

# NOVIJI NALAZ DVAJU SREDNJOVJEKOVNIH MAČEVA IZ RIJEKE KUPE KOD DONJE KUPČINE

## TWO MEDIEVAL SWORDS RECENTLY FOUND IN THE RIVER KUPA NEAR DONJA KUPČINA

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*U radu se donosi analiza dvaju novijih, neobjavljenih muzejskih akvizicija, koje su ubrzo po otkupu i konzervaciji izložene u okviru novoga stalnog postava Srednjovjekovne zbirke Arheološkog muzeja u Zagrebu. Riječ je o dvama srednjovjekovnim jednoručnim mačevima koji su pronađeni u šljunku izvađenome iz rijeke Kupe kod Donje Kupčine. Mačevi se, prema svojim obilježjima, mogu pripisati tipu  $\alpha$  i datirati u razdoblje ranog, odnosno razvijenoga srednjeg vijeka. Iako su nalazi mačeva ovog tipa već poznati na prostoru Hrvatske, stanje očuvanosti ovih primjereka, poznato mjesto nalaza, kao i činjenica da su pronađena dva srodna mača na istome području, osnažuju njihovu arheološku i povijesnu vrijednost te daju određene pomake u poznavanju srednjovjekovlja na području ovog, relativno neistraženog, dijela Pokuplja.*

### Ključne riječi:

*rani srednji vijek, razvijeni srednji vijek, mač, tip  $\alpha$ , rijeka Kupa, Donja Kupčina, Donje Pokuplje, Hrvatska, Arheološki muzej u Zagrebu*

*The paper presents an analysis of two relatively new and unpublished acquisitions of the Archaeological Museum in Zagreb which were exhibited, soon after purchase and conservation, as part of the new permanent exhibition of the Medieval Collection. These one-handed medieval swords were found in the gravel of the River Kupa, extracted near the village of Donja Kupčina. The swords can be characterized as type  $\alpha$  and dated to the Early and High Middle Ages. Though it is not uncommon to find swords of this type in the territory of present-day Croatia, the great archaeological and historical value of these specimens is represented by the exceptional condition they were found in. The fact that two related swords were found in the same territory increases their archaeological and historical value, because it warrants progress in the research of the medieval period in this relatively unexplored area of Pokuplje.*

### Key words:

*early Middle Ages, High Middle Ages, sword, type  $\alpha$ , River Kupa, Donja Kupčina, Lower Kupa valley, Croatia, Archaeological Museum in Zagreb*

## Uvod

Arheološki muzej u Zagrebu 2013. godine otkupio je dva srednjovjekovna mača koja su nešto ranije donesena u muzej na ekspertizu.<sup>1</sup> Ekspertizu je obavio tadašnji voditelj Srednjovjekovnog odjela, muzejski i znanstveni savjetnik dr. sc. Željko Demo, a potom je promptno poduzeo sve mjere kako bi se isti mačevi trajno našli u muzejskom fondusu te u konačnici u novom stalnom postavu, što je prilikom pisanja stručnog mišljenja u postupku otkupa i bio cilj koji je ubrzo i ostvaren.<sup>2</sup>

## Introduction

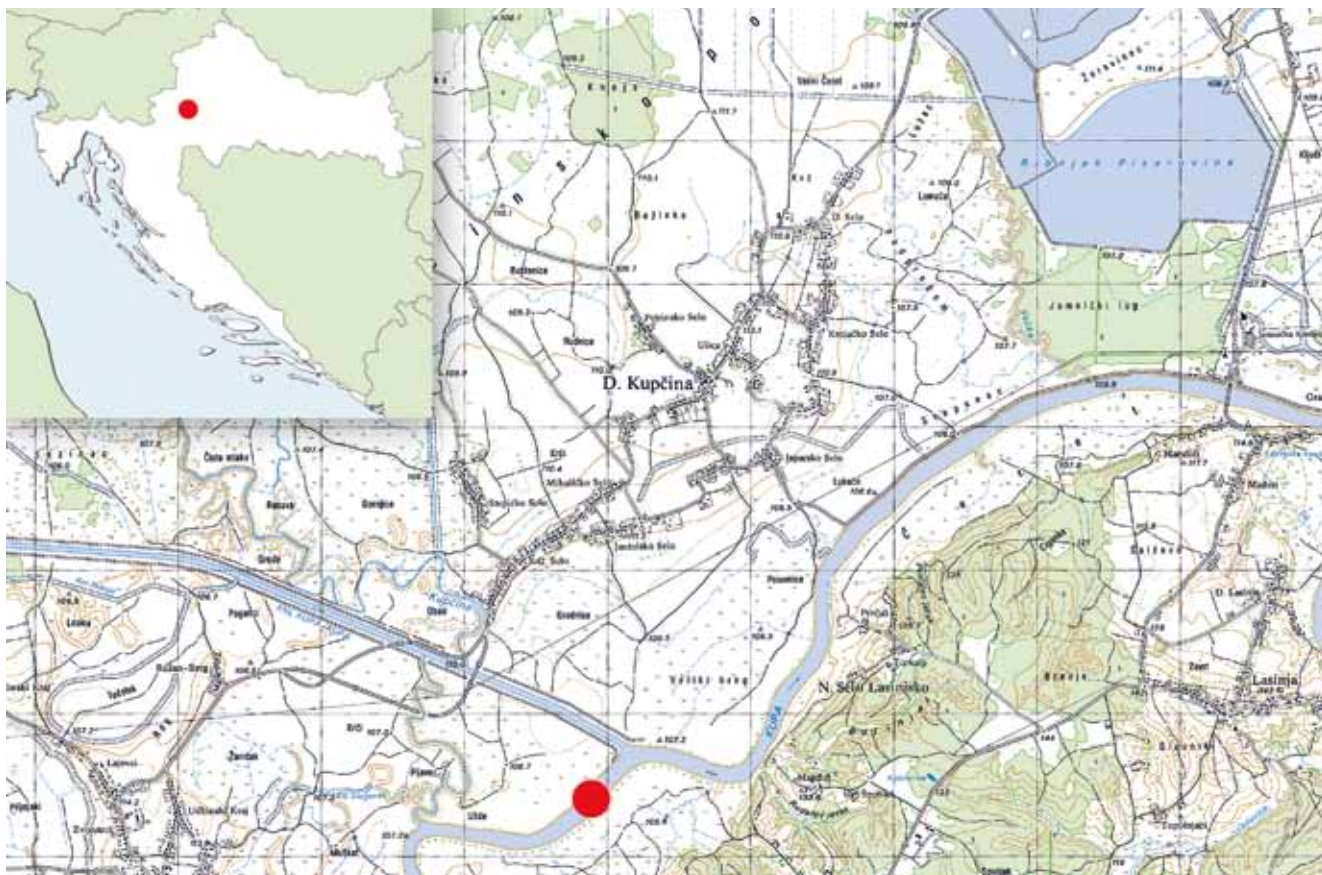
In 2013, the Archaeological Museum in Zagreb purchased two medieval swords, swords, which have been brought to the Museum a little earlier for expertise.<sup>1</sup> The expertise was given by Željko Demo, museum and scientific advisor, head of the Medieval Department at the time. He promptly took all measures to ensure that these swords came permanently into the museum's holdings, ultimately to be displayed in the new permanent exhibition. That was the goal when he wrote the expert opinion in the process of purchase, and that objective was soon achieved.<sup>2</sup>

<sup>1</sup> Dokumentacija o otkupu pohranjena je u Arhivu Arheološkog muzeja u Zagrebu (ur. br. 209/13).

