

Novi ranosrednjovjekovni nalazi iz šljunčare Jegeniš kraj Koprivnice

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NOVI RANOSREDNJOVJEKOVNI NALAZI IZ ŠLJUNČARE JEGENIŠ POKRAJ KOPRIVNICE

NEW EARLY MEDIEVAL FINDS FROM THE JEGENIŠ GRAVEL PIT NEAR KOPRIVNICA

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Tijekom višegodišnje eksploatacije šljunka na koprivničkoj šljunčari Jegeniš na svjetlo dana dospjeli su brojni željezni i drugi arheološki predmeti. Ovom prigodom prezentiraju se dijelovi konjaničke opreme iz Zbirke Zvijerac. Izdvojeni predmeti, od kojih valja istaknuti konjske žvale i više tipova željeznih stremena različitih dimenzija, pripadaju ranome srednjem vijeku. Predmeti se uspoređuju s najbližim analognim nalazima, a zajedno s ranije objavljenim značajnim arheološkim predmetima iz iste šljunčare upućuju na zamjetan intenzitet zaposjedanja ovog prostora uz rijeku Dravu tijekom više stoljeća ranoga srednjeg vijeka.

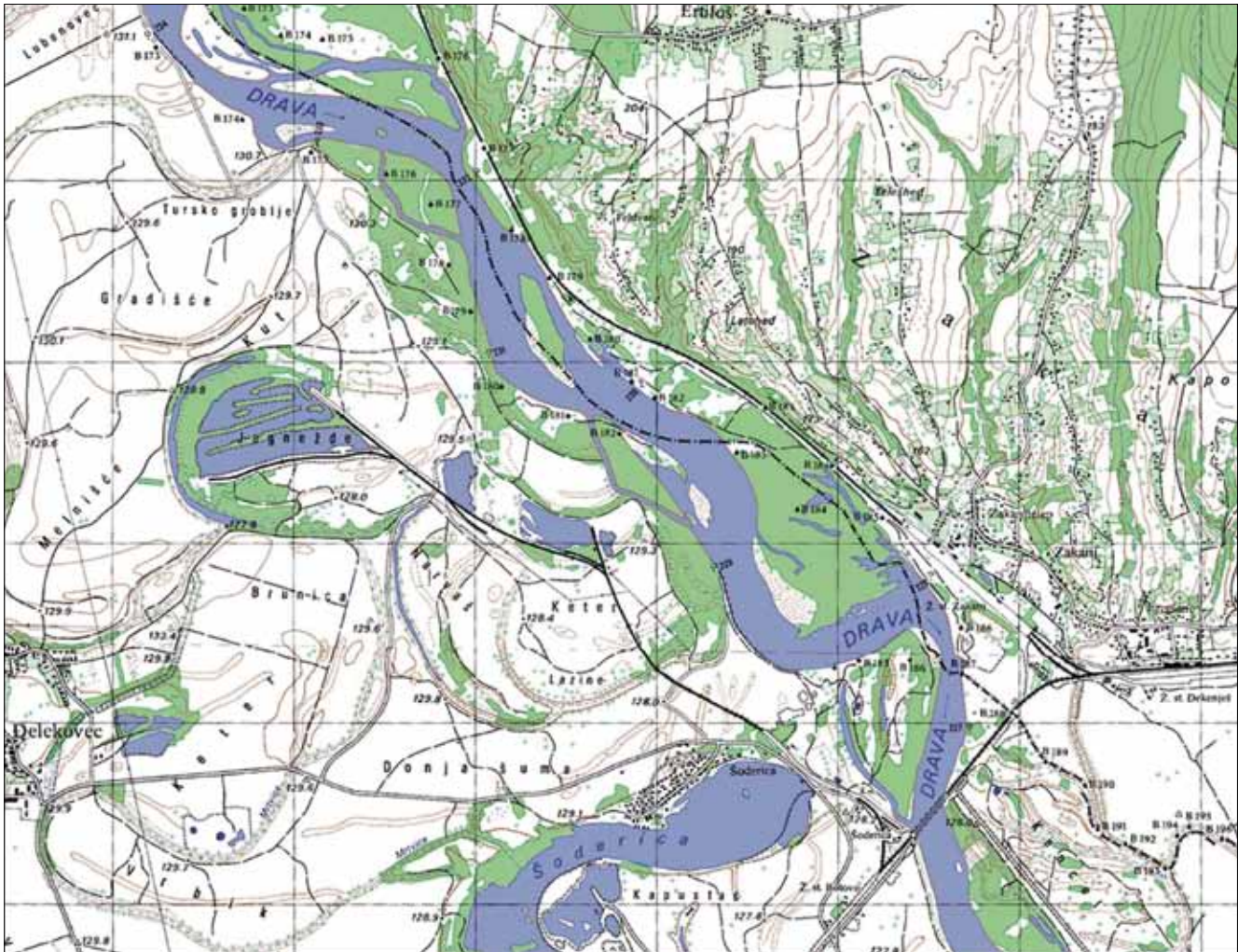
In the course of many years of dredging gravel at the Koprivnica gravel pit of Jegeniš, numerous iron and other archaeological objects have come to light. Elements of equestrian equipment from the Zvijerac Collection are presented here. The selected objects, including horse bits and several types of iron stirrups of various dimensions, belong to the early medieval period. The objects are compared to the closest analogous finds and, together with previously published significant archaeological finds from the same gravel pit, indicate a considerable intensity of occupation of this area along the River Drava during several centuries of the early Middle Ages.

Ključne riječi:
slučajni nalazi, oprema konja, žvale, stremen, rani srednji vijek

Key words:
chance finds, horse equipment, bits, stirrups, early medieval period

Sjeveroistočno od Koprivnice, u Koprivničko-križevačkoj županiji, smještena je šljunčara Jagnje(ž)de, Jagneđe ili, kako je mještani najčešće nazivaju, Jegeniš (sl. 1.), iz koje je tijekom višegodišnje eksploatacije na svjetlo dana dospjelo mnoštvo pojedinačnih arheoloških predmeta. Riječ je uglavnom o željeznim predmetima za svakodnevnu upotrebu, poput noževa, sjekira, klinova, te o mnoštvu drugih predmeta koji potječu iz različitih arheoloških razdoblja. Neki od tih predmeta dospjeli su u Muzej grada Koprivnice, gdje su trajno pohranjeni u muzejskoj zbirci, a većina ih se nalazi u Zbirci Zvijerac u Torčecu. Već prije nekoliko godina u fokusu stručnog i znanstvenog interesa našlo se željezno

To the northeast of Koprivnica, in Koprivnica-Križevci County, lies the gravel pit of Jagnje(ž)de, Jagneđe, or, as the locals most often call it, Jegeniš (Fig. 1), where numerous individual archaeological artefacts have come to light over the course of many years of gravel extraction. These consist primarily of iron objects for everyday use, such as knives, axes, chisels, and numerous other objects from various archaeological periods. Some of these artefacts are stored in the collections of the Municipal Museum of Koprivnica, while most are in the Zvijerac Collection in Torčec. Several years ago, a winged iron spearhead from this collection became the focus of professional and scientific inter-



SLIKA 1. Karta položaja šljunčare Jegeniš/Jagnje(ž)de, smještene jugozapadno od rijeke Drave u koprivničkoj Podravini (Hrvatska geodetska uprava, karte „Hlebine“ i „Ušće Mure“, mjerilo 1:25,000).

FIGURE 1. Map of the position of the Jegeniš/Jagnje(ž)de gravel pit located southwest of the River Drava in the Koprivnica region of the Drava basin (Croatian Geodetic Administration, the “Hlebine” and “Ušće Mure” maps, 1:25,000).

koplje s krilcima¹ iz spomenute zbirke te potom još jedno slično ranosrednjovjekovno koplje,² oba izdvojena i zasebno objavljena. Kako su uz prvo koplje, na približno istom položaju u sjeveroistočnom dijelu šljunčare Jegeniš, pronađeni ostaci životinjskih kostiju (dijelovi dviju donjih čeljusti konja) te fragmentirani dijelovi ljudskih lubanja (starac, žena i dijete), zaključeno je da se ovdje radi o uništenom groblju iz vremena s kraja 8. i početka 9. stoljeća.³

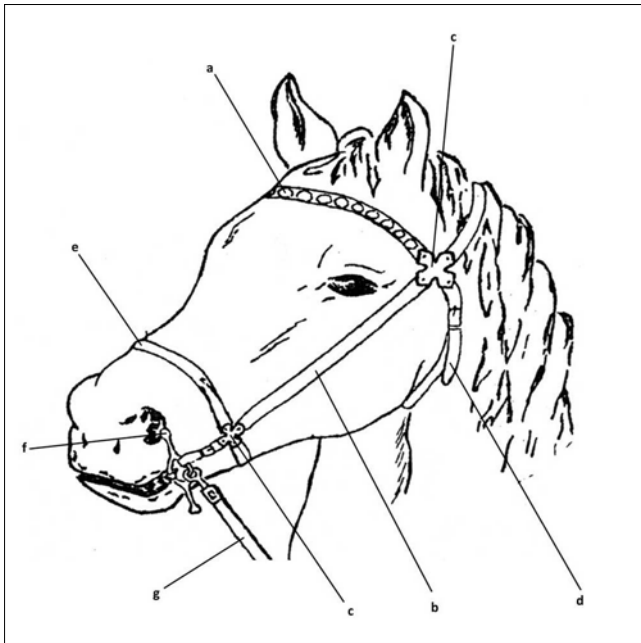
Od vremena pronalaska i objave koplja s krilcima, iz iste šljunčare, ali oko tristotinjak metara zapadnije od položaja na kojem su oba pronađena, potječu novopronađeni arheološki predmeti, danas također pohranjeni kod Ivana Zvijerca, nekadašnjeg zaposlenika šljunčare. Riječ je o dijelovima opreme konja – jednim željeznim žvalama i paru kovanih željeznih stremena pronađenih

est,¹ followed by yet another similar early medieval spearhead,² both published individually and separately. As remains of animal bones (parts of two lower jaw bones of horses) and fragmentary sections of human skulls (an elderly man, a woman and a child) were found by the first spearhead, at approximately the same position in the northeastern part of the Jegeniš gravel pit, it was concluded that this represented a destroyed cemetery from the period at the end of the 8th century and beginning of the 9th.³

Other archaeological artefacts have been discovered since the time of the discovery and publication of the winged spearheads, found in the same gravel pit or around three hundred metres farther west than the position where both spears were found. These objects, elements of horse equipment, have also been kept in his collection by Ivan Zvijerac, a former employee at the gravel

1 Sekelj Ivančan 2004.
2 Sekelj Ivančan 2007.
3 Sekelj Ivančan 2004, 119–122.

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SLIKA 2. Dijelovi oglavine konja: a: čeonni remen, b: remen lica, c: razdjelnici za remen, d: vratni remen, e: nosni remen, f: žvale, g: povodac (Karo 2003, 9; prema Měchurová 1984, 279, T. VII: 1).

FIGURE 2. Parts of the belt on the horse's head: a) browband, b) cheekpiece, c) strap dividers or spacers, d) throatlash, e) noseband, f) bit, g) rein (Karo 2003, 9; after Měchurová 1984, 279, T. VII: 1).

približno na istome mjestu i u isto vrijeme, o jednom stremenu koje je na svjetlo dana dospjelo nekoliko tjedna kasnije te o stremenu koje se već duže vremena nalazi u spomenutoj zbirci. S obzirom na okolnosti pronalaska, s oprezom možemo pretpostaviti da se u slučaju žvala i para stremena radi o dijelovima opreme konja koja je mogla pripadati istoj životinjskoj jedinki. Do nas su, dakako, dospjeli samo željezni očuvani dijelovi opreme.

Žvale su metalni, obično dobro očuvani dijelovi ulara, ili oglavine konja, i smještene su u usnoj šupljini. Jahaća oglavina,⁴ kojom se zauzdava konj kako bi se njime lakše ovladavalo, sastoji se od većeg broja međusobno isprepletenog kožnog remenja koje prekriva glavu konja (sl. 2). To su prednji ili čeonni remen, na koji se s donje strane vrata vezuje vratni remen, te remen koji prelazi preko prednjeg dijela glave, tzv. nosni remen. Čeono/vratni i nosno remenje spojeno je tzv. obraznim remenom, na njih okomito položenim, koji se proteže preko lica konja i jednim dijelom veže na žvale – metalni dio oglavine koji se stavlja u usta konja. Na njima je sa svake strane kroz kariku žvale provučeno uzde ili povodac/vođica. Spojevi, odnosno prepleti remenja, često su oja-

pit. The objects consist of one iron bit and a pair of forged iron stirrups found at approximately the same place and at the same time, one stirrup that came to light several weeks later, and a stirrup that had been in the collection for a long time. Given the circumstances of the discovery, it can be assumed (with caution) that, in the case of the bit and pair of stirrups, these were elements of horse equipment that might belong to the same animal. Naturally, only the iron parts of the equipment were preserved.

Bits are metal rings and rods placed in a horse's mouth to control it more easily, and are usually the best-preserved parts of a horse's halter or bridle,⁴ composed of a large number of intertwined and connected leather straps that fit on the head of a horse (Fig. 2). These consist of the headpiece and browband, attached on the lower side of the neck to the throatlash, and the strap that covers the lower part of the head, the noseband. The headpiece and browband are connected to the noseband by the cheekpieces, placed perpendicularly to them, which extend along the sides of the head of the horse and are connected in one part to the bit – the metal part of the bridle that is placed in the mouth of the horse. The reins are drawn through the snaffle rings of the bit on each side. The junctures or intertwining of the straps are often reinforced and separated by various fittings, spacers or decorative platelets (phalerae) made of various metals. The parts of the headstall for a horse, the straps and their intertwining, are in fact reconstructed on the basis of the preserved metal finds,⁵ while the sections made of organic materials decay and are unknown in archaeological contexts.

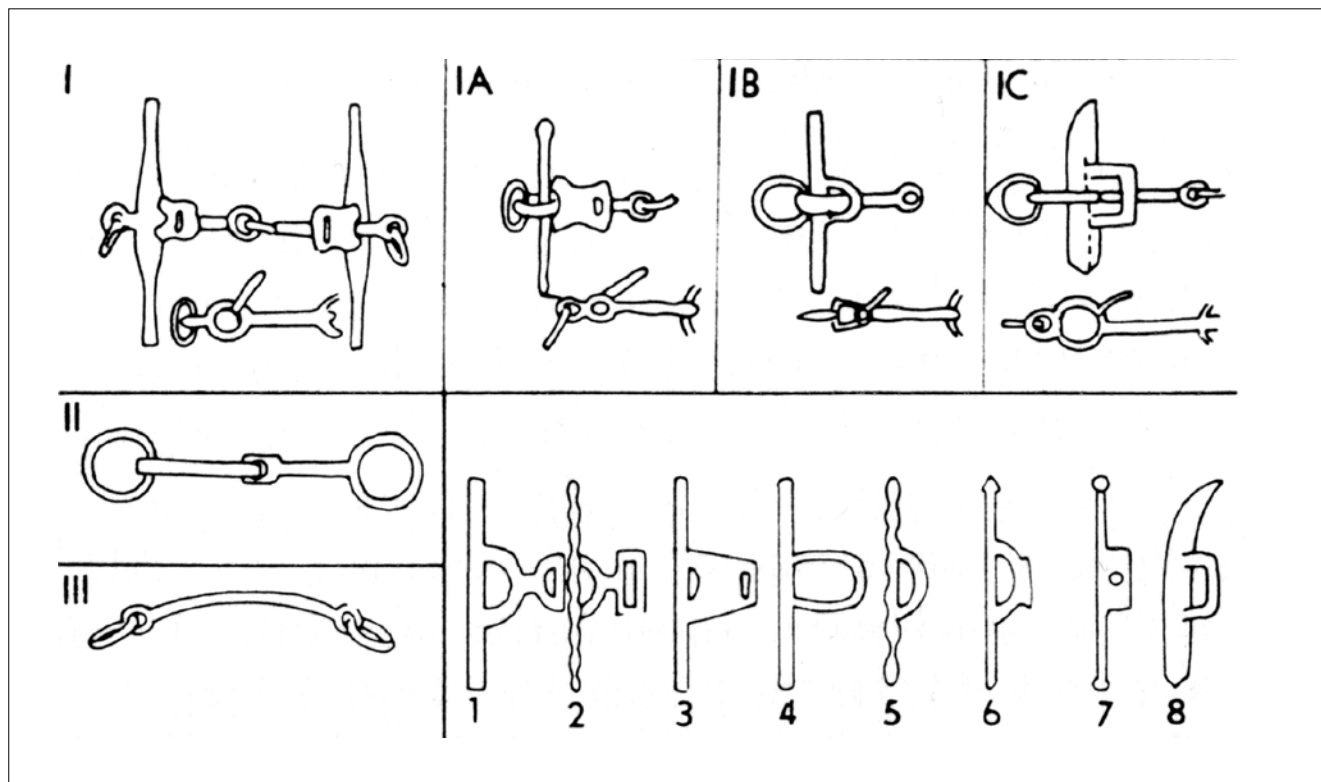
Bits, as a component of an item serving to direct a horse, were in use from the prehistoric periods onwards, specifically from the Bronze Age to the present day. Many types are known throughout their development, while simple bits and lever (curb) bits were in use in the Middle Ages. Curb bits had been developed in the Roman period; they were no longer in use in the early medieval period, but again appeared from the 11th century onwards. Simple bits can, depending on the number of parts from which they were made, be one-part (Fig. 3: III; Fig. 5: III), two-part with rings (Fig. 5: II), or two-part with rods (Fig. 3: I; Fig. 5: I), and three-part. One-part bits were in use among the nomad tribes of the central Asian, Caspian and southern Russian steppes (type III according to Ruttkay), while three-part bits were characteristic of the region of Scandinavia, Finland, the eastern Baltic and northern Russia (type V according to Kirpičnikov). Simple single-part and three-part bits were rarely in use during the early medieval period, while both variants of the simple two-part bit, those with rings as well as those with rods (Fig. 3), predominate in the early medieval period (types I and II according to Ruttkay, types I–IV according to Kirpičnikov).⁶

4 U potrazi za stručnim terminom za ovaj dio opreme, koja se stavlja životinji na glavu kako bi se njome lakše upravljalo, ustanovljeno je da ih postoji više. Primjerice, u Rječniku tudica, dijalektalizama i najvažnijih stručnih izraza koji se povezuju sa Sinjskom alkom, Šime Jurića (<http://free-st.htnet.hr/Sinj/rjecniktudica.html>) navode se izrazi oglav, oglavić, oglavnik za ovaj dio opreme konja. Uz još nekoliko izraza koji se pojavljuju, primjerice naglavnjak i oglavak, kao najučestaliji termin ipak se koristi izraz oglav ili oglavina. Stoga, u ovom će se radu za taj dio konjske opreme koristiti izraz oglavina.

4 The author notes that the terminology in Croatian for the equipment placed on the head of a horse (like bridle, halter, headstall, headpiece etc. in English) is both numerous and varied, and explains her choices.

5 Měchurová 1984, 279; Garam 1987, 121–124, Pl. XIX–XXII; Karo 2003, 9; Zábajník 2009, 56.

6 Kirpičnikov 1973, 17–18, ris. 4; Ruttkay 1976, 357–358, Abb. 75; Karo 2003, 9, 18.



SLIKA 3. Tipologija žvala prema Ruttkayu (Ruttkay 1976, 357, Abb. 75).

FIGURE 3. The typology of bits according to Ruttkay (Ruttkay 1976, 357, Fig. 75).

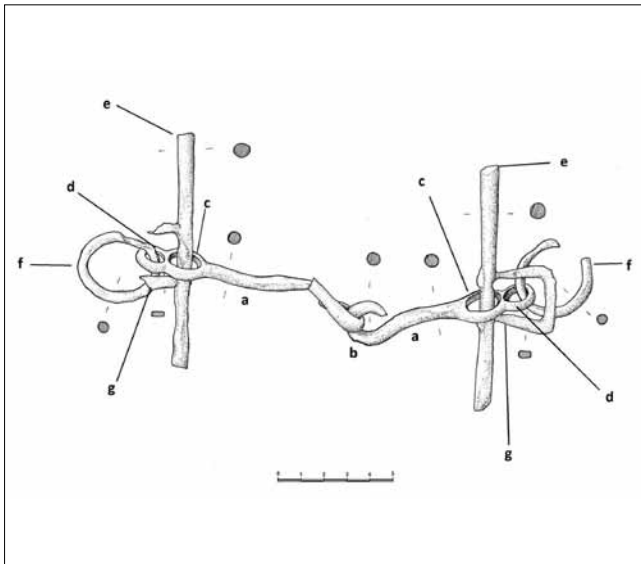
čani, razdijeljeni različitim okovima, razdjelnicima ili ukrasnim pločicama (falorama) načinjenima od različitog metala. Dijelovi oglavine konja, tj. remenje i njihovo ispreplitanje, rekonstruirani su upravo na temelju očuvanih metalnih nalaza,⁵ dok dijelovi načinjeni od organskog materijala propadaju i nisu poznati iz arheološkog konteksta.

