećena i radiokarbonskom datiranju drveta s Hočevarice jer, kao što je već rečeno, za njihovo apsolutno dendrokronološko datiranje još nema odgovarajućih referentnih kronologija. Radiokarbonske analize iznijete u tom poglavlju obavljene su u Heidelbergu. U zaključnoj interpretaciji rezultata apsolutnog datiranja Hočevarice i horizonta keramike s brazdastim urezivanjem u Sloveniji stoji da se početak građevinskih djelatnosti na Hočevarici može odrediti u prvu četvrtinu 36. st. pr. Kr. Sredinom toga stoljeća događaju se neke promjene na Ljubljanskom barju koje se zasada ipak najbolje očitavaju u keramičkoj ostavštini. Posude ukrašeno brazdastim urezivanjem, odnosno bogato urezanim uzorcima, kakvo je pokazala Hočevarica, nestaje.

Posljednje poglavlje monografije govori o početku uporabe bakra u Sloveniji (Anton Velušček), jer su prethodne analize jasno pokazale kako se upravo u vrijeme horizonta keramike s brazdastim urezivanjem pojavljuju nalazi koji nedvojbeno svjedoče o iskorištavanju lokalnih izvora rude i razvitku metalurgije bakra. Ovomu je poglavlju dodan i katalog novootkrivenih bakrenih predmeta i predmeta koji su povezani s metalurgijom bakra (uglavnom slučajnih i naseobinskih nalaza) koji zajedno s prije objavljenim istovrsnim katalogom (Velušček, Greif 1998) čini važan korpus bakrenih nalaza u Sloveniji.

Monografija Hočevarica zoran je pokazatelj kako se primjenom jasno zacrtanih i ciljanih interdisciplinarnih istraživanja

and Drljanovci sites show that the Lasinja and Retz-Gajary cultures were not contemporaneous. It should be underlined once again that in those last two sites there was no vertical stratigraphy to clearly prove this. In order to resolve this problem, we must repeatedly stress the need to publish not only the comprehensive and detailed results of the excavations at Pepelana, but also the more recent, targeted research of that site. When discussing the territorial distribution of the Retz-Gajary Culture in the south, A. Velušček also mentions the ceramic bottle from Vrlovka, identified by Z. Marković as an item belonging to the Retz-Gajary, rather than Lasinja, Culture (Marković 1986, 22). Velušček also refers to Kiringrad, which, according to L. Čučković, also belonged to the Retz-Gajary Culture (Čučković 1986, 9). However, both examples are just briefly mentioned and deserve more thorough consideration. As for the Vrlovka bottle, I still believe that it belongs to the Lasinja Culture – this characteristic shape can be found exclusively in the Lasinja context (Homen 1985), and the decoration cited by Z. Marković is not unknown among the Lasinja-style ornaments. On the other hand, the material from Kiringrad requires serious re-evaluation, so that it can finally be determined which elements belong to the Halstatt, Lasinja or Retz-Gajary cultures.

Following the detailed analysis of all types of finds, in the next chapter absolute dating is discussed by Katarina Čufar and Anton Velušček. The introductory part is dedicated to dendrochronology in general and to dendrochronological research in Slovenia (which has been carried out there only in the past ten years, but – as this monograph shows – has already yielded certain results), with particular emphasis on Ljubljansko Barje and some specific results from Hočevarica. The authors explain various difficulties that the researchers are faced with in their work, most importantly the lack of reference chronologies, that is, reference curves for the period of prehistory. This has resulted in an ever-increasing number of non-dated floating chronologies. For this reason, teleconnecting is used, that is, the synchronisation of chronologies over long distances, as well as heteroconnecting, i.e. the synchronisation and dating of chronologies of different types of trees. An example of teleconnecting is given in the chapter “Teleconnecting Chronologies from the Settlements of Hočevarica and Palù di Livenza in Italy”, written jointly by Katarina Čufar and Nicoletta Martinelli. Particular attention was also paid to the radiocarbon dating of wood from Hočevarica, because, as mentioned before, there are no corresponding reference chronologies for its absolute dendrochronological dating. The radiocarbon analyses presented in this chapter were carried out in Heidelberg. In the concluding interpretation of the absolute dating results of the Hočevarica site and the horizon of pottery with furrowed incising in Slovenia, it is said that the beginning of construction activities at Hočevarica can be dated in the first quarter of the 36th century BC. In the middle of that century, certain changes occurred in Ljubljansko Barje that are at this moment best reflected in the pottery remains. Subsequently, the pottery decorated by furrowed incising and other richly incised patterns, characteristic of Hočevarica, disappeared.