<sup>2</sup> Rad stoga posvećujem svome dugogodišnjem mentoru i voditelju Srednjovjekovnog odjela dr. sc. Željku Demi ne samo jer je upravo on zaslužan za ove vrijedne akvizicije već i zbog činjenice što je srednjovjekovno oružje jedna od tema koja mu je tijekom radnog vijeka bila posebno bliska. Ovom prilikom izražavam zahvalnost dr. Demi i za nešto više od sedam godina tijekom kojih smo surađivali u muzeju, kao i za sve razgovore i savjete koji nisu izostali niti nakon njegova umirovljenja.

<sup>1</sup> Documentation on purchase is kept in the Archives of the Archaeological Museum in Zagreb (reg. no. 209/13).

<sup>2</sup> I would like to dedicate this paper to my longtime mentor, and the head of the Medieval Department, Dr Željko Demo, not only because he takes credit for these valuable acquisitions, but also for the fact that medieval weapons were among the topics that he studied in his career. On this occasion, I also express gratitude for our cooperation in the Museum over more than seven years, as well as for all the conversation and advice, which have not ceased even in his retirement.



SLIKA 1. Mjesto nalaza mačeva u rijeci Kupi kod Donje Kupčine (obradio K. Lastrić).

FIGURE 1. Findspot of the swords in the River Kupa near Donja Kupčina (adapted by K. Lastrić).



SLIKA 2. Pogled prema desnoj obali rijeke Kupe kod Donje Kupčine, mjestu nalaza mačeva (snimila M. Bunčić).

FIGURE 2. View towards the right bank of the River Kupa near Donja Kupčina, the swords findspot (photo by M. Bunčić).

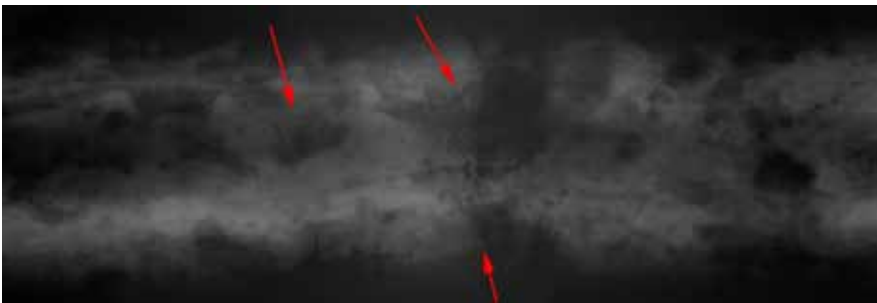


**SLIKA 3.** Naslage korozije i sedimenata iznad izvorne površine sječiva mača (kat. br. 2; snimio D. Doračić).

**FIGURE 3.** Deposits of corrosion and sediment upon the original surface of the sword blade (cat. no. 2; photo by D. Doračić).

Mačevi su pronađeni u šljunku koji se, za potrebe građevinskih radova, vadio iz rijeke Kupe kod Donje Kupčine (sl. 1–2).<sup>3</sup> Mačevi su očuvani u relativno dobrom stanju, a vrsta korozivskih produkata i sedimenata, nataloženih na izvornoj površini predmeta, mogu potvrditi iskaz nalaznika da je riječ o vodenim, odnosno riječnim nalazima (sl. 3).<sup>4</sup>

The swords were found in gravel that had been extracted from the River Kupa near Donja Kupčina for construction work (Figs 1–2).<sup>3</sup> They are preserved in relatively good condition. The type of corrosion products and sediments deposited on the original surface of the objects confirm the testimony of the finder that these are water/river finds (Fig. 3).<sup>4</sup>



**SLIKA 4.** Detalj radiograma sječiva s vidljivim oštećenjima nastalima uslijed ispravljanja mača (S-4107; kat. br. 2; snimio Zavod za zavarivanje i industrijsku tehnologiju u Zagrebu).

**FIGURE 4.** Detail of a radiograph of the blade with visible damage caused by the straightening of the sword (S-4107; cat. no. 2; photo by Department of Welding and Thermal Technology in Zagreb).

Kako bi se otkrili eventualni detalji skriveni pod naslagama korozije, na Zavodu za zavarivanje i toplinsku tehnologiju u Zagrebu provedena je radiografija,<sup>5</sup> ali osim urezanih ukrasa na križnici mača kat. br. 2, nisu otkriveni nikakvi drugi tragovi ukrašavanja. U trenutku nalaza mačevi su vjerojatno bili djelomično savijeni, a sudeći prema pukotinama karakterističnim za naprezanje materijala, koje se jasno vide na radiogramu, nalaznik ih je vjerojatno u nekom trenutku izravnao (sl. 4).

A radiograph was performed at the Department of Welding and Thermal Technology in Zagreb in order to reveal possible details hidden under the corrosion deposits.<sup>5</sup> Except for the incised decorations on the crossguard of sword cat. no. 2, no other traces of decoration were discovered. At the time of the find, the swords were probably partially bent; and, judging by the cracks characteristic of the stress of the material that is visible on the radiogram, the finder probably flattened them at some point (Fig. 4).

3 Selo Donja Kupčina administrativno se nalazi u sastavu Općine Pisarovina u Zagrebačkoj županiji, a smješteno je nedaleko lijeve obale rijeke Kupe. Sa zapadne (rijeka Kupčina) i južne (rijeka Kupa) strane sela nalazi se i granica s Karlovačkom županijom. Mačevi su pronađeni uz desnu kupsku obalu (teoretski Karlovačka županija) uzvodno od ušća kanala Kupa-Kupa u rijeku Kupu. Kako su se bageri koji su tada (oko 2000. godine) vadili šljunak iz rijeke na pontonima pomicali, mačevi su izvađeni u razmaku od nekoliko dana i na udaljenosti ne većoj od 50 m jedan od drugoga.

4 Konzervatorsko-restauratorske zahvate na mačevima obavio je Damir Doračić u laboratoriju Konzervatorsko-restauratorskog odjela Arheološkog muzeja u Zagrebu 2013. godine kojemu ovim putem zahvaljujem i na pruženim informacijama i fotografijama nastalima prilikom laboratorijske obrade mačeva.

5 Radiogramе su izradili Josip Barbić i Milan Rastović kojima ovom prigodom zahvaljujem u ime Arheološkog muzeja u Zagrebu.

3 The village of Donja Kupčina is administratively part of the Municipality of Pisarovina in Zagreb County, located near the left bank of the river Kupa. A border with Karlovac County is by the western (River Kupčina) and southern (River Kupa) side of the village. The swords were found along the right bank of the Kupa (theoretically Karlovac County) upstream from the confluence of the Kupa-Kupa canal into the river Kupa. They were taken out a few days apart and at a distance of no more than 50 m from each other as the dredges that extracted gravel from the river (around the year 2000) on the pontoons moved.

4 Conservation and restoration work on the swords was undertaken by Damir Doračić in the laboratory of the Conservation and Restoration Department of the Archaeological Museum in Zagreb in 2013. I would like to thank him for the information and photographs provided during the laboratory processing of the swords.

5 Radiograms were made by Josip Barbić and Milan Rastović. On this occasion I would like to thank them on behalf of the Archaeological Museum in Zagreb.