Žvale, kao dio predmeta koji služi za zauzdavanje konja, u upotrebi su još iz prapovijesnih razdoblja, točnije od brončanoga doba pa sve do današnjih dana. Tijekom svog razvoja poznato je mnoštvo njihovih tipova, a u srednjem vijeku u upotrebi su bile jednostavne žvale i žvale na polugu. Žvale na polugu razvile su se u rimskom razdoblju, tijekom ranoga srednjeg vijeka nisu bile u upotrebi, a ponovno se pojavljuju od 11. stoljeća nadalje. Jednostavne pak žvale su, s obzirom na to od koliko su dijelova napravljene, jednostavne (sl. 3: III; sl. 5: III), dvodjelne s obročima (sl. 5: II) ili dvodjelne s prečkama (sl. 3: I; sl. 5: I) i trodjelne. Jednostavne su u upotrebi kod nomadskih plemena srednjoazijskih, kaspjskih i južnoruskih stepa (tip III po Ruttkayu), a trodjelne

The bit from Jegeniš (Pl. 1, cat. no. 1) can be classified as the type of simple iron two-part bit with straight, smooth, undecorated rods where the reins/halter are connected directly to the bit. The basic form of simple two-part metal bit is composed of two equal parts that are joined in the centre so that the inner loops on the end are hooked into one another (Fig. 4). This part was placed in the mouth of the horse, where it was situated above the tongue in the upper part of the jaw where horses have no teeth. On the exterior sides of the bit are two consecutive or vertically arranged circular holes called the inner and outer fittings. A circular hoop passes through the inner hole,⁷ or, as in our case, a rod that keeps the bit from sliding out of the horse's mouth, while the circler onto which the reins are attached passes through the external hole. Circular or rectangular protrusions/loops through which the cheek-piece straps pass can also be located on the rods. It is commonly thought that bits with straight rods had been widespread throughout the region of central Asia and Siberia all the way to Central Europe, where they had probably been introduced by the Huns. From the second half of the 7th cen-

5 Měchurová 1984, 279; Garam 1987, 121–124, Taf. XIX–XXII; Karo 2003, 9; Zábajnik 2009, 56.

7 Such is the bit from the accidentally discovered and destroyed graves (1978 and 1980) at the site of Dalj-Bogaljevci, near Osijek. The bit has two basic horizontal sections that fit in the horse's mouth, but in place of rods on the cheeks, they have large hoops. They are dated at that site to the end of the 8th century and beginning of the 9th (Milošević (ed.) 2000, 89). This form of bit appears, for example, at the site of Pókaszeptek in graves 68, 168 and 176, and recent analysis of the horse bones from these graves shows that such bits were placed in the burial of horses that were recognized, despite their great differences, as Arabian horses (Vörös 2012, 688–690, Fig. 1: 2–4).



SLIKA 4. Dijelovi jednostavne dvodjelne žvale s prečkama: a) polovina dvodjelne žvale, b) unutarnja petlja, c) unutarnje oko, d) vanjsko oko, e) prečka, f) karika za povodac, g) pravokutna izbočina/uho za obrazni remen (slučajni nalaz iz šljunčare pokraj Preloga u Međimurju; izradila M. Galić; obradila K. Jelinčić Vučković).

FIGURE 4. The parts of a simple two-part bit with rods (curb bit): a) the two halves of the two-part bit, b) inner loop, c) inner hole, d) outer hole, e) rod, f) snaffle ring for the rein, g) rectangular protrusions/ears for the cheekpieces (a chance find from a gravel pit near Prelog in Međimurje; made by M. Galić; adapted by K. Jelinčić Vučković).

su karakteristične za područje Skandinavije, Finske, istočnog Baltika i sjeverne Rusije (tip V po Kirpičnikovu). Jednostavne jednodjelne i trodjelne žvale tijekom ranoga srednjeg vijeka rjeđe su u upotrebi, dok obje varijante jednostavnih dvodjelnih žvala, kako one s obručima tako i one s prečkama (sl. 3), prevladavaju u ranome srednjem vijeku (tip I i II po Ruttkayu, tipovi I–IV po Kirpičnikovu).⁶

Primjerak žvala iz Jegeniša (T. I., kat. br. 1) može se uvrstiti u jednostavne željezne dvodjelne žvale s ravnim, glatkim i neukrašenim prečkama kod kojih su uzde/povodac pričvršćene direktno na žvalu. Osnovu jednostavne dvodjelne metalne žvale čine dva jednaka dijela koja se na sredini spajaju na način da unutarnje petlje na krajevima ulaze jedna u drugu (sl. 4). Taj dio stavlja se u usta konja, gdje je smješten iznad jezika, u gornjem dijelu čeljusti, na bezubom dijelu. Na vanjskim stranama žvale nalaze se dvije uzastopne ili okomito postavljene okrugle ušice zvane unutarnjim i vanjskim okom. Kroz unutarnje oko prolazi okrugli obruč⁷ ili, kao u našem slučaju, prečka koja sprečava da žvala sklizne iz usta, a kroz vanjsko oko prolazi karika na koju se veže povodac. Na prečkama žvala može se nalaziti okrugla ili pravokutna izbočina/uho kroz koju prolazi obrazni remen. Uvriježeno je mišljenje da su žvale s ravnim prečkama raširene na području

tury, bits with straight metal rods⁸ were common finds at Avar cemeteries, along with two-part bits with S-shaped metal rods,⁹ which in that period had neither geographical nor chronological variants, and were tied to the equestrian graves of men of the ruling class and women.¹⁰

Analysing hoards of early medieval iron objects from the region of the former Czechoslovakia in the period of the 8th and 9th centuries, A. Bartošková concluded that the hoards predominantly consisted of so-called nomadic bits with straight rods or rods in an S-shape that appeared in these regions from the middle of the 7th century, primarily in Avaric-Slavic cemeteries.¹¹ According to the classification made by Ruttkay for Slovakian bits from the 9th century onwards, this bit can be classified as his type I, with rods of type 4 (Fig. 3).¹² According to the classification of the Great Moravian bits with rods that was composed by Z. Měchurová for the entire former Czechoslovakia and was based on Ruttkay's typology, bits of this period are a survival from bits of the Avaric period. Our bit can be placed in her type IA (Fig. 5) in consideration of the presence of the two holes that are next to one another at the horizontal ends of the bits through which the rods pass, in this case type 4 rods,¹³ a variant that appears in the region of Moravia and southwestern Slovakia. She considers bits with S-shaped rods to be a characteristic form of the Avaric-Slavic period, which was not fully adopted later among the Slavs, while bits with straight smooth rods, such as on the bit from the Koprivnica gravel pit, to some extent existed parallel to them.¹⁴ From them developed the bits with a D-shaped protrusion on the rods, called the Šestovici type, characteristic of the region between the Volga and Dnieper rivers, the upper parts of the

6 Kirpičnikov 1973, 17–18, ris. 4; Ruttkay 1976, 357–358, Abb. 75; Karo 2003, 9, 18.

7 Takav je primjerak žvala iz slučajno otkrivenih i uništenih grobova tijekom 1978. i 1980. godine na nalazištu Dalj-Bogaljevci kod Osijeka. Žvale imaju dva osnovna vodoravna dijela koji dolaze konju u usta, ali umjesto obraznih prečki, imaju veće karike. Na tom su nalazištu datirane u kraj 8. i početak 9. stoljeća (Milošević (ed.) 2000, 89). Ovaj oblik žvala pojavljuje se, primjerice, na lokalitetu Pókaszpetek u grobovima br. 68, 168 i 176, a novija analiza kostiju konja iz tih grobova pokazala je da su ovakve žvale bile uz ukope konja koji su prepoznati, unatoč njihovim velikim razlikama, kao arapski konji (Vörös 2012, 688–690, Fig. 1: 2–4).

8 Straight rods were made of metal, but earlier examples of bits are also known that could have had bone rods instead of metal ones (Zábojník 2009, 53). Such examples are known from grave 79 at the site of Devínska Nová Ves (Eisner 1952, 26, Fig. 12: 8, 10), and they are often decorated with carving, such as on the example from grave 129 at the site of Sárrétudvari-Hízfold in the Hajdú-Bihar region (Nepper 1996, 257, 269–270, Fig. 32).

9 Zábojník 2009, 53.

10 Karo 2003, 19.

11 Bartošková 1986, 84–85.

12 Ruttkay 1976, Abb. 75.

13 Měchurová 1984, 267, Pl. 1. Studying horse equipment of the early medieval period, Z. Měchurová first composed a detailed terminology of the forms and types of bits and rods, where she suggested distinguishing 9 types of rods (Měchurová 1980, 190, Pl. I–II), where the rods in our bits belong to type 5. This typology was later revised, and hence there are differences in numbers (Měchurová 1984, Pl. 1).

14 Měchurová 1984, 268.

centralne Azije i Sibira pa sve do srednje Europe, gdje su ih vjerojatno donijeli Huni. Od druge polovine 7. stoljeća žvale s ravnim metalnim prečkama⁸ čest su nalaz na avarskim grobljima, kao i dvodjelne žvale sa S metalnim prečkama,⁹ koje u tom razdoblju nemaju ni zemljopisnih ni kronoloških razlika, a vežu se uz konjaničke grobove muškaraca vladajućeg sloja i žena.¹⁰

Obrađujući depoe željeznih ranosrednjovjekovnih predmeta s područja bivše Čehoslovačke u razdoblju 8. i 9. stoljeća A. Bartošková zaključuje da u depoima prevladavaju tzv. nomadske žvale s ravnim ili prečkama u obliku slova S koje su se na ovim prostorima pojavile od sredine 7. stoljeća, uglavnom u avaroslavenskim grobljima.¹¹ Prema klasifikaciji, koju je proveo Ruttkay za slovačke žvale od 9. stoljeća na dalje, naše žvale mogu se uvrstiti u njegov tip I, s prečkama tipa 4 (sl. 3).¹² Prema klasifikaciji velikomoravskih žvala s prečkama, koju je provela Z. Měchurová za čitavu tadašnju Čehoslovačku, a oslanjajući se na Ruttkayevu podjelu, žvale toga doba prežitak su žvala iz avarodobnog vremena. Naše žvale mogle bi se prema toj klasifikaciji uvrstiti u njezin tip IA (sl. 5) s obzirom na prisutnost dva oka koja se nastavljaju u nizu jedno na drugo na vodoravnim krajevima žvale kroz koje prolaze prečke, u našem slučaju prečke tipa 4,¹³ varijanta koja se pojavljuje na prostoru Moravske i jugozapadne Slovačke. I prema njezinu mišljenju, žvale sa S prečkama karakterističan su oblik avaroslavenskog doba, koje se kasnije kod Slavena nisu posve udomaćile, a žvale s ravnim glatkim prečkama, kakav je i primjerak žvala iz koprivničke šljunčare, egzistiraju dijelom i paralelno s njima.¹⁴ Iz njih su se razvile žvale s D-formom izbočine na prečki nazvane tipom Šestovici, karakterističnim za područje između Wolge i Dnjepra, te u gornjim tokovima Tise i u jugozapadnoj Slovačkoj. Ovaj se tip, u Karpatskoj nizini, na osnovu drugih nalaza u grobnim cjelinama, datira do druge polovine ili kraja 9. stoljeća.¹⁵ Na tom prostoru u ranijem razdoblju pojavljuju se slični oblici u avarskim ili slavensko-avarskim grobljima 7. i 8. stoljeća, i to s kvadratičnom ili pravokutnom izbočinom na prečki (sl. 4: g), a kakav je i naš primjerak.

Zemljopisno najbližu analogiju našem primjerku predstavljaju žvale slučajno pronađene 1965. godine pri eksploataciji šljunka kod Preloga u Međimurju (sl. 4). Potječu iz jednog od nekoliko uništenih skeletnih grobova datiranih oko 800. godine u kojima je bilo različitih priloga, primjerice bojna sjekira, bojni nož, ne-

River Tisza, and southwestern Slovakia. This type is dated in the Carpathian basin, on the basis of other finds in grave units, to the second half or end of the 9th century.¹⁵ In earlier periods in the same area, similar forms appear in Avar or Slavic-Avaric cemeteries of the 7th and 8th centuries, with a square or rectangular protrusion on the rods (Fig. 4: g), such as on our example.

The closest analogy in geographic terms to our example was the bit discovered by chance in 1965 during gravel extraction at Prelog in the Međimurje region (Fig. 4). It came from one of several destroyed skeleton graves dated to around 800 AD that contained various grave goods, such as battle axes, daggers, several different stirrups, and eight almost totally complete pottery vessels.¹⁶ It is apparent from the photographs taken at the time of discovery that this had been an inhumation cemetery.¹⁷ The skeletons of the deceased were arranged in grave pits of a depth of up to 60 cm, as is quite visible in the profile of the gravel quarry. Although several forms of stirrups and one bit had been collected on that occasion, which would suggest a horse burial, no data about the discovery of animal bones were recorded or known. Comparing the very similar example of a bit from the gravel pit near Prelog with our example, it should be noted that insignificant differences nonetheless exist in terms of the length and cross-section of the straight rods, as well as in the section and non-uniform length (visible despite breakage), of the two basic elements that are actually placed in the mouth of the horse. The perpendicular short rods are insignificantly thickened at the ends, with a circular section, while the newly discovered example has longer rods, flattened at the ends. The asymmetry of the part of the bit placed in the mouth of the horse, noted on the example from Prelog, is not unusual and is important to riders who use only one hand to direct the horse, because the other hand is busy holding a weapon or a shield, while the different sizes of the two iron parts in the mouth of the horse in fact ensure that the horse does not pull to one side.¹⁸

Of the remaining finds of bits in northern Croatia, the find should be noted from Brodski Drenovac, where, in one of three equestrian graves (grave 14) dated to the beginning of the 9th century, a bit was found that, in the horizontal sections placed in the horse's mouth, was very similar to the bit under discussion, but in place of the straight rods that go along the cheeks,

8 Ravnne prečke napravljene su od metala, ali poznati su i stariji primjerci žvala koje su, umjesto metalnih, mogle imati koštane prečke (Zábojník 2009, 53). Takvi su primjerci poznati iz groba br. 79 na nalazištu Devínska Nová Ves (Eisner 1952, 26, obr. 12: 8, 10), a često su i ukrašeni urezima kakav je primjerak iz groba br. 129 s nalazišta Sárrétudvari-Hízföld u regiji Hajdú-Bihar (Nepper 1996, 257, 269–270, Fig. 32).

9 Zábojník 2009, 53.

10 Karo 2003, 19.

11 Bartošková 1986, 84–85.

12 Ruttkay 1976, Abb. 75.

13 Měchurová 1984, 267, T. 1. Baveći se opremom konja u ranome srednjem vijeku, Z. Měchurová prvo razrađuje detaljnu terminologiju oblika i tipova žvala i prečki, gdje predlaže distinkciju 9 tipova prečki (Měchurová 1980, 190, T. I–II) prema kojoj prečke na našim žvalama pripadaju tipu 5. Ovu tipologiju kasnije revidira pa tako dolazi do odstupanja u brojevima (Měchurová 1984, T. I).

14 Měchurová 1984, 268.

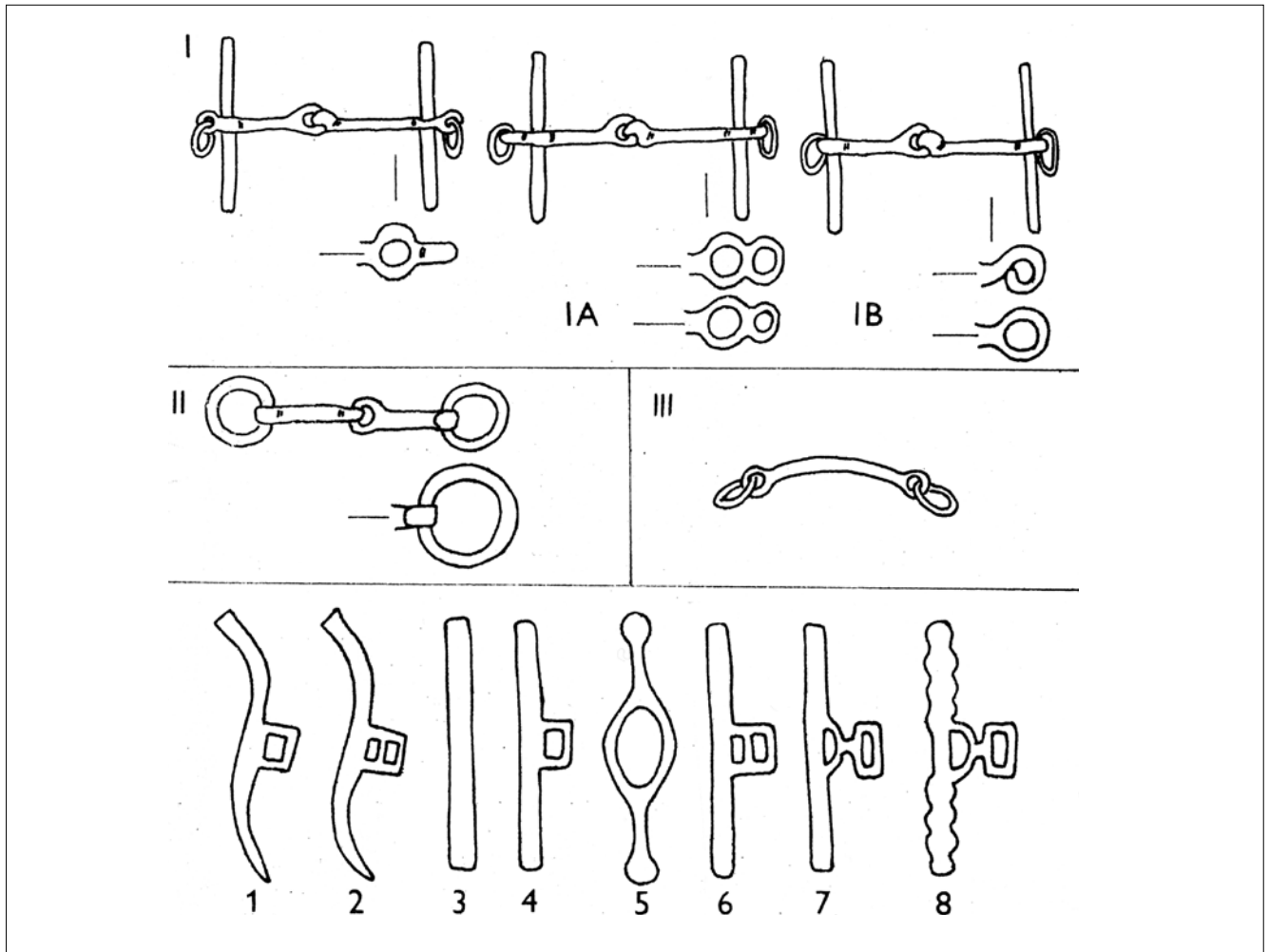
15 Schulze-Dörrlamm 1991, 398–399, Abb. 23.

15 Schulze-Dörrlamm 1991, 398–399, Fig. 23.

16 Tomičić 1978, 212; Milošević (ed.) 2000, 100–104.

17 I would like to thank my colleague Branka Marčuš, curator in the Museum of Međimurje in Čakovec, where these finds are kept, for allowing viewing of the material and museum documentation.

18 Révész 1996, 51.



SLIKA 5. Tipologija žvala prema Měchurovoj (Měchurová 1984, 267, T. I).

FIGURE 5. The typology of bits according to Měchurová (Měchurová 1984, 267, Pl. I).

koliko različitih stremena i osam gotovo cjelovitih keramičkih posuda.¹⁶ Da je sigurno riječ o skeletnom groblju, vidljivo je iz fotografija načinjenih pri samom pronalasku.¹⁷ Kosturi pokojnika pravilno su položeni u rake dubine do 0,60 m, koje su dobro vidljive u profilu same šljunčare. Iako je tom prigodom prikupljeno nekoliko oblikom različitih stremena i jedne žvale, što bi sugeriralo na ukope konja, podaci o pronalasku životinjskih kostiju nisu zabilježeni niti poznati. Uspoređujući sličan primjerak žvala iz šljunčara kod Preloga s našim primjerkom, valja ustanoviti da su ipak prisutne neznatne razlike, i to u dužini i presjeku ravnih prečki te u presjeku i nejednakoj dužini (vidljivoj unatoč lomu), dvaju osnovnih dijelova koji dolaze životinji u usta. Okomite, kratke prečke neznatno su zadebljane na krajevima, okruglog presjeka, dok je novopronađeni primjerak dužih i na krajevima plosnatih prečki. Asimetričnost pak dijelova žvala u ustima ko-

the rods were S-shaped.¹⁹ In addition to the abovementioned contemporaneous bit from Dalj-Bogaljevci, which because of the circular link belongs to a different variant of bit, the find should be mentioned of a bit that came from grave 4 at the site of Zagreb-Kruga, also a chance find, from 1911. It is of exceptionally large dimensions, dated to the beginning of the 9th century,²⁰ and in accordance with the basic shape it could be classified to the Csorna type, which were originally from the area between the Volga and Dnieper rivers, while in the Carpathian basin they are characteristic of the region of the upper course of the Tisza, the Small Hungarian Plain, and the southern parts of the Danube in Transdanubia, and they are also found in Great Moravian hoards of the middle 9th century.²¹ Pleterski connected similar bits found in the Sebenje hoard to forms characteristic of the Germanic-Frankish region and considered that their robust section and the

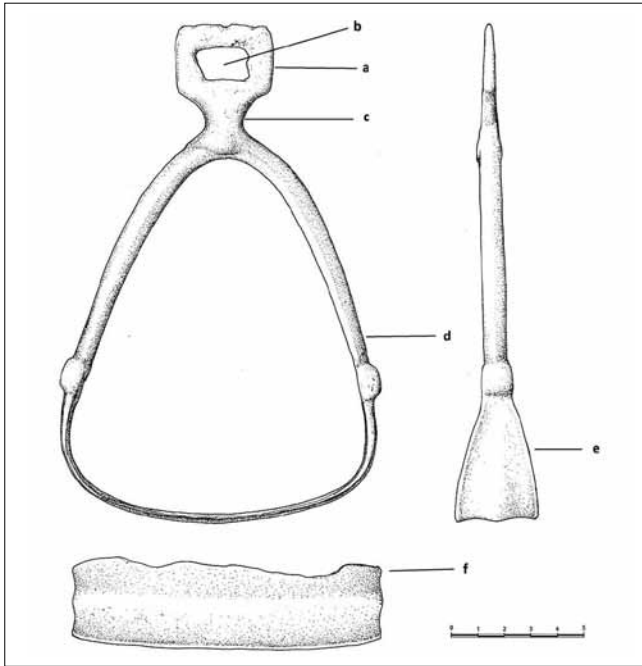
16 Tomičić 1978, 212; Milošević (ed.) 2000, 100–104.

17 Zahvaljujem kolegici Branki Marciuš, kustosici u Muzeju Međimurja u Čakovcu, gdje su pohranjeni spomenuti nalazi, na uvidu u građu i muzejsku dokumentaciju.