The last chapter in the monograph presents the beginnings of copper use in Slovenia (Anton Velušček), because previous analyses clearly indicated that at the time of the horizon of the pottery with furrowed incising there were also finds that testify to the use of local sources of ore and the development of copper metallurgy. This chapter also contains a catalogue of newly discovered copper items and items connected to copper production (mostly accidental

i iz male sonde može dobiti golema količina najraznovrsnijih podataka te iz njih rekonstruirati slika života u jednom prapovijesnom naselju. No odmah možemo postaviti pitanje, što su učinili i autori poglavlja o makrofauni – koliko su dobiveni rezultati relevantni za naselje u cjelini? Činjenica je da je istražen tek vrlo mali segment naseobine, za koju nije moguće utvrditi niti kolika je uistinu bila, kakva je bila njezina unutarnja struktura, koliko je bilo stambenih objekata ili onih neke druge namjene itd. No spomenutih je nedostataka svjestan i sam autor. Potpunu sliku, dakako, možemo dobiti tek kombinacijom ovakve vrste interdisciplinarnih istraživanja i sustavnih istraživanja na velikoj površini. A kao što je rečeno na početku – povijest istraživanja Ljubljanskog barja je dugotrajna i nema razloga da ne traje i dalje, uvijek usmjerena prema novim ciljevima i otvorena novim metodama i interpretacijama.

Dvije godine nakon Hočevarice A. Velušček je u istoj ediciji i prema istom obrascu, ponovno s ekipom različito stručno profiliranih suradnika obradio i objavio još jedan barjanski lokalitet – Resnikov prekop, koji je za razliku od Hočevarice već i prije bio istraživani i publiciran. Učinio je to u spomen na 130. obljetnicu otkrića sojenica na Ljubljanskom barju. A upravo je naseobina na Resnikovu prekopu najstarija u kronološkom pogledu. Knjiga, objavljena 2006. godine, zapravo je zbir radova proizašlih iz interdisciplinarnih rezultata sondažnih istraživanja koja je A. Velušček sa suradnicima proveo 2002. god. Sam lokalitet otkriven je 1953. god. pri prokopavanju novoga kanala, tzv. Resnikova prekopa, što je navelo najprije S. Jessea (1953; 1955), a potom i J. Korošca (1962) i T. Bregant (1963) da provedu sondažna, pa i sustavna istraživanja lokaliteta. Veluščekova istraživanja 2002. provedena su po istoj metodologiji kojom je istraživana sojenička naseobina na Hočevarici. Iskopavanje je obavljano s čelično-drvene platforme, sav sediment je ispiran i prikupljeni su uzorci za sedimentološke analize, palinološke, dendrokronološke, radiokarbonske, faunističke itd. Arheološki nalazi pojavljuju se na Resnikovu prekopu u aluvijalnom sloju koji leži na sloju jezerske krede. Prevladavaju prapovijesni nalazi iz sojeničkog naselja, ali ima i nešto rimskodobnih što ih treba vezati uz vicinalnu cestu koja je tu prolazila.

Ne umanjujući vrijednost ni značenje ostalih priloga, na ovome bih se mjestu osvrnula samo na poglavlje «Resnikov prekop – sondiranje, arheološke najdbe, kulturna opredelitev in časovna uvrstitev», jer nalazi s ovoga lokaliteta imaju mnogo srodnosti s kasnoneolitičkim nalazištima u sjeverozapadnoj Hrvatskoj – o tome uostalom govori i sam autor. Odmah na početku ističe kako se na Resnikovu prekopu dotiče problematike o najranijim keramičkim kulturama na širem jugoistočnoalpskom području, o čemu su stavovi u literaturi još uvijek prilično nejasni, i često suprotstavljeni. Za argumentiranu interpretaciju nužno je podatke prikupiti pomoću više neovisnih metoda, dakle i proučavanjem stratigrafije, tipološkom analizom keramičkih nalaza te apsolutnim datiranjem. Dakle, držeći se tih postulata A. Velušček je obradio keramičke nalaze s Resnikova prekopa, uspoređujući ih sa sličnim nalazima s lokaliteta Zamedvedica kod Plešivice na Ljubljanskom barju, Dragomelj, Drulovka,

finds and finds from settlements), which, together with a previously published catalogue of the same kind (Velušček, Greif 1998), constitutes an important corpus of copper finds in Slovenia.

