Prilog za raspravu o ranosrednjovjekovnom maču iz šljunčare Jegeniš (Legrad-Šoderica)

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PRILOG ZA RASPRAVU O RANOSREDNJOVJEKOVNOM MAČU IZ ŠLJUNČARE JEGENIŠ (LEGRAD-ŠODERICA)

A CONTRIBUTION TO THE DISCUSSION ABOUT AN EARLY MEDIEVAL SWORD FROM THE JEGENIŠ (LEGRAD-ŠODERICA) GRAVEL PIT

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Iz podravske šljunčare Jegeniš potječu brojni primjerci oružja i ratničke opreme. Među njima je i jedan ranosrednjovjekovni mač bez jabučice, koji je još 1984. godine detaljno objavio Željko Demo kao Petersenov tip S. Ubrzo je uslijedila kritička reakcija Zdenka Vinskog i drugačija atribucija pa daljnje rasprave nije bilo. Međutim, dosadašnje objave obojice autora potiču dodatna pitanja. U nastojanju da se na njih odgovori, u ovome se radu donose rezultati nove analize jegeniškog mača. Oni otkrivaju neke dosad nepoznate ili nezamijećene detalje, ponajviše o sječivu i dršku, koji mijenjaju i znatno upotpunjuju spoznaje o ovome kompleksnom oružju.[1]

Ključne riječi:
mač, rani srednji vijek, Petersenov tip S, damasciranje, šljunčara Jegeniš, Legrad-Šoderica

Numerous weapons and items of warrior equipment have been found in the Jegeniš gravel pit in Podravina. Among them is an early medieval sword without a pommel, already published in detail by Željko Demo, in 1984, as Petersen's type S. A critical reaction with a different attribution by Zdenko Vinski soon followed, and further discussion ceased. However, the publications of both authors provoke additional questions. In an attempt to answer them, this paper presents the results of a new analysis of the Jegeniš sword. These reveal several hitherto unknown or unnoticed details, mostly of the blade and the hilt, which alter and substantially supplement the findings about this complex weapon.[1]

Key words:
sword, Early Middle Ages, Petersen type S, pattern-welding, Jegeniš gravel pit, Legrad-Šoderica

Uvod

Eksploatacija podravske šljunčare Jegeniš kroz protekla je desetljeća otkrila mnoštvo arheoloških nalaza, među kojima i brojne primjerke oružja i ratničke opreme. Dio je tih nalaza objavljen i dobro poznat u arheološkoj literaturi,[2] a jedan od njih je i ranosrednjovjekovni mač bez jabučice, poklonjen Muzeju grada

Introduction

Several decades of exploitation of the Jegeniš gravel pit in Podravina have uncovered a number of archaeological finds, among which are numerous examples of weapons and warrior equipment. A number of these finds have been published and are well known in the archaeological literature.[2] One of them

1 Ovaj je rad sufinanciran iz Programa „Znanstvena suradnja" Hrvatske zaklade za znanost, koji je financirala Europska unija iz Europskog socijalnog fonda u sklopu Operativnog programa Učinkoviti ljudski potencijali 2014. – 2020., u sklopu projekta PZS-2019-02-1624 – GLOHUM – Globalni humanizmi: novi pogledi na srednji vijek (300 – 1600).

2 Općeniti pregled od kamenog doba do ranoga novog vijeka donosi Čimin 2013. Za ranosrednjovjekovne nalaze, vidi osobito Sekelj Ivančan 2004; 2007; 2019. U citiranim je radovima navedena i brojna ranija literatura.

1 This research has been supported in part by the 'Research Cooperability' Programme of the Croatian Science Foundation funded by the European Union from the European Social Fund under the Operational Programme 'Efficient Human Resources' 2014 – 2020, within project PZS-2019-02-1624 – GLOHUM – Global Humanisms: New Perspectives on the Middle Ages (300 – 1600).

2 Čimin 2013 gives a general overview from the Stone Age to the Early Modern Period. For early medieval finds, see especially Sekelj Ivančan 2004; 2007; 2019. Numerous earlier works are also cited in these papers.

Koprivnice 1969. godine (inv. br. MGK 2097; T. 1: 1–2).[3] Prvi je put u stručnoj literaturi spomenut 1976.,[4] a 1983. godine sumarno ga je objavio Zdenko Vinski.[5] Temeljita je objava uslijedila napokon godinu dana kasnije iz pera Željka Deme, koji ga je odredio kao Petersenov tip S i datirao u drugu polovinu 10. stoljeća.[6] Već 1985. stigla je oštra kritika Vinskog u kojoj pobija ovakvu tipološku atribuciju, naginjući više prema tipu R.[7] Kako Demo nije odgovorio, time je rasprava završena te se u svoj kasnijoj literaturi ovaj mač spominje tek usputno. No pomniji pogled na njega već prema dosadašnjim objavama nužno potiče sumnju u obje navedene tipološke determinacije, kao i potrebu za opširnijom reinterpretacijom. U ovome radu, stoga, donosim rezultate nove analize jegeniškog mača,[8] kao prilog raspravi koja je, nažalost, prekinuta čim je započela. Prilog kojeg s radošću posvećujem Željku Demi u povodu njegova sedamdesetog rođendana.

Dosadašnja saznanja i interpretacije

Prije iznošenja novih opažanja potrebno je, međutim, razmotriti što je do sada poznato. Vinski u prvoj objavi uz jednostavan i ne baš precizan crtež cijelog mača (T. 2: 1) donosi samo podatak o njegovoj ukupnoj duljini i sažeti kataloški opis. Ne ulazeći u tipologiju, ističe ipak kako je nakrsnica masivna te smatra da pokazuje karolinške oblikovne karakteristike. Stoga, i mač pripisuje karolinškom kontekstu u Panoniji prve polovine 9. stoljeća.[9] Isti se autor ponovno osvrće na ovaj mač već sljedeće godine, ovaj put uz nešto dulji opis, ali i u osnovi jednake zaključke.[10] Valja još reći kako Vinski u oba članka ističe postojanje rupe za zakovicu u trnu pa i mogućnost da je tada djelomično sačuvana drvena obloga drška možda bila naknadno pričvršćena na ranije sječivo.[11]

U istome broju *Vjesnika Arheološkog muzeja u Zagrebu* objavljen je i uvodno spomenuti članak Željka Deme o pet mačeva i jednoj sablji iz Muzeja grada Koprivnice, u kojemu je jegeniški mač detaljno opisan i objavljen sa svim relevantnim dimenzijama, preciznijim crtežom (T. 2: 3) i nekoliko fotografija.[12] Razmatrajući moguće tipološko određenje, Demo posebno ističe konkavni oblik nakrsnice (iz pogleda na dulje strane), detalj koji Vinski do

is the early medieval sword without a pommel, donated to the Koprivnica Municipal Museum in 1969 (inv. no. MGK 2097; Pl. 1: 1–2).[3] It was mentioned for the first time in the professional literature in 1976,[4] and preliminarily published by Zdenko Vinski in 1983.[5] Detailed publication finally ensued a year later, written by Željko Demo, who determined it to be Petersen's type S, and dated it to the second half of the 10th century.[6] A sharp critique followed as early as 1985 by Vinski, wherein he rejected such typological attribution, leaning more towards type R.[7] Since Demo did not reply, this ended the discussion, and in all later literature the sword is mentioned only in passing. But its more careful observation, even through existing publications, necessarily incites doubt in both typological determinations, as well as the need for a thorough reinterpretation. In this paper I therefore present the results of a new analysis of the Jegeniš sword,[8] as a contribution to a discussion that unfortunately ceased as soon as it had started – a contribution which I dedicate with joy to Željko Demo on the occasion of his 70th birthday.

Findings and interpretations so far

Prior to the elaboration of new observations, however, we need to consider what is known thus far. In the first publication, Vinski offers only data on the total length of the sword and a concise catalogue description, together with a simple and not very precise drawing of the whole object (Pl. 2: 1). Without going into typology, he does stress that the crossguard is massive, and considers it to display Carolingian characteristics in form. He therefore attributes the sword to the Carolingian context in Pannonia of the first half of the 9th century.[9] The author turns to this sword once more as early as the following year, this time with a somewhat longer description, but essentially equal conclusions.[10] It should also be said that, in both articles, Vinski highlights the existence of a rivet hole in the tang, and therefore the possibility that the then partially preserved wooden grip might have been additionally fastened to an earlier blade.[11]

The article by Željko Demo mentioned in the introduction, on five swords and one sabre from the Koprivnica Municipal Museum, was published in the same issue of the *Vjesnik Arheološkog muzeja u Zagrebu*. There the Jegeniš sword is described in detail and published with all relevant measurements, a more precise

3 U opisima slika i tabli se zbog distinkcije navode „prednja" i „stražnja" strana. Sječivo je mača blago savinuto pa je konkavna strana „prednja", a konveksna je „stražnja".

4 Kolar 1976, 111.

5 Vinski 1983. Pritom Vinski kao mjesto nalaza navodi Legrad-Šodericu, no riječ je o istome lokalitetu. Kako bi se izbjegle eventualne nedoumice, u naslovu članka stoga ističem oba naziva. Za višestruka imena ovog lokaliteta, vidi Sekelj Ivančan 2019, 149.

6 Demo 1984.

7 Vinski 1985, 101–106.

8 Na pomoći i ustupanju mača za neposredno proučavanje najsrdačnije zahvaljujem kolegi Ivanu Valentu, kustosu Muzeja grada Koprivnice.

9 Vinski 1983, 488–489, 500.

10 Vinski 1984, 197–198.

11 Vinski 1983, 500; 1983 – 1984, 198.

12 Demo 1984, 212, 216–218, T. 1: 1, 3: 1.

3 'Front' and 'reverse' sides are mentioned here in references to figures and tables for the purpose of distinction. The sword blade is slightly bent, so the concave side is the 'front' one, and the convex one the 'reverse'.

4 Kolar 1976, 111.

5 Vinski 1983. Vinski here states Legrad-Šoderica as the find site, but it is the same one. In order to evade possible confusion, I have thus placed both names in the article's title. For the site's multiple names, see Sekelj Ivančan 2019, 149.

6 Demo 1984.

7 Vinski 1985, 101–106.

8 I most sincerely thank Ivan Valent, curator of the Koprivnica Municipal Museum, for assistance and for conceding the sword for personal examination.

9 Vinski 1983, 488–489, 500.

10 Vinski 1984, 197–198.

11 Vinski 1983, 500; 1983 – 1984, 198.

12 Demo 1984, 212, 216–218, T. 1: 1, 3: 1.

tada nije niti spominjao. Naglašava kako je takav oblik posebno karakterističan za Petersenove tipove R i S te, u konačnici, bez detaljnijeg obrazloženja, odlučuje pripisati ovaj mač potonjem tipu. Time i dataciju pomiče u 10. stoljeće, dapače u njegovu drugu polovinu. Kako mačevi tipa S nisu pronađeni južno od Drave, ali jesu na području današnje Mađarske, Demo mač iz Jegeniša postavlja u odgovarajući kontekst djelovanja ranosrednjovjekovnih ugarskih vojnih jedinica.[13]

Možda je upravo takva kontekstualizacija izazvala reakciju Zdenka Vinskog. Naime, Vinski je u *Starohrvatskoj prosvjeti* za 1985. godinu objavio opsežan rad o karolinškom oružju, podijeljen na dvije glavne teme. U prvome dijelu raspravlja o mačevima i kopljima pronađenima u Hercegovini, a u drugom o karolinškim i poslijekarolinškim mačevima u Panonskoj nizini.[14] U tome drugome dijelu rada oštro polemizira s mađarskim arheolozima, koji većinu arheoloških nalaza 10. – 11. stoljeća iz Panonske nizine pripisuju isključivo Ugrima („staromađarskom etnosu"), dok u interpretacijama marginaliziraju slavensko stanovništvo. Tako i Deminu atribuciju jegeniškog mača ugarskim ratnicima kralja Gejze I. smatra ne samo „netočnom" nego i „naivnom" jer oni tada ne bi bili boravili uz Dravu. Dapače, naglašava kako na tako nešto ne pomišljaju „čak ni strastveni sljedbenici 'mađarske fascinacije'".[15] Ostatak rasprave o ovome maču, koji se uglavnom tiče tipologije, osjetno je staloženiji, a time i za Vinskoga očito manje uznemirujući.[16] Štoviše, u tome pogledu Demi priznaje i određene zasluge pa piše da je „ispravno zapazio da je mač (...) poslijekarolinško oružje 10. stoljeća".[17] U vlastitu pak obranu navodi da ranije nakrsnica nije bila dovoljno preparirana i da je mač crtan prije konačne konzervacije pa da pojedinosti na njoj nisu bile sasvim jasne.[18] Ipak, Vinski naglašava kako nakrsnica zapravo i nije u tolikoj mjeri konkavna i odbacuje atribuciju Petersenovu tipu S. Umjesto toga, smatra ga uvjetno bliskim tipu R. Usto inzistira na važnosti postojanja rupe u trnu, zbog čega zaključuje da je mač bio u dugoj upotrebi i da mu je držak popravljan tako da je drvena obloga naknadno fiksirana zakovicom nakon gubitka jabučice.[19]

Kako je već naznačeno u uvodu, Demo na kritike nije odgovorio i Vinskijeva je tako ostala zadnja, a ovaj je mač u narednim desetljećima uopće rijetko nalazio mjesto u literaturi. Ni autori koji su ga spominjali nisu ulazili dublje u problematiku. Robert Čimin, primjerice, ističe njegovo kvalitetno damascirano sječivo i navodi kako se mačevi „tog tipa okvirno (...) datiraju u 10. st.".[20] Pritom

drawing (Pl. 2: 3), and several photographs.[12] Considering a possible typological determination, Demo especially stresses the crossguard's concave form (long side view), a detail previously not even mentioned by Vinski. He emphasizes that such a form is especially characteristic of Petersen's types R and S, and ultimately, with no detailed explanation, decides to ascribe this sword to the latter type. With this he also moves the dating to the 10th century, indeed to its second half. Since type S swords had been found in the territory of present-day Hungary, but not south of the Drava, Demo places the sword from Jegeniš in the corresponding context of activities of Magyar early medieval military units.[13]