19 Milošević (ed.) 2000, 86.

20 Milošević (ed.) 2000, 109–111.

21 Schulze-Dörrlamm 1991, 416–417, Fig. 41.



SLIKA 6. Dijelovi stremena: a) ušica ili petlja, b) perforacija za remen, c) vrat, d) krak, e) donji dio kraka, f) stopalni dio (izradila M. Galić; obradila K. Jelinčić Vučković).

FIGURE 6. Parts of a stirrup: a) loop, b) perforation for the strap, c) neck, d) arm or bow, e) the lower part of the arm, f) tread section (made by M. Galić; adapted by K. Jelinčić Vučković).

nja, zamijećena kod primjerka iz Preloga, nije neobična i važna je onim jahačima koji zbog zauzetosti druge ruke, primjerice nekim oružjem ili štitom, koriste samo jednu ruku za usmjeravanje konja, a različite veličine dvaju željeznih dijelova u ustima životinje upravo osiguravaju da konj ne vuče na jednu od strana.¹⁸

Od ostalih nalaza žvala iz sjeverne Hrvatske valja spomenuti nalaze iz Brodskog Drenovca, gdje su u jednom od triju konjaničkih grobova (grobu br. 14), datiranim u početak 9. stoljeća, pronađene žvale koje u vodoravnim dijelovima, koji se stavljaju konju u usta, veoma slične našim žvalama, ali umjesto ravnih prečki koje dolaze na obraze, nalaze se prečke u obliku slova S.¹⁹ Osim već spomenutih istovremenih žvala iz Dalj-Bogaljevaca, koje zbog okruglih karika pripadaju različitoj varijanti žvala, valja spomenuti nalaz žvala što potječu iz groba br. 4 s lokaliteta Zagreb-Kruga i također su slučajni nalaz iz 1911. godine. Iznimno su velikih dimenzija, datirane su u početak 9. stoljeća,²⁰ a prema osnovnom obliku moglo bi ih se opredijeliti u tip Csorna, koje su inače podrijetlom iz područja između Wolge i Dnjepra. U Karpatskoj nizini karakteristične su za područje gornjeg toka Tise, Male ugarske nizine i južnih dijelova Dunava u Transdanubiji, a pronalazi ih se i u velikomoravskim ostavama iz sredine 9. stoljeća.²¹ Slične žvale, pronađene u sebenskoj ostavi, Pleterski povezuje s oblicima značajnima za germanski/franački prostor i smatra da bi se njihov robusni presjek te izgled petlji i oka teško mogao povezati s nomadskim narodima kojima je bila iznimno važna pokretljivost konja te su, kako ne bi oštetili osjetljiva usta životinje, izrađivali žvale okrugloga presjeka, bez oštih rubova.²² Prema navedenom

appearance of the loop and hole could hardly be connected to nomadic peoples, to whom the manoeuvrability of the horse was of the utmost importance and who manufactured bits of circular section without sharp edges so as not to damage the sensitive mouth of the animal.²² In line with this view, it could be said, for the bit from the gravel pit near Koprivnica, that it is graceful with a rounded square section of the parts that are placed in the mouth of the horse, and hence could be connected with nomadic peoples, just as are all the bits mentioned here documented from the region of northern Croatia.

According to the basic characteristics of our bit, although this form is in use in the wider area from the very end of the 7th century to the second half of the 9th century, in the region of the Koprivnica Drava river basin where it was found, like the closest analogous example from Prelog, it can be classified to the period around the year 800 or the very beginning of the 9th century.

The second type of object discussed here is the stirrup. Stirrups are items of equestrian equipment related to the saddle, which was usually made of organic material, such as wood or leather. Due to the decay of organic material, the only parts of saddles that are known to us, whether from clear grave units or as chance finds, are bone reinforcements or the metal fittings on the frontal or rear raised part of the saddle, along with various forms of wrought-iron stirrups.²³ They were suspended from leather straps dangling from both sides of the sitting part of the saddle, while the entire saddle was secured with a belt (girth) across the belly of the horse, and they enabled easier mounting of the horse, comfort in longer riding, and better balance for the rider. As the straps (called leathers) were attached with clasps, forged buckles with one or two pins are often found in horse burials.

The parts of a stirrup (Fig. 6) consist of a suspension loop for the strap, with a perforation or hole through which the strap was threaded, and a neck that joined the loop with the other sections, i.e. the arms (or bow), of the stirrup. The section for the foot (called the tread) often had additional reinforcement in the form of a rib on the lower side, and it could have been flat, concave, or convex, depending on the riding style and the footwear of the rider (Fig. 7).

18 Révész 1996, 51.

19 Milošević (ed.) 2000, 86.

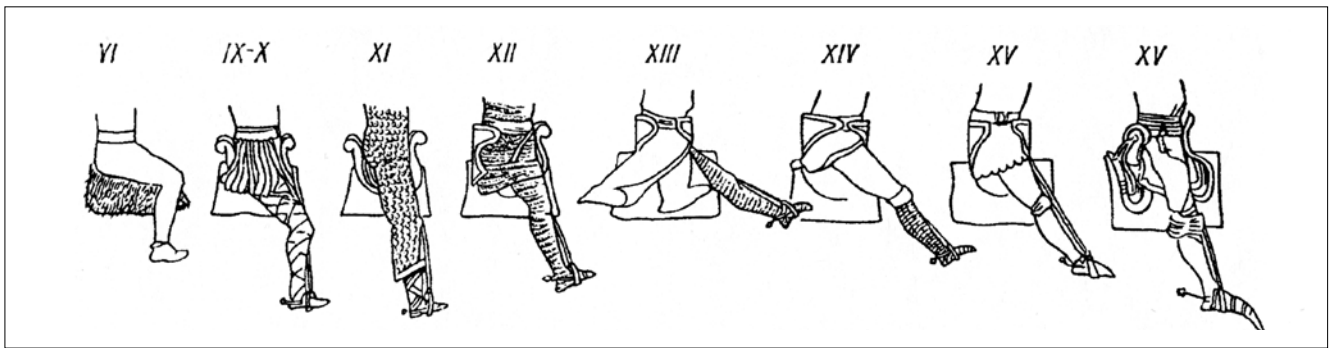
20 Milošević (ed.) 2000, 109–111.

21 Schulze-Dörrlamm 1991, 416–417, Abb. 41.

22 Pleterski 1987, 253–256.

22 Pleterski 1987, 253–256.

23 According to some data, only in the late 5th century and during the 6th were stirrups made completely of metal, while in earlier periods they had probably also been made of organic material, or some parts had been made, for example, of wood, which was also retained later (Karo 2003, 21–22; Zábajník 2009, 54).



SLIKA 7. Način jahanja od 6. do 15. stoljeća (Kirpičnikov 1973, ris. 30).

FIGURE 7. Manners of riding from the 6th century to the 15th (Kirpičnikov 1973, Fig. 30).

mišljenju, za žvale iz šljunčare kod Koprivnice moglo bi se reći da su gracilne s oblim pravokutnim presjekom dijelova, koji dolaze konju u usta, pa bi ih, prema tome, mogli vezati za nomadske narode, kao i sve spomenute žvale evidentirane s područja sjeverne Hrvatske.

Prema osnovnim značajkama naših žvala, iako je ovaj oblik u upotrebi na širem prostoru od samog kraja 7. stoljeća pa do druge polovine 9. stoljeća, na području koprivničke Podravine, gdje su pronađene, mogu se, kao i najbliži analogni primjer iz Preloga, opredijeliti u vrijeme oko 800. godine ili u sam početak 9. stoljeća.

Druga su vrsta predmeta koji se ovdje donose, stremeni. Stremeni pripadaju dijelovima konjske opreme vezane uz sedlo koje je obično načinjeno od organskog materijala poput drva ili kože. Zbog propadanja organskog materijala, od dijelova sedla koji su do nas dospjeli, bilo iz jasnih grobnih cjelina ili kao slučajni nalazi, poznata su tek koštana pojačanja ili kovinski okovi na prednjem ili zadnjem uzdignutom dijelu sedla te razni oblici željeznih kovanih stremena.²³ Oni su visjeli na kožnim remenima s obje strane sjedećeg dijela sedla, čitavog pričvršćenoga remenom za trbuh konja, a omogućavali su lakše uspinjanje na konja, udobnost pri duljem jahanju i bolju ravnotežu jahača. Kako se remenje zapinjalo sponama, često se (uz ukope konja) pronalaze kovane pređice s jednim ili dva trna.

Dijelove stremena (sl. 6) čini ušica ili petlja za remen s perforacijom, odnosno rupom kroz koju se remen provlačio, zatim vrat koji je spajao ušicu s ostalim dijelovima, tj. krakovima stremena. Krakovi u svom donjem dijelu mogu imati proširenje koje je svojevrsni nastavak stopalnog dijela stremena. Stopalni je dio često imao dodatna pojačanja u obliku rebara na donjoj strani, mogao je biti ravnog, konkavnog ili konveksnog oblika, što je ovisilo o načinu jahanja i obući jahača (sl. 7).

The earliest forms of metal stirrups in Europe are of Asian origin, and they were discovered in early Avar graves from the beginning of the second half of the 6th century.²⁴ Early forms were circular with a tall rectangular loop (end of the 6th century and beginning of the 7th) or with an open loop for threading the strap and a slightly convex tread, while from the second half of the 7th century, stirrups acquired a regular horseshoe-shaped form that was predominant during the 8th century and the beginning of the 9th century. It is probable that the stirrup was also used in the West as an item of equestrian equipment, and its increased use is related, on the basis of archaeological and epigraphic data, to the reign of Charles Martel, or the first half of the 8th century, while to the 9th century the use of stirrups would have spread throughout the entire Carolingian territory.²⁵

Several types of stirrups are discussed in this work that display certain chronological differences in terms of the varied formation of the basic elements representing the composite parts of every stirrup. Stirrup no. 3 in the catalogue (Pl. 4) exhibits the earliest elements, and according to the formation of the suspension loop, here a simple loop through which the strap passes, it can be classified as type III according to Čilinská (Fig. 8), with the upper part corresponding to variant 4, while the relatively narrow, almost flat, tread with a slightly emphasized central rib is closer to variant 3 of the same type.²⁶ On all of them, in contrast to the earlier circularly shaped arms (Fig. 8: 1–2), the arms were horseshoe-shaped (Fig. 8: 3–8). The basic typology of stirrups, particularly focused on the formation of the loop, was composed according to finds from graves where deceased individuals were accompanied by a horse burial at the Slavic-Avaric cemetery of Nové Zámky. Among the many graves (such as nos. 179, 196, 218 and 360), grave 179 should be noted here, where, along with a bit identical to ours, with rods with square protrusions/ears, two stirrups were found that can be classified as type III, or more pre-

23 Prema nekim podacima, tek u kasnom 5. i tijekom 6. stoljeća stremeni su u cijelosti izrađivani od metala, dok su u ranijim razdobljima vjerojatno bili od organskog materijala, ili su im samo neki dijelovi bili načinjeni, primjerice, od drva, što se zadržava i kasnije (Karo 2003, 21–22; Zábojník 2009, 54).

24 Seaby, Woodfield 1980, 89; Zábojník 2009, 53.

25 Seaby, Woodfield 1980, 89; Karo 2003, 8, 22.

26 Čilinská 1966, 190–191, Fig. 22: 3–4. Even closer parallels are found in the Šebastovce site in graves no. 37, 80 and 381 (Budinský-Krička, Točík 1991) and at the Tiszafüred site in graves no. 435, 917 and 997 (Garam 1995: Pl. 178: 1–2; Pl. 185: 2–3; Pl. 186: 4).

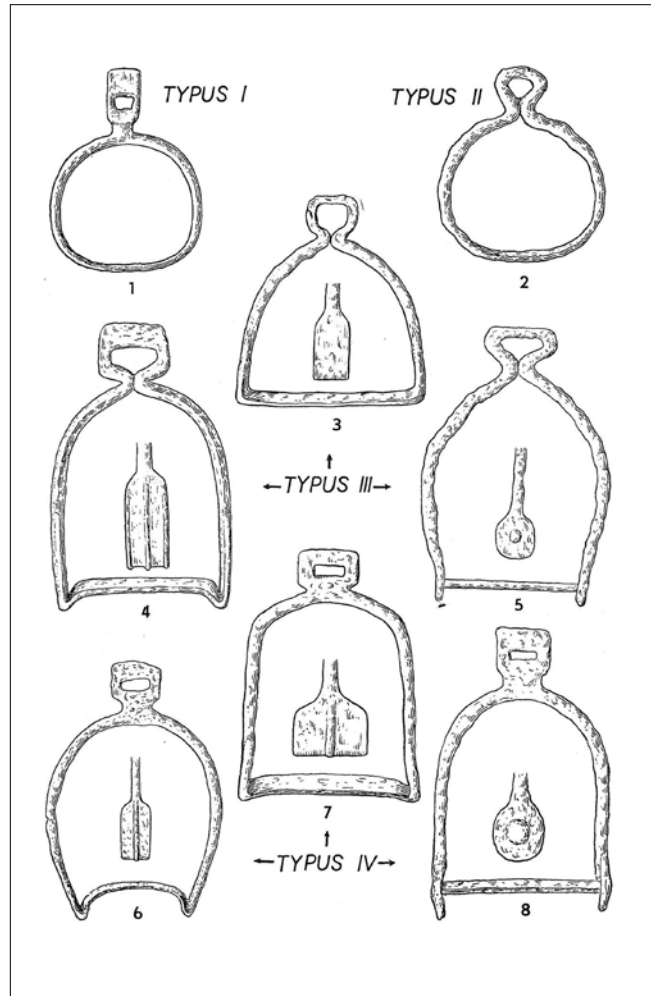
SLIKA 8. Tipologija stremena prema Čilinskoj (Čilinská 1966, 190–191, Abb. 22).

FIGURE 8. The typology of stirrups according to Čilinská (Čilinská 1966, 190–191, Fig. 22).

Najstariji oblici metalnih stremena na europskom prostoru azijskog su podrijetla, a pronađeni su u ranoavarskim grobovima na prostoru današnje Mađarske početkom druge polovine 6. stoljeća.²⁴ Rani su oblici bili okrugle forme s visokom pravokutnom ušicom (kraj 6. i početak 7. stoljeća) ili s otvorenom petljom za provlačenje remena i blago izbočenim stopalnim dijelom, da bi od druge polovine 7. stoljeća stremenje zadobilo pravilnu potkovastu formu koja je prevladavala tijekom 8. i početkom 9. stoljeća. Vjerojatno je i zapad poznao stremen kao dio opreme konja, a njegova učestalija uporaba veže se, na temelju arheoloških i epigrafskih podataka, uz vladanje Karla Martela, odnosno uz prvu polovinu 8. stoljeća, da bi se do 9. stoljeća uporaba stremena proširila u cijelom karolinškom ozemlju.²⁵

U ovom je radu izdvojeno nekoliko tipova stremena koji, prema različitom oblikovanju osnovnih elemenata što predstavljaju sastavni dio svakog stremena, pokazuju i neke kronološke razlike. Stremen kat. br. 3 (T. 4) pokazuje najstarije elemente, odnosno prema oblikovanju ušice, petlje kroz koju prolazi remen, može se opredijeliti u tip III prema Čilinskoj (sl. 8), pri čemu gornji dio odgovara varijanti br. 4, dok je relativno uski, gotovo ravni, stopalni dio s blago naglašenim središnjim rebrom bliži varijanti br. 3 istog tipa.²⁶ Svima njima je, za razliku od starijih, okruglo oblikovanih krakova (sl. 8: 1–2), forma krakova potkovičasta (sl. 8: 3–8). Osnovna tipologija stremena, s posebnim naglaskom na oblikovanje ušice/petlje, napravljena je prema nalazima iz grobova u kojima je ukopan pokojnik s konjem na slavensko-avarskom groblju Nové Zámky. Između mnoštva grobova (primjerice br. 179, 196, 218, 360), ovdje valja istaknuti grob br. 179 u kojem su, uz žvale identične našima, s prečkama na kojima se nalazi kvadratična izbočina/uhlo, pronađena dva stremena koja se mogu opredijeliti u tip III, odnosno, preciznije, u dvije različite inačice tipa stremena od kojih jedan u gornjem dijelu, a drugi u donjem dijelu imaju direktne paralele s našim stremenom (sl. 8: 3–4). Ovaj se tip stremena na Novim Zámkyima datira od druge polovine, odnosno od samog kraja 7. stoljeća, ali zadržava se i tijekom čitavog 8. stoljeća.²⁷

Kod stremenja s krakovima potkovastog oblika pojavljuju se različite vrste ušica za provlačenje remena, primjerice pravokutna ili kvadratna ušica (sl. 8: 6–8) i ušica u obliku petlje (sl. 8: 3–5), koji mogu imati različite varijante stopalnog dijela. S područja sjeverne Hrvatske u stremenje s ušicom i potkovastom formom krakova mogu se uvrstiti nalazi rasparanih stremena iz triju grobova s ukopima konja iz Brodskog Drenovca, gdje su datirani u po-



cisely to two different variants of this type of stirrup, which have direct parallels to our stirrup, one in the upper part and the other in the lower part (Fig. 8: 3–4). This type of stirrup at Nové Zámky is dated from the second half or the very end of the 7th century, but was also in use throughout the entire 8th century.²⁷

Stirrups with arms shaped like a horseshoe have various types of loops for threading the straps, such as rectangular or square slots (Fig. 8: 6–8) or simple loops (Fig. 8: 3–5), which can have different variants of the footrest section (tread). From the northern Croatian region, among the stirrups with a loop and horseshoe-shaped form can be included the finds of broken stirrups from three graves with horse burials at Brodski Drenovac, where they are dated to the beginning of the 9th century,²⁸ as well as one of the stirrups found by chance at Bogaljevci, near Dalj, dated to the end of the 8th century and beginning of the 9th,²⁹ and the pair of stirrups from Zagreb-Kruga.³⁰ Although it shows the same horseshoe-shaped form of the bow, the other stirrup from Bogaljevci

24 Seaby, Woodfield 1980, 89; Zábojník 2009, 53.

25 Seaby, Woodfield 1980, 89; Karo 2003, 8, 22.

26 Čilinská 1966, 190–191, Abb. 22: 3–4. Još bliže paralele pronalaze se na lokalitetu Šebastovce u grobovima br. 37, 80, 381 (Budinský-Krička, Točík 1991) i na lokalitetu Tiszafüred u grobovima br. 435, 917, 997 (Garam 1995: Taf. 178: 1–2; Taf. 185: 2–3; Taf. 186: 4).

27 Čilinská 1966, 190, 192–193, 238, 279–280, 284, 298.

27 Čilinská 1966, 190, 192–193, 238, 279–280, 284, 298.

28 Milošević (ed.) 2000, 84–88.

29 Milošević (ed.) 2000, 89, II.8a.

30 Milošević (ed.) 2000, 110.

četak 9. stoljeća,²⁸ zatim jedan od slučajno pronađenih stremena iz Bogaljevaca kod Dalja, datiran u kraj 8. i početak 9. stoljeća²⁹, te par stremena iz lokaliteta Zagreb-Kruga.³⁰ Iako pokazuju isti potkovasti oblik krakova, drugi stremen iz Bogaljevaca pokraj Dalja,³¹ kao i tri stremena iz uništenih grobova pokraj Preloga u Međimurju, datirani oko 800. godine, imaju drugačije oblikovane ušice, tj. imaju petlju kroz koju se provlačio remen. Navedeni stremeni u prihvaćenim se klasifikacijama opredjeljuju u različite tipove pa iako se onaj s petljom pojavljuje ranije, već od druge polovine i s kraja 7. stoljeća, a onaj s pravokutnom ušicom nešto kasnije i najmlađi je oblik avarskih stremenja, oba su tipa rasprostranjena na širokom zemljopisnom području i karakteristična su za 8. stoljeće, a zadržavaju se u upotrebi i tijekom prve polovine 9. stoljeća. Iako je stremen kat. br. 3 (T. 4) u stopalnom dijelu prelomljen i iskrivljen, može se naslutiti da je njegov oblik u gornjem dijelu krakova bio više lučno zaobljen ili potkovičast. Takav oblik krakova, kao i oblikovanje ušice kroz koju se provlačio remen načinjen u obliku petlje, iz koje se u jednom neprekinutom dijelu nastavljaju krakovi, ukazuje na moguću stariju tradiciju izrade premda je sam predmet mogao biti u uporabi i krajem 8. ili na prijelazu u 9. stoljeće.

Sljedeći nalaz iz Jegeniša predstavljen je dvama gotovo identičnim stremenima (kat. br. 2.A, T. 2 i kat. br. 2.B, T. 3) pronađenima u razmaku od samo nekoliko dana eksploatacije šljunka. Zbog velike sličnosti i činjenice o uskom vremenskom razdoblju njihova pronalaska, koji sugeriraju istu izvornu poziciju nalaza, zaključeno je da vjerojatno predstavljaju par. Na oba stremena, a posebno na primjerku kat. br. 2.B, na donjem dijelu stopalnog dijela vidljivi su tragovi duljeg boravka u rijeci ili šljunčanom, odnosno pjeskovitom okružju u vidu većih nakupina šljunka i pijeska. Upravo je ova okolnost razlogom što su oba stremena vrlo dobro očuvana.