Riječ je o dvosjeklim mačevima jednoručnjacima približno iste dužine sječiva, različitih varijacija istog tipa glavica te potpuno različitih križnica. Prilikom pisanja stručnog mišljenja u svrhu otkupa, a potom i u završnoj fazi pripreme stalnog postava i pisanja legendi,<sup>6</sup> Demo ih je odredio tipološki i kronološki, svrstavši oba mača u tip  $\alpha$ , od kojih je jedan datirao u 10. – 11. (kat. br. 2), a drugi u 11. – 12. stoljeće (kat. br. 1).

Na prostoru Hrvatske do sada je iz literature poznato više mačeva ovoga tipa, od kojih su svi pohranjeni u različitim muzejima, a riječ je, dakako, o slučajnim nalazima. U daljnjem tekstu donosi se detaljnija analiza ovih (rano)srednjovjekovnih, dosad neobjavljenih mačeva iz rijeke Kupe iz fundusa Arheološkog muzeja u Zagrebu.

## Katalog nalaza

### Kat. br. 1 – Mač; rijeka Kupa kod Donje Kupčine

Nalazište: rijeka Kupa, Donja Kupčina, Hrvatska  
Način nabave: slučajni nalaz; otkup 2013. godine  
Smještaj i inventarni broj: Arheološki muzej u Zagrebu, S-4106  
Materijal i tehnika izrade: željezo, kovanje  
Dimenzije:<sup>7</sup>

These are one-handed double-edged swords of approximately the same blade length, with different variations of the same type of pommel, and completely different crossguards. In the expert opinion written before purchase, and then in the final phase of preparing the permanent exhibition and writing the legends,<sup>6</sup> Demo identified them typologically and chronologically, classifying both swords as type  $\alpha$ , one of which dated to the 10<sup>th</sup> – 11<sup>th</sup> century (cat. no. 2), and the other to the 11<sup>th</sup> – 12<sup>th</sup> century (cat. no. 1).

So far, several swords of this type from Croatia have been published, all of which are stray finds and are stored in various museums. The present paper offers a more detailed analysis of these (early-) medieval swords from the River Kupa, as yet unpublished, from the holdings of the Archaeological Museum in Zagreb.

## Catalogue

### Cat. no. 1 – Sword; River Kupa by Donja Kupčina

Finding site: River Kupa, Donja Kupčina, Croatia  
Acquisition: stray find; purchased in 2013  
Storage and inventory number: Archaeological Museum in Zagreb, S-4106  
Material and technique: iron, minting  
Dimensions:<sup>7</sup>

	Glavica / Pommel	Trn / Tang	Križnica / Crossguard	Sječivo / Blade	Žlijeb / Fuller	Ukupno / Total
Dužina / Length (cm)	9.2	8.9	21.9	82.5	72.5	96.2
Širina / Width (cm)	2.77	0.87 (kod glavice / at pommel) 2.47 (kod križnice / at crossguard)	1.2 (u sredini / in the middle) 0.9 (na rubovima / at the edges)	5 (kod križnice / at crossguard) 3.4 (na 60 cm / at 60 cm) 1.5 (kod vrška / at top)	1.5 (kod križnice / at crossguard) 1.4 (na 40 cm / at 40 cm) 1 (kod vrška / at top)	
Visina / Height (cm)	3.8		1 (u sredini / in the middle) 0.85 (na rubovima/ at the edges)			
Debljina / Thickness (cm)		0.36 (kod glavice / at pommel) 0.48 (kod križnice / at crossguard)		0.5 (kod križnice / at crossguard) 0.35 (na 60 cm / at 60 cm) 0.26 (kod vrška / at top)		
Težina / Weight (g)						1050

**TABLICA 1.** Dimenzije mača kat. br. 1 (izradila M. Bunčić).

**TABLE 1.** Dimensions of sword cat. no. 1 (made by M. Bunčić).

6 Stalni je postav Srednjovjekovne zbirke otvoren u prosincu 2016. godine. Zbog oštećenja zgrade uslijed zagrebačkog potresa (22. 3. 2020.), muzej je otada zatvoren za javnost, a predmeti iz stalnih postava uklonjeni su i pohranjeni u čuvaonice.

7 Na oba su mača sve dimenzije izmjerene nakon konzervatorsko-restauratorskog zahvata.

6 The permanent exhibition of the Medieval Collection was opened in December 2016. Due to damage sustained by the building during the Zagreb earthquake (22 March 2020), the Museum has been closed to the public since then. All items from the permanent exhibitions have been removed and are still stored in the museum depot.

7 All dimensions were measured after the conservation and restoration work on both swords.



**SLIKA 5.** Mač, Donja Kupčina; kat. br. 1 (snimio I. Krajcar).

**FIGURE 5.** Sword, Donja Kupčina; cat. no. 1 (photo by I. Krajcar).

### Opis

Mač je sačuvan u punoj dužini, sa svim konstruktivnim elementima i u dobrom stanju. Dvosječno je sječivo srednje dužine (82,5 cm) i postupno se sužava prema šiljastom vršku, a s time usporo i stanjuje. Presjek je plosnat i lečast sa središnjim udubljenjem. Žlijeb je jasno vidljiv, širok je i plitak. U gornjem je dijelu malo uži od širine donjeg dijela trna. Cijelom dužinom, osim na samom završetku, iste je širine pa tako do otprilike polovine sječiva zauzima trećinu širine, a u drugoj polovini nešto više od trećine širine sječiva. Žlijeb završava deset centimetara iznad vrška, odnosno zauzima 88 % dužine sječiva. Na sječivu, kao niti na drugim dijelovima mača, nema tragova ukrasa. Bio je premljen malo iznad sredine sječiva (na 38 cm), a na oštrici je s jedne strane bio neznatno oštećen, i na tom je mjestu restauriran. Obje strane mača nisu jednako dobro sačuvane, na jednoj je strani korozija izraženija.<sup>8</sup> Glavica je izduženog ovalnog oblika sa zašiljenim krajevima, odnosno, kako je uobičajeno za opis ovih vrsta glavica – lečastog oblika (*brazil-nut pommel*) s jače naglašenim lukom na gornjoj liniji u odnosu na donju. Trn je kratak (8,9 cm)

### Description

The sword is preserved in its full length, with all constructive elements, and in good condition. The double-edged blade is of medium length (82.5 cm) and gradually becomes narrower and thinner towards the tip. The cross-section is flat and lenticular with a central recess. The fuller is visible, wide and shallow. The upper part of the fuller is slightly narrower than the width of the lower part of the tang. Along the entire length, except at the very end, it is of the same width. Up to about half of the blade length, it occupies one-third of the width of the blade, and in the other half slightly more than one-third of it. The fuller ends ten centimetres above the tip, i.e. it occupies 88 % of the blade's length. There are no traces of decoration on the blade, nor on the other parts of the sword. It was broken just above the middle of the blade (at 38 cm), and was slightly damaged on one side, where it was subsequently restored. The two sides of the sword are not equally well preserved, since one has been affected more by corrosion.<sup>8</sup> The pommel is an elongated oval with pointed ends (*brazil-nut pommel*) with a stronger arch on the upper line than the lower

<sup>8</sup> Fotografije prikazuju obje, a crteži bolje sačuvanu stranu mača na oba primjerka.

<sup>8</sup> Photographs show both, and drawings show better-preserved side of the sword on both specimens.