Perhaps it was precisely such contextualization that provoked the reaction of Zdenko Vinski. In the *Starohrvatska prosvjeta* for 1985, Vinski published an extensive article on Carolingian weaponry, divided into two main subjects. In the first section he discusses swords and spears found in Herzegovina, and in the second one Carolingian and post-Carolingian swords from the Pannonian plain.[14] In this second section he vehemently polemicizes with Hungarian archaeologists, who ascribed the majority of 10th – 11th-century archaeological finds from the Pannonian plain exclusively to the Magyars ("the old-Hungarian ethnos"), while marginalizing the Slavic population in their interpretations. He thus also considers Demo's attribution of the Jegeniš sword to Magyar warriors of King Géza I not only "incorrect", but even "naive", because they would not have been present alongside the Drava at that time. Indeed, he emphasizes that "even the passionate followers of the 'Magyar fascination'" do not think of something like that.[15] The remainder of the discussion about this sword, mostly pertaining to typology, is noticeably calmer in tone, and thus obviously less disturbing for Vinski.[16] Moreover, he even gives some credit to Demo in that regard, writing that he "correctly noticed that the sword (...) is a post-Carolingian weapon of the 10th century".[17] In his own defence, however, he states that the crossguard had previously not been sufficiently prepared, and that the drawing of the sword was made prior to its final conservation, and so the details on it were not completely clear.[18] Still, Vinski points out that the crossguard is actually not that concave, and rejects the attribution to Petersen's type S. Instead, he considers it conditionally close to type R. He also insists on the importance of the hole in the tang, from which he concludes that the sword had been in use for a long time, and that its grip was repaired in the manner that its wooden fittings were subsequently fastened with a rivet after the loss of the pommel.[19]

13 Demo 1984, 216–218 i bilj. 11.

14 Vinski 1985.

15 Vinski 1985, 106.

16 Od inače uravnotežena pisanja Z. Vinskog posebno odudara jedna od uvodnih rečenica njegove rasprave o jegeniškome maču, gdje navodi kako je isti uz još nekoliko primjeraka oružja objavljen „u tom radu inače narcisoidnog obilježja (autor Ž. Demo)" (Vinski 1985, 103). Citirani Demin rad, naravno, ničime ne daje povoda takvoj opasci koja predstavlja najobičniju *ad hominem* uvredu i mogla bi se protumačiti kao grubi pokušaj diskreditacije autora.

17 Vinski 1985, 106.

18 Vinski 1985, 101, bilj. 128, 103.

19 Vinski 1985, 103, 106.

20 Čimin 2013, 34.

13 Demo 1984, 216–218 and n. 11.

14 Vinski 1985.

15 Vinski 1985, 106.

16 One of the introductory sentences of Vinski's discussion about the Jegeniš sword especially deviates from his usually balanced writing. In it he states that the sword was published alongside several other examples of weapons "in that work of an otherwise narcissistic character (author Ž. Demo)" (Vinski 1985, 103). Demo's cited article gives, of course, no cause for such a remark, which represents an ordinary *ad hominem* insult and could be interpreted as a harsh attempt at discrediting the author.

17 Vinski 1985, 106.

18 Vinski 1985, 101, n. 128, 103.

19 Vinski 1985, 103, 106.

ne specificira koji bi to točno tip bio, a mač navodi i kao karolinški. Citirajući izvore za takvo određenje, u bilješci se referira na članke Deme i Vinskog iz *Vjesnika Arheološkog muzeja u Zagrebu*, ne uzimajući u obzir kasniji Vinskijev rad.[21] Tajana Sekelj Ivančan pak piše kako je mač određen kao Petersenov tip S i datiran u drugu polovinu 10. stoljeća,[22] dok u nedavnom radu o novim ranosrednjovjekovnim nalazima iz šljunčare Jegeniš usto pridodaje i da ga Demo veže uz mađarske prodore u srednju i zapadnu Europu preko sjeverne Podravine, što i sama prihvaća.[23] Autorica se u svojim radovima referira samo na Demin članak, ne i radove Vinskog. Mogućnost tumačenja u kontekstu ugarskoga vojnog djelovanja (ali konkretno u borbama protiv isturenih hrvatskih predstraža) navodi i Hrvoje Gračanin, oslanjajući se također na Deminu interpretaciju, ali navodi i kritički stav Vinskog.[24]

Sumarno, dakle, može se reći kako je naposljetku ipak uglavnom prihvaćeno stajalište Željka Deme unatoč temeljitoj kritici Vinskoga pa i unatoč njegovu trajnom autoritetu na području istraživanja ranosrednjovjekovnih mačeva. Jegeniški mač smatra se očito oružjem 10. stoljeća, unikatnim primjerkom Petersenova tipa S s područja današnje Hrvatske. Takvo se tipološko određenje, koje potom utječe i na povijesnu kontekstualizaciju, temelji isključivo na blago konkavno oblikovanoj nakrsnici. No koliko je ono doista utemeljeno i opravdano? Zanimljivo, određenu je sumnju po tom pitanju nedavno izrazio i sam Demo. U obuhvatnom radu o istraživanjima i temama u djelima Zdenka Vinskog dotaknuo se i ovog mača, navodeći kako je izgled njegove nakrsnice „tek zanimljiv, ali ne i jedini element dostatan za njegovo eventualno nešto kasnije datiranje, ali i neko drukčije tumačenje".[25] Novu analizu treba stoga započeti upravo od tog elementa.

As noted already in the introduction above, Demo did not reply to the criticism, leaving Vinski the final word, while this sword rarely appeared in the literature during the following decades. Even the authors who did mention it did not go deeper into the topic. Robert Čimin, for example, emphasizes its high-quality damascened blade, and states that swords "of that type are approximately (...) dated to the 10th century".[20] In doing so he does not specify which type exactly that would be, and also refers to the sword as being Carolingian. Citing the sources for such determination, he refers to the articles of Demo and Vinski in the *Vjesnik Arheološkog muzeja u Zagrebu*, not taking into account Vinski's later work.[21] Tajana Sekelj Ivančan, on the other hand, writes that the sword is determined as Petersen's type S and dated to the second half of the 10th century,[22] while, in a recent paper on new early medieval finds from the Jegeniš gravel pit, she further adds, and herself supports, that Demo associates it with Magyar incursions into Central and Western Europe through Northern Podravina.[23] In her works, the author refers only to Demo's article, and not to those by Vinski. The possibility of interpretation in the context of Magyar military activity (but specifically in clashes with protruding Croatian outposts) is stated also by Hrvoje Gračanin, who likewise relies on Demo's explication, but cites the critical stance of Vinski accordingly.[24]

It can summarily thus be said that, in the end, the viewpoints of Željko Demo are predominantly accepted, despite Vinski's thorough criticism, and even despite his lasting authority within the topic of early medieval sword research. The Jegeniš sword is thus obviously considered to be a 10th-century weapon, a unique example of Petersen's type S from the territory of present-day Croatia. Such typological determination, which then affects the historical contextualization, is based solely on the slightly concave-shaped crossguard. But how well-founded and justified is it, really? Interestingly enough, certain doubts in that regard have recently been expressed by Demo himself. In an encompassing article on the research and themes in the works of Zdenko Vinski, he also touches upon this sword, noting that the form of its crossguard is "only an interesting element, and not the only one sufficient for its possible somewhat later dating, or some other interpretation".[25] New analysis should thus begin with precisely that element.

21 Čimin 2013, 34.

22 Sekelj Ivančan 2010, 175, bilj. 136. U ranijem članku o ranokarolinškom koplju iz šljunčare Jegeniš autorica navodi tek da se mač prema oblikovnim značajkama datira u 10. stoljeće, bez spominjanja tipologije (Sekelj Ivančan 2004, 120).

23 Sekelj Ivančan 2019, 169–170.

24 Gračanin 2008, 203, bilj. 206–207.

25 Demo 2020, 77.

20 Čimin 2013, 34.

21 Čimin 2013, 34.

22 Sekelj Ivančan 2010, 175, n. 136. In an earlier article on an Early Carolingian spearhead from the Jegeniš gravel pit, the author writes only that the sword is dated to the 10th century on the basis of the characteristics of its form, without mentioning typology (Sekelj Ivančan 2004, 120).

23 Sekelj Ivančan 2019, 169–170.

24 Gračanin 2008, 203 and n. 206–207.

25 Demo 2020, 77.

SLIKA 1. Nakrsnica, „prednja“ strana (snimio G. Bilogrivić).
FIGURE 1. Crossguard, ‘front’ side (photo by G. Bilogrivić).

SLIKA 2. Nakrsnica, „stražnja“ strana (snimio G. Bilogrivić).
FIGURE 2. Crossguard, ‘reverse’ side (photo by G. Bilogrivić).

Nova opažanja i rezultati

Nakrsnica

Obostrano konkavni izgled nakrsnice iz pogleda na dulje strane nije upitan, s krajevima koji su sveukupno 0,5 cm viši od središnjeg dijela (sl. 1–2).[26] Takvo je oblikovanje doista specifično za Petersenove tipove R i S, što i on sam ističe, a naglašena razlika među njima jest jedino masivnost jabučice i nakrsnice kod potonjega.[27] Upravo to je i navelo Vinskoga da naposljetku gleda prema tipu R budući da je nakrsnica jegeniškog mača relativno male visine. No konkavni je izgled ujedno i jedina njezina sličnost s obama tipovima. Ni Vinski, a ni Demo prije njega, nisu uzeli u obzir činjenicu da su nakrsnice i tipa R i tipa S u pogledu odozgo redovito ovalne, odnosno paralelnih duljih strana, koje se zakrivljenom linijom spajaju u zašiljeni vrh. Također, i u pogledu na kraće strane, odnosno na krajeve nakrsnica, njihove su bočne linije zakrivljene. Povrh toga, primjerci tipova R i S u pravilu imaju raskošno ukrašene balčake, uglavnom tauširane ili platirane srebrom, s raznolikim urezanim motivima.[28]

Nasuprot tomu, nakrsnica jegeniškog mača u pogledu odozgo je više-manje spljošteno romboidna (sl. 3),[29] dok su u pogledu na kraće strane bočne linije uglavnom ravne. Dakle, sasvim je drugačija od nakrsnica i Petersenova tipa R i S. Romboidni izgled i

New observations and results

Crossguard

The doubly-concave form of the crossguard in the long side view is unquestionable, with its ends 0.5 cm higher in total than the central part (Figs 1–2).[26] Such form truly is specific to Petersen’s types R and S, which he himself stresses, the accentuated difference between them being only the massiveness of pommel and crossguard in the latter.[27] It was precisely this that ultimately led Vinski to look towards type R, since the Jegeniš crossguard is of relatively modest height. But the concave form is also its only similarity to both of these types. Neither Vinski nor Demo before him took into account the fact that, in the view from above, crossguards of both types, R and S, are regularly oval, or with parallel longer sides curving towards pointed ends. Likewise, in the short side view, i.e. at the crossguard’s ends, their lateral outlines are also curved. Moreover, examples of types R and S regularly have lavishly decorated hilts, mostly inlaid or plated with silver, with various incised motifs.[28]

In contrast to that, the Jegeniš sword’s crossguard is more or less flatly rhomboid in the view from above (Fig. 3),[29] while in the short side view its lateral lines are predominantly straight. It is thus quite different from the crossguards of both Petersen’s

26 Duljina naksnice iznosi 9,9 cm, širina u sredini 2,2 cm, dok je visina u sredini 0,9 cm, a na vrhovima 1,4 cm. Za sve ostale detaljne dimenzije mača, vidi tablicu u Demo 1984, 215, sl. 2.

27 Petersen 1919, 140–149. Upravo iz tog razloga oba tipa zajedno razmatra Alfred Geibig (1991, 52–54), u okviru svojega kombinacijskog tipa 10, kao i u novije vrijeme Fedir Androshchuk (2014, 74–76).

28 Uz publikacije navedene u prethodnoj bilješci za brojne dodatne primjere, vidi također Müller-Wille 1972; Peirce 2002, 96–105. Valja napomenuti kako obostrano konkavnu nakrsnicu mogu imati i mačevi tipa Q (Petersen 1919, 136–140; vidi posebno primjerak na str. 137, sl. 111), međutim, ni kod ovoga tipa nakrsnice u pogledu odozgo nisu romboidne. U pravilu su ili ovalne, ponekad s više ili manje zašiljenim krajevima, ili pak uske i izdužene, s odrezanim krajevima. Kod tipa O nakrsnice su najčešće ili ravne ili blago konkavno zakrivljene prema sječivu, no treba ukazati i na obostrano konkavni primjerak s lokaliteta Kaldárhöfda na Islandu (Androshchuk 2014, 71–72, Fig. 26). Dapače, dimenzije ove nakrsnice (duljine 9,9 cm, visine 1 cm u sredini i 1,4 cm na krajevima, širine do 2 cm) gotovo u potpunosti odgovaraju dimenzijama jegeniške, kao što je i njezin izgled iz pogleda na dulje strane vrlo sličan. Ipak, u pogledu odozgo ova je nakrsnica gotovo paralelnih duljih strana, s ovalnim krajevima.

29 Možda ne toliko geometrijski precizno te izraženih kutova kao na crtežima koje donose Demo (1984, T. 1: 1) i Vinski (1985, 102, sl. 13.2), ali ipak je romboidna.

26 The crossguard’s length is 9.9 cm, and width in the centre 2.2 cm, while the height in the centre is 0.9 cm, and at the ends 1.4 cm. For all other detailed measurements of the sword, see the table in Demo 1984, 215, Fig. 2.

27 Petersen 1919, 140–149. It is precisely for that reason that both types have been considered jointly by Alfred Geibig (1991, 52–54) within his combination type 10, as well as more recently by Fedir Androshchuk (2014, 74–76).