Iako je objavljeno i obrađeno mnoštvo grobova s ukopom konja u kojima su pronađeni i različiti oblici stremenja iz vremena dominacije Avara u Karpatskoj kotlini, valja reći da, u tom arheološkome materijalu nisu pronađene direktne analogije našem paru stremena u vidu identično izrađenog ili oblikovanog predmeta. Primjerice, poznati su brojni ukopi s konjem (70 ukopa s konjem) na velikom groblju Tiszafüred na rijeci Tisi (ukupno 1282 groba), ali uglavnom s okruglim ili potkovičastim oblikom krakova, tj. stremenima koji u većini primjeraka imaju ušicu za provlačenje remena izvedenu kao petlju³² (tip III po Čilinskoj), kakvi su i nalazi stremena na lokalitetu Šebastovce u istočnoj Slovačkoj³³ te se ne mogu navoditi kao paralele. Prema oblikovanju ušice, par bi bio blizak tipu IV po Čilinskoj datiranom u 8. stoljeće (sl. 8: 6–8),³⁴ ali sam oblik krakova i izvedba stopalnog dijela nemaju direktnih paralela u tom tipu. Naš par ima pravokutnu ušicu za provlačenje remena, ali njihovi krakovi ne pokazuju okrugli ili potkovičasti oblik karakterističan za tipove avarodobnih stremena koje je

near Dalj,³¹ as well as three stirrups from the destroyed graves near Prelog, in Međimurje, dated to around the year 800, have differently shaped suspension loops for the leathers. The above stirrups are determined as different types in the accepted classifications, and although the stirrups with the simple loop appear earlier, from as early as the second half and end of the 7th century, while the stirrups with rectangular slot are somewhat later and are the youngest form of Avaric stirrups, both types are distributed throughout a broad geographical area and are characteristic of the 8th century, further remaining in use throughout the first half of the 9th century. Although stirrup no. 3 in the catalogue (Pl. 4) was broken and twisted in the tread section, it is possible to glimpse that its form in the upper section of the arms was more arched and horseshoe-shaped. Such a form of the arms, as well as the formation of the simple loop through which the strap was passed, from which the arms continued in an uninterrupted manner, indicates a possibly earlier tradition of manufacture, although the object itself could also have been in use at the end of the 8th century or at the turn of the 9th.

The next find from Jegeniš is represented by two almost identical stirrups (cat. no. 2.A, Pl. 2, and cat. no. 2.B, Pl. 3) found during the span of only a few days of gravel extraction. Their great similarity and the short period of time between their discoveries, which suggests the same original position of the find, led to the conclusion that they probably represent a pair. Traces are visible of lengthy immersion in the river or a gravel/sand environment in the form of several clumps of gravel and sand. This circumstance is in fact the reason that both stirrups are very well preserved.

Although many graves with horse burials in which various forms of stirrups were found from the period of the Avar dominion in the Carpathian basin have been published and analysed, it should be noted that, among this archaeological material, direct analogies to our pair of stirrups in terms of identical manufacture were not discovered. For example, numerous burials with horses (70) are known at the large cemetery of Tiszafüred on the River Tisza (a total of 1282 graves), but the stirrups in these had primarily circular or horseshoe-shaped bows, i.e. stirrups that in most cases had a simple loop for the strap³² (type III according to Čilinská), such as the finds of stirrups at the site of Šebastovce in eastern Slovakia,³³ and hence they cannot be cited as an analogy. On the basis of the formation of the loop, the pair would in fact be close to type IV according to Čilinská, dated to the 8th century (Fig. 8: 6–8),³⁴ but the form of the bow and the workmanship of the tread have no direct parallels to this type. Our pair have a rectangular slot for threading the strap, but their arms do not exhibit the circular or horseshoe-shaped forms characteristic of the types of Avar-period stirrups that were analysed by Čilinská (Fig. 8); rather, they can be described more as triangular, while the tread section was curved concavely.

28 Milošević (ed.) 2000, 84–88.

29 Milošević (ed.) 2000, 89, II.8a.

30 Milošević (ed.) 2000, 110.

31 Milošević (ed.) 2000, 89, II.8b.

32 Garam 1987; Garam 1995.

33 Budinský-Krička, Točík 1991.

34 Čilinská 1966, 190–191, Abb. 22: 6–8.

31 Milošević (ed.) 2000, 89, II.8b.

32 Garam 1987; Garam 1995.

33 Budinský-Krička, Točík 1991.

34 Čilinská 1966, 190–191, Fig. 22: 6–8.

obradila Čilinska (sl. 8), već bi se oni mogli okarakterizirati više kao trokutasta forma, dok je stopalni dio pravilno konkavno zakrivljen.

S obzirom na oblikovanje stopalnog dijela, valja spomenuti da je u okolici mjesta Komarno u jugozapadnoj Slovačkoj pronađeno više avarodobnih nalazišta, a značaj ovih lokaliteta ogleda se u mnoštvu ukopa pokojnika s konjem, posebno onih s položaja Schiffswerft (Lodenice).³⁵ Ta je okolnost dala dobar uvid u opremu konja od kraja 7. do početka 9. stoljeća pri čemu se kod stremena izdvajaju dva osnovna oblika prijelaza krakova u stopalni dio. S jedne strane, riječ je o uskom, pravokutnom prijelazu, a s druge, o karakterističnom vrlo širokom, gotovo kvadratnom prijelazu s po dvije perforacije sa svake strane središnjeg rebra.³⁶ Naš je par stremena prema toj klasifikaciji nešto bliži stremenima s pravokutnim prijelazom, a grobovi u kojima su takvi stremeni nađeni datiraju se veoma široko, od kraja 7. i početka 8. stoljeća pa do prve polovine 9. stoljeća,³⁷ iako ni u ovim primjerima nisu pronađene direktne paralele.

Stoga, valjalo je potražiti analogne primjerke našem paru izvan avarskog/avarodobnog konteksta. Osnovnu tipologiju stremena za područje Slovačke u razdoblju od 9. do 12. stoljeća proveo je Ruttkay koji je, obradivši 220 stremena, razlučio šest tipova s obzirom na oblik ušice i oblike stopalnog dijela stremena, a koji se oslanjaju na starije oblike.³⁸ Stremeni kat. br. 2.A i 2.B prema njegovoj bi se klasifikaciji mogli opredijeliti u tip I 1 ili I 2 s nazljebljenim krakovima (sl. 9), što je inače značajka stremena zapadne provenijencije, iako valja zaključiti da su naši primjerci glatkih krakova neukrašeni. Stremen kat. br. 3 prema istoj klasifikaciji bio bi bliži tipu VI 1.³⁹

Nakon Ruttkayeve tipologije, Z. Měchurová razrađuje detaljnu terminologiju za dijelove opreme konja,⁴⁰ a potom katalogizirajući i obrađujući sve nalaze ranosrednjovjekovnih stremena prikupljenih do 80-ih godina 20. stoljeća s područja Češke i Slovačke, od kojih navise primjeraka potječe s velikomoravskih gradišta, razvrstava nalaze u šest osnovnih tipova s nekoliko varijanti.⁴¹ Razlikuje starije avarske i mlađe, staromađarske (tip IV i V) kao i one s utjecajem zapadnog, karolinškog kruga koji karakteriziraju trokutasto oblikovani krakovi, a koji se na spomenutom području pojavljuju tijekom 9. i u 10. stoljeću.⁴² Par stremena bi prema

Considering the formation of the tread, it should be noted that, in the vicinity of Komarno, in southwestern Slovakia, several Avar-period sites were discovered, and the significance of these sites can be seen in the abundance of burials of the deceased with a horse, particularly those at the site of Schiffswerft (Lodenice).³⁵ This circumstance has offered good insight into horse equipment from the end of the 7th century to the beginning of the 9th, with two basic forms of the transition from the arms to the tread distinguished. The first has a narrow rectangular transitional point, while the other is characterized by a very wide, almost square transition, with two perforations on each side of the central rib.³⁶ Our pair of stirrups, according to this classification, would be somewhat closer to the stirrups with the rectangular transition, and the graves in which such stirrups were found are dated, very broadly, from the end of the 7th century and beginning of the 8th to the first half of the 9th century,³⁷ although no direct parallels were found among these examples.

Thus it was necessary to seek analogous examples to our pair outside an Avar or Avar-period context. The fundamental typology for stirrups from the region of Slovakia in the period from the 9th century to the 12th was composed by Ruttkay, who analysed 220 stirrups and distinguished six types on the basis of the shape of the loop and the form of the tread, which are based on earlier forms.³⁸ The stirrups presented as cat. nos. 2.A and 2.B could be determined according to his classification system as type I 1 or I 2 with grooved arms (Fig. 9), which is otherwise a characteristic of stirrups with western provenience, although it should be noted that our examples have smooth arms and are undecorated. Stirrup no. 3 in the catalogue, according to the same classification, would be close to type VI 1.³⁹

After Ruttkay's typology, Z. Měchurová composed a detailed terminology for items of horse equipment,⁴⁰ and subsequently catalogued and analysed all finds of early medieval stirrups gathered to the 1980s from the then Czechoslovakia, most of the examples coming from the Great Moravian fortified sites, placing the finds in six basic types with several variants.⁴¹ She differentiated the earlier Avar and later Early Hungarian types (IV and V), as well as those with influence from the western Carolingian circle, characterized by triangular shaped arms that appeared in the above region during the 9th and 10th centuries.⁴² The pair of stirrups, ac-

35 Trugly 1987; Trugly 1993.

36 Trugly 1993.

37 Trugly 1993, 237. Stremeni s pravokutnim prijelazom u stopalni dio predstavljeni su jednim primjerkom od para stremena iz groba br. 100 i jednim od stremena iz groba br. 133 (žena), kao i pojedinačnim nalazom stremena iz ženskih grobova br. 106 i 134 (Trugly 1993, 240, 248, 279, 282). Grobovi br. 100 i 106 opredijeljeni su u horizont SPA I i datirani u kraj 7. i početak 8. stoljeća, dok je grob br. 134 opredijeljen u SPA IIIa horizont i datiran u najmlađu skupinu grobova s ukopom konja, odnosno vrijeme druge polovine 8. stoljeća (Trugly 1993, 237). Slični primjerci nalaze se i u grobu br. 9 (dijete) te grobu br. 30 (muškarac) (prva polovina 9. st.) ili grobovima s ukopom konja br. 76 i 85 (muškarci) (Trugly 1987, 301, 304, 317, 327).

38 Ruttkay 1976, 353–356, Abb. 74.

39 Ruttkay 1976, Abb. 74.

40 Měchurová 1980.

41 Měchurová 1983, 83, T. I.

42 Měchurová 1983, 67.

35 Trugly 1987; Trugly 1993.

36 Trugly 1993.

37 Trugly 1993, 237. Stirrups with a rectangular transition to the tread section are represented by one example from a pair of stirrups from grave 100 and one of the stirrups from grave 133 (female), as well as individual finds of stirrups from female graves 106 and 134 (Trugly 1993, 240, 248, 279, 282). Graves 100 and 106 are classified to the SPA I horizon and are dated to the end of the 7th century and beginning of the 8th, while grave 134 was classified to horizon SPA IIIa and dated to the latest group of graves with horse burials, or the period of the second half of the 8th century (Trugly 1993, 237). Similar examples were found in grave 9 (child) and grave 30 (male) (first half of the 9th century) or male graves with a horse burial 76 and 85 (Trugly 1987, 301, 304, 317, 327).

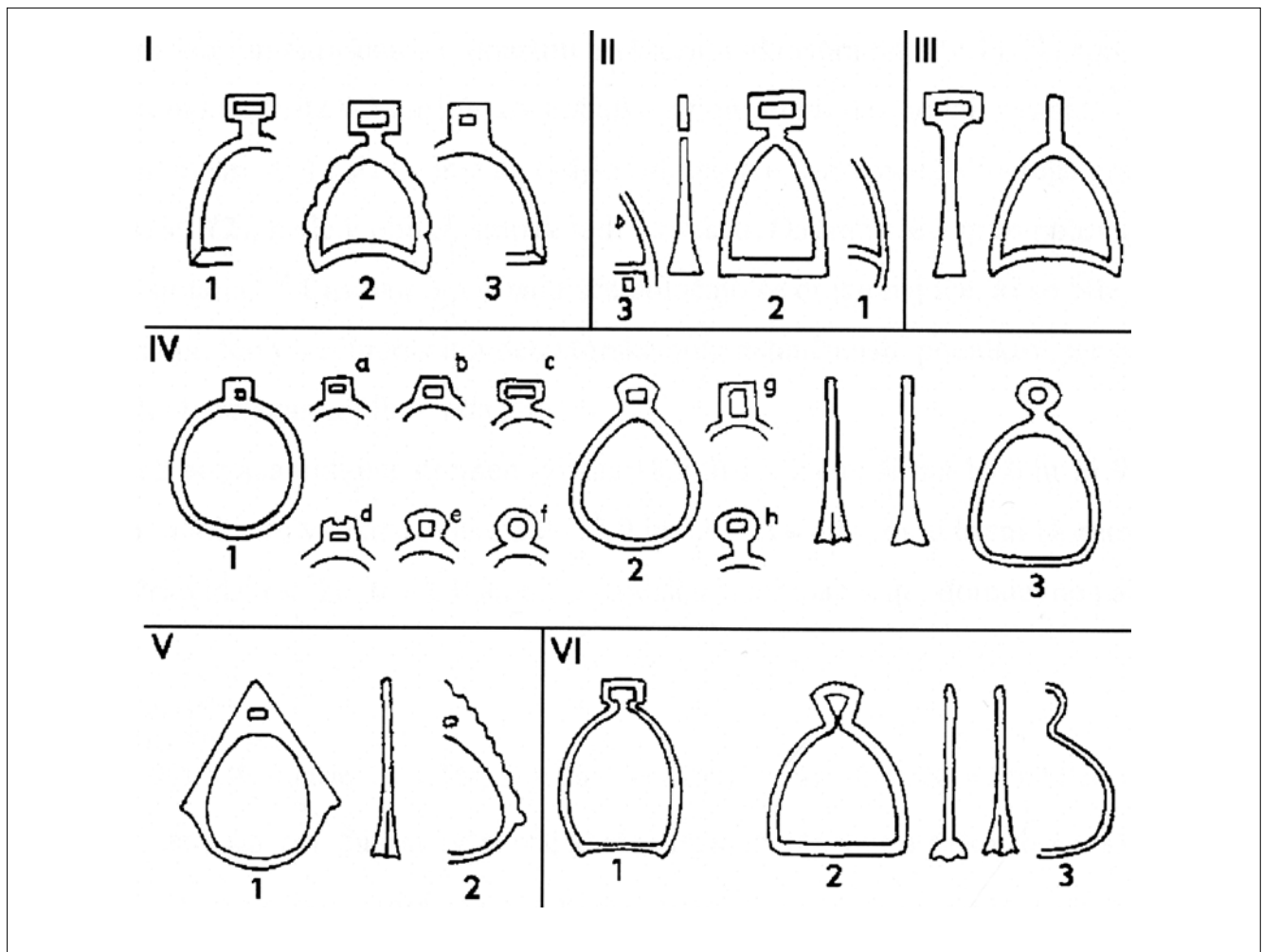
38 Ruttkay 1976, 353–356, Fig. 74.

39 Ruttkay 1976, Fig. 74.

40 Měchurová 1980.

41 Měchurová 1983, 83, Pl. I.

42 Měchurová 1983, 67.



SLIKA 9. Tipologija stremena prema Ruttkayu (Ruttkay 1976, 353, Abb. 74).

FIGURE 9. The typology of stirrups according to Ruttkay (Ruttkay 1976, 353, Fig. 74).

toj tipologiji mogli uvrstiti u varijantu 2 tipa I sa stopalnim dijelom označenim kao A (sl. 10),⁴³ a oblikom su najbliži stremenima s nalazišta Blatnica (sl. 11) i gradišta Sv. Jur pokraj Bratislave (sl. 12) koji su, zajedno s još nekoliko sličnih primjeraka, datirani u prvu polovinu ili sredinu 9. stoljeća.⁴⁴ Měchurová smatra da su stremeni tipa I, varijante 2, datirani u prvu polovinu 9. stoljeća, produkt domaćih majstora velikomoravske države.⁴⁵ Za razliku od naših stremena, oba navedena analogna primjerka u gornjem dijelu imaju ukrašene krakove, a stremen s nalazišta Sv. Jur pokraj Bratislave i prema relativno malim dimenzijama bio bi najbliži našem paru (visina mu je 18 cm, a ukupna širina 11,5 cm, dok je stopalni dio širine 5 cm). S obzirom na veličinu stremena, valja prenijeti razmišljanja nekih autora o tome da su vojnici upotrebljavali veće stremenje u usporedbi s ostalim članovima skupi-

cording to this typology, could be placed in variant 2 of type I, with the tread section marked as A (Fig. 10),⁴³ while in terms of form they are closest to the stirrups from the sites of Blatnica (Fig. 11) and Sv. Jur, near Bratislava (Fig. 12), which, together with another few similar examples, are dated to the first half or middle of the 9th century.⁴⁴ Měchurová considered that stirrups, variant 2 of type I, dated to the first half of the 9th century were produced by local craftsmen of the Great Moravian state.⁴⁵ In contrast to our stirrups, both of the analogous examples cited have decorated arms in the upper section, while the stirrup from the site of Sv. Jur, near Bratislava, would be the closest to our pair in terms of the relatively small dimensions (the height being 18 cm, the total width 11.5 cm, and the width of the tread 5 cm). Considering the size of the stirrups, it should be noted that

43 Měchurová 1983, 67.

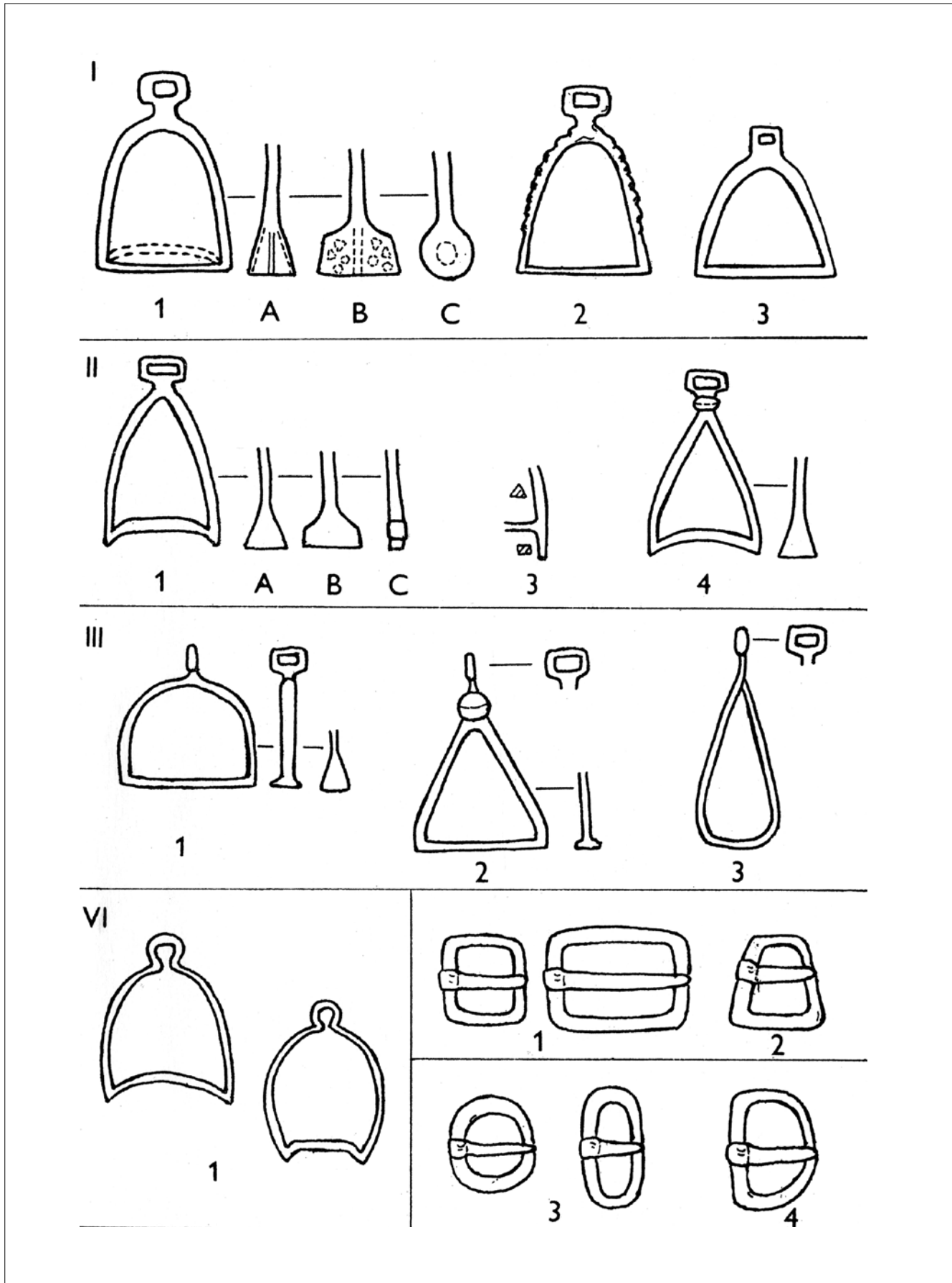
44 Měchurová 1983, 70, T. III: 1, 10.

45 Měchurová 1983, 71.

43 Měchurová 1983, 67.

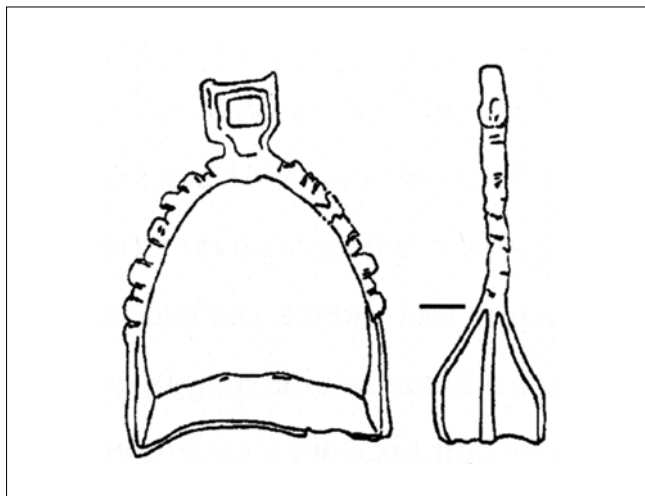
44 Měchurová 1983, 70, Pl. III: 1, 10.