SLIKA 6. Mač, Donja Kupčina; kat. br. 1; detalj, balčak i gornji dio sječiva (snimio I. Krajcar).

FIGURE 6. Sword, Donja Kupčina; cat. no. 1; detail, hilt and upper part of blade (photo by I. Krajcar).



SLIKA 7. Mač, Donja Kupčina; kat. br. 1; detalj, donji dio i vršak sječiva (snimio I. Krajcar).

FIGURE 7. Sword, Donja Kupčina; cat. no. 1; detail, lower part and tip of blade (photo by I. Krajcar).

i određuje mač kao jednoručni. Pravokutnog je presjeka, od glavice prema križnici se širi te gotovo utrostručuje svoju širinu u donjem dijelu. Križnica je ravna i dugačka (21,9 cm). Njezino je suženje prema krajevima krakova vrlo blago i neznatno.

#### Tipološke odrednice

Prema tipologiji E. Oakeshotta, ovaj se mač može odrediti kao tip X(a), A, 1. Karakteristike sječiva određuju ga u tip X, a moguće i u Xa,<sup>9</sup> dok križnica pripada 1. skupini oblika. Glavica pripada Oakeshottovom tipu A, najuobičajenijem obliku upravo za mačeve tipa X.<sup>10</sup>

Tipologija A. Geibiga razvedenija je i kompleksnija od Oakeshottove, a prema njoj se ovaj mač može svrstati u kombinacijski tip 16, i to njegovu varijantu I, 16-15-9-9,<sup>11</sup> dok se samo sječivo uklapa u tip 7 iako pokazuje i vrijednosti koje bi se mogle uklopiti u tip 3.<sup>12</sup>

Prema još starijoj tipologiji A. Nadolskog, a koju je i Demo primijenio, mačevi s ovakvim oblikom jabučice pripadaju tipu  $\alpha$ ,<sup>13</sup> a koji u potpunosti odgovara i spomenutom Geibigovu kombinacijskom tipu 16, varijanti I.

Datacija: kraj 11. do sredine 12. stoljeća

one. The tang is short (8.9 cm), which defines the sword as one-handed. It is rectangular in cross-section, widens from the pommel to the crossguard, and almost triples its width in the lower part. The crossguard is straight and long (21.9 cm). Its narrowing towards the ends is very slight.

#### Typological determinants

According to the typology of E. Oakeshott, this sword can be defined as type X (a), A, 1. The characteristics of the blade allow its classification as a type X, and possibly as Xa,<sup>9</sup> while the crossguard belongs to group 1 of shapes. The pommel is of Oakeshott's type A, the most common shape for type-X swords.<sup>10</sup>

According to A. Geibig's typology, which is more detailed and more complex than Oakeshott's, this sword can be classified as a combination type 16, its variant I, 16-15-9-9.<sup>11</sup> Observing only the blade, it fits type 7, although it also shows characteristics that could fit into type 3.<sup>12</sup>

According to the even older typology of A. Nadolski, which was also the one applied by Demo, swords with this shape of the pommel belong to type  $\alpha$ ,<sup>13</sup> which fully corresponds to the above-mentioned Geibig combination type 16, variant I.

Dating: end of the 11<sup>th</sup> century – middle of the 12<sup>th</sup> century

9 Oakeshott 1960, 204–205. Tip Xa izdvojio je naknadno (1980.), a jedinu razliku koju navodi od tipa X malo je uži žlijeb, ali bez preciznijeg određenja u dimenzijama (Oakeshott 1991, 36). Ipak, uspoređujući fotografije mačeva, koje donosi za tip X i za tip Xa, često je ta razlika u širini žlijeba teško razlučiva.

10 Oakeshott 1960, 204, 224, Fig. 106.

11 Geibig 1991, 70–73, Abb. 17. Za ovaj mač vrijednosti odnosa dimenzija glavice (dužina – visina; visina – širina; dužina – širina) iznose: 2,42 / 1,37 / 3,3, dok odnos vrijednosti dimenzija križnice (dužina – visina) iznosi 18,25.

12 Geibig 1991, 86–87. Gotovo sve vrijednosti uklapaju se u tip sječiva 7 osim odnosa dužine sječiva i žlijeba, koji u ovom slučaju iznosi 1,137, dok se za tip 7 mjeri u rasponu od 1,16 – 1,21, no ta bi se mjera uklopila u tip 3 (varijanta a, više od 1,12 cm). Također, maksimalna širina sječiva računa se sa 4,9 cm, dok ovaj mač ima uz samu križnicu jedan milimetar više te iznosi 5 cm. Suženje žlijeba također se uklapa u tip 3 te dužina koja u tipu 3 ne prelazi 83 cm.

13 Nadolski 1954, 26–36.

9 Oakeshott 1960, 204–205. Type Xa was distinguished later (1980), and the only difference from type X is a slightly narrower groove. He did not propose a more precise definition according to dimensions (Oakeshott 1991, 36). However, when comparing the photographs of swords he shows for type X and type Xa, it is often difficult to distinguish this difference in width of fuller.

10 Oakeshott 1960, 204, 224, Fig. 106.

11 Geibig 1991, 70–73, Abb. 17. For this sword, the values of the ratios of the dimensions of the pommel (length-height; height-width; length-width) are 2.42 / 1.37 / 3.3, while the ratio of the values of the dimensions of the crossguard (length-height) is 18.25.

12 Geibig 1991, 86–87. Almost all values fit into blade type 7 except the blade-to-fuller length ratio, which in this case is 1.137, while for type 7 it is measured in the range of 1.16 – 1.21, but this measure would fit in type 3 (variant a, more than 1.12 cm). Also, the maximum width of the blade is 4.9 cm, while this sword has one millimetre more just next to the crossguard and thus is of 5 cm. The narrowing of the fuller also fits in type 3, as well as the length, which in type 3 does not exceed 83 cm.

13 Nadolski 1954, 26–36.

**Kat. br. 2 – Mač; rijeka Kupa kod Donje Kupčine**

Nalazište: rijeka Kupa, Donja Kupčina, Hrvatska  
 Način nabave: slučajni nalaz; otkup 2013. godine  
 Smještaj i inventarni broj: Arheološki muzej u Zagrebu, S-4107  
 Materijal i tehnika izrade: željezo, kovanje, urezivanje  
 Dimenzije:

**Cat. no. 2 – Sword; River Kupa by Donja Kupčina**

Finding site: River Kupa, Donja Kupčina, Croatia  
 Aquisition: stray find; purchased in 2013  
 Storage and inventory number: Archaeological Museum in Zagreb, S-4107  
 Material and technique: iron, minting, incision  
 Dimensions:

	Glavica / Pommel	Trn / Tang	Križnica / Crossguard	Sječivo / Blade	Žlijeb / Fuller	Ukupno / Total
Dužina / Length (cm)	9.4	9.37	12.3	76.5	52	90.75
Širina / Width (cm)	2.1	1.25 (kod glavice / at pommel) 2.46 (kod križnice / at crossguard)	1.6 (u sredini / in the middle) 0.5 (na rubovima / at the edges)	5.7 (kod križnice / at crossguard) 4.1 (na 60 cm / at 60 cm) 2.5 (kod vrška / at top)	2 (kod križnice / at crossguard)	
Visina / Height (cm)	3.71		1.17 (u sredini / in the middle) 1.85 (na rubovima / at the edges)			
Debljina / Thickness (cm)		0.57 (kod glavice / at pommel) 0.56 (kod križnice / at crossguard)		0.67 (kod križnice / at crossguard) 0.45 (na 60 cm / at 60 cm) 0.45 (kod vrška / at top)		
Težina / Weight (g)						1150