28 Along with the publications cited in the previous footnote, for numerous further examples see also Müller-Wille 1972; Peirce 2002, 96–105. It must be noted that type-Q swords can also have a doubly concave crossguard (Petersen 1919, 136–140; see especially the example on p. 137, Fig. 111), but here, too, the crossguards are not rhomboid in the view from above. They are regularly either oval, sometimes with more or less pointed ends, or rather narrow and elongated, with cut-off ends. In type O, the crossguards are mostly either straight or concavely curved towards the blade, but I must also point to the doubly concave example from the Kaldárhöfda site on Iceland (Androshchuk 2014, 71–72, Fig. 26). Indeed, the dimensions of this crossguard (l. 9.9 cm, h. 1 cm in the centre and 1.4 cm at the ends, w. up to 2 cm) almost completely correspond to those of the Jegeniš crossguard, and its outline is very similar in the long side view. Still, in the view from above, this crossguard has almost parallel long sides, with oval ends.

29 Perhaps not so geometrically precise and angled as in the drawings in Demo (1984, T. 1: 1) and Vinski (1985, 102, Fig. 13. 2), but it still is rhomboid.

SLIKA 3. Nakrsnica, gornja strana (snimio G. Bilogrivić).
FIGURE 3. Crossguard, upper side (photo by G. Bilogrivić).

SLIKA 4. Nakrsnica, donja strana (snimio G. Bilogrivić).
FIGURE 4. Crossguard, lower side (photo by G. Bilogrivić).

sveukupnu jednostavnost nakrsnice istaknuo je već Demo,[30] dok se Vinski na taj aspekt oblikovanja nije osvrtao. Zbog snažne korodiranosti, nije pak moguće reći je li izvorno bila ukrašena,[31] no već njezina morfologija jasno pokazuje da ju nije moguće pripisati navedenim Petersenovim tipovima. Dapače, takav oblik nakrsnice nije karakterističan ni za jedan tip, kako Petersenove tako ni Geibigove tipologije. Štoviše, pri pregledu brojnih publikacija ranosrednjovjekovnih mačeva nisam uspio pronaći analogni primjerak kod kojega bi se u pogledu odozgo linije bočnih strana nakrsnice lomile pod kutom umjesto da su zaobljene.[32] Već ta činjenica pokazuje da ovdje nije riječ o „standardnom" proizvodu, što potvrđuje i sljedeća.

Naime, otvor u središtu nakrsnice jegeniškog mača, koji služi za njezino nasađivanje na trn i sječivo, jednak je i s gornje i s donje strane, i to ovalno izdužen, dimenzija 3 × 1,1 cm. Takvo je njegovo oblikovanje u najmanju ruku neuobičajeno. U pravilu, otvori su s donjih strana nakrsnica dulji od onih s gornje, ali i uski, oblikovani tako da, koliko je god moguće, tijesno nasjedaju na sječivo. Otvori s gornje strane su pak kraći i redovito uskoga pravokutnog oblika, kako bi jednako tijesno pristajali oko trna.[33] Ovdje razmatrana nakrsnica, međutim, ostavlja pozamašan prostor oko trna (sl. 5). Kako je već navedeno, prilično je oštećena korozivnim djelovanjem, ali ono nije moglo u tolikoj mjeri izmijeniti oblik otvora. Dakle, izvorno je oblikovan ovalno, uniformno kroz cijelu visinu nakrsnice. Kako bi ista ipak što je više moguće čvrsto nasjedala na sječivo, dodatno je žlijebasto izdubljena s donje strane, makar udubina više prati njezine vanjske linije nego linije sječiva (sl. 4). Sveukupno gledajući, morfologija nakrsnice te njezin otvor upućuju na zaključak da doista nije riječ o uobičaje-

types R and S. The crossguard's rhomboid outline and overall simplicity had already been pointed out by Demo,[30] while Vinski took no heed of that aspect of its form. Due to its highly corroded state it is not possible to say whether it may originally have been decorated,[31] but already its morphology clearly shows that it can not be attributed to the stated types of Petersen's. Indeed, such form of the crossguard is not characteristic of any type, either in Petersen's typology or in Geibig's. Moreover, in searching through numerous publications of early medieval swords, I was unable to find an analogous example, where in the view from above the lines of the crossguard's lateral sides would meet at an angle instead of being curved.[32] Already, this fact shows that here we do not have a 'standard' product, which is further corroborated by the following.

The insertion slot in the centre of the Jegeniš sword's crossguard, used for its fitting on the tang and the blade, is equal on both the upper and the lower sides, and ovally elongated, measuring 3 × 1.1 cm. Such form is unusual, to say the least. Insertion slots on the lower sides of crossguards are generally longer than those on the upper sides, but also narrow, designed to fit as tightly as possible on the blade. On the other hand, insertion slots on the upper sides are shorter and regularly of a thin rectangular outline, in order to equally tightly fit around the tang.[33] The crossguard considered here, however, leaves substantial space around the tang (Fig. 5). As already mentioned, it is fairly damaged by corrosion, but this could not have deformed the insertion slot's outline to such an extent. It was thus originally designed oval, uniform through the entire height of the crossguard. Still, to enable as firm a fit as possible on the blade, the crossguard was addi-

30 Demo 1984, 212, 218.

31 Na jednome kraju dulje strane nakrsnice vidljivo je, doduše, gotovo kvadratno zadebljanje dimenzija 0,8 × 0,7 cm (desni kraj na sl. 1), no teško je reći je li ovdje riječ o ostatku nekadašnjeg ukrasa ili samo o slučajnom rezultatu korozivnog djelovanja.

32 Takv je oblik u pogledu odozgo prisutan doduše kod brončanih nakrsnica bizantskih mačeva tipa Aradac-Kölked-Korint, koji usto ponekad imaju i dvije rupe u trnu. Međutim, ove nakrsnice su u pogledu na dulje strane sasvim drugačije. Također, riječ je o oružju kasnog 6. i uglavnom prve polovine 7. stoljeća (v. Eger 2014, za primjere osobito str. 204–205, Abb. 3–4).

33 Za gotovo idealno oblikovane otvore, vidi nakrsnicu pronađenu unutar naselja oko tzv. druge crkve na lokalitetu Břeclav-Pohansko u Češkoj (Košta *et al.* 2019, 215, sl. 56).

30 Demo 1984, 212, 218.

31 An almost square-like thickening measuring 0.8 × 0.7 cm is visible at one end of a long side (right end on Fig. 1), but it is hard to say whether this is a trace of former decoration, or only an accidental outcome of corrosion.

32 It should be noted that such form in the view from above is present on bronze crossguards of Byzantine swords of the Aradac-Kölked-Corinth type, which also sometimes have holes in their tangs. However, in the long side view these crossguards are completely different. Likewise, this is weaponry of the late 6th century and mostly the first half of the 7th (see Eger 2014, for examples, especially pp. 204–205, Abb. 3–4).

33 For practically ideally-formed insertion slots, see the crossguard found within the settlement around the so-called second church at Břeclav-Pohansko in the Czech Republic (Košta *et al.* 2019, 215, Fig. 56).

SLIKA 5. Detalj balčaka (snimio G. Bilogrivić).
FIGURE 5. Hilt, detail (photo by G. Bilogrivić).

nom elementu kojeg god Petersenovog tipa,[34] nego prije o barem donekle improviziranom radu ili rezultatu naknadnog popravka starijeg oružja. Time dolazimo do drugoga spornog elementa jegeniškoga mača, a to je držak.

Držak

Nažalost, danas više nema ni traga nekoć djelomično sačuvane drvene obloge drška, tako jasno vidljive u objavama iz 1980-ih. Kada i kako je propala, nije poznato.[35] S druge strane, nestanak obloge omogućio je pomicanje i odvajanje nakrsnice od sječiva, a time i njezino potpunije proučavanje. Također, sada je jasno vidljiva i rupa u trnu sječiva, ne toliko uobičajen detalj kod ranosrednjovjekovnih mačeva, ali važan za potpunije vrednovanje ovog primjerka.[36] Promjera 0,5 cm, rupa se nalazi na 9,1 cm od baze trna, odnosno 3,1 cm od njegova vrha (T. 4: 4; 5: 4). Kako je prethodno navedeno, spominje je već Zdenko Vinski u svojim prvim objavama, kao rupu za zakovicu koja ga pak navodi na zaključak o vjerojatnom naknadnom pričvršćivanju drvene obloge na taj način nakon nestanka nekoć postojeće jabučice.[37] Naime, drški su ranosrednjovjekovnih mačeva u pravilu konstruirani tako da je drvena obloga precizno obuhvaćala trn između nakrsnice i jabučice, bilo da je riječ o jednodijelnoj ili višedijelnoj oblozi. Drvo je potom najčešće dodatno omatano tekstilnom ili kožnom trakom, a kod luksuznijih primjeraka i srebrnom ili zlatnom žicom,

tionally grooved on the lower side, although the groove follows the crossguard's outlines more than the blade's (Fig. 4). Taking all into account, both the crossguard's morphology and its insertion slot point to the conclusion that it truly is not a regular element of whichever of Petersen's types,[34] but rather, at least to some extent, an improvised work, or the result of later repairs of an older weapon. This brings us to the second debatable element of the Jegeniš sword: its grip.

Grip

Unfortunately, no traces remain today of the once partially preserved wooden grip, so clearly visible in the 1980s publications. When and how it disappeared is unknown.[35] On the other hand, the grip's disappearance has enabled the moving and detachment of the crossguard from the blade, and with that its more thorough study. Likewise, the hole in the tang is now very clearly visible, a detail not so common on early medieval swords, but important for a fuller evaluation of this example.[36] Measuring 0.5 cm in diameter, the hole is situated at 9.1 cm from the base of the tang, or 3.1 cm from its tip (Pl. 4: 4; 5: 4). As mentioned earlier, it had already been noted by Zdenko Vinski in his first publications as a rivet hole, which in turn led him to the conclusion that the wooden grip was probably subsequently fastened in this manner after the loss of a previously existing pommel.[37] The grips of early medieval swords are generally constructed with the wooden fittings precisely encompassing the tang between the crossguard and the pommel, regardless of the fittings consisting of one or more parts. The wood is then most often additionally wrapped

34 Ipak, dvostruko konkavni oblik ne smije se zanemariti pa ne treba isključiti mogućnost da je izrađena po uzoru na nakrsnice tipova R ili S.

35 R. Čimin (2013, 34) navodi kako su tijekom nekadašnje konzervacije „bili vidljivi ostatci drvene obloge", iz čega proizlazi da ni u vrijeme pisanja njegova članka očito više nisu postojali.

36 Zanimljivo je da je u stalnom postavu Muzeja grada Koprivnice izložen još jedan mač s rupom u trnu (inv. br. MGK 5815). Riječ je o sječivu bez sačuvanih dijelova balčaka iz Jegenišu nedaleke Šoderice kod Botova. S izraženim žlijebom, koji se pruža cijelom njegovom duljinom, po svemu sudeći pripada Geibigovu tipu 2. U žlijebu se naziru tragovi damasciranja, a trn je oblikovan nešto drugačije od jegeniškog, s oštrim završetkom. Vidi također Čimin 2013, 34.

37 Vinski 1983, 550; 1984, 198.

34 Still, the crossguard's doubly concave form must not be disregarded. We should thus not rule out the possibility of its being modelled on crossguards of type R or S.

35 R. Čimin (2013, 34) states that, during earlier conservation, "the remains of a wooden grip were visible", which means that they had already disappeared before the writing of his article.

36 Interestingly enough, one more sword with a hole in its tang can be seen in the permanent exhibition of the Koprivnica Municipal Museum (inv. no. MGK 5815). It is a sword blade with no preserved hilt parts, from Šoderica, near Botovo, quite close to Jegeniš. With a distinct fuller extending over its entire length, it can be ascribed to Geibig's type 2. Traces of pattern-welding are visible in the fuller, while the tang is somewhat different than on the Jegeniš sword, with a sharply pointed tip. See also Čimin 2013, 34.

37 Vinski 1983, 550; 1984, 198.

ili čak sasvim obloženo ukrašenom metalnom oplatom.[38] Tako fiksirana drvena obloga nije mogla otpasti pa nije bilo ni potrebe za njezinim dodatnim učvršćivanjem zakovicom.

Nasuprot Vinskome, međutim, Demo rupu u dršku i trnu uopće ne spominje. U svojoj kritici potom Vinski ne propušta istaknuti kako je Demo nije registrirao i još jednom objašnjava značenje tog detalja i kao najbližu analogiju ponovno navodi mač s lokaliteta Mostar-Vukodol, s dvije takve rupe.[39] Budući da je Demo u svojoj objavi vrlo temeljit, da detaljno opisuje mač i donosi sve njegove precizne dimenzije, teško je očekivati da bi ovako što propustio. Zašto je onda ne spominje? Štoviše, kako to da rupa ne samo što nije naznačena na crtežu nego nije vidljiva ni na fotografiji u Deminu članku? Vinski to objašnjava pretpostavkom da su crtež i fotografija, koje Demo donosi, izrađeni prema drugoj strani balčaka, gdje bi drvena obloga vjerojatno prekrivala rupu.[40] Takva tvrdnja, s jedne strane, jasno pokazuje da je on jegeniški mač interpretirao prema fotografijama, a ne na temelju neposrednog proučavanja samoga predmeta.[41] U suprotnome, zasigurno bi znao, a ne samo pretpostavljao, kako izgleda druga strana balčaka. S druge strane, takva pretpostavka nije održiva jer bi zakovica morala prolaziti kroz obje strane drvene obloge drška, ostavljajući neminovno rupu i na suprotnoj strani. Iz Deminog je pak teksta sasvim jasno da on jest pisao objavu na temelju proučavanja mača, a ne fotografskog materijala. No odgovor na gore postavljeno pitanje nude upravo fotografije kojima se služio Vinski.