45 Měchurová 1983, 71.



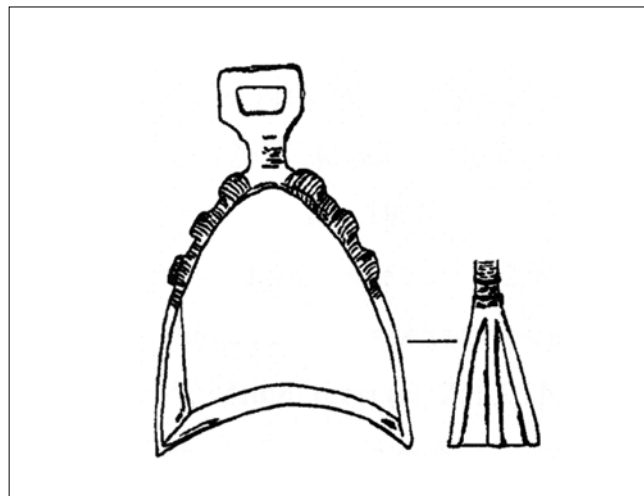
SLIKA 10. Tipologija stremena prema Měchurovoj (Měchurová 1983, 83, T. I).

FIGURE 10. The typology of stirrups according to Měchurová (Měchurová 1983, 83, Pl. I).



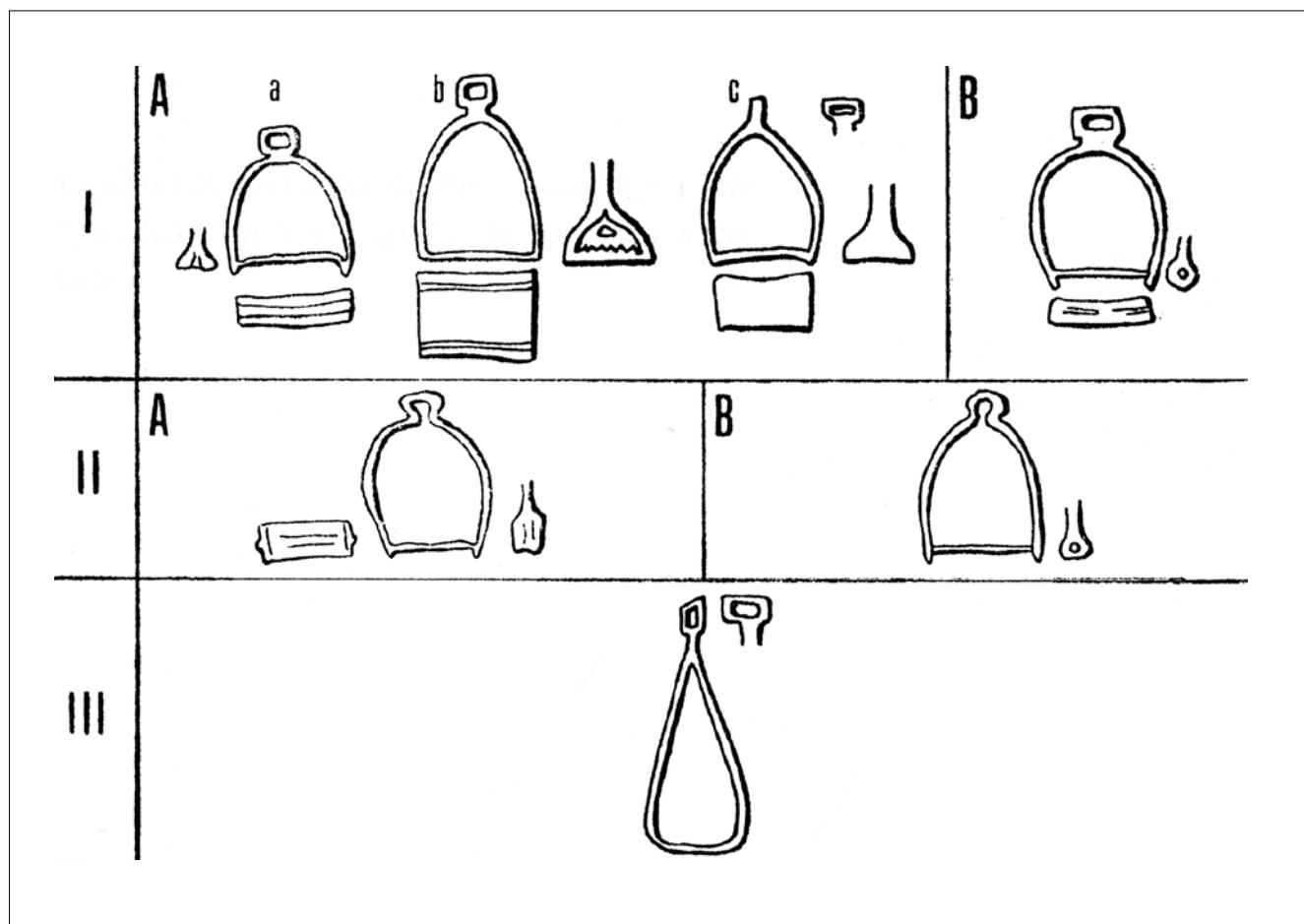
SLIKA 11. Stremen iz Blatnice, Slovačka (Měchurová 1983, 85, T. III: 1).

FIGURE 11. The stirrup from Blatnica, Slovakia (Měchurová 1983, 85, Pl. III: 1).



SLIKA 12. Stremen s gradišta Sv. Jur kraj Bratislave, Slovačka (Měchurová 1983, 85, T. III: 10).

FIGURE 12. The stirrup from the oppidum of Sv. Jur, near Bratislava, Slovakia (Měchurová 1983, 85, Pl. III: 10).



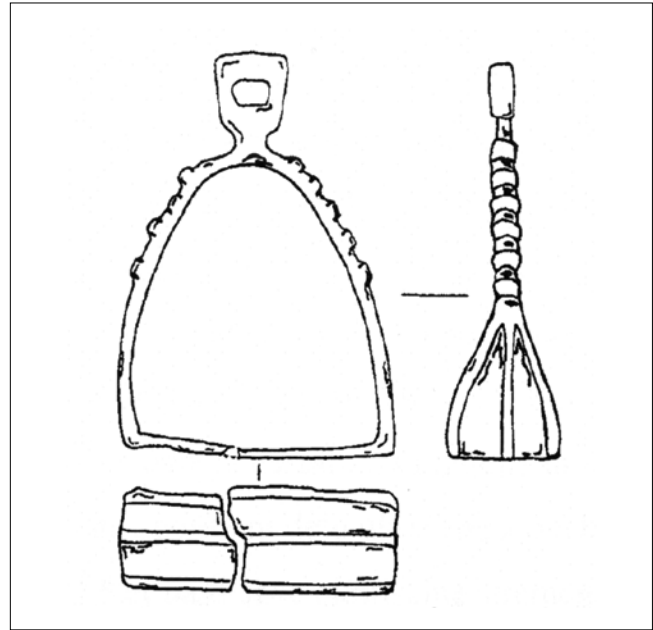
SLIKA 13. Tipologija stremena prema Bartoškovoj (Bartošková 1986, 8, Obr. 2).

FIGURE 13. The typology of stirrups according to Bartošková (Bartošková 1986, 8, Fig. 2).

ne, što im je omogućavalo da pri padu s konja lakše izvuku noge kako ih ne bi životinja vukla za sobom. Nasuprot tomu, poznati su primjeri gdje su žene, djeca i muškarci višeg staleža upotrebljavali stremenje manjih dimenzija.⁴⁶

Obrada depoa željeznih ranosrednjovjekovnih predmeta s područja bivše Čehoslovačke, u razdoblju 8. i 9. stoljeća, navela je A. Bartoškovu na zaključak da se stremeni na ovom području oslanjaju na srednjoazijski prostor, odakle su tijekom 7. i 8. stoljeća s Avarima dospjeli u Karpatsku kotlinu, pa ih dijeli na tri osnovna tipa.⁴⁷ Prema njezinoj klasifikaciji, stremeni kat. br. 2.A i 2.B mogu se zbog kvadratičnog oblika ušice i bočnih krakova, koji u donjem dijelu prelaze u široki stopalni dio, opredijeliti u stremene tipa IAa (sl. 13), karakteristične za vrijeme od kraja 7. i u 8. stoljeće, a početak 9. stoljeća nije isključen. Stremen kat. br. 3 bio bi, s obzirom na drugačiji način oblikovanja ušice kroz koju se provlači remen, bliži njezinu tipu II A, koji je karakteristika nešto starijeg vremena, ali uzevši u obzir neke zatvorene cjeline, prema kojima se datira poradi drugih predmeta u njima, vjerojatno se u upotrebi zadržava do prijelaza sa 8. na 9. stoljeće, a sporadično se može zadržati i nešto kasnije.⁴⁸ Važno je naglasiti da su stremeni tipa I A, a ipak nešto drugačije oblikovanih krakova u gornjem dijelu stremena od našeg para, odnosno više su lučno zaobljeni u gornjem dijelu, dok su naši više trokutastog oblika krakova, kakav je gracilni primjerak (za razliku od našeg pomalo robusnog) s područja Moravske iz Břeclav-Pohanskog⁴⁹ (sl. 14). Taj se primjerak, prema ostalim nalazima, datira unutar 9. stoljeća,⁵⁰ a prema mišljenju J. Vignatiove, na njemu je vidljiv zapadni karolinški utjecaj.⁵¹ S područja Moravske poznata su još dva slična primjerka, ali s ravnim stopalnim dijelom, i to iz Mikulčica.⁵² Navedene moravske primjerke M. Schulze-Dörrlamm datira u 9. stoljeće i naziva ih tipom Esztergom⁵³ prema mađarskom nalazištu, kojeg karakterizira uska pravokutna ušica i široki, ravni stopalni dio.

S područja Slovenije, gdje je poznato četrnaest stremena razvrstanih u sedam tipova, naš par stremena kat. br. 2.A i 2.B bio bi najbliži tipu 2 po klasifikaciji koju je predložila Š. Karo, a koji karakterizira kvadratična ušica i nadsvođeni stopalni dio s tri rebra.⁵⁴ Svi slovenski primjerci ovog tipa većih su dimenzija i ukrašenih krakova, a predstavljeni su trima stremenima s lokaliteta Gradišče nad Bašljem te po dvama stremenima s lokaliteta Sebelje pri Zasipu i Stari grad iznad Celja.⁵⁵ Razdijeljeni su u tri varijante, pri čemu prva varijanta ima veću kvadratnu ušicu, druga manju, pravokutnu, dok treća varijanta ima petlju s pojačanim rubovima. Valja reći da je naš par najbližih varijanti 1, tipa 2 (sl. 15), koji Š. Karo veže uz karolinški, zapadni utjecaj na



SLIKA 14. Stremen iz Břeclav-Pohanskog, Moravska (Vignatiová 1992, 62, Tab. 152: 6).

FIGURE 14. The stirrup from Břeclav-Pohansko, Moravia (Vignatiová 1992, 62, Pl. 152: 6).

some scholars think that soldiers used larger stirrups than the other members of the group, which enabled them to more easily remove their foot from the stirrup if they fell from their horse, so that they would not be dragged. Numerous examples are known where women, children and men of higher status used stirrups of smaller dimensions.⁴⁶

The analysis of hoards of early medieval iron objects from the region of the former Czechoslovakia in the period of the 8th and 9th centuries led A. Bartošková to the conclusion that stirrups in this area are related to the central Asian region, from where they arrived during the 7th and 8th centuries along with the Avars in the Carpathian basin, and she divided them into three basic types.⁴⁷ According to her classification, the stirrups under cat. nos. 2.A and 2.B could be classified as stirrups of type IAa in terms of the quadratic form of the loop and the lateral arms that merge, in the lower section, into a wide tread section (Fig. 13), characteristic of the period from the end of the 7th century into the 8th, while the beginning of the 9th century is also not excluded. Stirrup no. 3 in the catalogue, in terms of the different manner of forming the suspension loop for the strap, would be closer to her type IIA, which is characteristic of a somewhat earlier time, but considering certain closed units according to which other objects in them are dated, it probably remained in use to the turn of the 9th century, and sporadically could also have been retained somewhat later.⁴⁸ It is important to emphasize that stirrups of type

46 Révész 1996, 51; Karo 2003, 81.

47 Bartošková 1986, 8, Obr. 2.

48 Bartošková 1986, 84.

49 Objekt 412, Vignatiová 1992, 62, Tab. 152: 6. Sličan je primjerak pronađen i u objektu 14, Vignatiová 1992, Tab. 8: 2a-b.

50 Bartošková 1986, 81, Obr. 22: 3.

51 Vignatiová 1980, 184, Obr. 4: 2a-c.

52 Měchurová 1983, T. 4: 9-10.

53 Schulze-Dörrlamm 1991, 429-432, Abb. 54.

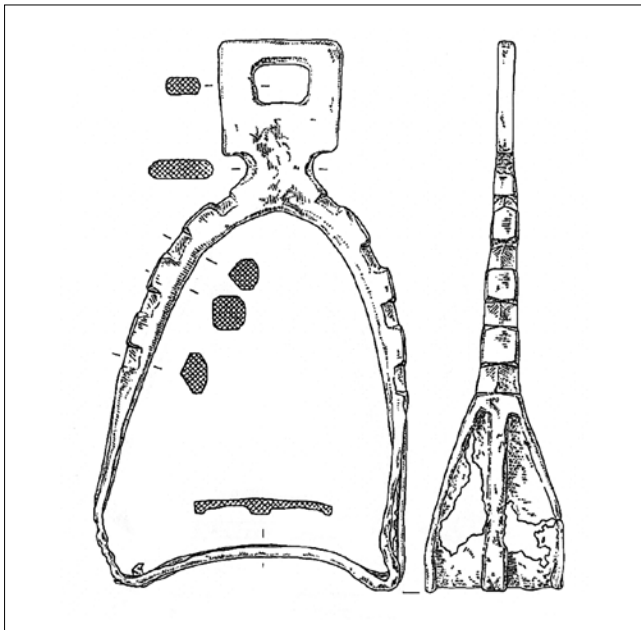
54 Karo 2003, 51, sl. 13.

55 Karo 2004, 167-169, Abb. 3-4.

46 Révész 1996, 51; Karo 2003, 81.

47 Bartošková 1986, 8, Fig. 2.

48 Bartošková 1986, 84.



SLIKA 15. Stremen iz Gradišča nad Bašljem, Slovenija (Karo 2004, 167, Abb. 3: 1).

FIGURE 15. The stirrup from Gradišče nad Bašljem, Slovenia (Karo 2004, 167, Fig. 3: 1).

tlu Slovenije, kako u obliku tako i u funkcionalnosti. Navodi da takvi masivni stremeni s konkavnim stopalnim dijelom ukazuju na to da je konjanik, koji je bio naoružan bojnou sjekirom ili kopljem, trebao čvrst oslonac u sedlu i pribor koji mu omogućuje bolje ovladavanje konjem, a zaključuje da je razmjerno velik broj ukrašenih primjeraka stremena, datiranih u 9. stoljeće iz slovenskih nalazišta, pokazatelj dobro razvijenoga kovačkog zanata u slavenskog stanovništva.⁵⁶

U zaključku valja istaknuti da su našem paru oblikom najbliži stremeni s područja Slovačke, i to s nalazišta Blatnica i gradišta Sv. Jur pokraj Bratislave, koji su datirani u prvu polovinu ili sredinu 9. stoljeća, a koje Měchurova tumači produktom domaćih majstora velikomoravske države. S područja Moravske bliski su im stremeni iz naselja Břeclav-Pohansko, datirani u 9. stoljeće, a prema klasifikaciji Š. Karo za slovenske primjerke, najbliže paralele pronalaze se u stremenu tipa 2, varijante 1 predstavljene primjerkom iz Gradišča nad Bašljem (sl. 15), koji veže uz karolinški, zapadni utjecaj. Za razliku od naših stremena, svim navedenim analognim primjercima, koji se vežu uz zapadnu provenijenciju, gornji su dijelovi krakova ukrašeni, a valja primijetiti i to da, dok su slovenski primjerci nešto većih dimenzija, oni slovački i dimenzijama u potpunosti odgovaraju našem paru.

IAa nonetheless have somewhat differently formed arms in the upper section of the stirrup than our pair, i.e. they have a more rounded arch in the upper section, while ours have more of a triangular shape, such as on the graceful example (in contrast to our slightly robust stirrup) from Břeclav-Pohansko, in the Moravian region (Fig. 14).⁴⁹ This stirrup, in accordance with the other finds, is dated within the 9th century,⁵⁰ and according to J. Vignatiová it exhibits western Carolingian influence.⁵¹ Another two similar examples are known from Moravia, but with a flat tread section, from Mikulčice.⁵² The Moravian examples cited were dated by M. Schulze-Dörrlamm to the 9th century, while she called them the Esztergom type after the Hungarian site,⁵³ characterized by a narrow rectangular loop and a broad straight tread.

Fourteen examples of stirrups classified into seven types are known from Slovenia, and our pair of stirrups (cat. nos. 2.A and 2.B) would be closest to type 2 according to the classification suggested by Š. Karo, characterized by a square loop and an arched tread section with three ribs.⁵⁴ All the Slovenian examples of this type have larger dimensions and decorated arms, and are represented by three stirrups from the site of Gradišče nad Bašljem and two stirrups from the sites of Sebelje, near Zasip, and Stari Grad, above Celje.⁵⁵ They are divided into three variants, where the first variant has a larger square slot, and the second a smaller rectangular slot, while the third variant has a loop with reinforced edges. It should be noted that the closest to our pair is variant 1 of type 2 (Fig. 15), which Š. Karo relates to Carolingian, western influence on Slovenian territory in both form and function. She noted that such massive stirrups with a concave tread section indicate that the rider, who was armed with a battle-axe or a spear, required firm support in the saddle and equipment that would enable better mastery of the horse, and concluded that the relatively large number of decorated examples of stirrups dated to the 9th century from Slovenian sites shows a well-developed blacksmith craft among the Slavic population.⁵⁶

Finally, it should be noted that our pair of stirrups are closest in form to the stirrups from the region of Slovakia, specifically the sites of Blatnica and Sv. Jur, near Bratislava, which are dated to the first half or middle of the 9th century, and which Měchurova interpreted as the product of local master smiths of the Great Moravian state. From the region of Moravia, there are close analogies in the stirrups from the settlement of Břeclav-Pohansko dated to the 9th century; and, according to the classification of Š. Karo for Slovenian examples, the closest parallels can be found in stirrup type 2 variant 1, as represented by the example from Gradišče nad Bašljem (Fig. 15), related to a western, Carolingian influence. In contrast to our stirrups, on all the analogous examples cited related to a western provenience, the upper parts of the arms are decorated; and it should also be noted that, while

56 Karo 2004, 167–169, 171, Abb. 3–4.

49 Object 412, Vignatiová 1992, 62, Pl. 152: 6. A similar example was also found in object 14, Vignatiová 1992, Pl. 8: 2a–b.

50 Bartošková 1986, 81, Fig. 22: 3.

51 Vignatiová 1980, 184, Fig. 4: 2a–c.

52 Měchurová 1983, Pl. 4: 9–10.

53 Schulze-Dörrlamm 1991, 429–432, Fig. 54.

54 Karo 2003, 51, Fig. 13.

55 Karo 2004, 167–169, Fig. 3, Fig. 4.

56 Karo 2004, 167–169, 171, Fig. 3, Fig. 4.

Pogledamo li oblikovne, funkcionalne i ukrasne detalje na spomenutim analognim primjercima, iako naša dva stremena pokazuju slične značajke u oblikovanju, ali i u načinu izrade, gdje se valja osvrnuti na način spajanja krakova kod vrata oba stremena, oni nisu u potpunosti jednaki. Prije svega, to se odnosi na zakrivljenost linija krakova, gdje kod stremena kat. br. 2.A (T. 2) pokazuje više trokutastu formu, dok je kod stremena kat. br. 2.B (T. 3) više lučno zaobljena. Također, potrebno je istaknuti da je stremen kat. br. 2.A nešto većih dimenzija, odnosno širi mu je stopalni dio, ali i više udubljen prema unutra. Okolnost da par stremena nije u potpunosti jednakog izgleda nije neobična jer su predmeti rađeni rukom, odnosno pojedinačno kovani, pa su odstupanja takve vrste uobičajena. Neznatna razlika u dimenzijama također nije nepoznata kod stremena koji se pojavljuju u paru. Primjerice, u staromađarskim vojničkim grobovima poznati su primjeri gdje je stremen, koji dolazi na lijevu stranu, nešto manji kako bi se jahač lakše i sigurnije mogao popeti na konja, dok je stremen, koji dolazi na desnu stranu, bio nešto većih dimenzija. Osim pojave stremena u paru s neznatnim razlikama u dimenzijama, česta je pojava i različitih oblika stremena u istoj grobnoj cjelini, kakav je slučaj, primjerice, u sva tri groba s ukopom konja iz Brodskog Drenovca. Prema nekim autorima, razlog tomu je gubitak ili uništenje jednog stremena iz para i njegov nadomjestak drugačijim oblikom, dok drugi zastupaju mišljenje da je razlika u veličini ciljana zbog zajahivanja konja s određene strane, kako je to već spomenuto.⁵⁷

Izgled ušice i prijelaz u vrat te nadalje način spajanja krakova, vidljiv na obje strane oba masivna stremena (kat. br. 2.A i 2.B), kako je gore spomenuto, omogućuje neke zaključke o samom načinu njihove izrade. Krakovi su izvedeni u jednom komadu, a oba stremena imaju tzv. pozitiv (a strana) i negativ (b strana), ili ispupčenu (a) i udubljenu (b) stranu spoja dvaju krakova kao posljedicu kovanja, odnosno spajanja krakova vjerojatno zakovicom (?) (T. 2: 2Ab; T. 3: 2Bb). Spojevi su im vidljivi u gornjem dijelu, u blizini vrata, pa se čini kao da je prvo ušica prikovana na jedan kraj kraka, koji se nadalje proteže u trokutastoj formi do stopalnog dijela, a potom vraća prema ušici, gdje se pomoću zakovice (?) spaja s početnim krakom s gornje strane (a strana; T. 2: 2Aa; T. 2: 2Ba). Na samom su vratu vidljivi tragovi kovanja koji pak upućuju na zaključak da je ušica bila izrađena možda na isti način kao i ušica u obliku petlje iz jednog komada, a potom je čitava raskovana na način da su dva dijela petlje na najužem dijelu spojena u jednu cjelinu koja u konačnici čini vrat stremena.