**TABLICA 2.** Dimenzije mača kat. br. 2 (izradila M. Bunčić).

**TABLE 2.** Dimensions of sword cat. no. 2 (made by M. Bunčić).

**Opis**

Mač je sačuvan u punoj dužini, sa svim konstruktivnim elementima i u dobrom stanju. Sječivo je kratko (76,5 cm), na dužini od 23 cm i 68,5 cm vidljiva su poprečna površinska napuknuća. Dvosječivo je sječivo široko s paralelnim oštricama koje se tek u donjem dijelu postupno sužavaju prema zaobljenom vršku. Presjek je plosnat i asimetričan sa središnjim udubljenjem u gornjem dijelu. Žlijeb je plitak i slabo vidljiv te prestaje na dužini od 52 cm, što bi značilo da se žlijeb nalazi na 68 % dužine sječiva. U gornjem dijelu uži od širine donjeg dijela trna, a cijelom je dužinom iste širine. Trn je kratak (9,37 cm), duljine koja odgovara hvatu jednom rukom. Pravokutnog je presjeka, blago se širi od glavice prema križnici te udvostručuje širinu u donjem dijelu. Križnica je kratka (12,4 cm) i blago lučno povijena prema sječivu, a krajevi krakova trapezasto su prošireni. Ukrašena je s obje strane cik-cak linijom koja ima po šest vrhova uz svaki rub. S lijeve strane slabo je vidljiv početak te vjerojatno započinje slovom X, odnosno Andrijinim križem. Glavica je nepravilno lećastog oblika (*brazil-nut pommel*) s jače naglašenim lukom na gornjoj strani te ravnijom donjom, baznom linijom. Zbog zakovice na vrhu glavice, vizualno

**Description**

The sword is preserved in its full length, with all constructive elements, and is in good condition. The blade is short (76.5 cm), with transverse surface cracks at a length of 23 cm and 68.5 cm. The double-edged blade is wide, with parallel blades that only gradually taper in the lower part towards the rounded tip. The cross-section is flat and asymmetrical with a central recess in the upper part. The fuller is shallow and poorly visible and stops at a length of 52 cm. That means that the fuller occupies 68 % of the blade length. In the upper part, it is narrower than the width of the lower part of the tang, and the whole length is of the same width. The tang is short (9.37 cm), and it corresponds to a one-hand grip. It is rectangular in cross-section, widens slightly from the pommel to the crossguard, and doubles in width at the bottom. The crossguard is short (12.4 cm) and slightly arched towards the blade. The ends of the prongs are trapezoidal. It is decorated on both sides with a zigzag line that has six tops along each edge. The beginning is barely visible on the left and probably begins with the letter X, i.e. a St Andrew's cross. The pommel is irregularly lenticular in shape (*brazil-nut pommel*) with a

**SLIKA 8.** Mač, Donja Kupčina; kat. br. 2 (snimio I. Krajcar).

**FIGURE 8.** Sword, Donja Kupčina; cat. no. 2 (photo by I. Krajcar).



djeluje trokutastijeg oblika. Ostaci drva (?), kojim je bio obložen trn, vidljivi su u tragovima na unutrašnjem dijelu glavice, gdje je nataknut trn. Obje strane mača nisu jednako dobro sačuvane, na jednoj je strani korozija izraženija.

#### Tipološke odrednice

Prema Oakeshottovoj tipologiji ovaj mač nije jednostavno, poput prethodnog, uvrstiti u postojeće tipove, ali pokazuje odlike tipa VIII, ili čak i tipa X, iako ne predstavlja njegov tipičan primjer.<sup>14</sup> Glavica najviše odgovara tipu A premda joj je donja linija vrlo blago konveksna. Križnica se također ne može lako uklopiti ni u jednu tipološku skupinu. Ima određenih sličnosti s tipom 1, a

stronger arch on the upper side and a flatter lower base line. Due to the rivet at the top of the pommel, it appears triangular. Some remains of the wooden (?) coating of the thorn are barely visible on the inner part of the pommel where the tang is attached. The two sides of the sword are not equally well preserved, since one side has been affected more by corrosion.

#### Typological determinants

Unlike the previous one, this sword is not easy to fit into the existing types according to Oakeshott's typology. This sword shows the characteristics of type VIII or possibly type X, although it does not represent a typical example.<sup>14</sup> The pommel is most suitable for type A, although its bottom line is (very) slightly convex. The crossguard also cannot be easily fitted into any typologi-

14 Mačevi tipa X razvijaju se direktno iz ranijih vikinških mačeva, odnosno mačeva tipa VIII uz blage modifikacije, te su prvi tip koji se pojavljuje u razdoblju kasnije faze ranoga srednjeg vijeka (kasno 10. stoljeće) i traju kroz razvijeni srednji vijek (vjerojatno do prve trećine 13. stoljeća). Kada je pak riječ o Oakeshottovom tipu VIII, glavica mača također je izduženoga ovalnog oblika (brazil nut), ali su im križnice gotovo uvijek povijene prema sječivu, ali i duže od klasičnih vikinških tipova. Datira ih od sredine 10. pa sve do početka 13. stoljeća (Oakeshott 1960, 204, 137).

14 Swords of type X develop directly from earlier Viking swords, that is, swords of type VIII, with slight modifications. This is the first type that appears in the period of the later phase of the early Middle Ages (late 10<sup>th</sup> century), and it lasts through the High Middle Ages (first third of the 13<sup>th</sup> century). Regarding Oakeshott's type VIII, the pommel is also an elongated oval (brazil nut), but the crossguard is almost always bent towards the blade, and also longer than the classic Viking types. They date from the mid-10<sup>th</sup> century to the beginning of the 13<sup>th</sup> (Oakeshott 1960, 204, 137).





SLIKA 9. Mač, Donja Kupčina; kat. br. 2; detalj, balčak i gornji dio sječiva (snimio I. Krajcar).

FIGURE 9. Sword, Donja Kupčina; cat. no. 2; detail, hilt and upper part of blade (photo by I. Krajcar).



SLIKA 10. Mač, Donja Kupčina; kat. br. 2; detalj, ukrašena križnica (snimio I. Krajcar).