Naime, u ostavštini Zdenka Vinskog i Ksenije Vinski-Gasparini u Arhivu Arheološkog muzeja u Zagrebu (dalje: AMZ) u jednoj od kutija sačuvani su i njegovi radni materijali o jegeniškome maču, među njima i fotografski negativi snimaka cijeloga mača i balčaka s dijelom sječiva, kao i razvijene fotografije.[42] Dio fotografija prikazuje mač prije čišćenja i konzervacije, a dio nakon. Osim činjenice da je mač na potonjima očišćen i konzerviran, među snimkama postoje još neke važne razlike.[43] Dvije bi fotografije (T. 3: 1, 3) trebale pokazivati istu stranu mača prije i poslije konzervacije. I, doista, u donjem dijelu lijevoga kraja nakrsnice na obje je slike primjetno jednako oštećenje, dok je desni kraj cjelovit, a drvena je obloga balčaka pak jednako stepenasto oštećena na svojoj lijevoj strani. Jednako je tako na druge dvije (T. 3: 2, 4), na kojima bi trebala biti prikazana suprotna strana, sada desni kraj

with a textile or leather band, on more luxurious examples also with silver or golden wire, or even completely coated with metal plating.[38] Thusly fastened wooden fittings could not fall off, so there was no need for them to be further riveted.

In contrast to Vinski, however, Demo does not even mention the hole in the grip and tang. In his ensuing critique, Vinski then does not fail to emphasize that Demo had not registered it, once more explaining the meaning of this detail, and again citing the sword from Mostar-Vukodol, with two such holes, as the closest analogy.[39] Since Demo is very thorough in his publication, describing the sword in detail and listing all its precise measurements, it is hard to expect that he would have missed something like this. Why then does he not mention it? Moreover, how is it that not only is the hole not marked on the drawing, but it is not visible on the photograph in Demo's article, either? Vinski explains this by assuming that the drawing and the photograph presented by Demo were created with regard to the opposite side of the hilt, where the wooden grip would probably be covering the hole.[40] Such a claim on the one hand clearly shows that he himself interpreted the Jegeniš sword through photographs, and not through personal examination of the object itself.[41] He would otherwise surely have known, and not only presumed, what the opposite side of the hilt looked like. On the other hand, such an assumption is untenable, because the rivet would have to go through both sides of the wooden grip, inevitably leaving a hole on the opposite side as well. From Demo's text it is, in turn, clear that he did write his publication on the basis of examination of the sword, and not the photographic material. But the answer to the question posed above is offered precisely by the photographs used by Vinski.

That is, in one of the boxes within the bequest of Zdenko Vinski and Ksenija Vinski-Gasparini in the Archives of the Archaeological Museum in Zagreb (further: AMZ), his working materials on the Jegeniš sword are also kept. Among these are photographic negatives of pictures of the entire sword, and of the hilt with part of the blade, as well as developed photographs.[42] Some of the photographs show the sword before cleaning and conservation, and some after. Besides the fact that, on the latter ones, the sword is cleaned and conserved, there are some other important differences between the pictures.[43] Two photographs (Pl. 3: 1, 3)

38 Za izradu drška, vidi Geibig 1991, 100–103. Ogledni primjerak drška s hrvatskih lokaliteta sačuvan je na ranokarolinškom maču tipa K iz Cirkovljana kod Preloga (Tomičić 1984, 209–216; Bilogrivić 2009, 141, T. 3), tridesetak kilometara uzvodno Dravom od šljunčare Jegeniš.

39 Vinski 1985, 103–104.

40 Vinski 1985, 103, bilj. 132.

41 Dodatno to potvrđuje i zahvala Z. Vinskog nekadašnjoj kustosici Muzeja grada Koprivnice, Sonji Sušanj-Kolar, za podatke o maču, ali i za njegovu skicu i fotografije (Vinski 1984, 198).

42 AAMZ 210–5. Fotografije se nalaze u zavežljaju od prozirnog masnog papira, na kojemu je rukom Z. Vinskog napisano „Legrad-Šoderica (grad. muzej, Koprivnica)".

43 Na dopuštenju za objavu fotografija i susretljivosti prilikom arhivskog istraživanja ovim putem srdačno zahvaljujem kolegici Ani Solter, voditeljici Odjela za dokumentaciju Arheološkog muzeja u Zagrebu.

38 For grip construction see Geibig 1991, 100–103. A representative example of a grip from a Croatian site is preserved on the Early Carolingian type-K sword from Cirkovljan, near Prelog (Tomičić 1984, 209–216; Bilogrivić 2009, 141, T. 3), some thirty kilometres up the Drava from Jegeniš.

39 Vinski 1985, 103–104.

40 Vinski 1985, 103, n. 132.

41 This is further corroborated by Z. Vinski's gratitude to Sonja Sušanj-Kolar, a former curator of the Koprivnica Municipal Museum, for the information on the sword, and also its sketch and photographs (Vinski 1984, 198).

42 AAMZ 210–5. The photographs are bundled in transparent glossy paper, on which Z. Vinski personally wrote: "Legrad-Šoderica (grad. muzej, Koprivnica)".

43 For permission to publish the photographs, and for being very forthcoming during my archival research, I must express my gratitude to Ana Solter, head of the Documentation Department of the Archaeological Museum in Zagreb.

nakrsnice otkrhnut na donjoj strani, a drvena je obloga podjednako blago zakrivljena na lijevoj strani i znatnije oštećena na desnoj.

Međutim, ista je strana sječiva prikazana na T. 3: 1, 4, te na T. 3: 2–3, a ne na prethodno navedenim parovima. To je jasno uočljivo budući da je jedna oštrica u prvih 5 – 6 cm ispod nakrsnice relativno dobro očuvana, dok je druga više oštećena i nazubljena s tri jača utora. Razlike su, nadalje, vidljive i na dršku, odnosno trnu. Primjerice, na fotografiji T. 3: 1 lijeva je strana vrha trna očuvana i blago konveksno zaobljena, dok je desna pak uleknuta. Isto bi analogno trebalo očekivati i na T. 3: 3, no na njoj je situacija obrnuta. Jednako tako, na slikama balčaka prije konzervacije jasno se vidi rupa na obje strane (T. 3: 1–2). Nasuprot tomu, na slikama poslije konzervacije na jednoj se strani uopće ne vidi (T. 3: 3), dok je na drugoj vidljivo kružno oštećenje drvene obloge, ali je sada pozicionirano nešto bliže vrhu i desnoj strani trna (T. 3: 4). Da bi se sasvim razriješile ove nesuglasice, valja opisane fotografije usporediti s objavama Deme i Vinskog.

Demo donosi fotografiju mača nakon konzervacije, i to fotografiju iste strane balčaka koja je prikazana i na ovdje navedenoj slici T. 3: 3 iz Arhiva AMZ, a prema toj strani izrađen je i prateći crtež cijelog mača (T. 2: 3).[44] Vinski pak u sva tri svoja članka donosi jedan te isti crtež cijelog mača, crtan prije konzervacije (T. 2: 1).[45] Uz njega u članku iz 1985. objavljuje pak i detaljniji crtež balčaka, na kojemu je nakrsnica prikazana u stanju nakon konzervacije (T. 2: 2).[46] Taj crtež, međutim, nije izrađen prema tada aktualnome stanju, odnosno prema konzerviranome maču, nego, po svemu sudeći, prema fotografiji prije čišćenja i konzervacije (T. 3: 1), no s dorađenom nakrsnicom.[47] Naime, na crtežu je uz stepenasto oštećenje drvene obloge istaknuta rupa u trnu, a njegov je vrh blago uleknut na desnoj strani. Također, koliko god je sječivo pojednostavljeno crtano, nazubljena su oštećenja naznačena na lijevoj oštrici.

Povrh svega, na crtežima u radovima Deme i Vinskoga uočljiva je i razlika između donjeg dijela drška, tik uz nakrsnicu. Ista razlika vidljiva je na obje strane drška i na fotografijama prije i nakon konzervacije. Na potonjima donji dio drvene obloge djeluje utisnuto u odnosu na ostatak, s naglašenom horizontalnom ravnom linijom na otprilike 0,85 cm iznad nakrsnice. Na fotografijama nastalima prije konzervacije toga jednostavno nema. O čemu je onda riječ? Željko Demo je u svome članku srećom objavio i fotografiju balčaka s bočne strane, na kojoj se vidi kako obloga pri dnu doista jest utisnuta, odnosno stanjena.[48] Dakle, donji je

ought to be showing the same side of the sword before and after conservation. And truly, in the lower part of the crossguard's left end, equal-looking damage is noticeable while the right end is whole, and the wooden grip in turn equally gradually diminishes towards the tip on its left side. Vice versa in the other two photographs (Pl. 3: 2, 4), which ought to be showing the opposite side: it is now the crossguard's right end that is chipped off on the lower side, while the wooden grip is equally slightly curved on its left side and more severely damaged on the right.

However, the same side of the blade is depicted in Pl. 3: 1, 4, and in Pl. 3: 2–3, respectively, not in the previously described pairs. This is clearly noticeable, since one cutting edge is relatively well-preserved in its first 5 – 6 cm below the crossguard, while the other is damaged more and serrated with three deep dents. Further differences are visible also on the grip and the tang. For example, in photograph Pl. 3: 1 the left side of the tip of the tang is preserved and slightly convexly curved, while the right one is dented. The same should then analogously be expected in Pl. 3: 3, but there the situation is the opposite. Likewise, in the pictures before conservation the hole is clearly visible on both sides (Pl. 3: 1–2). In contrast, in the pictures after conservation it is on one side not visible at all (Pl. 3: 3), while on the other a circular item of damage in the wooden grip can be seen, but this is now positioned somewhat closer to the tip and the right side of the tang (Pl. 3: 4). In order to resolve these inconsistencies entirely, we must compare the described photographs with Demo's and Vinski's publications.

Demo presents a photograph of the sword after conservation, a photograph of the same side of the hilt that is shown on the picture cited here, Pl. 3: 3 from the AMZ Archives, and his accompanying drawing of the entire sword (Pl. 2: 3) was also made with regard to that side.[44] Vinski in turn presents one and the same drawing of the entire sword in all three of his articles, made before conservation (Pl. 2: 1).[45] In the 1985 article, though, alongside it he also published a more detailed drawing of the hilt, on which the crossguard is pictured in the state after conservation (Pl. 2: 2).[46] That drawing, however, was not made according to the then actual state, i.e. according to the conserved sword. By all accounts, it was based on the photograph taken before cleaning and conservation (Pl. 3: 1), but with a corrected crossguard.[47] That is, on this drawing the hole is marked in the tang beside the gradually damaged wooden hilt, and the tip is slightly dented on the right side. Likewise, much though the drawing of the blade is simplified, the serrated damage is marked on the left edge.

44 Demo 1984, T. 1: 1, 3: 1. Dakako, jasno se vidi da nije riječ o fizički istoj fotografiji, nego su za Deminu objavu očito izrađene nove.

45 Spomenuto je već gore kako je u članku iz 1985. naglasio da ranije nakrsnica nije bila dovoljno preparirana i da je mač crtan prije konačne konzervacije.

46 Vinski 1985, 102, sl. 13: 1–2.

47 Presjek je nakrsnice pak vjerojatno precrtan prema Deminoj objavi. Originalni primjerak crteža za članak iz 1985. čuva se također u Arhivu AMZ (AAMZ 210–1, novi žuti fascikl s oznakom "ad SHP 1985/6"). Autor je Krešimir Ronče vić, u čijem se potpisu nalazi i godina: '85.

48 Demo 1984, T. 3: 1, srednja slika.

44 Demo 1984, T. 1: 1, 3: 1. Of course, it is clearly visible that these are not physically the same photographs. New ones were obviously taken for Demo's publication.

45 It has already been mentioned above how, in the 1985 article, he emphasized that the crossguard had earlier not been sufficiently prepared, and that the drawing of the sword was made before the final conservation.

46 Vinski 1985, 102, Fig. 13: 1–2.

47 The crossguard's cross section was in turn probably redrawn according to Demo's publication. The original copy of the drawing for the 1985 article is also kept in the AMZ Archives (AAMZ 210–1, new yellow folder labelled "ad SHP 1985/6"). Its author is Krešimir Ronče vić, in whose signature there is also a date: '85.

dio drvene obloge drška bio očito stanjen kako bi mogao biti uglavljen u nakrsnicu. S time se slaže i činjenica da nakrsnica na gornjoj strani nema uzak otvor oblikovan prema trnu, nego relativno prostran ovalni otvor jednak kroz cijelu svoju visinu, po sredini uglavnom odgovarajuću stanjenom dijelu obloge. Iz tog je razloga bila dovoljna samo jedna zakovica u gornjem dijelu drška da čvrsto fiksira drvenu oblogu, umjesto dvije (primjerice, na spomenutom maču s lokaliteta Mostar-Vukodol) ili više njih, kao što je slučaj na oružju bez jabučice.[49]

S ovime napokon dolazimo do odgovora na prethodno postavljeno pitanje. Prema svim do sada opisanim detaljima, može se zaključiti da je prilikom čišćenja i konzervacije mača njegov balčak rastavljen pa naknadno opet sastavljen. Tom su prilikom nakrsnica i drvena obloga vraćene u izvornoj orijentaciji, ali je sječivo greškom okrenuto na obrnutu stranu.[50] Također, obloga drška više nije uglavljivana u nakrsnicu, nego je postavljena oko trna otprilike 0,85 cm više, time prekrivajući rupu u njegovu gornjem dijelu. Dakle, prilikom Deminog proučavanja i objave mača jednostavno nije bila vidljiva i zato nije ni spomenuta nigdje u njegovu članku, niti ju je mogao uzeti u razmatranje pri analizi i interpretaciji.[51] Time mu je i prostor za cjelovito njegovo vrednovanje bio ponešto sužen. Ono što čudi, međutim, jest da Vinski, koji je imao na raspolaganju svu postojeću fotodokumentaciju, nije opazio ove razlike. Dodatno iznenađuje i to što ni za jedan od tri svoja ovdje citirana članka nije dao izraditi precizniji crtež prema stanju mača nakon čišćenja i konzervacije. Tako je i novi crtež balčaka iz 1985., kako je prethodno objašnjeno, zapravo hibrid dorađenog starog uz neprecizno predočeno „novo" stanje nakrsnice. Jednako je neprecizno nacrtan i dio sječiva ispod balčaka, na kojemu je prikazan vrlo primjetan žlijeb (T. 2: 2).[52] U stvarnosti, međutim, žlijeb na tome dijelu sječiva ne postoji. Zašto je to tako, vidjet ćemo u posljednjem dijelu analize.