Izgled ovih masivnih stremena, kao i promišljanja o načinu i tijeku same izrade predmeta, pokazuje donekle nevještu ruku i svojevrstan nemaran odnos prema izgledu konačnog proizvoda. Čini se da su predmeti trebali zadovoljiti funkcionalnost, a dorada i finoća izrade, kao i sam izgled, u drugom su planu. S obzirom na funkcionalnost, uočene razlike u oblicima stremena u stopalnom dijelu ili oblikovanju krakova tijekom ranoga srednjeg vijeka vežu se uz način jahanja i vrstu obuće (sl. 7). Naime, okrugli i potkovasti oblici avarskih stremena povezuju se s istoč-

the Slovenian examples have somewhat larger dimensions, the dimensions of the Slovakian examples correspond completely to our pair.

If the formal, functional, and decorative detail on the above analogous examples are viewed, it should be noted that, although our two stirrups exhibit similar characteristics in form and also in workmanship, attention should be paid to the manner of joining the arms on the neck of both stirrups, where they are not completely identical. This refers primarily to the curved line of the arms, which on stirrup cat. no. 2.A (Pl. 2) exhibits more of a triangular form, while it had more of a rounded arch on stirrup cat. no. 2.B (Pl. 3). It should also be emphasized that stirrup cat. no. 2.A has somewhat greater dimensions, i.e. the tread section is wider, but also more concave towards the inside. The fact that the pair of stirrups are not completely identical in appearance is not unusual, as they are products made by hand, individually forged, and such discrepancies are normal. A slight difference in size is also not unknown for stirrups that appear in pairs. In early Hungarian warrior graves, for instance, examples are known where the stirrup for the left side was somewhat smaller so that the rider could more easily and securely mount the horse, while the stirrup for the right side was of somewhat greater dimensions. In addition to the appearance of pairs of stirrups with slight differences in size, frequently different forms of stirrups appear in the same grave unit; such is the case, for example, in all three graves with horse burials at Brodski Drenovac. According to some authors, the reason for this was the loss or destruction of one stirrup from a pair and its replacement with another form, while others consider that the difference in size was deliberate because of mounting from a given side, as has already been mentioned.⁵⁷

The appearance of the slot and its transition to the neck, along with the manner of joining the arms, visible on both sides of both massive stirrups (cat. nos. 2.A and 2.B), as was mentioned above, enable certain conclusions about the very manner of their production. The arms were made in a single piece, and both stirrups have a positive or front (a) side and a negative or back (b) side, or a protrusion (a) or depression (b) side at the juncture of the two arms as a result of forging, or rather joining the arms, most probably with a rivet (Pl. 2: 2Ab; Pl. 3: 2Bb). The joins are visible in the upper section near the neck, and it seems that first the loop was forged onto one end of the bow, which further extended in a triangular form to the tread section, and then returned up to the loop, where, again with the aid of a rivet (?), it was joined to the starting arm on the upper (a) side (Pl. 2: 2Aa; Pl. 3: 2Ba). Traces of forging are visible on the neck itself, which indicates that the slot-like loop had perhaps been manufactured in the same way as the simple loop, from one piece, and then the whole thing was reforged so that the two parts of the loop in the narrowest place were joined into a single unit that composed the neck of the stirrup.

57 Garam 1995, 358; Zábajník 2009, 54.

57 Garam 1995, 358; Zábajník 2009, 54.

nim dijelovima Europe, odnosno s nomadskim narodima koji su vjerojatno imali visoko postavljena koljena i mekanu obuću, dok su stremeni trokutastog oblika s ravnim ili konkavnim stopalnim dijelom karakteristika zapadne Europe, gdje su noge bile više ispružene niz trbuh konja i upotrebljavala se obuća tvrdih potplata, a sve u funkciji novih tipova oružja, odnosno novih načina ratovanja.⁵⁸ Je li ovaj par stremena izrađivao neki lokalni majstor kovač, možemo prema opisanim detaljima, koji ukazuju na tijek izrade, samo naslućivati. Nedostatak istih ili sličnih analognih primjeraka na užem i širem prostoru u to vrijeme ukazivao bi na to da naš par nije produkt radionice ili radioničkog kruga, a bliže paralele u osnovnom obliku, kao predmetu s određenom funkcijom, ali ne i s raznolikim ukrasima na stremenju s područja Slovenije, ali i šire, ukazuju na eventualne predloške koji su poslužili majstoru kovaču za izradu stremenja. Iz izloženoga vidljivo je da su i žvale mogle biti u upotrebi u istom vremenu te, iako im paralele nalazimo u tzv. nomadskim avarodobnim žvalama, moguće je da su se tradicije toga vremena zadržale i kasnije. Zbog nejasnih okolnosti nalaza, nije moguće sa sigurnošću zaključiti jesu li bile dio opreme iste jedinice, no njihov pronalazak, neposredno jedno za drugim prigodom eksploatacije šljunka kada i para stremena, sugerirali bi takav kontekst. Ako prihvatimo i tu mogućnost, možemo nadalje pomišljati da su predmeti produkt istih ruku. U prilog tom razmišljanju idu i detalji nevjeste izrade simetričnih dijelova žvala koji imaju vidljivih odstupanja u dimenzijama i samom oblikovanju i izgledu (kat. br. 1; T. 1).

Sagledamo li vrijeme u kojem su predmeti mogli biti u upotrebi na ovom prostoru, valja ponoviti da iz šljunčare Jegeniš potječu dva koplja s krilcima. Prigodom njihove objave opredijeljeni su u vrijeme oko 800. godine, odnosno na prijelaz u 9. stoljeće,⁵⁹ ali novije analize, temeljene na metričkim podacima i tehnološkim obilježjima, ukazuju da bi drugo, usko koplje s krilcima moglo biti produkt starijeg vremena, tj. da je iz prve polovine ili sredine 8. stoljeća.⁶⁰ Ovaj značajan vremenski raspon, u kojem je ova vrsta oružja mogla nastati, možda će u budućnosti uroditi i novim zaključcima o vremenu upotrebe na području gdje je pronađeno, što na ovom stupnju spoznaja ostavljamo otvorenim. Činjenica da se par stremena prema svojim osnovnim značajkama može vezati prije uz razdoblje prve polovine 9. stoljeća potiče na razmišljanja i traži objašnjenje i odgovore na pitanja tko je mogao izraditi te predmete i u čijoj su bili upotrebi. Je li to bio pripadnik domicilnog stanovništva ovog dijela Podravlja, koji tijekom prve polovine 9. stoljeća ima neke avarodobne elemente (žvale i stremen kat. br. 3), ali i upotrebljava novo izrađene predmete pod uplivom zapadnih utjecaja (par stremena kat. br. 2.A i 2.B)? Na ovom stupnju spoznaja, bez jasnog konteksta nalaza, ne možemo donositi konačne zaključke. Također, važno je napomenuti da je rijeka Drava u dijelu svoga toka tijekom povijesti često meandrirala pa čak i mijenjala tok. Tako je na preciznim jozefinskim kartama s kraja 18. stoljeća (1783.–1784.) prikazano korito rijeke Drave, pozicionirano sjeveroistočno od Đelekovca, bliže samome naselju, tik uz potok Malu Dravicu,⁶¹ današnju Mrtvicu. U vrijeme

The appearance of these massive stirrups, as well as considerations about the manner and process of their manufacture, displays a somewhat unskilled hand and an almost careless attitude to the appearance of the final product. Seemingly the primary necessity was functionality, while any refinement in the workmanship and even appearance were evidently less important. In terms of functionality, the noted differences in the forms of stirrups in the tread section or the shape of the arms during the early medieval period was related to the manner of riding and type of footwear (Fig. 7). The circular and horseshoe-shaped forms of Avar stirrups are connected with the eastern parts of Europe, to the nomadic peoples who probably placed their knees higher and had soft footwear, while the stirrups of triangular shape with a flat or concave tread section were characteristic of western Europe, where the legs were farther extended along the belly of the horse, and where footwear with hard soles was used, all in the function of new types of weapons or new manners of warfare.⁵⁸ On the basis of the details described that indicate the process of production, it can only be conjectured whether this pair of stirrups had been manufactured by some local blacksmith. The lack of identical or similar analogies in both the immediate and broader area at that time would indicate that our pair was not the product of a workshop or a workshop circle, while close parallels in the basic form, as an object with a distinct function, but not in terms of the varied decorations on stirrups from Slovenia and beyond, would indicate possible models that might have served the master blacksmith in the manufacture of these stirrups. It can be seen from the above that the bit could also have been in use in the same period, and although parallels can be found in the so-called nomadic-Avar-period bits, it is possible that the traditions of this time were also retained later. The unclear circumstances of the find make it impossible to determine with certainty whether they were part of the equipment of the same individual, but their discovery, one immediately after the other during gravel extraction, at the same time as the pair of stirrups would suggest such a context. If such a possibility is accepted, then we can consider further that the objects may have been manufactured by the same hands. This would be supported by the details of the unskilled workmanship of the symmetrical parts of the bit that have visible discrepancies in the dimensions as well as the formation itself and the appearance (cat. no. 1; Pl. 1).

If the period in which these objects could have been in use in this area is considered, it should again be noted that two winged axes also come from the Jegeniš gravel pit. When they were first published, they were assigned to the period around 800 AD, or to the turn of the 9th century,⁵⁹ but more recent analyses based on metrical data and technological features indicate that the second, long spearhead with wings could have been produced in an earlier period, namely the first half or middle of the 8th century.⁶⁰ This significant span of time in which this type of weapon could have originated will perhaps result in new conclusions about

58 Ruttkay 1976, 353; Karo 2003, 23.

59 Sekelj Ivančan 2004; Sekelj Ivančan 2007.

60 Demo 2011, 72.

61 Valentić, Horbec, Jukić (eds.) 2004, sekcija 16.

58 Ruttkay 1976, 353; Karo 2003, 23.

59 Sekelj Ivančan 2004; Sekelj Ivančan 2007.

60 Demo 2011, 72.

crtanja spomenutih karata, mjesto današnje šljunčare Jegeniš, iz čijeg središta potječu arheološki nalazi, bilo je smješteno sjeverno od Drave koja je tekla zapadnim rubom današnjeg Jegeniša ili Jagnežda (sl. 1). Na pitanje, je li slična situacija bila i više stoljeća ranije, ne možemo odgovoriti, ali bismo spomenutu mogućnost trebali imati u vidu pri interpretaciji nalaza. Neovisno s koje je strane rijeke bilo ovo područje, predmeti su mogli biti u upotrebi tijekom franačko-slavenskog saveza u borbi s Avarima na prijelazu sa 8. u 9. stoljeće ili na početku 9. stoljeća na ovim prostorima, u kojima je zasigurno značajnu ulogu na strani zapadne vojske imalo i domicilno stanovništvo. Ove je nalaze moguće vezati i uz nešto kasnije vrijeme, kada prostor između Save i Drave postaje poprištem novih, ovog puta franačko-slavenskih sukoba (Ljudevit Posavski /810.–823./ i Ratimir /829.–838./) što se, s obzirom na sve izneseno u svezi para stremena, čini vjerojatnim. Ne treba odbaciti ni naredno mirnije razdoblje (mir u Paderbornu, 845. godine), kada područje dolazi pod upravu donjopanonskog kneza Pribine (do 861. godine) i kada je bio znatno veći utjecaj sa zapada. U tom kontekstu valja istaknuti da se, prema pronađenim arheološkim predmetima,⁶² može zaključiti kako, na određeni način (s obzirom na to da nije poznat njihov intaktni položaj), zaposjedanje položaja na nalazištu šljunčare Jegeniš kontinuirano. Slično je i s područjem oko Preloga u Međimurju, gdje su, uz poznate avarodobne nalaze iz šljunčare, na nedalekoj cirkovljanskoj šljunčari Diven pronađeni karolinški mač i stremen (iz razorenog groba?) iz prve polovine 9. stoljeća,⁶³ a sličnost pokazuje i prostor Brodskog Drenovca s poznatim ranosrednjovjekovnim grobljem na položaju Plana iz prve polovine 9. stoljeća, ali i slučajnim nalazom mača tipa X (također iz razorenog groba?) iz nešto kasnijeg vremena.⁶⁴ Iako su do nas dospjeli samo tragovi onoga što se zbivalo na ovim prostorima početkom pa i tijekom 9. stoljeća, nameće se još jedno pitanje – možemo li na temelju iznesenih triju primjera prepoznati obrasce ponašanja, odnosno obrasce/razloge odabira prostora/položaja i njegova kontinuiranog zaposjedanja s različitim značajkama i detaljima materijalnih ostataka u navedenom razdoblju? Odgovore na to pitanje morat ćemo pričekati do nekih novih arheoloških nalaza iz poznatog konteksta pronalaska, odnosno nalaza prikupljenih arheološkim iskopavanjima.

Posljednji predmet, koji se ovdje donosi, stremen je kat. br. 4 (T. 5). Ovaj oblik stremena, tzv. kruškolike forme sa zadebljanjima na prijelazu krakova u širi stopalni konveksno oblikovan dio, blizak je primjerima poznatima s područja Mađarske, gdje su uglavnom ukrašenih, tauširanih krakova. L. Kovács ih naziva stremenima trapezaste forme zbog specifičnoga trapezastog oblika ušice.⁶⁵ Na području Mađarske većinom potječu iz grobova gdje su datirani od druge polovine 10. stoljeća i u 11. stoljeće.⁶⁶ Iako se staromađarski stremeni navode kao svojevrsne paralele, u odnosu na naš primjerak valja ustanoviti da postoje i neznatne razlike. Osim što nema ukrašene krakove, ušica našeg primjerka kvadratnog je oblika, za razliku od brojnih primjeraka s trapezoidnom

the period of its use in the areas where the spears were found, which remains open at this stage of knowledge. The fact that the pair of stirrups, in accordance with their basic characteristics, should rather be tied to some time in the first half of the 9th century encourages considering and seeking an explanation and answers to the questions of who could have manufactured these objects and who used them. Was it a member of the local population of this part of the Drava basin, which during the first half of the 9th century had certain Avar period elements (the bit and stirrup cat. no. 3), but also utilized newly manufactured products under the impact of western influences (the pair of stirrups cat. nos. 2.A and 2.B)? Given the current state of knowledge, without a clear context for the finds, no final conclusions can be drawn.

It is also important to note here that throughout history the River Drava has often meandered and even changed its course in certain sections. On the very precise maps made during the reign of the Emperor Joseph at the end of the 18th century (1783–1784), the river bed of the Drava was shown as northeast of Đelekovec, near the settlement itself, next to the Mala Dravica stream,⁶¹ the present-day Mrtvica. At the time this map was drawn, the location of the present Jegeniš gravel pit, whose central section has been producing archaeological finds, was located to the north of the River Drava, which flowed along the western edge of the present Jegeniš or Jagnežde (Fig. 1). The question of whether the situation had been the same several centuries earlier cannot be answered, but the possibility should be kept in mind when interpreting the finds. Regardless of the position, on one or the other side of the river, the objects could have been in use during the Frankish-Slavic alliance in this region in the conflict with the Avars at the transition from the 8th to the 9th centuries, or at the very beginning of the 9th century, in which a significant role was certainly played by the local population on the side of the western army. These finds can also be related to a somewhat later period, when the area between the Sava and Drava rivers became the scene of a new conflict, this time between the Franks and the Slavs (Ljudevit Posavski /810–823/ and Ratimir /829–838/), which seems likely, considering all that has been noted in connection with the pair of stirrups. Even the following peaceful period (the treaty of Paderborn, 845 AD) should not be rejected, when this region came under the reign of the Lower Pannonian Prince Pribina (to 861 AD) and when the influence from the west was considerably greater. In this context it should be emphasized that, according to the archaeological objects discovered,⁶² it can be concluded that, in a certain manner (considering that their intact position is not known), the occupation of the position at the site of the Jegeniš gravel pit was continuous. The same is true for the region around Prelog in the Međimurje region, where, along with well-known Avar-period finds from a gravel pit, at the nearby Diven gravel pit in Cirkovljan, a Carolingian sword and stirrup (from a destroyed grave?) from the first half of the 9th cen-

62 Sekelj Ivančan 2004, 120, 122.

63 Tomičić 1984, 212–215, sl. 6–7.

64 Milošević (ed.) 2000, 88, II. 7.

65 Kovács 1986b, 204–223.

66 Kovács 1986a, 107, kep. 9: A; 109, kep. 11; Kovács 1996, 316, Fig. 5.

61 Valentić, Horbec, Jukić (eds.) 2004, section 16.

62 Sekelj Ivančan 2004, 120, 122.

ušicom, čija oblikovna jednoobraznost navodi na zaključak o produkciji iste radionice ili radioničkog kruga.

Iz vidljivih detalja na našem primjerku i njegova izgleda, može se zaključivati o načinu izrade. Čini se da je napravljen od tri zasebna dijela. Jedan čini stopalni dio, drugi krakove, a treći ušicu. Dio, vidljiv kao ispupčeno kvadratično zadebljanje na oba kraka, čini se kao mjesto spoja stopalnog dijela i krakova, a na mjestu gdje krakovi prelaze u vrat uočljivi su tragovi kovanja u vidu naknadnog spajanja ušice na ostatak stremena (T. 5: 4a). Ovi su elementi bliži primjerku stremena koji potječe s nepoznatog nalazišta na području Poljske. Primjerak je pohranjen u Arheološkome muzeju u Wrocławu. Świętosławski ga je opredijelio u svoj tip II, varijantu A, koju datira u kraj 10. i početak 11. stoljeća,⁶⁷ a slični su primjeri poznati, osim s područja Poljske, i na području Rusije, Slovačke, Rumunjske, no ima ih i u Skandinaviji.

S obzirom na vrijeme upotrebe stremena kat. br. 4 i iznesene analogije, Muzeju grada Koprivnice poklonjen je 1969. godine dvosjekli, oštećeni mač, bez jabučice s jednoručnim oštećenim rukohvatom.⁶⁸ Mač također potječe iz šljunčare Jegeniš, a opredijeljen je s obzirom na jednostavnu nakrnicu romboidnog oblika, kao mač tipa S prema Petersonovoj klasifikaciji, specifičnu za razdoblje 10. stoljeća. Ž. Demo stavlja mač iz Jegeniša u vrijeme druge polovine 10. stoljeća iako se oni na širem prostoru, koji uključuje područje Norveške i Danske, ali i Poljske, Mađarske i Ukrajine, pojavljuju i tijekom prvih godina 11. stoljeća. Nadalje, veže ga uz mađarske prodore u srednju i zapadnu Europu preko sjeverne Podravine,⁶⁹ a u tom kontekstu valja promatrati i pojavu stremena kat. br. 4 na ovim prostorima.

Sumirajući izneseno, ovdje obrađeni predmeti iz šljunčare Jegeniš, koji pripadaju dijelovima opreme konja, pokazuju oblikovnu raznolikost i različite utjecaje koji tijekom ranoga srednjeg vijeka prodiru na ovaj prostor. S jedne strane, riječ je o predmetima čije paralele većinom pronalazimo u grobovima s ukopom konja s područja koja su nastanjivali Avari (žvale kat. br. 1 i stremen s petljom kat. br. 3), a s druge strane, vidljivi su detalji u oblikovanju para stremena (kat. br. 2.A i 2.B) koji se mogu prepoznati kao upliv utjecaja iz zapadnijeg prostora prije svega velikomoravskog područja, kao i utjecaji s područja današnje Slovenije tijekom prvih desetljeća 9. stoljeća. Spomenuti novi nalazi, zajedno s ranije objavljenim značajnim arheološkim predmetima iz iste šljunčare, od kojih ovdje valja spomenuti dva ranokarolinška koplja s krilcima, kao i nalaze ostataka lubanje muškarca, žene i djeteta te dviju donjih vilica konja, dodatno učvršćuje ranije iznesene zaključke o postojanju groblja na ovome mjestu iz vremena druge polovine 8. i 9. stoljeća, nepovratno uništenog eksploatacijom šljunka. Odras pak kasnijih povijesnih zbivanja u drugoj polovini 10. i početkom 11. stoljeća ogleda se u kruškolikom stremenu sa zadebljanjima, čije podrijetlo i utjecaje, zajed-

tury were found.⁶³ Similarities are also exhibited by the Brodski Drenovac region with a well-known early medieval cemetery at the site of Plana from the first half of the 9th century, and also a chance find of a type-X sword (also from a destroyed grave?) from a somewhat later period.⁶⁴ Although only traces of what occurred in this region during the 9th century, and at its beginning, have reached us, yet another question arises as to whether a pattern of behaviour can be recognized on the basis of the three examples presented, i.e. the patterns/reasons for the choice of an area/position and its continued settlement with various characteristics and details of the material remains in a given period. Answers to these questions will have to wait until new archaeological finds are known from a solid context of discovery, in other words items collected through archaeological excavations.

The last object to be presented here is stirrup no. 4 in the catalogue (Pl. 5). This form of stirrup, the so-called pear-shaped form with side-bosses (nodules) at the transition from the arms to the widened, convex tread section, is close to examples known from Hungary, where the arms are primarily decorated with inlay. L. Kovács called them trapezoidal stirrups because of the specific trapezoidal form of the suspension loop.⁶⁵ In Hungary most of them come from graves, where they are dated from the second half of the 10th century and into the 11th century.⁶⁶ Although the Early Hungarian stirrups are cited as a parallel, it should be noted that, in relation to our example, insignificant differences exist. In addition to lacking decorated arms, the loop of our example is rectangular in shape, in contrast to the numerous examples with trapezoidal loops whose formal uniformity suggests a conclusion about production by the same workshop or workshop circle.

Conclusions can be made about the manner of manufacture from the visible details on our example and its appearance. It seems to have been made from three separate parts: the tread section, the bow and the suspension loop. The part visible as a protruding square boss on both arms appears to be the join of the tread section and the bow, while traces of forging can be seen where the arms pass into the neck, showing the later joining of the suspension loop to the rest of the stirrup (Pl. 5: 4a). These elements are close to a stirrup that comes from an unknown site in Poland, in the Archaeological Museum in Wrocław. Świętosławski classified it as his type II, variant A, which he dated to the end of the 10th century and beginning of the 11th,⁶⁷ and similar examples are also known from Russia, Slovakia, Romania, and even from Scandinavia.