The Hočevarica monograph is a vivid example of how the application of clearly defined and targeted interdisciplinary research may yield – even from a small test pit – a huge amount of the most diverse information, and how this can be used to reconstruct a picture of life in a prehistoric settlement. However, we can immediately ask the same question that was raised by the authors of the chapter on macrofauna: how relevant are these results for the entire settlement? The fact remains that thus far just a small portion of the settlement has been explored and it is still unclear how big the settlement was, how many dwellings or facilities for other purposes there were, etc. The author is fully aware of these shortcomings. The full picture can be achieved only through a combination of such interdisciplinary research and systematic excavations over a large surface area. But, as was stated at the very beginning, the history of research of Ljubljansko Barje is a long one, and there is no reason why it should not continue, constantly aiming at new targets, and always open to new methods and interpretations.

Two years after Hočevarica, A. Velušček published yet another Barje site, in the same edition and same format, once again with a team of experts of different profiles. This was Resnikov Prekop, which, unlike Hočevarica, had been researched and published previously. This publication marked the 130th anniversary of the discovery of pile-dwellings in Ljubljansko Barje. The settlement at Resnikov Prekop is chronologically the oldest. Published in 2006, the book consists of a series of works presenting the results of interdisciplinary exploration of test pits carried out by A. Velušček and his associates in 2002. The site was discovered in 1953, when a new canal – the so-called Resnikov Prekop – was dug. This prompted first S. Jesse (1953; 1955), and then J. Korošec (1962) and T. Bregant (1963) to excavate first some test pits, and later to systematically explore the site. Velušček's excavation of 2002 was carried out with the same methodology used in researching the pile-dwelling settlement at Hočevarica. The digging was done from a steel-and-wood platform, the entire sediment was rinsed and samples were taken for sedimentological, palinological, dendrochronological, radiocarbon, faunistic and other analyses. At Resnikov Prekop, archaeological finds appear in the alluvial stratum, which lies on a layer of lacustrine chalk. The prevailing number of finds belongs to the pile-dwelling settlement, but there are also some finds from the Roman period, which can be explained by the fact that a vicinal road passed through here.

Without any intention to diminish the value and importance of other contributions, at this point I would like to say a few words only about the chapter “Resnikov prekop – sondiranje, arheološke najdbe, kulturna opredelitev in časovna uvrstitev”, because finds from this site have much in common with the Late Neolithic sites in north-western Croatia – as mentioned by the author himself. At the very beginning of the chapter, he points out that at Resnikov Prekop the issue is raised of the earliest pottery cultures in a wider south-eastern Alpine region, and the opinions concerning this problem presented in literature are still rather unclear, and are often contradictory. For a valid interpretation, it would be necessary to collect data by several independent methods, including stratigraphy analysis, typological analysis of pottery finds, and absolute dating. Starting from these postulates, A. Velušček analysed the pottery finds from Resnikov Prekop, comparing them with similar

Gradišče pri Stiški vasi, Gradec pri Mirni, Ajdovska jama, Sredno polje pri Čatežu i Moverna vas te Sevnica. U Hrvatskoj su mu relevantni lokaliteti Pepelana, Seče, Slavča, a najviše sličnosti vidi sa Seče kulturom, kako ju definira Z. Marković. Uočava tipološku, ali ne i kronološku sličnost s brezovljanskim tipom sopotske kulture. Sasvim ispravno jer brezovljanski tip sopotske kulture ima predlengyeljski karakter (i kronološki i tipološki), dakle, prethodi klasičnim lengyeljskim kulturama. Resnikov pak prekop nedvojbeno pripada kasnom lengyeljskom horizontu, odnosno onom horizontu koji prethodi lasinjskoj kulturi (kakogod ga pojedini autori imenovali.). Do takva zaključka dolazi i A. Velušček nakon iscrpne analize raspoloživih radiokarbonskih datauma s različitih lokaliteta Slovenije, Hrvatske, Austrije i Mađarske. Na kraju, A. Velušček zaključuje kako je naseobina na Resnikovu prekopu osnovana negdje tijekom 46. st. pr. Kr., da je bila kratkotrajna (o čemu govori i mali broj drvenih stupova sojenica, za razliku od nekih drugih naseobina na Ljubljanskom barju) i da je samo jedna u nizu naseobina središnje Slovenije u kojima se pojavljuju vrlo slični keramički nalazi. U posljednje vrijeme M. Guštin je spomenute naseobine definirao kao srednjeneolitičku savsku skupinu (Guštin 2003, 247) – A. Velušček s pravom postavlja pitanje odakle kulturno-kronološka atribucija u srednji neolitik i na koju se to postojeću kronološku shemu odnosi? Bez obzira kako će u budućnosti ta skupina biti nazvana, savska ili nekako drukčije, ona je kasnoneolitička pojava nastala pod utjecajima kasne sopotske i/ili njezinih regionalnih inačica te lengyeljske kulture, a ishodište je kasnijoj lasinjskoj kulturi.