Sječivo

U svim ovdje citiranim radovima sječivu jegeniškog mača posvećeno je znatno manje pažnje u usporedbi s balčakom, što i ne čudi, budući da su sječiva razmjerno manje klasifikacijski i datacijski iskazljiva. Vinski tako u prvoj objavi navodi tek da je sječivo damascirano, u drugome radu usto dodaje i da je bez žlijeba, dok ga u posljednjem uopće ne spominje.[53] Pritom, kako je već navedeno, kroz sva tri rada ponavlja isti crtež cijelog mača (T. 2: 1). Na njemu je, zanimljivo, naznačen i žlijeb koji se pruža punom duljinom, od nakrsnice do nekoliko centimetara prije

On top of that, a difference in the lower part of the hilt, just above the crossguard, is noticeable in the drawings in the works of Demo and Vinski. The same difference is noticeable on both sides of the hilt also in the photographs taken before and after conservation. On the latter ones the lower end of the wooden grip fittings seems pressed in regard to the rest, with an accentuated horizontal line at around 0.85 cm above the crossguard. On the photographs taken before conservation, this simply does not exist. What do we have here, then? Luckily, Željko Demo also published a photograph of the hilt from the side, where it can be seen that the wooden fitting truly is pressed, i.e. thinned in its lower end.[48] Therefore, the lowest parts of the wooden grip fittings were obviously thinned out in order to be fitted into the crossguard. This agrees with the fact that the crossguard does not have a narrow slot modelled on the tang, but a relatively spacious oval one equal throughout its entire height, which in the centre roughly corresponds to the thinned-out part of the fittings. This is the reason why only one rivet in the upper part of the grip was sufficient to firmly fasten the wooden fittings, instead of two (e.g. on the abovementioned sword from Mostar-Vukodol) or more, as is the case on weapons without pommels.[49]

With this we finally arrive at the answer to the question posed above. In accordance with all the details described, it can be concluded that, during the cleaning and conservation of the sword, its hilt was disassembled and subsequently reassembled. On that occasion the crossguard and the wooden grip were returned to their original orientation, but the blade was mistakenly turned to the opposite side.[50] Likewise, the wooden grip fittings were no longer inserted into the crossguard, but rather placed around the tang at approx. 0.85 cm higher, thus covering the hole in its upper part. Therefore, during Demo's studying and publication of the sword, it was simply no longer visible, and that is why it is not mentioned anywhere in his article, nor was it possible for him to take it into account during analysis and interpretation.[51] This, then, also somewhat constricted him in the area of its complete evaluation. It is puzzling, however, that Vinski, who had all the existing photodocumentation at his disposal, did not notice these differences. It is further surprising that he did not have a more precise drawing made, based on the state of the sword after cleaning and conservation, for any of his three articles cited here. The new drawing of the hilt of 1985, as explained above, is thus actually a hybrid of the reworked old one with an imprecisely presented 'new' state of the crossguard. Part of the blade below the hilt is equally imprecisely depicted, with a very notice-

49 Za brojne takve primjere, vidi Nabergoj 2019.

50 Kako navodi Demo (1984, 212), mač je očišćen i konzerviran u AMZ-u 1973. godine. Dokumentacija o toj konzervaciji danas tamo, nažalost, ne postoji.

51 Zbog pogrešno sastavljenog balčaka, ni fotografija u Deminu članku stoga ne pokazuje izvorno stanje. Na novim fotografijama, koje objavljujem, nakrsnica je orijentirana prema arhivskim fotografijama mača prije čišćenja i konzervacije tako da „prednja" strana mača odgovara onoj na T. 3: 2.

52 Teško je objasniti kako je moguće da je tako izniman arheološki ilustrator poput K. Rončevića izradio crtež s toliko mana.

53 Vinski 1983, 500; 1984, 198.

48 Demo 1984, T. 3: 1, central picture.

49 For numerous such examples, see Nabergoj 2019.

50 According to Demo (1984, 212), the sword was cleaned and conserved in the AMZ in 1973. There is, unfortunately, no documentation of that conservation there today.

51 Due to the incorrectly reassembled hilt, the photograph in Demo's article, then, also does not show the original state. In the new photographs which I am publishing here, the crossguard is orientated according to the archival photographs taken before cleaning and conservation, the 'front' side of the sword thus corresponding to the one shown on T. 3: 2.

vrha. Dakle, i u članku u kojemu izričito piše da ga nema. Demo je u opisivanju ipak opširniji i precizniji pa navodi kako je žlijeb plitak, širok i vidljiv samo mjestimice te donosi njegove dimenzije, a damascirani uzorak definira kao varijantu oblika riblje kosti. Objavio je pritom i fotografiju detalja jednog dijela sječiva s vidljivim uzorkom.[54] Isto uglavnom ponavlja i R. Čimin, istaknuvši da, kako je već ranije dijelom navedeno, „pokazuje izuzetnu kvalitetu izrade putem damasciranja".[55] S potonjom je tvrdnjom bez daljnjega u pravu, barem što se tiče otprilike dvije trećine sječiva od vrha prema balčaku, kako objašnjavam u nastavku. No prvo je potrebno kratko se osvrnuti na problematiku izrade sječiva ranosrednjovjekovnih mačeva damasciranjem.

Valja imati na umu da se „pravo damasciranje" odnosi na izradu vrlo kvalitetnog čelika s relativno visokim udjelom ugljika, odnosno jednu varijantu čeličnog lijeva (engl. *crucible steel*). Pri tome procesu na sječivu nastaje i vodenasti uzorak, dodatno naglašen jetkanjem kiselinom. Ova metoda izrade sječiva, međutim, nije prakticirana u ranosrednjovjekovnoj Europi, nego u Aziji i na Bliskom istoku.[56] Kada se pak u arheološkoj literaturi govori o damasciranim europskim ranosrednjovjekovnim mačevima, zapravo se misli na zavarivanje s uzorkom (engl. *pattern-welding*). Ta metoda podrazumijeva kovačko zavarivanje barem dviju različitih vrsta željeza ili čelika. Naizmjenično složeni tanki slojevi željeza i čelika (ili samo čelika, no s različitim udjelom ugljika) čvrsto se zavare i oblikuju u šipku, koja se potom tordira kako bi se omogućila izrada uzoraka. Konačni izgled uzorka ovisi o razini do koje se takva kompozitna šipka brusi. Zatim se dvije ili više šipki međusobno kovački zavare, čime se formira središnji dio sječiva, na kojega se naknadno zavare oštrice (sl. 6). Gledano u presjeku, središnji dio može se sastojati od jednog ili dva reda kompozitnih šipki, ali i dva reda između kojih se nalazi zasebna tanka jezgra. Završnim pak poliranjem i eventualno jetkanjem blagom kiselinom dobiva se konačni izgled „damasciranog" uzorka, vidljivog u žlijebu sječiva.[57] Iako je, dakle, riječ o dvama potpuno različitim procesima izrade sječiva, pojam damasciranje je toliko uobičajen u arheološkoj literaturi i za potonji, da ga je teško izbjeći. Isti se zbog jednostavnosti izražavanja koristi i u ovom radu, međutim, time se ne implicira da je sječivo jegeniškog mača izrađeno pravim damasciranjem.

Na njegovu je sječivu damascirani uzorak jasno vidljiv s obje strane. Nalazi se unutar plitkog žlijeba i pruža od samoga vrha prema balčaku. Uzorak, međutim, nije izveden u obliku riblje kosti, nego je puno kompleksniji. Na „prednjoj" strani u sredini sječiva od vrha započinje dijagonalni niz,[58] no nakon 15-ak cm prelazi u polukružni uzorak,[59] koji pak nakon sljedećih 30-ak cm ponovo prelazi u dijagonalni niz jednak početnome. Nakon sljedećih 15-ak

able fuller (Pl. 2: 2).[52] In reality, though, the fuller does not exist on that part of the blade. Why that is so, we shall see in the final part of the analysis.

Blade

In all the articles cited here, much less attention has been paid to the blade of the Jegeniš sword than the hilt, which is not surprising, since blades are proportionately less expressive in terms of classification and dating. Vinski, in his first publication, thus states only that the blade is damascened, in his second work adding also that it has no fuller, while in the last one there is no mention of the blade at all.[53] Simultaneously, as has already been mentioned, he repeats the same drawing of the whole sword in all three works (Pl. 2: 1). Interestingly enough, a fuller spanning the whole length of the blade, from the crossguard to a few centimetres before the tip, is marked in it. Thus also in the article wherein he explicitly writes that it does not exist. Demo is, in turn, more extensive and precise in his description, stating that the fuller is shallow, wide, and visible only in some places, adding its measurements, and defining the damascening as being of a herringbone pattern. He also publishes a photograph of a detail of the blade showing the pattern.[54] The same is mostly repeated by Čimin, who, as already partly noted, emphasizes that it "shows exquisite quality of production by damascening".[55] He is undoubtedly right with the latter claim, at least for approximately two thirds of the blade, as I shall explain below. But first it is necessary to turn briefly to the problem of the production of early medieval sword blades by damascening.

We must bear in mind that 'true damascening' pertains to the production of high-quality steel with relatively high carbon content, i.e. a variant of crucible steel. During the process a watery pattern also appears on the blade, and this is further accentuated by etching with acid. This method of blade production, however, was practised not in early medieval Europe, but in Asia and the Near East.[56] When archaeological literature in turn speaks of damascened early medieval European swords, what is described is actually pattern-welding. That method implies the welding of at least two different kinds of iron or steel. Alternately stacked thin sheets of iron or steel (or only of steel, but with different carbon content) are welded solid and formed into a rod which is then twisted, so as to enable the creation of patterns. The final appearance of the pattern depends on the level of grinding of such a composite rod. Then two or more rods are welded together, thus forming the central part of the blade, onto which the cutting edges are subsequently welded (Fig. 6). In cross section the central part can consist of one or two rows of composite rods, but

54 Demo 1984, 212, 216, T. 3: 1.

55 Čimin 2013, 34.

56 Williams 2012, 24–37; Moilanen 2015, 113–114.

57 Više o zavarivanju s uzorkom, vidi u Ypey 1983; Westphal 2002, 6–9; Williams 2012, 62–82; Lehmann 2014, 112–114; Moilanen 2015, 113–124; Lehmann, Roth, Lipka 2019, 44–47.

58 Tzv. Z-uzorak, budući da se dijagonale spuštaju zdesna nalijevo kada se mač gleda postavljen okomito, s vrhom prema dolje.

59 Također, zvan i rozetastim uzorkom.

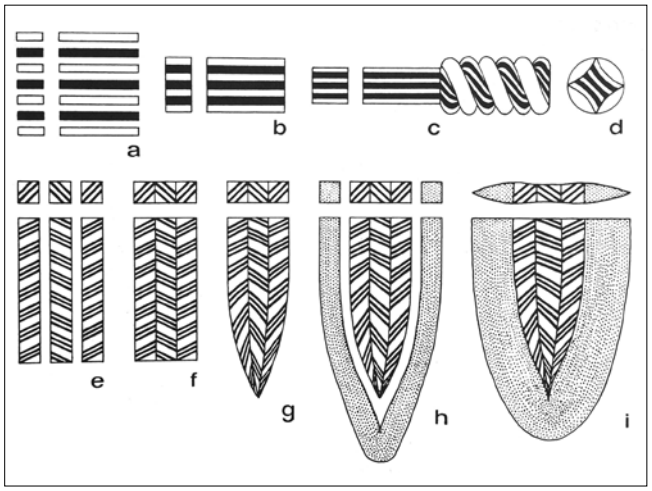
52 It is hard to explain how an exceptional archaeological illustrator, such as K. Rončević was, could have made a drawing with so many flaws.

53 Vinski 1983, 500; 1984, 198.

54 Demo 1984, 212, 216, T. 3: 1.

55 Čimin 2013, 34. When referring to previous authors' writings I use the term *damascening*, corresponding to the usual Croatian term used by them (*damasciranje*), while further on in the text I write of pattern-welding. The distinction between the two is explained in the following paragraph.

56 Williams 2012, 24–37; Moilanen 2015, 113–114.



SLIKA 6. Shematski prikaz izrade damasciranog sječiva sa Z-S-Z uzorkom. Čelik je označen crnim, a željezo bijelim. a–d: izrada kompozitne šipke; e–g: zavarivanje triju šipki i oblikovanje njihova vršnog dijela; h–i: zavarivanje oštrica i konačno oblikovanje vrha sječiva (Ypey 1983, 209, Abb. 22; obradio G. Bilogrivić).

FIGURE 6. Schematic representation of the forging of a pattern-welded blade with a Z-S-Z pattern. Steel is drawn in black, iron in white. a–d: production of a composite rod; e–g: welding of three rods and forming of their tip area; h–i: welding of the edges and final forming of the tip of the blade (Ypey 1983, 209, Abb. 22; adapted by G. Bilogrivić).

cm damascirani se uzorak sasvim prekida. Navedeni alternirajući niz flankiran je s obje strane jednostavnim trakastim uzorkom, što znači da je sveukupno riječ o trima pojedinačnim šipkama (T. 4: 1–3; 6: 1–2).