Considering the period of use of stirrup no. 4 and the analogies cited for it, it should be noted that in 1969 the Municipal Museum of Koprivnica was given a damaged double-edged sword, without a pommel but with a damaged one-handed grip.⁶⁸ The sword also came from the Jegeniš gravel pit, and on the basis of the

67 Świętosławski 1990, 39–40, 91–92, kat. br. 11.

68 Demo 1984, 212, 216–218, T. 1: 1.

69 Demo 1984, 234.

63 Tomičić 1984, 212–215, Fig. 6–7.

64 Milošević (ed.) 2000, 88, II.7.

65 Kovács 1986b, 204–223.

66 Kovács 1986a, 107, Fig. 9: A; 109, Fig. 11; Kovács 1996, 316, Fig. 5.

67 Świętosławski 1990, 39–40, 91–92, cat. no. 11.

no s ranije pronađenim mačem tipa S, valja povezati s istočnim i sjeveroistočnim područjima jer se paralele stremenu kat. br. 4 uz neznatna odstupanja pronalaze u staromađarskim grobovima, ili još bliže analogije sa sjevernijih područja, odnosno teritorijem današnje Poljske, tj. vezati ih uz mađarske prodore prema zapadu kroz ovaj dio Podravine u tome razdoblju.

Sagledavajući uži i širi prostor sjeverne Podravine, dosadašnje spoznaje upućuju na znatan intenzitet zaposjedanja ovog prostora uz rijeku Dravu tijekom više stoljeća ranoga srednjeg vijeka, bilo zbog pogodnog prelaska preko rijeke na ovome mjestu ili zbog trajnijeg naseljavanja.

simple cross guard of rhomboid shape it was classified as an S-type sword, according to Peterson's typology, which is specific to the period of the 10th century. Željko Demo placed the sword from Jegeniš in the second half of the 10th century, although in their broader area of distribution, which includes Norway and Denmark, along with Poland, Hungary and Ukraine, they also appear in the first years of the 11th century. It is considered connected with the Hungarian invasions of central and western Europe through the northern Drava valley,⁶⁹ and this context should also be considered for the appearance of stirrup no. 4 in this area.

In summation, it should be noted that the objects from the Jegeniš gravel pit analysed here, which consist of items of horse equipment, exhibit varieties of form and different influences that penetrated into this area during the early medieval period. On the one hand these are objects whose parallels can mostly be found in graves with horse burials from the areas settled by the Avars (bit cat. no. 1, and stirrup with a loop cat. no. 3), while on the other hand details are visible in the formation of a pair of stirrups (cat. nos. 2.A and 2.B) that can be recognized as influences from more western areas, particularly the Great Moravian region, as well as influences from the area of present-day Slovenia during the first decades of the 9th century. The new finds cited, together with previously published archaeological objects from the same gravel pit – including two early Carolingian winged spears, as well as finds of parts of the skulls of a man, woman and child and two lower jawbones of horses – further strengthen earlier conclusions about the existence of a cemetery at this spot from the period of the second half of the 8th century and the 9th century, irretrievably destroyed by gravel extraction. A reflection of later historical events in the period of the second half of the 10th century and first years of the 11th can be seen in the pear-shaped stirrup with side bosses, whose provenience and influences, together with the earlier discovered S-type sword, should be related to eastern and northeastern regions, as parallels to stirrup no. 4, with insignificant differences, can be found in early Hungarian graves, or even closer analogies with more northerly areas, in present-day Poland, or connected with the Hungarian penetrations towards the west through this part of the Drava river valley in this period.

Considering the narrow and broader area of the northern Drava river basin, the present knowledge indicates a considerable intensity of occupation of this area along the Drava throughout several centuries, either because of an accessible ford across the river at this site or because of more permanent settlement.

68 Demo 1984, 212, 216–218, Pl. 1: 1.

69 Demo 1984, 234.

KATALOG**CATALOGUE****1. Žvale (T. 1)**

Jednostavne dvodjelne, metalne kovane žvale, sastavljene od dva jednaka dijela, kvadratnog presjeka, koji se na sredini spajaju na način da unutarnje petlje na krajevima ulaze jedna u drugu. Na vanjskim stranama žvala nalaze se dvije uzastopne okrugle ušice, unutarnje i vanjsko oko. Kroz unutarnje, veće oko prolaze prečke koje su u središnjem dijelu kvadratičnog presjeka, a na krajevima spljoštene. Kroz vanjsko, manje oko, prolaze karike nepravilnog oblika na koje se sa svake strane veže povodac. Na sredini prečki, na mjestu gdje su kvadratnog presjeka, nalazi se pravokutna izbočina/uho, kroz koju prolazi obrazni remen. Te su izbočine/uha nejednakih dimenzija, a umetnute su u dvije perforacije koje su vidljive na svakoj prečki.

Dimenzije: ukupna dužina žvale 23,5 cm; dužina prečki 14,1 i 14,6 cm; najveća širina prečki 1,1 cm; visina ušice na prečki 2,7 i 3,6 cm; širina ušice na prečki 3,2 cm; promjer okova za remen uzde 2,8 i 3,1 cm; težina 172 gr.

2.A. Stremen (T. 2)

Kovano željezno streme s udubljenim, konkavnim stopalnim dijelom. Gornja je površina stopalnog dijela glatka, dok je donja strana na rubovima i po sredini ojačana rebrom. Krakovi u jednom dijelu kružnog, a u drugom pravokutnog presjeka, u donjem se dijelu trokutasto šire prema stopalnom dijelu. Na tom su proširenju već naznačena i jasno vidljiva rebra. Na gornji je dio krakova prikovana pravokutna ušica za remen s plosnatim vratom. Stremen nije pravilnog oblika, odnosno krakovi blago trokutaste forme nejednake su dužine pa je zbog toga lagano nagnut na jednu stranu. Na kraćem su kraku vidljivi tragovi kovanja, odnosno spajanja krakova zakovicom (?), dok su na vratu, na jednoj strani, vidljivi tragovi dodirivanja dvaju dijelova i njihova djelomičnog preklapanja prema središtu.

Dimenzije: ukupna visina 16,4 cm; najveća širina 11,7 cm; visina petlje 3,8 cm; širina petlje 3,6 cm; širina vrata 1,9 cm; dužina krakova 11,8 i 12,8 cm; širina stopalnog dijela 4,6 cm; težina 317 gr.

2.B. Stremen (T. 3)

Kovano željezno streme s udubljenim, konkavnim stopalnim dijelom. Gornja je površina stopalnog dijela glatka, dok je donja strana na rubovima i po sredini ojačana rebrom, a vidljivi su i tragovi duljeg boravka u šljunčanom okruženju. Krakovi su u jednom dijelu poligonalnog, a u drugome pravokutnog presjeka, dok se u donjem dijelu trokutasto šire prema stopalnom dijelu. Na tom su proširenju već naznačena i jasno vidljiva rebra. Na gornji je

1. Bit (Pl. 1)

A simple two-part forged metal bit composed of two equal parts of square section. They are joined in the middle, the interior loop on each of the ends being joined to the other. The exterior sides of the bit each have two lined-up circular holes, inner and outer. The rods, which had a square section in the central part and were flattened at the ends, passed through the inner, larger hole. Circlets of irregular shape to which the halter was attached on each side passed through the outer, smaller hole. In the middle of the rods, at the point where the section is square, there are square protrusive buckle-like elements through which the cheek strap was passed. These elements are of unequal dimensions, and they were inserted into two perforations that are visible on each rod.

Dimensions: total length of the bit, 23.5 cm; length of the rods, 14.1 and 14.6 cm; largest width of the rods, 1.1 cm; height of the elements on the rods, 2.7 and 3.6 cm; width of the elements on the rods, 3.2 cm; diameter of the fittings for the rein strap, 2.8 and 3.1 cm; weight, 172 gr.

2.A. Stirrup (Pl. 2)

A forged iron stirrup with an indented concave tread section. The upper surface of the tread is smooth, while the lower side was reinforced along the edges and in the centre with ribs. The arms, with a circular section in one part and rectangular in another, widen triangularly in the lower section towards the tread. The ribs are already marked and clearly visible in this widening. A rectangular suspension loop for the strap, with a flat neck, was attached to the upper part of the bow. The stirrup has an irregular form, as the arms, of slightly triangular form, are of unequal length, and hence it leans slightly to one side. Traces of forging can be seen on the shorter arm, specifically the joining of the arms with a rivet (?), while on one side of the neck, traces are visible of two parts touching and their partial overlapping towards the centre.

Dimensions: total height, 16.4 cm; greatest width, 11.7 cm; height of the loop, 3.8 cm; width of the loop, 3.6 cm; width of the neck, 1.9 cm; length of the arms, 11.8 and 12.8 cm; width of the tread section, 4.6 cm; weight, 317 gr.

2.B. Stirrup (Pl. 3)

A forged iron stirrup with an indented concave tread section. The upper surface of the tread is smooth, while the lower side is reinforced along the edges and in the centre with ribs, while

dio krakova prikovana pravokutna ušica za remen s plosnatim vratom. Stremen nije pravilnog oblika, odnosno krakovi blago trokutaste forme nejednake su dužine pa je blago nagnut na jednu stranu. Na dijelu gdje krakovi prelaze u vrat vidljivi su tragovi kovanja u obliku ispupčenja na jednoj strani i udubljenja na drugoj, vjerojatno od zakovice (?), odnosno djelomičnog preklapanja i spajanja krakova.

Dimenzije: ukupna visina 16,2 cm; najveća širina 10,1 cm; visina petlje 3,1 cm; širina petlje 3,6 cm; širina vrata 1,7 cm; dužina krakova 12,2 i 12,7 cm; širina stopalnog dijela 4,5 cm; težina 290 gr.

3. Stremen (T. 4)

Kovano željezno streme, kojem je stopalni, vjerojatno u izvornom obliku ravan dio prelomljen. Gornja je površina uskoga stopalnog dijela glatka, dok je donja strana po sredini ojačana blago naznačenim rebrom. Krakovi kružnog presjeka pri samom se dnu, na mjestu gdje već gotovo prelaze u stopalni dio, blago trokutasto šire. Krakovi koji pokazuju potkovičastu formu, u jednoj liniji, preko vrata gdje se dodiruju, prelaze u kvadratičnu petlju za remen.

Dimenzije: ukupna visina 15,1 cm; najveća širina 11,2 cm; visina petlje 2,4 cm; širina petlje 3 cm; širina vrata 1,6 cm; širina stopalnog dijela 1,6 cm; težina 115 gr.

4. Stremen (T. 5)

Kovano željezno streme kruškolike forme, s lučno izbočenim, konveksnim stopalnim dijelom. Gornja je površina stopalnog dijela glatka s vidljivim tragovima duljeg boravka u šljunčanom okružju, dok je donja strana na rubovima i po sredini ojačana blago naglašenim rebrom. Krakovi kvadratnog presjeka, nakon ispupčenoga kvadratičnog zadebljanja u donjem dijelu, blago se trokutasto šire prema stopalnom dijelu. Na tom proširenju već su naznačena i vidljiva rebra koja se nastavljaju ravnomjerno duž čitavoga stopalnog dijela. Na gornjem dijelu krakovi, preko vrata, prelaze u pravokutnu ušicu za remen.

Dimenzije: ukupna visina 18,1 cm; najveća širina 12 cm; visina petlje 2,7 cm; širina petlje 3,7 cm; širina vrata 1,6 cm; širina stopalnog dijela 3,3 cm; težina 215 gr.

traces are visible of lengthy immersion in gravel-dominated surroundings. The arms, with a polygonal section in one part and rectangular in another, widen triangularly in the lower section towards the tread. The ribs are already marked and clearly visible in this widening. A rectangular suspension loop for the strap, with a flat neck, was attached to the upper part of the bow. The stirrup has an irregular form, as the arms, of slightly triangular form, are of unequal length, and hence it leans slightly to one side. Traces of forging can be seen at the join of the arms and the neck in the form of a protrusion on one side and a depression on the other, probably from a rivet (?), or the partial overlapping and joining of the arms.

Dimensions: total height, 16.2 cm; greatest width, 10.1 cm; height of the loop, 3.1 cm; width of the loop, 3.6 cm; width of the neck, 1.7 cm; length of the arms, 12.2 and 12.7 cm; width of the tread section, 4.5 cm; weight, 290 gr.

3. Stirrup (Pl. 4)

A forged iron stirrup whose tread section, probably originally flat, is broken. The upper surface of the narrow tread section is smooth, while the lower side is reinforced in the centre with a slightly prominent rib. The arms, of circular section, widen triangularly at the spot where they almost merge into the tread section. The arms form a horse-shoe shape and continue into the neck, where they touch, and then form a square loop for the strap.

Dimensions: total height, 15.1 cm; greatest width, 11.2 cm; height of the loop, 2.4 cm; width of the loop, 3 cm; width of the neck, 1.6 cm; width of the tread section, 1.6 cm; weight, 115 gr.

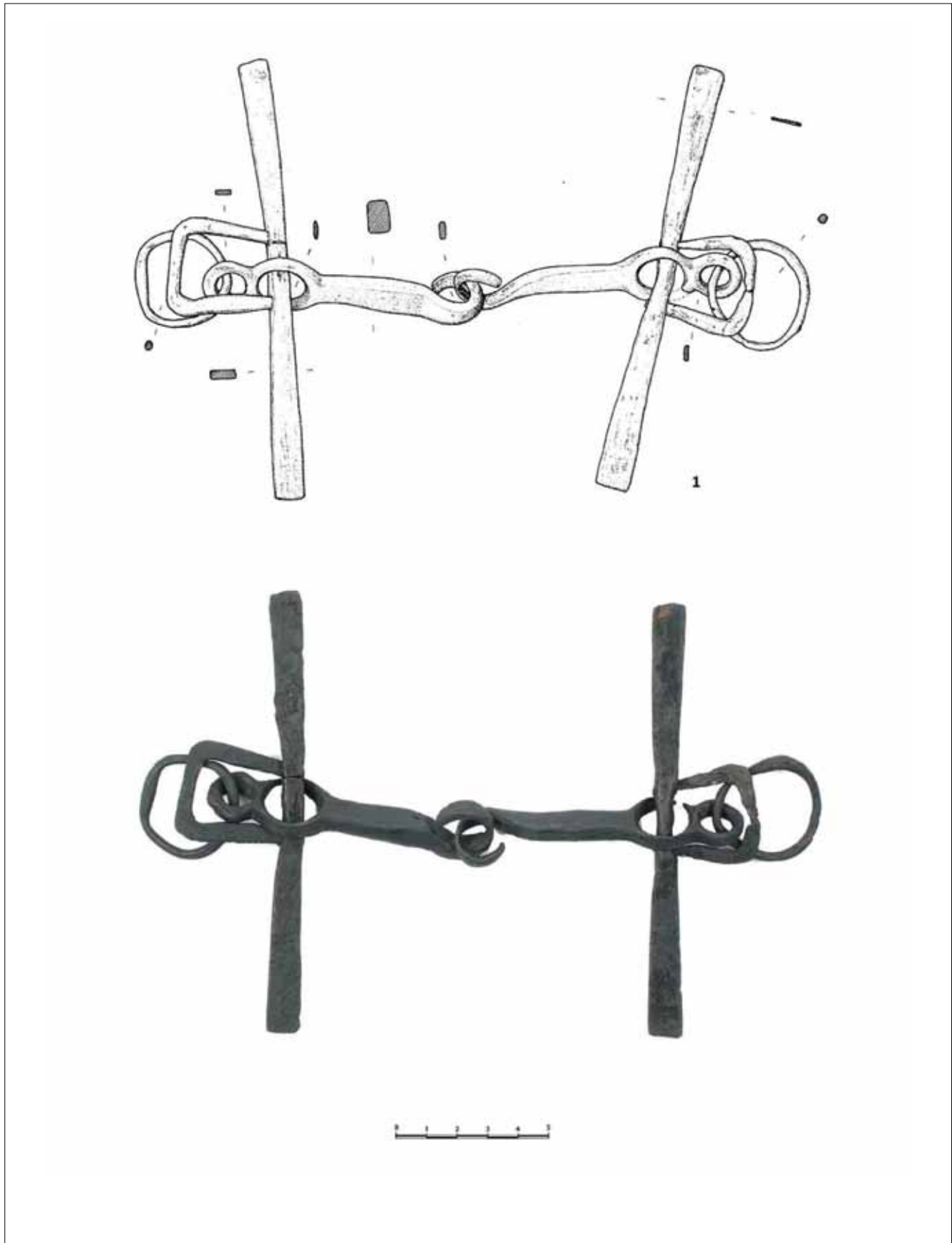
4. Stirrup (Pl. 5)

A forged iron stirrup of pear-shaped form, with a curved convex tread section. The upper surface of the tread is smooth, with visible traces of lengthy immersion in gravel, while the lower side was reinforced along the edges and in the centre with slightly emphasized ribs. The arms, of square section, after square thickenings in the lower section (side bosses), gently widen triangularly towards the tread section. This widening has visible ribs that continue across the entire tread section. The arms join at the flat neck and merge into a rectangular suspension loop for the strap.

Dimensions: total height, 18.1 cm; greatest width, 12 cm; height of the loop, 2.7 cm; width of the loop, 3.7 cm; width of the neck, 1.6 cm; width of the tread section, 3.3 cm; weight, 215 gr.