FIGURE 10. Sword, Donja Kupčina; cat. no. 2; detail, decorated crossguard (photo by I. Krajcar).

to je tlocrtni pogled, osim što mač iz Kupe ima zašiljene krajeve krakova. Sličnost pak s tipom 6 očituje se u proširenim krajevima koji često mogu imati jedan ili više usjeka na svakome kraju, dok je gornji dio križnice lučno povijen.<sup>15</sup>

Niti u Geibigovu tipologiju mač nije moguće bez odstupanja uvrstiti u neki od kombinacijskih tipova. Oblik i odnosi dimenzija dužine i visine glavice mača uklapaju se, također, u kombinacijski tip 16, varijantu I.<sup>16</sup> Odnos pak visine i širine glavice odgovarao bi tipu 0–14–0–0 u okviru kombinacijskog tipa 15, varijante I, što je vidljivo također u crtežu (T. 2) – bočni pogled jednak je kao i u Geibigovoj shemi.<sup>17</sup> U toj su varijanti križnice lučno povijene, ali krajevi su kupskog mača prošireni i tlocrtno su zašiljeni prema krajevima, što je pak uobičajenije za varijante II i III, u koje se ne uklapa zbog dimenzija, dok se samo dužinom uklapa u tip 0–0–0–10, a odnos dužine i širine premašuje gornju granicu od 6,18 cm jer iznosi 7,68 cm.<sup>18</sup> Sječivo pokazuje najviše sličnosti s karakteristikama sječiva tipa 1 i 3, a zbog slabo vidljivog žlijeba teško ga je pobliže odrediti.<sup>19</sup> Moguće ga je i opredijeliti eventualno u tip koji, u drugoj polovini 10. stoljeća, zamjenjuje tip 3, ali kod tipa 4 sječivo u načelu ne prelazi 76 cm iako je sječivo kupskog mača samo pola centimetra duže.<sup>20</sup> Glavica je izrađena u konstrukcijskom tipu 3, kao uostalom i sve jednodijelne kojima trn prolazi kroz cijelu glavicu, ali ovdje je trn probijen visoko i vidljiv je na

cal group. It has a certain similarity to type 1, namely the plan view, except that the Kupa sword has pointed ends of prongs. Similarity with type 6 is evident in the extended prongs, which can often have one or more notches at each end, while the upper part of the crossguard is arched.<sup>15</sup>

Nor can the sword be included in any of the combination types in Geibig's typology without certain deviations. The shape and proportions of the length and height of the sword's pommel also fit into the combination type 16, variant I.<sup>16</sup> The ratio of the height and width of the pommel would correspond to type 0–14–0–0 within the combination type 15, variant I, which is also visible in the drawing (Pl. 2) – the side view is the same as in Geibig's scheme.<sup>17</sup> In this variant, the crossguards are arched, but the ends of the Kupa sword prongs are widened and pointed towards the ends, which is more common in variants II and III, in which it cannot be fitted due to its dimensions. On the other hand the sword's dimensions, but only the length, fit type 0–0–0–10, and the ratio of length to width exceeds the upper limit of 6.18 cm, being 7.68 cm.<sup>18</sup> The blade shows most similarities with type 1 and 3 in terms of blades; and, due to the poorly visible fuller, it is difficult to classify it more precisely.<sup>19</sup> It could perhaps be possible to assign it to type 4, which replaces type 3 in the second half of the 10<sup>th</sup> century. But a blade of type 4 should not

15 Oakeshott 1960, 232.

16 Geibig 1991, 70.

17 Geibig 1991, 66–67, Abb. 16.

18 Geibig 1991, 66–67, Abb. 16.

19 S tipom 1 pokazuje sličnost u samoj formi – sječiva su kraća (manja od 80 cm) i široka iako je kod kupskog mača suženje malo veće, 1,39 cm, a trebalo bi biti 1,16 cm ili manje. Žlijeb kod tipa 1, ili ne postoji, ili je vrlo plitak i slabo vidljiv, što je ovdje, na primjer, slučaj.

20 Geibig 1991, 86, 153.

15 Oakeshott 1960, 232.

16 Geibig 1991, 70.

17 Geibig 1991, 66–67, Abb. 16.

18 Geibig 1991, 66–67, Abb. 16.

19 It shows a similarity with type 1 in its very form: the blades are shorter (under 80 cm) and wide, although the Kupa sword has a little greater narrowing, 1.39 cm, while it should be 1.16 cm or less. The fuller in type 1 either does not exist or is very shallow and poorly visible, which is, for example, the case here.

20 Geibig 1991, 86, 153.

samome vrhu.<sup>21</sup> Otvor na donjoj strani glavice kroz koji prolazi trn širi je od samog trna, a slobodni je prostor zapunjen (vjerovatno) drvom.

Prema tipologiji Nadolskog i ovaj bi se mač mogao naći u skupini tipa  $\alpha$  kojoj odgovara po obliku glavice i po svim propisanim mjerama, osim po dužini križnice.<sup>22</sup>

Datacija: druga polovina 10. do sredina 11. stoljeća

## Komparativna građa i datacijski okviri

Nakon (pokušaja) opredjeljivanja mačeva u neke od postojećih, najčešće korištenih tipologija, potrebno je osvrnuti se i na datacijske okvire, kao i na bliske primjerke mačeva s drugih nalazišta. Pokazalo se da novopronađeni kupski mačevi međusobno dijele određene sličnosti koje ih mogu opredijeliti u isti, ili vrlo srodan tip, što se prije svega odnosi na dimenzije i oblik glavice, ali i razlike koje se posebno odnose na dimenzije i oblik križnice te sječiva, što se dakako može i treba uzeti u obzir pri njihovu datiranju.

Morfološke karakteristike mača kat. br. 1 ne pokazuju nikakve posebnosti niti u pojedinačnim elementima (glavica, križnica, sječivo) niti u cjelokupnoj kombinaciji, naprotiv, prema svim parametrima, idealno se uklapa u Geibigovu kombinaciju 16–15–9–9. Pojedinačni elementi mača ukazuju na različito vrijeme pojave i trajanja pa se tako, primjerice, ravne, duge križnice pojavljuju već u vikinškim grobovima 10. stoljeća, a zbog svoje su jednostavne forme, vrlo dugo u upotrebi.<sup>23</sup> Prema Geibigovoj tipologiji sječivo se može opredijeliti u tip 7, koje se i na mačevima s područja Njemačke također najčešće nalazi u kombinacijskom tipu 16, varijanta I. Ova kombinacija datira se kroz vrlo dugo razdoblje, od sredine 10. pa sve do posljednje četvrtine 12. stoljeća.<sup>24</sup> No datacijski je okvir za sječiva tipa 7 ipak uži od kombinacijskog tipa te se datira od kraja 11. do sredine 12. stoljeća.<sup>25</sup> Isto tako, sječivo ima neke elemente prema kojima bi se moglo svrstati i u tip 3, što dovodi do većih kronoloških razlika u odnosu na tip 7, jer se datira dosta ranije, kroz cijelo 9. pa do sredine, odnosno najkasnije do kraja 10. stoljeća. I kombinacijski tip 16, varijanta I, također se može pojaviti uz sječivo tipa 3.<sup>26</sup> Kombinacijski tip 16, varijanta I, zabilježena je na 26 primjeraka na području Njemačke, dok u potpuno istu kombinaciju (16–15–9–9) nije uvršten ni jedan primjerak.<sup>27</sup> Mačevi tipa  $\alpha$ , koji su kao tip izdvojeni na temelju svoje

exceed 76 cm, although the blade of the Kupa sword is only half a centimetre longer.<sup>20</sup> The pommel is made in Geibig's construction type 3, like all one-piece pommels with the thorn passing through the whole pommel, but here the thorn is pierced high and is visible at the very top.<sup>21</sup> The opening on the underside of the head through which the thorn passes is much wider than the thorn itself, and the free space was filled (probably) with wood.

According to Nadolski's typology, this sword could also be classified as type  $\alpha$ , to which the shape of its pommel and all the prescribed measures correspond, except for the length of the crossguard.<sup>22</sup>

Dating: second half of the 10<sup>th</sup> century - middle of the 11<sup>th</sup>

## Comparative material and dating frameworks

After attempting to classify the swords according to some of the existing and most-commonly-used typologies, it is necessary to discuss the dating frameworks, as well as similar swords from other sites. It has been shown that the newly-found swords from the Kupa share certain similarities that can classify them as belonging to the same type, or a very similar one, primarily in terms of the dimensions and shape of the pommel. Also, their differences relate especially to the dimensions and shape of the crossguard and blade. These facts should be taken into consideration when discussing their chronological position.