Na suprotnoj, „stražnjoj", strani sječiva situacija je pak drugačija. U sredini od vrha također započinje dijagonalni niz,[60] no duljine oko 30 cm, nakon kojega sljedećih 30-ak cm slijedi polukružni uzorak, a potom se damascirani uzorak i ovdje prekida.[61] Za razliku od prethodno opisane strane sječiva, na ovoj je središnji niz flankiran s obiju strana polukružnim uzorkom (T. 5: 1–3). Budući da za trakasti damascirani uzorak šipka ostaje ravna i ne može biti tordirana, bočni segmenti damasciranog dijela sječiva sa-

also of two rows around a separate thin core. The final polishing, and possibly etching with mild acid, gives the final appearance of a 'damascened' pattern, visible in the fuller.[57] Although these are thus two very different blade-production processes, the term *damascening* is so customary in the archaeological literature, also for the second one, that it is hard to avoid. For simplicity of expression the same term (*damasciranje*) is used in the Croatian text of this paper, too. This does not, however, imply that the Jegeniš sword blade was made by true damascening.

On its blade, pattern-welding is clearly recognizable on both sides. It is found inside the shallow fuller and extends from the very tip towards the hilt. The pattern, however, is not of herringbone form, but actually much more complex. On the 'front' side a diagonal sequence in the central part of the blade begins from the tip,[58] but after some 15 cm it transforms into a semicircular pattern,[59] which is, in turn, after approximately 30 cm, transformed again into a diagonal sequence identical to the initial one. After the next 15 cm or so, the welded pattern stops altogether. The said alternating sequence is flanked on both sides by a simple straight-line pattern, meaning that here we have a total of three individual rods (Pls 4: 1–3; 6: 1–2).

On the opposite, or 'reverse', side of the blade, the situation is different. A diagonal sequence also begins from the tip in the central part,[60] but extends for around 30 cm, after which follows approximately 30 cm of a semicircular pattern, and then the welded pattern is completely terminated here, as well.[61] Unlike the previously described side of the blade, on this one the central sequence is flanked on both sides by a semicircular pattern (Pl. 5: 1–3). Since the rod remains straight and can not be twisted for the straight-line pattern, the lateral segments of the pattern-welded part of the blade are obviously composed of four individual rods, two on each side of the blade. Since the central diagonal sequence between them is of 'Z' pattern on one side, and 'S' pattern on the other, this could technically be just one, somewhat thicker, rod, but it is more probable that here there is also one rod on each side of the blade. The central pattern-welded section of the blade was thus, by all accounts, constructed with six individual composite rods.[62] The cutting edges, of different

60 Na ovoj strani riječ je o tzv. S-uzorku budući da se dijagonale spuštaju slijeva nadesno.

61 Zbog korozivnog djelovanja, uzorak nije na svim mjestima sasvim jasno vidljiv. Također, kako upozorava Mikko Moilanen (2015, 124), valja imati na umu da i korozivno djelovanje i kasniji konzervatorski zahvati mogu izmijeniti izvorne uzorke, tako da današnji izgled sječiva ne mora nužno sasvim odgovarati izgledu kada je bilo prvotno iskovano i polirano.

57 For more on pattern-welding, see Ypey 1983; Westphal 2002, 6–9; Williams 2012, 62–82; Lehmann 2014, 112–114; Moilanen 2015, 113–124; Lehmann, Roth, Lipka 2019, 44–47.

58 The so-called 'Z' pattern, since the diagonals descend from right to left when the sword is viewed positioned vertically and with the tip down.

59 Also known as the rosette pattern.

60 On this side it is the 'S' pattern, since the diagonals descend from left to right.

61 Due to corrosion the pattern is not completely visible in all segments. Likewise, as cautioned by Mikko Moilanen (2015, 124), we should bear in mind that both corrosion and later conservation interventions can alter the original patterns, so that the present-day appearance of the blade does not necessarily have to completely correspond to its appearance at the time when it was forged and polished.

62 The width of the lateral rods, i.e. of the presently visible lateral welded patterns, measures 0.5 – 0.7 cm. The central sequences are slightly wider, from 0.8 to 1 cm. For a schematic representation of a pattern-welded blade construction with six composite rods, see Lehmann 2014, 117, Fig. 6.

stavljeni su očito od četiri pojedinačne šipke, po dvije sa svake strane sječiva. Kako je središnji dijagonalni niz među njima s jedne strane Z-uzorka, a s druge S-uzorka, tehnički bi tu mogla biti riječ o samo jednoj, nešto debljoj, šipci, no vjerojatnije se i ovdje radi o po jednoj šipci sa svake strane sječiva. Dakle, središnji damascirani dio sječiva jegeniškog mača sastavljen je po svemu sudeći od šest pojedinačnih, međusobno zavarenih kompozitnih šipki.[62] Na njega su potom kovački zavarene oštrice od drugog materijala. Takva konstrukcija odaje vještog kovača, koji je izradio vrlo kompleksno sječivo. Odnosno, nešto više od dvije trećine sječiva kakvo je danas.

Naime, kako je upravo objašnjeno, damascirani uzorci naglo se prekidaju nakon 60-ak cm duljine od vrha sječiva prema balčaku. U posljednjih nekoliko centimetara također su primjetno deformirani. Do toga je očito došlo prilikom naknadnog kovanja, koje dokazuje kovački var nezamijećen u dosadašnjim raspravama o ovome maču. Var započinje na mjestu prekida damasciranih uzoraka i nastavlja se prema balčaku u duljini od otprilike 9 cm. Jasno je vidljiv i golim okom na obje strane sječiva (T. 4: 3; 5: 3), kao i na rentgenskoj snimci (T. 6: 2–3).[63] Rentgenska snimka dodatno potvrđuje da u preostalom dijelu sječiva sve do trna više nema tragova damasciranja. Također, na tome dijelu na obje strane sječiva nema nikakvih tragova žlijeba. Dakle, nije riječ o sječivu koje je bilo prelomljeno pa je potom popravljeno i spojeno u izvorni oblik. Ovdje je riječ o šezdesetak centimetara starijega damasciranog sječiva na koje je u nekom trenutku prikovan sasvim različit dio mača, od drugačijeg materijala,[64] u duljini od otprilike 39 cm (od čega oko 26 cm otpada na sječivo, a 12,7 cm na trn). Time je zapravo iskovan potpuno novi mač.[65]

Iz tog razloga jegeniško sječivo teško može poslužiti za precizniju dataciju. Damascirani dio svojom formom odgovara Geibigovu tipu 2, kod kojeg su oštrice gotovo paralelne i tek se u posljednjem dijelu nešto izrazitije približavaju prema vrhu, dok žlijeb zauzima gotovo punu duljinu sječiva.[66] Doduše, na mjestu završetka tog dijela širina iznosi 4,25 cm (širina u korijenu iznosi pak svega 4,45 cm), čime je ovo sječivo relativno usko za tip 2, međutim, preostalim tipovima nikako ne odgovara. Kako svojom formom, tako i širinom žlijeba koja iznosi 2,3 – 2,5 cm. Navoditi proporci-

material, were then welded onto it. Such construction reveals a skilled blacksmith, who created a very complex blade. That is, a bit more than two thirds of the blade as it is today.

As has just been explained, the welded patterns are abruptly terminated after some 60 cm in length from the tip towards the hilt. In their last few centimetres they are also noticeably deformed. This obviously occurred during subsequent reforging, which is proven by a welding joint unnoticed in previous discussions on this sword. The joint begins where the welded patterns are cut off and continues towards the hilt for around 9 cm. It is clearly visible not only in the X-ray image (Pl. 6: 2–3), but also to the naked eye on both sides of the blade (Pls 4: 3; 5: 3).[63] The X-ray additionally confirms that there are no more traces of pattern-welding in the remainder of the blade all the way to the tang. Likewise, in that part there are no traces of a fuller on either side of the blade. Thus, this is not a blade that was broken, and then repaired and reconnected to its original form. Here we have some 60 centimetres of an older pattern-welded blade onto which, at some point, a completely different sword part, of different material,[64] with a length of approximately 39 cm (26 cm of which pertain to the blade, and 12.7 to the tang), was attached. Thereby an entirely new sword was actually forged.[65]

Because of this the Jegeniš blade can hardly serve for more precise dating. The pattern-welded part in its form corresponds to Geibig's type 2, the edges of which are almost parallel, tapering more noticeably towards the tip only in its final segment, with the fuller occupying almost the full length of the blade.[66] Albeit the width at the position where this part ends measures 4.25 cm (the width of the base being in turn only 4.45 cm), making this blade relatively narrow for type 2. Still, it does not correspond to other types in any way: as in form, so too with the fuller width of 2.3 – 2.5 cm. Stating proportions according to Geibig's typology, the ratio of blade to fuller and their tapering at 60 and 40 cm from the base, respectively, makes no particular sense, since the blade in its present form is probably slightly longer than the original pattern-welded one was.[67] The circumstance that, in the first 26.5 cm, i.e. within the newer part of the blade, the fuller simply was not forged is also a hindrance. The fact that it is a

62 Širine bočnih šipki, odnosno danas vidljivih bočnih damasciranih uzoraka iznose 0,5 – 0,7 cm. Središnji nizovi su nešto širi, od 0,8 do 1 cm. Za shematski prikaz damascirane konstrukcije sječiva sa šest kompozitnih šipki, vidi Lehmann 2014, 117, Abb. 6.

63 Rentgensko snimanje je obavljeno bolničkim rentgenom u KB „Sveti Duh" u Zagrebu, čijim djelatnicima, na čelu s Nevenom Starčevićem, ovom prilikom srdačno zahvaljujem.

64 Da bi se dodatno potvrdila i elaborirala navedena tvrdnja trebalo bi, naravno, provesti metalografsku analizu materijala. To je, nažalost, bilo izvan opsega i mogućnosti ovog istraživanja.

65 Premda je teško tvrditi sa sigurnošću, čini se da je tom prilikom i vrh mača djelomično preoblikovan (T. 4: 1; 5: 1). Naime, damascirani se uzorci s obje strane sječiva protežu do samog vrha, dok je inače uobičajeno da završavaju koji centimetar ranije, a vrh čine spojene oštrice od drugačijeg materijala. Dapače, na „stražnjoj" strani sječiva jasno se vidi kako desna oštrica završava otprilike 1 cm prije vrha, a lijeva čak i ranije. Tako je vrh oblikovan u potpunosti od damasciranog materijala. Činjenica da je krivulja obiju oštrica sasvim očuvana pokazuje kako nije riječ o posljedici korozivnog djelovanja ili naknadnog oštećenja.

66 Geibig 1991, 85.

63 X-ray scanning was carried out on a hospital device in the 'Sveti Duh' University Hospital in Zagreb, to whose staff, headed by Neven Starčević, I hereby express my sincere gratitude.

64 In order to additionally confirm and elaborate the stated claim, a metallographic analysis should, of course, be carried out. That was unfortunately outside the scope and possibilities of the present research.

65 Although it is difficult to claim with certainty, it seems that, on this occasion, the tip of the sword was also slightly reshaped (T. 4: 1; 5: 1). The welded patterns on both sides of the blade extend to its very tip, while they more usually end a few centimetres prior, with the tip formed from joined edges of different material. Indeed, it is clearly visible on the 'reverse' side that the right edge ends around 1 cm before the tip, and the left one even earlier. The tip was thus formed completely from the pattern-welded material. The fact that the curve of both edges is completely preserved shows that this is not a consequence of corrosion or subsequent damage.

66 Geibig 1991, 85.

67 Blades of Geibig's type 2 usually do not exceed 83 cm in length, while the Jegeniš example measures 86.5 cm.

je u skladu s Geibigovom tipologijom, odnos sječiva i žlijeba te njihovo sužavanje na 60, odnosno 40 cm od korijena, nema osobitog smisla budući da je sječivo u svojem aktualnom obliku vjerojatno nešto duže nego što je to bilo ono izvorno, damascirano.[67] Također, otegotna je okolnost i da u prvih 26,5 cm, dakle unutar novijeg dijela sječiva, žlijeb jednostavno nije iskovan. Činjenica da je riječ o prilično vitkom sječivu možda bi mogla upućivati na vrijeme izrade damasciranog dijela negdje u kasnijem periodu dugoga datacijskog raspona tipa 2 (od sredine 8. do sredine 10. stoljeća), no to je tek spekulacija. Uostalom, kako je već navedeno na početku ove sekcije, ranosrednjovjekovna sječiva sama po sebi nisu pogodna za precizniju dataciju,[68] a posebno ne ovakvi hibridni primjerci.

Kako god bilo, riječ je o iznimno zanimljivom primjeru ponovne upotrebe dijela starijeg sječiva. Budući da je iskorišten u izradi novoga, koje je i dalje vrlo skladno, nema razloga sumnjati da je kovač bio dovoljno vješt da iskuje i kompletno novi mač. Nameće se, stoga, pitanje zašto nije učinjeno upravo to, ili zašto nije jednostavno popravljeno cijelo izvorno damascirano sječivo? Je li gornji dio potonjega mača, očito nekad prelomljenog, bio izgubljen? Ili je bio toliko oštećen, da je možda radije pretopljen u materijal za kovanje gornjeg dijela mača kakav je danas sačuvan? Činjenica da nije preupotrebljen izvorni balčak govori više u prilog prvoj mogućnosti.[69] U svakom slučaju, posrijedi je morao biti vrlo svjestan odabir o preupotrebi, a time i očuvanju, dijela ranijeg sječiva. Ako je riječ o odabiru njegova vlasnika, moglo bi se nagađati da je izvorni mač, osim materijalno vrijednog predmeta, predstavljao i simboličku te emocionalnu vrijednost. Možda kao obiteljsko nasljedstvo ili pak dar, možda kao oružje s osvjedočenim ratničkim pedigreom. Takvi se aspekti nipošto ne smiju zanemariti.[70]

fairly slender blade might possibly point to a time of production of the pattern-welded part somewhere in the later period of the long dating span of type 2 (from the middle of the 8th century to the middle of the 10th), but this is only speculating. Besides, as already mentioned at the beginning of this section, early medieval blades are not so suitable for dating by themselves,[68] and especially not hybrid examples such as this one.