BIBLIOGRAFIJA BIBLIOGRAPHY

- Bartošková 1986 – A. Bartošková, *Slovanské depoty železných předmětů v Československu / Slawische Hortfunde von Eisengegenständen in der Tschechoslowakei*, Studie Archeologického ústavu Československé akademie věd v Brně 13/2, 1986, 123–126.
- Budinský-Krička, Točík 1991 – V. Budinský-Krička, A. Točík, *Šebastovce. Gräberfeld aus der Zeit des awarischen Reiches*, Archäologisches Institut der Slowakischen Akademie der Wissenschaften zu Nitra, 1991.
- Čilinská 1966 – Z. Čilinská, *Slawisch-awarisches Gräberfeld in Nové Zámky*, Archaeologica Slovaca Fontes 7, 1966.
- Demo 1984 – Ž. Demo, *Srednjovjekovni mačevi u Muzeju grada Koprivnice / Medieval Swords in the Muzej grada Koprivnice*, *Vjesnik Arheološkog muzeja u Zagrebu* 16–17, 1984, 211–240.
- Demo 2011 – Ž. Demo, *Ranosrednjovjekovno koplje s krilcima iz okolice Dugog Sela u svjetlu novih saznanja o ovoj vrsti oružja na motki / An Early Medieval Winged/Lugged Spearhead from the Dugo Selo Vicinity in the Light of New Knowledge about this Type of Pole-Mounted Weapon*, *Archaeologica Adriatica* 4, 2011, 61–84.
- Eisner 1952 – J. Eisner, *Devínska Nová Ves, Slovanské pohřebiště – Begräbnisstätte aus dem VII. und VIII. Jahrhundert in Devínska Nová Ves bei Bratislava in der Slowakei*, Nakladatelstvo Slovenskej akadémie vied a umení, 1952, 387–411.
- Garam 1987 – É. Garam, *Pferdegräber der awarenzeitlichen Gräberfeldes in Tiszafüred. Angaben der spätawarenzeitlichen Pferdebestatungen*, *Alba Regia* 23, 1987, 65–125.
- Garam 1995 – É. Garam, *Das awarenzeitliche Gräberfeld von Tiszafüred, Cemeteries of the Avar Period (567–829) in Hungary* 3, Akadémiai Kiadó, 1995.
- Horváth 1996 – A. M. Horváth, *Unprovenanced finds from the Kalocsa area (Bács-Kiskun country)*, in Fodor, I. et al. (eds.), *The Ancient Hungarians*, Magyar Nemzeti Múzeum, 1996, 315–316.
- Karo 2003 – Š. Karo, *Oprema konja v zgodnjem srednjem veku*, unpublished MA thesis, Univerza v Ljubljani, Filozofska fakulteta, Oddelek za arheologijo, 2003.
- Karo 2004 – Š. Karo, *Die Typologie der Frühmittelalterlichen Steigbügel aus slowenischen Funderten*, in Fusek, G. (ed.), *Zbornik na počest Dariny Bialekovej, Archaeologica Slovaca monographiae – Communicationes* 7, 2004, 165–173.
- Kirpičnikov 1973 – A. N. Kirpičnikov, *Snaržazhenije vsadnika i verchovogo konja na Rusi IX–XIII vv. Arheologija SSSR. Svod arheologičeskikh istočnikov E1–36*, 1973.
- Kovács 1986a – L. Kovács, *Honfoglalás kori sírok Nagytarcsán II: A homokbányai temetőrészet (Adatok a nyéltámaszos balták, valamint a trapéz alakú kengyelek értékeléséhez) / Landnahmezeitliche Gräber in Nagytarcsa II: Gräberfeldabschnitt in der Sandgrube (Beiträge zur Wertung der Äxte mit schaftlochklappen sowie der trapezförmigen Steigbügel)*, *Communicationes Archaeologicae Hungariae*, 1986, 93–121.
- Kovács 1986b – L. Kovács, *Über einige Steigbügeltypen der Landnahmezeit*, *Acta Archaeologica Academiae Scientiarum Hungaricae* 38, 1986, 195–225.
- Měchurová 1980 – Z. Měchurová, *Podrobná terminologie koňského postroje a jeho částí ve středohradištním období / Die Terminologie des Pferdegeschirrs und seiner Bestandteile in der mittleren Burgwallzeit*, *Vlastivědný věstník Moravský* 32, 1980, 187–193.
- Měchurová 1983 – Z. Měchurová, *Třmeny a jiné součásti sedla z časné středověkého období / Die Steigbügel und andere Sattelsbestandteile aus dem Frühmittelalter*, *Časopis Moravského Muzea v Brně. Vědy společenské* 68, 1983, 61–89.
- Měchurová 1984 – Z. Měchurová, *Součásti uzdění koně ve velkomoravském období / Die Bestandteile der Reitpferdzäumung in der mittleren Burgwallzeit*, *Archaeologia historica* 9, 1984, 263–292.
- Milošević (ed.) 2000 – A. Milošević (ed.), *Hrvati i Karolinzi* 2, Muzej hrvatskih arheoloških spomenika-Split, 2000.
- Nepper 1996 – I. M. Nepper, *Sárrétudvari-Hízípföld, Hajdú-Bihar county*, in Fodor, I. et al. (eds.), *The Ancient Hungarians*, Magyar Nemzeti Múzeum, 1996, 257–277.
- Pleterski 1987 – A. Pleterski, *Sebenjski zaklad / Der Hortfund von Sebenje*, *Arheološki vestnik* 38, 1987, 237–330.
- Révész 1996 – L. Révész, *Horse Harness*, in Fodor, I. et al. (eds.), *The Ancient Hungarians*, Magyar Nemzeti Múzeum, 1996, 51–52.
- Ruttkay 1976 – A. Ruttkay, *Waffen und Reiterausrüstung des 9. bis zur ersten Hälfte des 14. Jahrhunderts in der Slowakei* 2, *Slovenská archeológia* 24/2, 1976, 245–395.
- Schulze-Dörrlamm 1991 – M. Schulze-Dörrlamm, *Untersuchungen zur Herkunft der Ungarn und zum Beginn ihrer Landnahme im Karpatenbecken*, *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 35/2 (1988), 1991, 373–478.
- Seaby, Woodfield 1980 – W. A. Seaby, P. Woodfield, *Viking Stirrups from England and their Background*, *Medieval Archaeology* 24, 1980, 87–122.
- Sekelj Ivančan 2004 – T. Sekelj Ivančan, *Ranokarolinško koplje s krilcima iz šljunčare Jegeniš kraj Koprivnice / Frühkarolingische Flügellanze aus der Kiesgrube Jegeniš bei Koprivnica*, *Prilozi Instituta za arheologiju* 21, 2004, 109–128.
- Sekelj Ivančan 2007 – T. Sekelj Ivančan, *Još jedan nalaz ranokarolinškog koplja s krilcima iz šljunčare Jegeniš kraj Koprivnice / Another Find of an Early Carolingian Winged Spearhead from the Gravel Extraction Plant of Jegeniš near Koprivnica*, *Prilozi Instituta za arheologiju* 24, 2007, 419–427.
- Świętosławski 1990 – W. Świętosławski, *Strzemiona średniowieczne z ziem Polski*, Polska Akademia nauk, Instytut Historii Kultury Materialnej, 1990.
- Tomičić 1978 – Ž. Tomičić, *Rezultati ranosrednjovjekovnih arheoloških istraživanja u Međimurju i varaždinskoj regiji / Ergebnisse Frühmittelalterlicher Forschungen im Međimurje und auf dem gebiet von Varaždin*, *Izdanja Hrvatskog arheološkog društva* 2, *Arheološka istraživanja u sjeverozapadnoj Hrvatskoj*, 1978, 209–222.
- Tomičić 1984 – Ž. Tomičić, *Prilog istraživanju karolinškog oružja u Međimurju i varaždinskoj regiji / Karolingische funde aus dem Kroatischen Mur-Drau-Gebiet*, *Starohrvatska prosvjeta* 3/14, 1984, 209–230.
- Trugly 1987 – A. Trugly, *Gräberfeld aus der Zeit des awarischen Reiches bei der Schiffswerft in Komárno*, *Slovenská archeológia* 35/2, 1987, 251–344.
- Trugly 1993 – A. Trugly, *Gräberfeld aus der Zeit des awarischen Reiches bei der Schiffswerft in Komárno II (1987–1989)*, *Slovenská archeológia* 41/2, 1993, 191–307.
- Valentić, Horbec, Jukić (eds.) 2004 – M. Valentić, I. Horbec, I. Jukić (eds.), *Križevačka županija. Hrvatska na tajnim zemljovidima 18. i 19. stoljeća*. Biblioteka Hrvatska povjesnica – posebna izdanja 9, Hrvatski institut za povijest, 2004.
- Vignatióvá 1980 – J. Vignatióvá, *Součásti jezdecké výstroje z nálezů na Pohansku u Břeclavě / Eléments de L'équipement de Cavalier Dans les Découvertes de Pohansko*, *Sborník prací Filozofické fakulty brněnské univerzity. Řada archeologicko-klasická* E25, 1980, 161–198.
- Vignatióvá 1992 – J. Vignatióvá, *Břeclav–Pohansko 2. Slovanské osídlení jižního předhradí / Břeclav–Pohansko 2. Die Slawische Besiedlung der Südlichen Vorburg*, Spisy Masarykovy univerzity, Filozofická fakultá 291, 1992.
- Vörös 2012 – I. Vörös, *Archeozoological investigations of the Early Avar Period cemetery at Pókaszpetek*, in Tivadar, V. (ed.), *Thesaurus Avarorum, Archaeological Studies in Honour of Éva Garam*, ELTE Bölcsészettudományi Kar Régészettudományi Intézet, Magyar Nemzeti Múzeum, MTA Bölcsészettudományi Kutatóközpont Régészeti Intézet, 2012, 679–695.
- Zábojník 2009 – J. Zábojník, *Slovensko a Avarský kaganát / Slovakia and the Avar Khaganate*, *Studia Archaeologica et Medievalia* 9, 2009, 137–147.

**TABLA 1.**

Kat. br. 1. žvale

(crtež izradila Miljenka Galić; snimio Hrvoje Jambrej; obradila dr. sc. Kristina Jelinčić Vučković).

PLATE 1

Cat. no. 1, bit.

(drawing made by Miljenka Galić; photo by Hrvoje Jambrej; adapted by Kristina Jelinčić Vučković, PhD).

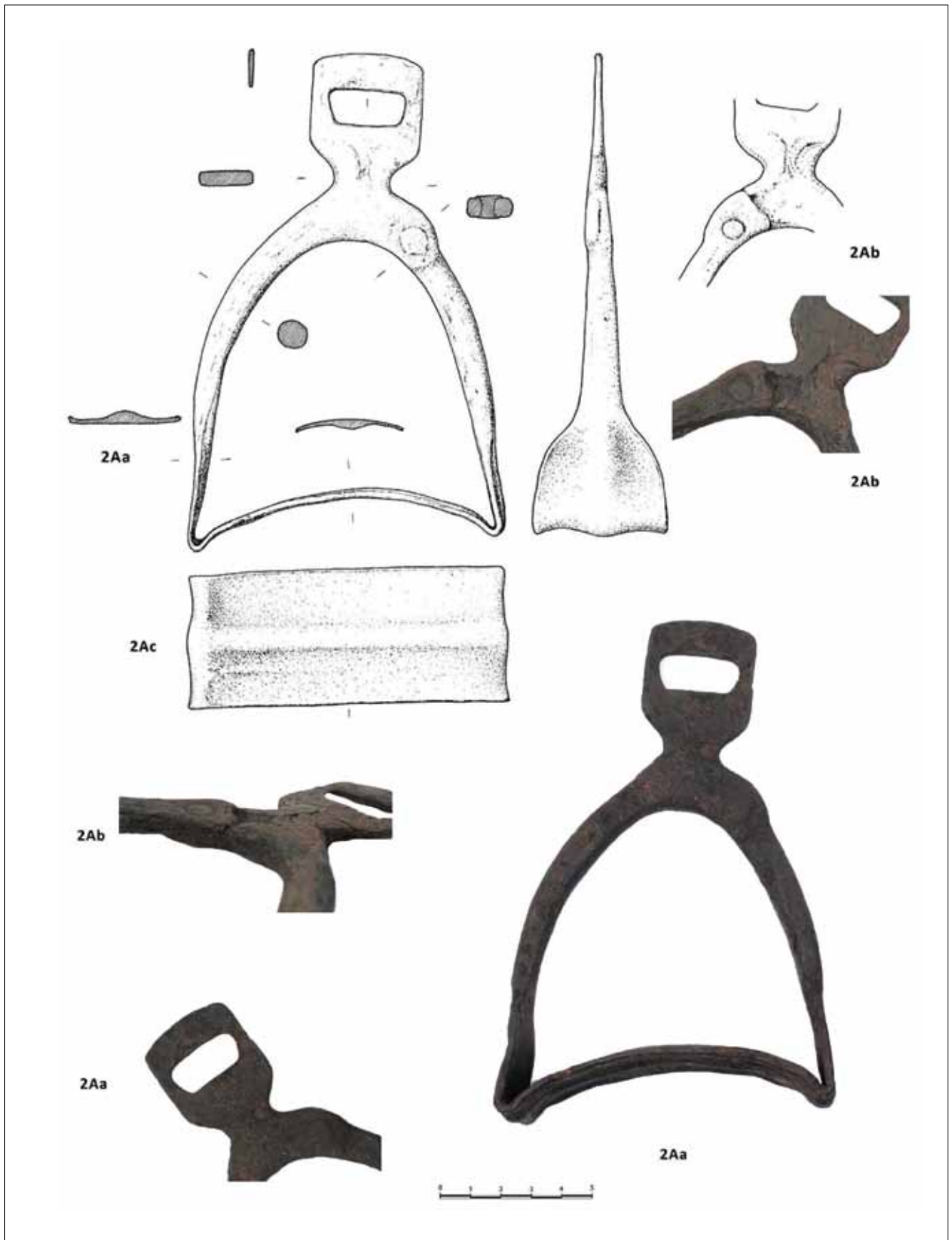


TABLA 2.

Kat. br. 2. stremen A; a: strana, b: strana, c: stopalni dio
(crtež izradila Miljenka Galić; snimio Hrvoje Jambrej; obradila dr. sc. Kristina Jelinčić Vučković).

PLATE 2

Cat. no. 2, stirrup 2; a: side, b: side, c: tread section
(drawing made by Miljenka Galić; photo by Hrvoje Jambrej; adapted by Kristina Jelinčić Vučković, PhD).

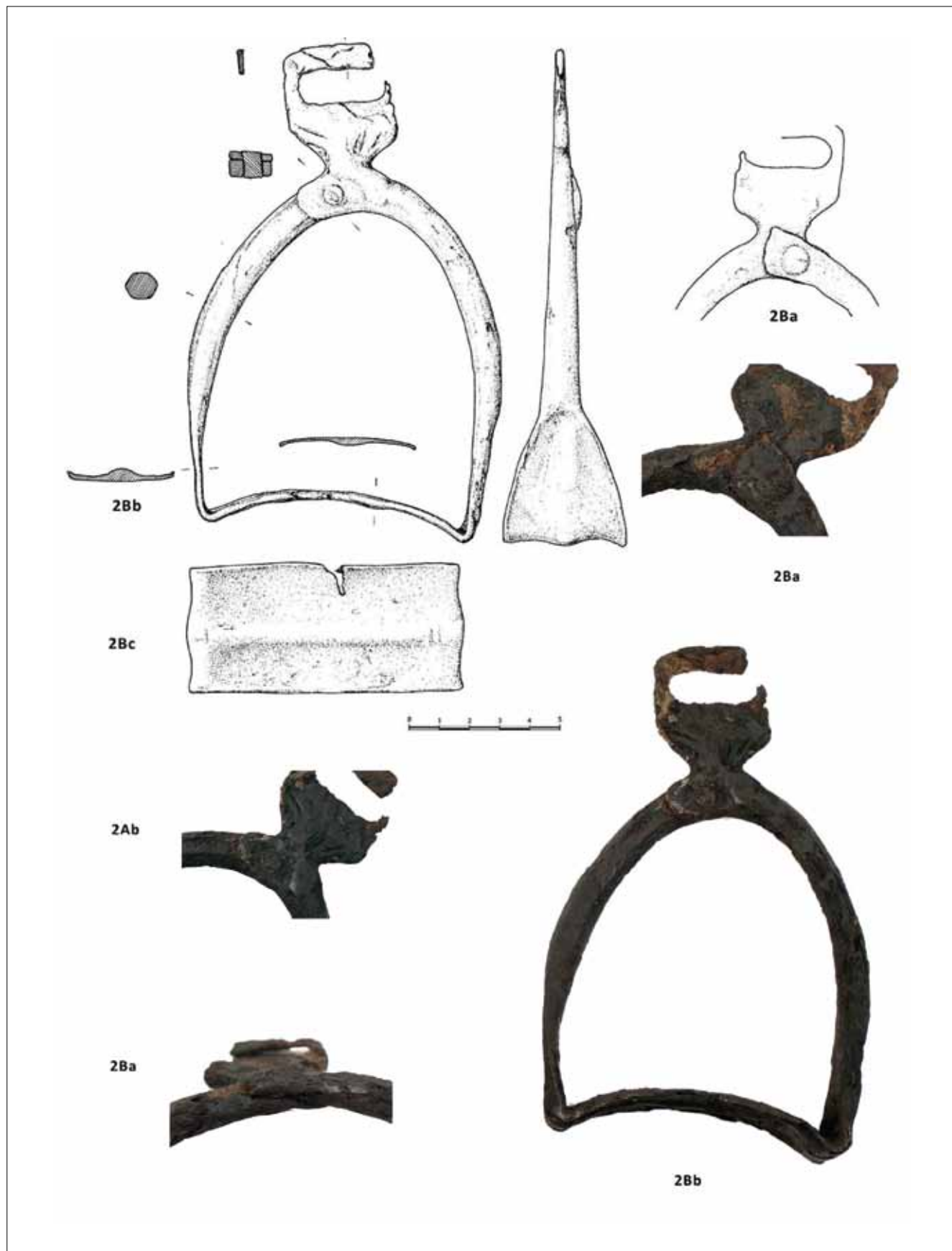


TABLA 3.

Kat. br. 2. stremen B; a: strana, b: strana, c: stopalni dio
(crtež izradila Miljenka Galić; snimio Hrvoje Jambrej; obradila dr. sc. Kristina Jelinčić Vučković).

PLATE 3

Cat. no. 2, stirrup B; a: side: b: side; c: tread section
(drawing made by Miljenka Galić; photo by Hrvoje Jambrej; adapted by Kristina Jelinčić Vučković, PhD).

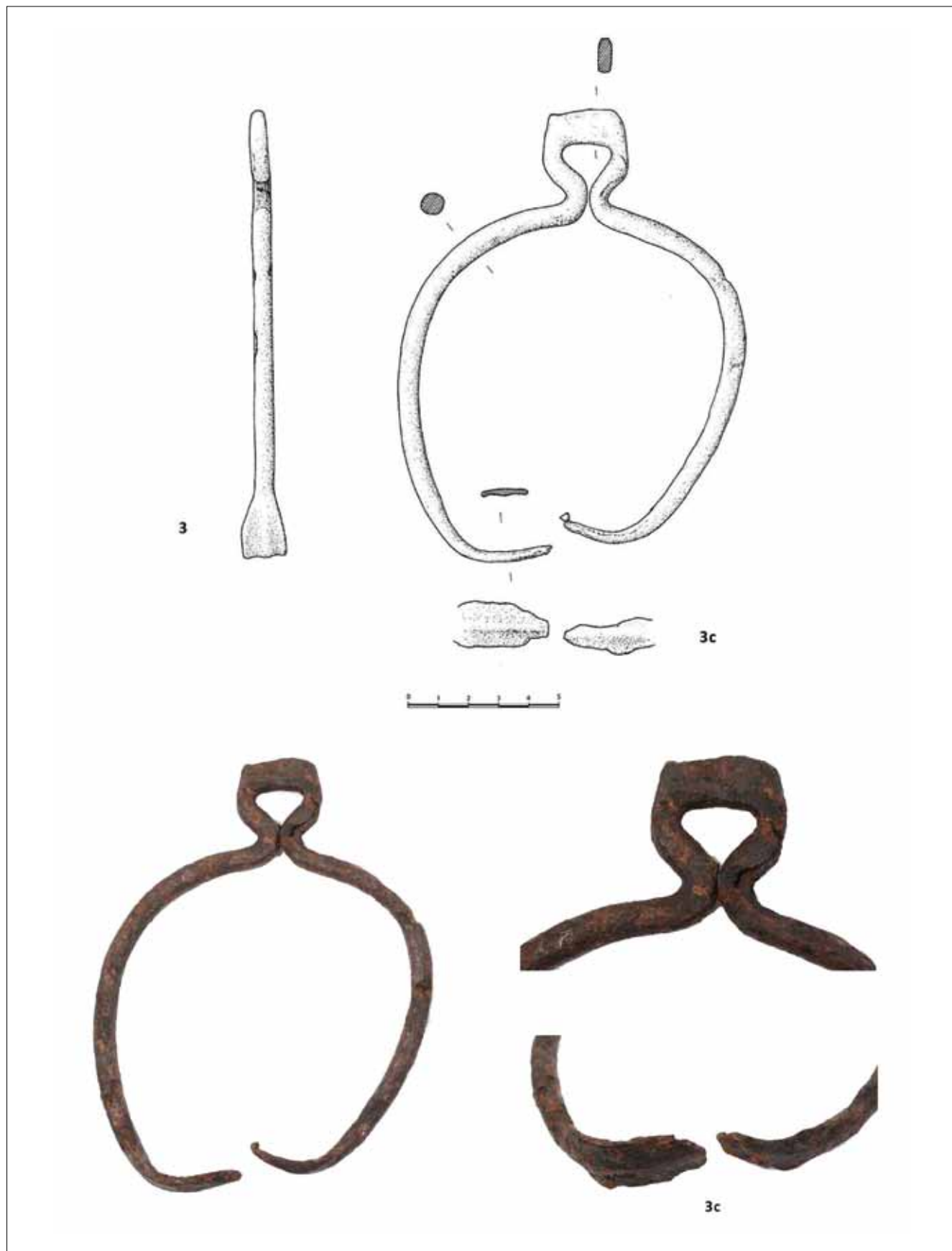


TABLA 4.

Kat. br. 3. stremen; c: stopalni dio

(crtež izradila Miljenka Galić; snimio Hrvoje Jambreč; obradila dr. sc. Kristina Jelinčić Vučković).

PLATE 4

Cat. no. 3, stirrup, c: tread section.

(drawing made by Miljenka Galić; photo by Hrvoje Jambreč; adapted by Kristina Jelinčić Vučković, PhD).

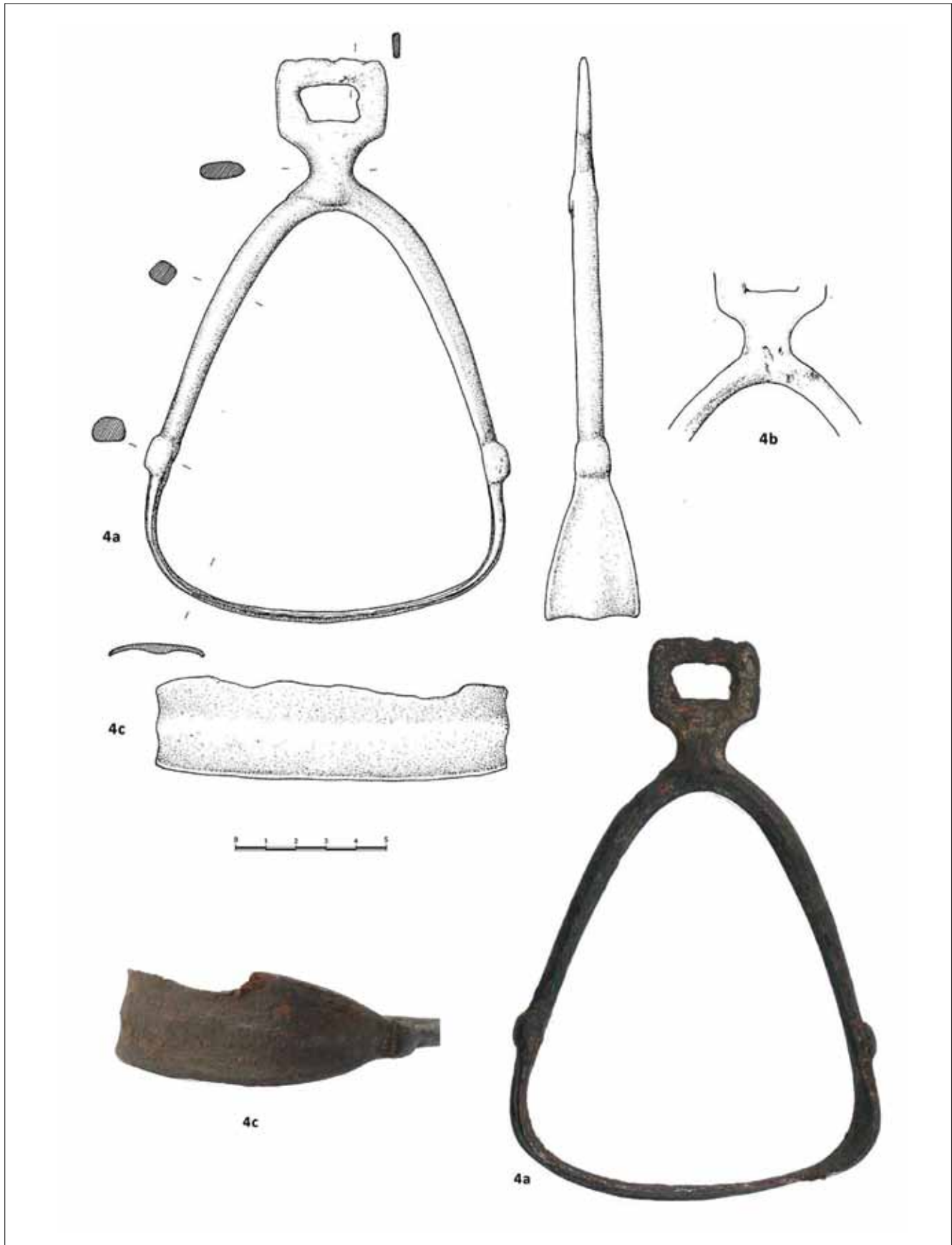


TABLA 5.

Kat. br. 4. stremen; a: strana, b: strana, c: stopalni dio
(crtež izradila Miljenka Galić; snimio Hrvoje Jambrek; obradila dr. sc. Kristina Jelinčić Vučković).

PLATE 5

Cat. no. 4, stirrup; a: side, b: side, c: tread section
(drawing made by Miljenka Galić; photo by Hrvoje Jambrek; adapted by Kristina Jelinčić Vučković, PhD).