The morphological characteristics of sword cat. no. 1 do not show any peculiarities either in the individual elements (pommel, crossguard, blade) or in their combination. On the contrary, according to all parameters, it fits perfectly into Geibig's combination 16–15–9–9. The individual elements of the sword indicate different times of their appearance and duration. So, for example, long flat crossguards already appear in 10<sup>th</sup>-century Viking tombs; and, due to their simple form, they have been in use for a very long time.<sup>23</sup> The blade can be classified as type 7 according to Geibig's typology, which is also most commonly found in combination type 16, variant I, on swords from Germany. This combination was in use through a very long period, from the middle of the 10<sup>th</sup> century to the last quarter of the 12<sup>th</sup>.<sup>24</sup> However, the chronological frame for type-7 blades is still shorter than for the combination type, and it can be dated from the end of the 11<sup>th</sup> century to the mid-12<sup>th</sup>.<sup>25</sup> Also, the blade has some elements according to which it could be classified as type 3, which leads to greater chronological differences than type 7, because the former is dated much earlier, throughout the 9<sup>th</sup> century to the middle, or no later than the end, of the 10<sup>th</sup>. The combination type 16, variant I can also occur with a type-3 blade.<sup>26</sup> The combination

21 Geibig 1991, 95.

22 Nadolski 1954, 26–27.

23 Oakeshott 1960, 232.

24 Geibig 1991, 151, Abb. 39.

25 Geibig 1991, 84, 87, 153–154, Abb. 22.

26 Geibig 1991, 153.

21 Geibig 1991, 95.

22 Nadolski 1954, 26–27.

23 Oakeshott 1960, 232.

24 Geibig 1991, 151, Abb. 39.

25 Geibig 1991, 84, 87, 153–154, Abb. 22.

26 Geibig 1991, 153.

velike distribucije zabilježene na području središnje i sjeverne Poljske, datiraju se u 11. – 12. stoljeće.<sup>28</sup>

Objavljeni mačevi ponekad nemaju navedene sve informacije koje bi bile korisne kako bi se točno uspostavile analogije, ili pak nisu sačuvani u cijelosti, što također otežava usporedbe. S područja Hrvatske, tipološki i geografski, najbliža je analogija ovome maču primjerak iz fundusa Gradskog muzeja Karlovac, čija je provenijencija nepouzdana, ali pretpostavlja se da također potječe iz rijeke Kupe u okolici Karlovca. Datiran je u 11. stoljeće, točnije između 1025. i 1075. godine. U usporedbi s novim kupskim mačem, ovaj iz karlovačkog muzeja ima kraću križnicu (17 cm), dok mu sječivo nije u cijelosti sačuvano.<sup>29</sup> Drugi bliski primjerak (Oakeshott X, A, 1) također je riječni nalaz, iz Save kod Jasenovca, i čuva se u Hrvatskom povijesnome muzeju. Duljina križnice ovog mača nije u katalogu iznesena iako na temelju fotografije i crteža djeluje slično dimenzijama ovoga mača, dok mu je sječivo za pet centimetara duže. Razlika se očituje i u žlijebu, koji je na ovom primjerku vidljiv i u donjem dijelu trna, odnosno jezičcu mača. Datiran je u 11. stoljeće.<sup>30</sup> Oba navedena primjerka imaju ukras, odnosno ostatke natpisa na sječivu. Provenijencija ovih mačeva veže se uz istočna područja Njemačkog Carstva. Još jedan mač iz Save kod Jasenovca objavljen je iste, 2002. godine, a pohranjen je u Zavičajnome muzeju u Našicama. Ž. Tomičić klasificirao ga je također u tip  $\alpha$  te jednako datirao u 11. stoljeće, a za razliku od Vinskog, koji mačeve 11. stoljeća naziva postkarolinškima,<sup>31</sup> Tomičić ih naziva romaničkima.<sup>32</sup>

Iz Save kod Bosanske Gradiške potječe još jedan srodan mač (iako ne tip  $\alpha$ ) koji se čuva u Zemaljskome muzeju u Sarajevu, a koji je M. Sijarić, nakon što je već duže bio poznat u literaturi, 2005. godine detaljno analizirao te razriješio nedoumicu oko njegove pohrane, ali i korigirao dataciju, predloživši njegovu izradu od sredine 10. do najkasnije sredine 11. stoljeća.<sup>33</sup> S nepoznatog nalazišta u posjedu Franjevačke gimnazije Visoko potječe mač kojemu je balčak opredijeljen u isti kombinacijski tip 16–15–9–9. Međutim, dužina sječiva toga mača veća je i, budući da je oštećen, pretpostavlja se njegova dužina od 91 cm. Kombinacijom databilnih elemenata proizvodnja mača datira se oko sredine 12. stoljeća.<sup>34</sup>

type 16, variant I, has been recorded on 26 specimens in Germany, while no specimen was included in the same combination (16–15–9–9).<sup>27</sup> Swords of type  $\alpha$  were classified based on their wide distribution in the area of central and northern Poland, where they appear in the 11<sup>th</sup> and 12<sup>th</sup> centuries.<sup>28</sup>

Published swords are sometimes not accompanied with all the necessary information or are not preserved in their entirety, which makes comparisons difficult. Typologically and geographically, the closest analogy from Croatia to this sword is a specimen from the holdings of the Karlovac City Museum. Although its provenance is unreliable, it is assumed that it also originates from the River Kupa in the vicinity of Karlovac. It is dated to the 11<sup>th</sup> century, more precisely between 1025 and 1075. Compared to the new Kupa sword, this one from the Karlovac Museum has a shorter crossguard (17 cm), while its blade has not been completely preserved.<sup>29</sup> Another closely related specimen (Oakeshott X, A, 1) is also a river find, from the Sava near Jasenovac, and is kept in the Croatian History Museum. The length of the crossguard of this sword is not stated in the catalogue, although in the photographs and drawing it looks similar in dimensions to this sword, while its blade is five centimetres longer. A difference is also evident in the fuller, which is visible on this specimen in the lower part of the tang. It is dated to the 11<sup>th</sup> century.<sup>30</sup> Both of these specimens have an ornament or remnants of an inscription on the blade. The provenance of these swords is associated with the eastern areas of the German Empire. Another sword from the Sava near Jasenovac was published in 2002 and is stored in the Našice County Museum. By Ž. Tomičić, it is also classified as type  $\alpha$  and likewise dated to the 11<sup>th</sup> century. Unlike Vinski, who treats 11<sup>th</sup>-century swords as post-Carolingian,<sup>31</sup> Tomičić rather calls them Romanesque.<sup>32</sup>

Another related sword (although not of type  $\alpha$ ), which originates from the Sava near Bosanska Gradiška, is kept in the National Museum in Sarajevo. Though known in the literature for a long time, in 2005 M. Sijarić analysed it in detail and resolved the dilemma about its storage. He also corrected the dating, proposing its production in the period from the mid-10<sup>th</sup> century to the mid-11<sup>th</sup> at the latest.<sup>33</sup> The Franciscan Gymnasium in Visoko possessed a sword from an unknown site with a hilt which fits the

27 Geibig 1991, 188–189. Od ukupno 26, njih četiri nemaju određene kombinacije, nego su opredijeljeni u kombinacijski tip 16, varijantu I.