Be that as it may, it is an exceptionally interesting example of reuse of a part of an older blade. Since this was used in the construction of a new one that is still very proportionate, there is no reason to doubt that the blacksmith was skilled enough to forge a completely new sword. The question then arises of why precisely that was not done, or why the whole original pattern-welded blade was not simply repaired. Was the upper part of the latter sword, obviously broken at some point, lost? Or was it damaged to such extent that it was perhaps rather smelted into material for forging the upper part of the blade, as is preserved today? The fact that the original hilt was not reused speaks more in favour of the former possibility.[69] In any case, this must have been a very conscious choice to reuse, and thus preserve, part of an earlier blade. If it was its owner's choice, we could speculate that the original sword also represented a symbolic and emotional value, along with its being a materially valuable object. Perhaps as a family heirloom, or rather a gift, perhaps as a weapon with an attested warrior pedigree. Such aspects should by no means be disregarded.[70]

67 Sječiva Geibigova tipa 2 u pravilu ne prelaze 83 cm, dok je duljina jegeniškog 86,5 cm.

68 Za umjerenu kritiku Geibigove tipologije ranosrednjovjekovnih sječiva, usp. Androshchuk 2014, 102.

69 Moglo bi se možda pomišljati i na mogućnost da nije dorađivano ranije prelomljeno sječivo, nego produžen izvorno kraći mač, no i u takvoj prilici bi vjerojatnije bilo očekivati preupotrebu izvornoga balčaka.

70 Za sjajnu studiju o različitim društvenim aspektima mačeva i njihove upotrebe, vidi Brunning 2019 (za popravke i ponovnu upotrebu, među ostalim, i u kontekstu povezanosti vlasnika s oružjem osobito str. 85–87).

68 For a moderate critique of Geibig's early medieval blade typology, cf. Androshchuk 2014, 102.

69 We might even consider the possibility that this was not a reforging of an earlier broken blade, but instead an extension of an originally shorter sword. However, in that case it would likewise be more probable to expect the reuse of the original hilt.

70 For an excellent study of various social aspects of swords and their use, see Brunning 2019 (for repairs and reuse, among other things also in the context of the connections between owner and weapon, especially pp. 85–87).

Zaključak

Temeljita re-evaluacija ranosrednjovjekovnog mača bez jabučice iz šljunčare Jegeniš otkrila je niz novih detalja. Za početak, nesretna okolnost da su ostaci drvene obloge njegova drška nekad tijekom proteklih desetljeća nestali, omogućila je bolje proučavanje nakrsnice. Ona, s jedne strane, pokazuje da nipošto nije riječ o dijelu balčaka Petersenova tipa S, ali ni tipa R. S druge strane, sada vidljivi prostrani otvor u nakrsnici, detalj teško dostupan ranijim istraživačima, uz arhivsku fotodokumentaciju otkriva specifičan način konstrukcije drška. Fotodokumentacija nadalje razrješava dvojbu oko postojanja rupe za zakovicu u dršku i trnu, koju Vinski donosi na crtežima u svojim radovima, dok ona nije vidljiva na fotografiji balčaka u detaljnoj objavi Željka Deme. Rupa u dršku je definitivno postojala, a i danas je prisutna u trnu. Najznačajnije nove podatke pružilo je, međutim, sječivo. Od vrha prema balčaku, u duljini od šezdesetak centimetara, pruža se kompleksan damascirani uzorak, koji se tada naglo prekida. Potom slijedi kovački var i sasvim drugačija struktura sječiva do trna. Jegeniškom maču, dakle, nije samo popravljan držak, kako je od svoje prve preliminarne objave pretpostavljao Zdenko Vinski, nego je prije svega popravljano sječivo. Dapače, moguće je da je tom prilikom balčak i dizajniran pa onda i izveden bez jabučice, s drvenom oblogom drška na jednoj strani uglavljenom u nakrsnicu, a na drugoj pričvršćenom zakovicom. Budući da nakrsnica ima otvor prilagođen upravo takvoj montaži, može se zaključiti da nije izvorno bila dio mača kojemu je pripadao damascirani dio sječiva, nego je vjerojatno izrađena upravo prilikom ovog naknadnoga kovanja. S obzirom na njezin ipak blago konkavni oblik, moguće je pretpostaviti da je izvedena po uzoru na nakrsnice Petersenovih tipova R, S ili možda čak O. To bi objasnilo zašto im je naizgled bliska, ali opet od njih znatno odstupa. Prema svemu navedenome, datacija mača najranije u 10. stoljeće, možda doista i u njegovu drugu polovinu, kako je prvi zaključio Željko Demo, ostaje najizglednijom. Tu je, naravno, riječ tek o vremenu proizvodnje, dok je u upotrebi očito bio puno duže. O povijesnom je pak kontekstu nezahvalno zaključivati na temelju pojedinačnog nalaza bez detaljnijeg arheološkog konteksta, no mislim da su i ovdje Demine pretpostavke dobra vodilja.[71] Ipak, riječ je o maču nepotpune biografije.[72] Nepotpune, ali vrlo bogate.

Conclusion

Thorough re-evaluation of the early medieval sword without a pommel from the Jegeniš gravel pit has revealed a number of new details. To begin with, the unfortunate circumstance that the remains of its wooden grip have disappeared at some point during the past decades has enabled better examination of the crossguard. This, on the one hand, shows that it is in no way an element of a hilt of Petersen's type S, but neither of type R. On the other hand, the now visible spacious insertion slot in the crossguard, a detail not easily accessible to earlier researchers, together with archival photodocumentation reveals a specific manner of grip construction. The photodocumentation further resolves the doubts about the existence of a rivet hole in the grip and the tang, which Vinski presents in drawings in his works, but the same detail is not visible in the photograph of the hilt in Demo's detailed publication. The hole in the hilt had definitely existed, and is still today present in the tang. The most significant new data, however, were provided by the blade. From the tip towards the hilt, a complex welded pattern extends to a length of around 60 centimetres, and is then abruptly cut off. Thereafter a welding joint and a wholly different blade structure follow to the tang. The Jegeniš sword therefore did not merely have its grip repaired, as presumed by Zdenko Vinski from his first preliminary publication onwards, but instead it was the blade that was primarily reworked. Indeed, it is possible that, on that occasion, the hilt was designed and then constructed without a pommel, with the wooden fittings at one end inserted into the crossguard, and at the other fastened with a rivet. Since the crossguard's insertion slot is suitable for precisely such construction, it can be concluded that it was not an original part of the sword with the pattern-welded blade, but was rather probably produced precisely during this subsequent forging. Given its still slightly concave form, it can be assumed that it was modelled on crossguards of Petersen's types R, S or even perhaps O. This would explain why it appears close to them, but simultaneously deviates strongly. Taking all this into account, the dating of the sword to the 10th century at the earliest, possibly even to its second half, as concluded first by Željko Demo, stays the most likely option. This is, of course, only the time of production, while it was obviously in use for much longer. It is in turn difficult to debate historical contextualization on the basis of a single find without a more detailed archaeological context, but I think that Demo's assumptions are a good lead here, too.[71] Still, this is a sword with an incomplete biography.[72] Incomplete, but very rich.

71 Posebno ako se ovaj lokalitet u ranome srednjem vijeku nalazio sjeverno od meandrirajuće Drave, što kao mogućnost koju valja imati na umu navodi T. Sekelj Ivančan (2019, 167–168).

72 Izraz je parafraza poznate sintagme Željka Rapanića o pojedinim predromaničkim i ranoromaničkim spomenicima (v. Rapanić 1996 – 1997, 83–84).

71 Especially if this site was, in the Early Middle Ages, located north of the meandering Drava, which is to be borne in mind as a possibility, mentioned by T. Sekelj Ivančan (2019, 167–168).

72 The expression is a paraphrase of the famous phrase coined by Željko Rapanić for certain pre-Romanesque and Early Romanesque monuments (see Rapanić 1996 – 1997, 83–84).

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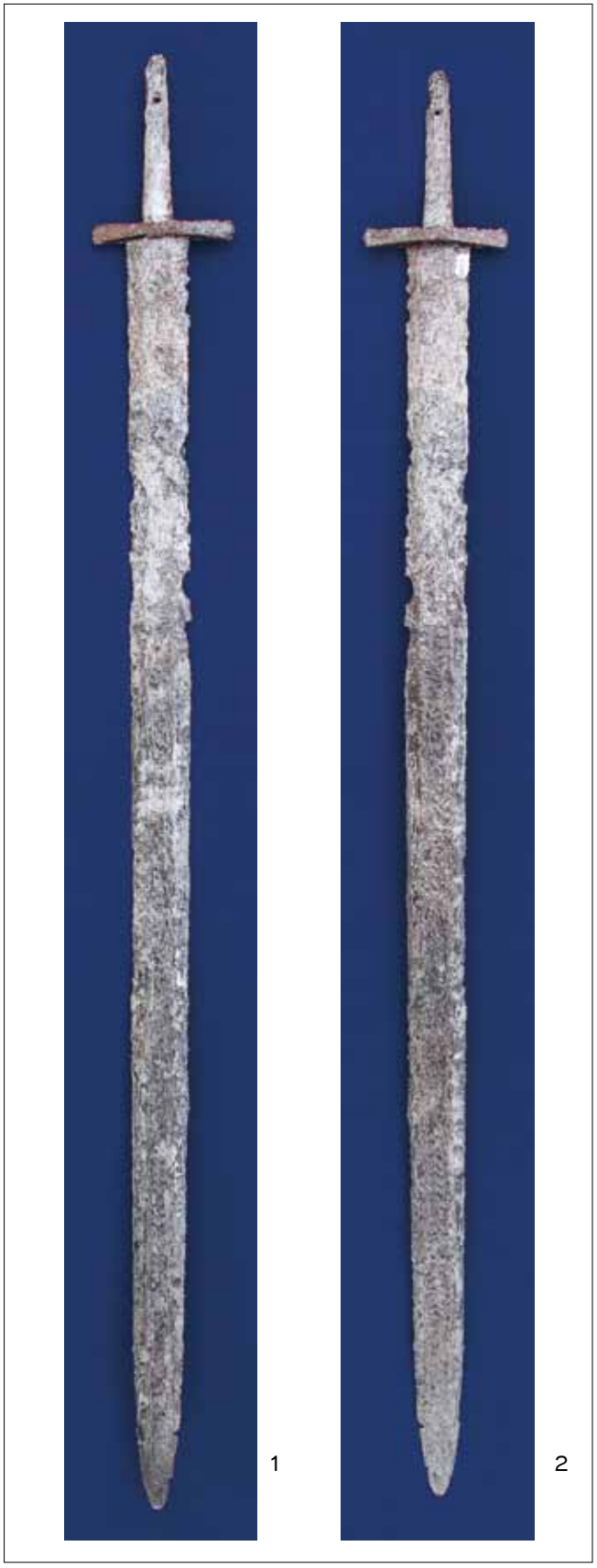

TABLA 1: 1. Mač iz šljunčare Jegeniš, „prednja" strana (snimio G. Bilogrivić); 2. Mač iz šljunčare Jegeniš, „stražnja" strana (snimio G. Bilogrivić).

PLATE 1: 1. The sword from the Jegeniš gravel pit, 'front' side (photo by G. Bilogrivić); 2. The sword from the Jegeniš gravel pit, 'reverse' side (photo by G. Bilogrivić).

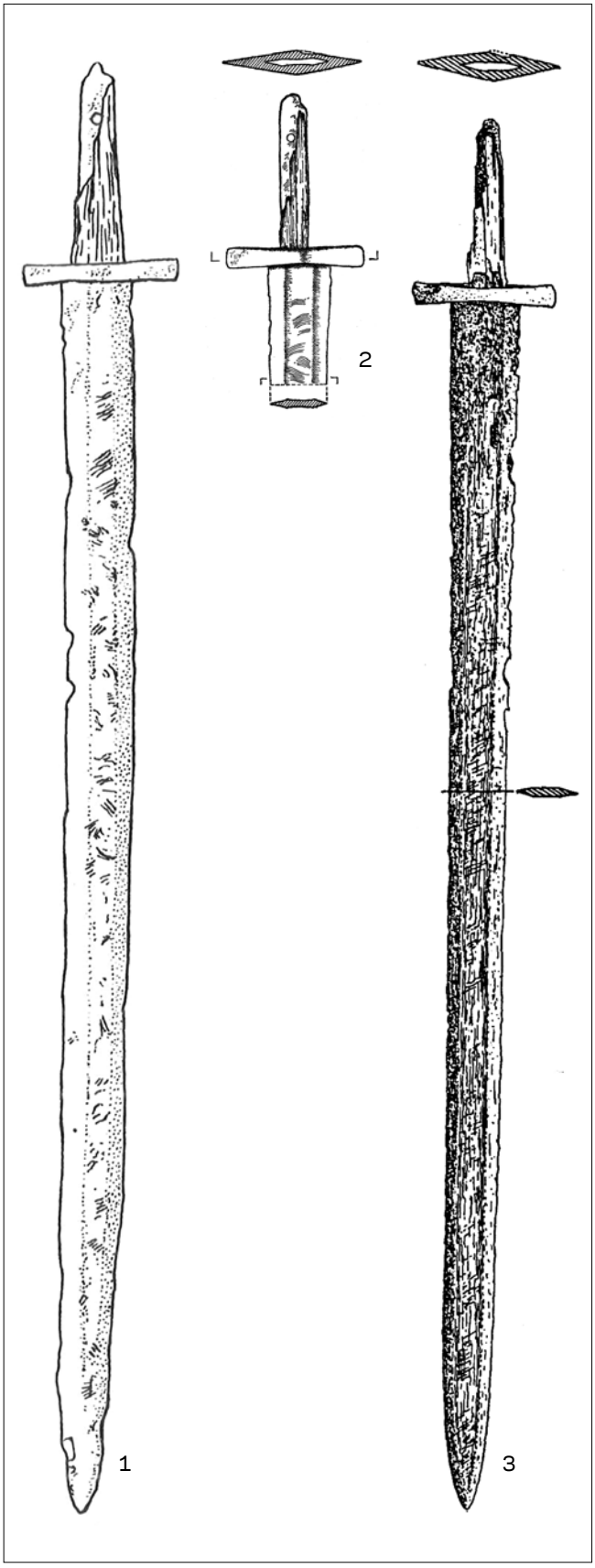

TABLA 2: 1. Crtež mača iz radova Z. Vinskog (Vinski 1983, 209, Abb. 16: 2; obradio G. Bilogrivić); 2. Detalji balčaka prema Z. Vinskom (Vinski 1985, 102, sl. 13: 2; obradio G. Bilogrivić); 3. Crtež mača prema Ž. Demi (Demo 1984, T. 1: 1; obradio G. Bilogrivić).