Keramički su nalazi iscrpno prikazani na 19 tabli crteža, no autor je prenio i nešto materijala s drugih slovenskih, pa i hrvatskih nalazišta, koja bi bila suvremena s naseobinom na Resnikovu prekopu i koja pokazuju slična obilježja.

Ovdje prikazane dvije monografije vrlo su važne i za prapovijesnu arheologiju u Hrvatskoj jer govore o nalazištima koja imaju mnogo dodirnih točaka s kasnoneolitičkim i eneolitičkim nalazištima, prije svega u sjeverozapadnoj Hrvatskoj i pokreću mnoga pitanja vezana upravo uz poznavanje spomenutih hrvatskih lokaliteta. Navode nas da shvatimo koliko je potrebno obraditi i objaviti ključne lokalitete poput, primjerice Pepelane, ali i preispitati neke, već desetljećima ukorijenjene spoznaje o određenim kulturnim pojavama, prije svega o sopotskoj kulturi i općenito prijelazu kasnog neolitika u rani eneolitik (pitanje Sopota IV, Seče kulture, kasne lengyeljske kulture itd.) kao i o Retz-Gajary kulturi.

finds from the sites of Zamedvedica near Plešivica in Ljubljansko Barje, Dragomelj, Drulovka, Gradišče pri Stiški Vasi, Gradec pri Mirni, Ajdovska Jama, Sredno Polje pri Čatežu and Moverna Vas and Sevnica. As for Croatian sites, he believes that the relevant ones are Pepelana, Seče and Slavča, and sees most parallels with the Seče Culture, as defined by Z. Marković. He also notes that there is a typological, although not a chronological, similarity with the Brezovljani type of the Sopot Culture. Indeed, he is quite right to make this remark, since the Brezovljani type of the Sopot Culture is pre-Lengyel in its character (both chronological and typological), in other words, it precedes the Classical Lengyel cultures. On the other hand, Resnikov Prekop undoubtedly belongs to the Late Lengyel horizon, that is, to the horizon preceding the Lasinja Culture (regardless of the name used to describe it by different authors). The same conclusion is reached by A. Velušček after a thorough analysis of available radiocarbon dates from different sites in Slovenia, Croatia, Austria and Hungary. Finally, A. Velušček concludes that the settlement at Resnikov Prekop was established in the 46th century BC and that it did not last long (further proven by a small number of wooden piles for pile-dwellings, unlike in some other settlements in Ljubljansko Barje) and that it was just one of a series of settlements in Central Slovenia in which very similar pottery finds have been discovered. Recently, M. Guštin defined these settlements as the Middle Neolithic Sava Group (Guštin 2003, 247). However, A. Velušček rightly asks what the reason is for this cultural and chronological attribution to the Middle Neolithic and wonders what available chronological scheme was used as a reference for this. Regardless of what name will be used to indicate this group in the future, be it the Sava group or something else, this Late Neolithic phenomenon was created under the influence of the late Sopot Culture and/or its regional versions, and the Lengyel Culture, and it developed into the later Lasinja Culture.

The pottery finds are comprehensively presented in 19 plates, but the author here included some material from other Slovenian, and also Croatian, sites that he believes were contemporaneous to the settlement at Resnikov Prekop and that show similar features.

The two reviewed monographs are also very significant for the prehistoric archaeology of Croatia, since they describe the sites that have many links to the Late Neolithic and Eneolithic sites primarily in north-western Croatia, and raise many questions concerning our knowledge of these Croatian sites. The monographs make us realise how pertinent it is to research thoroughly some key sites, such as, for example, Pepelana, but also to question certain notions that have been accepted for decades, concerning certain cultural phenomena, especially the Sopot Culture and the transition from Late Neolithic to Early Eneolithic (the issue of Sopot IV, the Seče Culture, the late Lengyel Culture) as well as the Retz-Gajary Culture.

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