PLATE 2: 1. The drawing of the sword used in Z. Vinski's articles (Vinski 1983, 209, Abb. 16: 2; adapted by G. Bilogrivić); 2. Hilt details according to Z. Vinski (Vinski 1985, 102, Fig. 13: 2; adapted by G. Bilogrivić); 3. Drawing of the sword according to Ž. Demo (Demo 1984, T. 1: 1; adapted by G. Bilogrivić).

TABLA 3: 1–2. Mač fotografiran prije čišćenja i konzervacije (AAMZ 210–5); 3–4. Mač fotografiran nakon čišćenja i konzervacije (AAMZ 210–5).

PLATE 3: 1–2. The sword photographed before cleaning and conservation (AAMZ 210–5); 3–4. The sword photographed after cleaning and conservation (AAMZ 210–5).

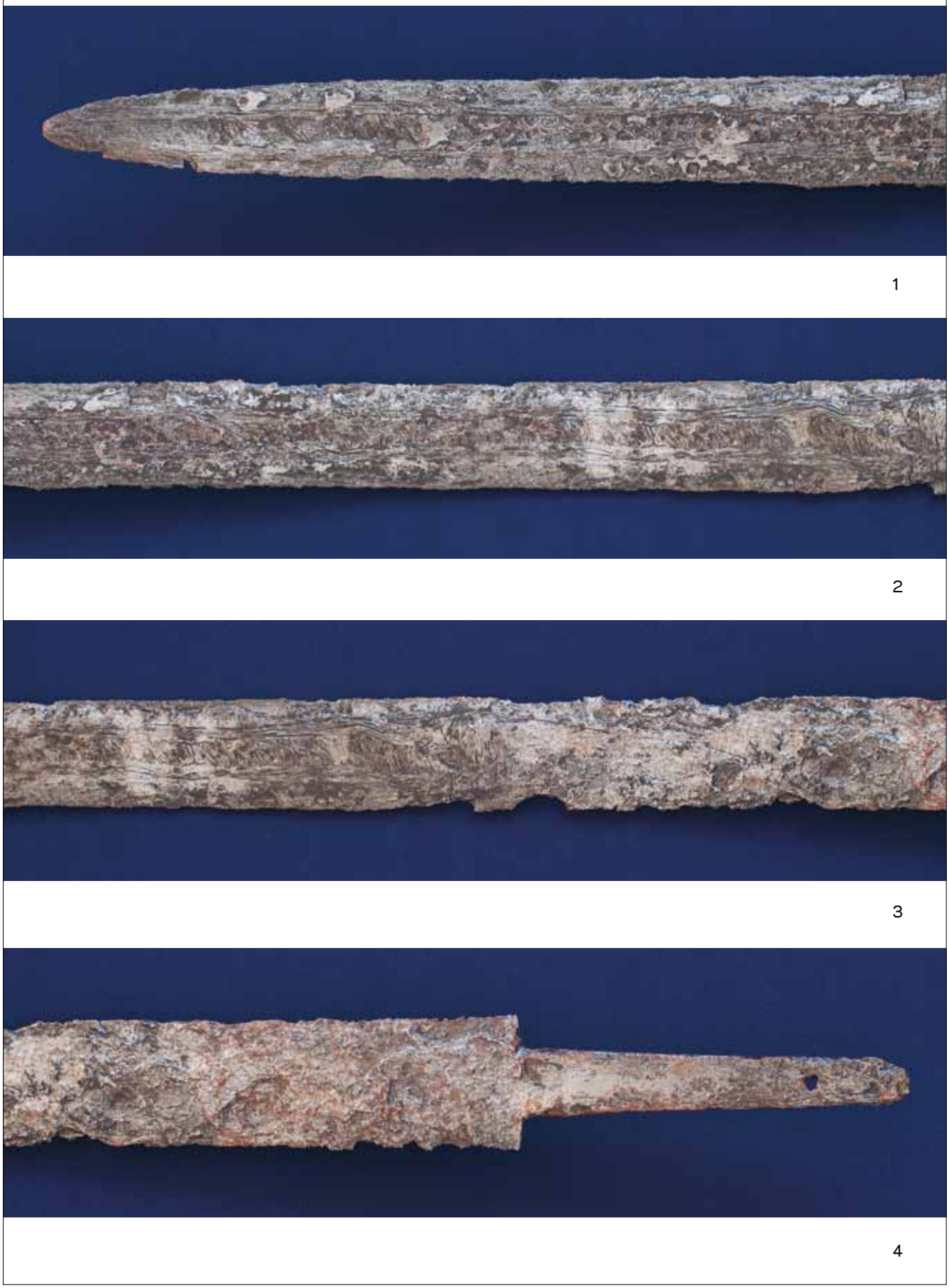

TABLA 4: 1–4. Detalji „prednje“ strane sječiva (snimio G. Bilogrivić).

PLATE 4: 1–4. Details of the ‘front’ side of the blade (photo by G. Bilogrivić).

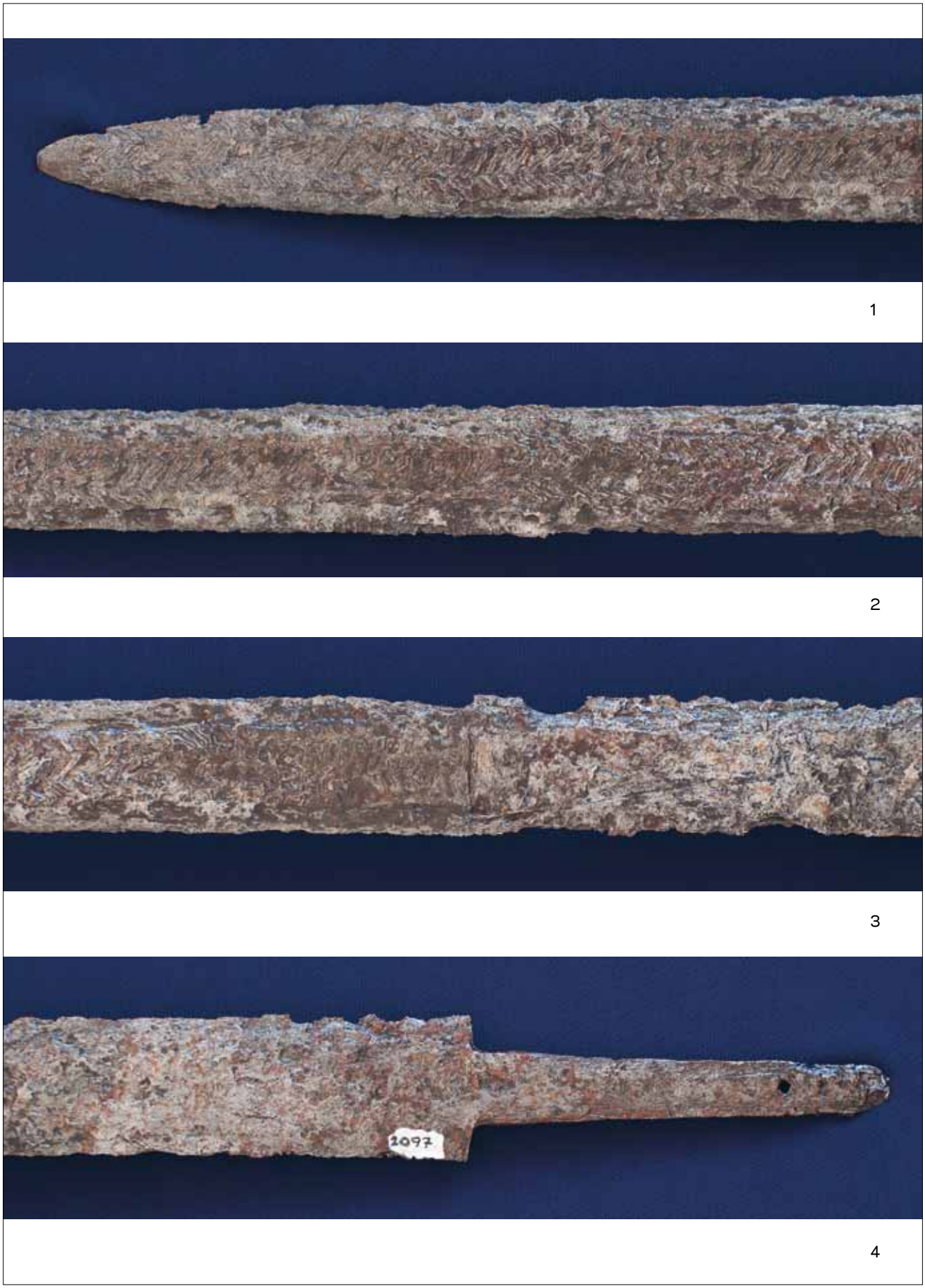

TABLA 5: 1–4. Detalji „stražnje“ strane sječiva (snimio G. Bilogrivić).

PLATE 5: 1–4. Details of the ‘reverse’ side of the blade (photo by G. Bilogrivić).

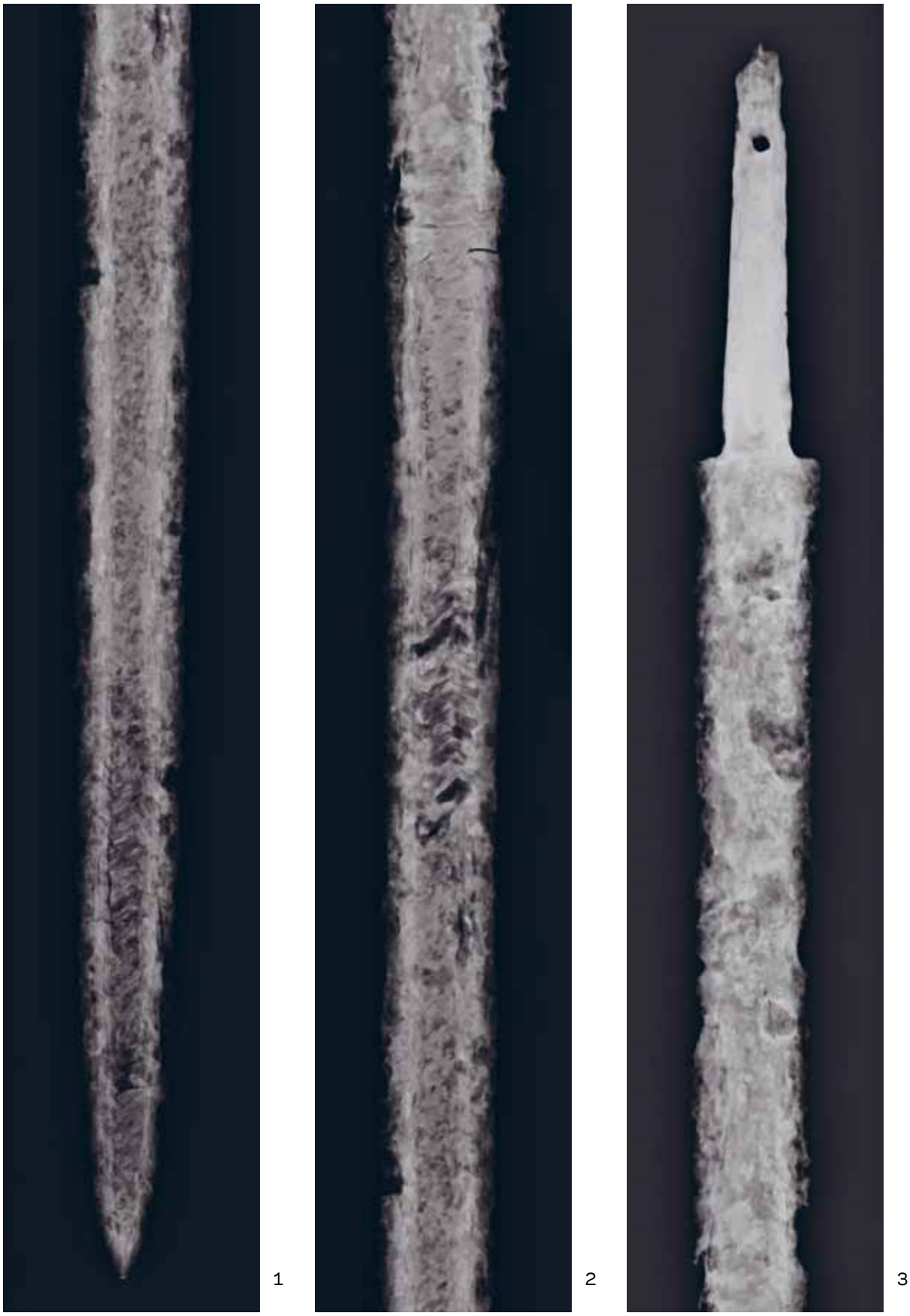

TABLA 6: 1–3. Rentgenske snimke sječiva (KB „Sveti Duh“, Zagreb).

PLATE 6: 1–3. X-ray images of the blade (‘Sveti Duh’ University Hospital, Zagreb).