28 Nadolski 1954, 26–29, 248–251, T. 8–11.

29 Demo 1984, 220–221, bilj. 42, T. 5–6; Čučković 1986, 16–17, sl. 10.

30 Borošak-Marijanović *et al.* 2002, 164–165, kat. br. 21; Bošković, Doračić 2009, 54–59.

31 Vinski 1983.

32 Tomičić 2002. U radu Tomičić spominje još nekoliko mačeva koje pripisuje istome tipu, ali bez slikovnog materijala i dimenzija. Navodi dva mača tipa  $\alpha$  u fundusu Hrvatskoga povijesnog muzeja iako je do sada objavljen samo jedan (Borošak-Marijanović *et al.* 2002, 164, kat. br. 21; Bošković 2009, 110, kat. br. 26; Bošković, Doračić 2009, 54–59), potom mač iz okolice Hodošana u Međimurju u fundusu Muzeja Međimurja te navodi još jedan u privatnoj zbirci, pronađen u rijeci Savi, ali ne precizira koji dio savskog toka (Tomičić 2002, 154).

33 Sijarić 2005, 14–24; 2014, 36–41. Mač je objavljen prvi put 1959. godine (Kalmár 1959), a na njega je u domaćoj literaturi pažnju skrenuo Ž. Demo (Demo 1984, 222). Do Sijarićeve objave smatralo se da je mač pohranjen u Povijesnome muzeju u Budimpešti.

34 Sijarić 2014, 58–61.

27 Geibig 1991, 188–189. Of a total of 26, four are not selected in any combination, but are attributed to combination type 16, variant I.

28 Nadolski 1954, 26–29, 248–251, T. 8–11.

29 Demo 1984, 220–221, n. 42, T. 5–6; Čučković 1986, 16–17, sl. 10.

30 Borošak-Marijanović *et al.* 2002, 164–165, cat. no. 21; Bošković, Doračić 2009, 54–59.

31 Vinski 1983.

32 Tomičić 2002. In this paper, Tomičić mentions several other swords that he attributes to the same type, but without the images or drawings and their dimensions. He mentions two  $\alpha$ -type swords in the holdings of the Croatian History Museum, although only one has been published so far (Borošak-Marijanović *et al.* 2002, 164, cat. no. 21; Bošković 2009, 110, cat. no. 26; Bošković, Doračić, 2009, 54–59), a sword from the vicinity of Hodošan, in Međimurje, in the holdings of the Museum of Međimurje, and another one in a private collection found in the River Sava, but does not specify which part of the Sava (Tomičić 2002, 154).

33 Sijarić 2005, 14–24; 2014, 36–41. The sword was first published in 1959 (Kalmár 1959); and, in the domestic literature, it was brought to attention by Ž. Demo (Demo 1984, 222). Until Sijarić's publication, the sword was considered to be kept in the Historical Museum in Budapest.

Iako često mačevi ovoga tipa imaju natpise (radioničke, religijske invokacije) ili ukrase u vidu raznih simbola na sječivima, pa i navedeni primjerci iz Hrvatske, budući da ih (n)ovi mačevi iz Kupe nemaju, niti su im sječiva damascirana, trenutno neće tome biti posvećena pažnja.<sup>35</sup>

Pitanje datacije mača kat. br. 1 ne stvara previše dvojbi. Glavica je mača prvi element koji ga određuje te se može smatrati oglednim primjerkom Geibigova kombinacijskog tipa 16, varijante I, koja se obično datira u 11. i 12. stoljeće, a koja odgovara i tipu  $\alpha$  prema Nadolskom datiranom u 11., ali moguće i u 12. stoljeće, kada se glavicama mača smanjuju dimenzije. Glavica ovoga mača ima pak prilično velike dimenzije i izduženi ovalni (elipsoidni) oblik te dugu križnicu (22 cm),<sup>36</sup> što bi ga svrstalo u mačeve 11. stoljeća.

Spomenuto je već da taj mač ima elemente koji mogu odrediti sječivo i u tip 3 i u 7. S obzirom na vitkiji izgled sječiva tipa 7, što ovdje i jest slučaj (osobito u odnosu na mač kat. br. 2), potom zbog činjenice da je za određivanje toga tipa primijenjeno više parametara, kao i zbog statističkog podatka koji ide u prilog tomu da se kod kombinacijskog tipa 16/I češće koristi upravo tip 7,<sup>37</sup> nameću se razlozi za opravdano opredjeljivanje sječiva u tip 7.

Izneseni podaci u potpunosti podržavaju dataciju mača s rasponom od 11. do 12. stoljeća, međutim, tip sječiva ovoga mača, čija se proizvodnja definira u užem vremenskom rasponu, od kraja 11. do sredine 12. stoljeća,<sup>38</sup> sugerira i dataciju ovoga mača u tom okviru, s time da bi se eventualno zbog veličine i oblika jabučice možda još mogla datacija suziti na kraj 11. do početka 12. stoljeća.<sup>39</sup>

Drugi mač (kat. br. 2), kod kojeg su uočene određene poteškoće sigurnog opredjeljenja u postojeće tipologije, svakako ima elemente tipa  $\alpha$ , ali ne može se u potpunosti uklopiti u taj tip, odnosno ne predstavlja njegov tipičan primjerak. Oakeshott navodi da tipovi sječiva X, iz kojeg je naknadno izdvojen upravo tip  $\alpha$ , imaju gotovo uvijek dugu ravnu križnicu, ali da ima i nekoliko primjera s povijenom križnicom.<sup>40</sup> Oblik ovakve križnice nije čest, a najslič-

same combination type of 16–15–9–9. However, the length of the blade of this sword is longer; and, since it is damaged, its original length is assumed to be 91 cm. The combination of datable elements suggests a production date for the sword around the mid-12<sup>th</sup> century.<sup>34</sup>

Although inscriptions (documenting the workshop that produced the object or in the form of religious invocations) or decorations in the form of various symbols on the blades are common on swords of this type, including the above-mentioned specimens from Croatia, since these newly-found swords from the Kupa do not have them, nor are their blades damasked, no attention will be paid to this phenomenon here.<sup>35</sup>

The question of the dating of sword cat. no. 1 does not create too many doubts. The pommel of the sword is the first element that determines its typological affiliation and can be considered as a typical example of Geibig's combination type 16, variant I, which is usually dated to the 11<sup>th</sup> and 12<sup>th</sup> centuries. That also corresponds to type  $\alpha$  according to Nadolski, dated to the 11<sup>th</sup> century and even to the 12<sup>th</sup>, when pommels were shrinking in size. The pommel of this sword has rather large dimensions and an elongated oval (ellipsoidal) shape, as well as a long crossguard (22 cm),<sup>36</sup> which would classify it as an 11<sup>th</sup>-century sword.

It has already been pointed out that this sword has elements that could identify the blade as belonging to both types 3 and 7. Given the slimmer appearance of blades of type 7, which is the case here (especially concerning sword cat. no. 2), and since more parameters are used to identify this type, as well as due to the statistical data that support the fact that type 7 is more often used in the combination type 16/I,<sup>37</sup> there appear to be valid reasons for classifying the blade as type 7.

The data presented fully support the dating of the sword within a range from the 11<sup>th</sup> century to the 12<sup>th</sup>. However, the type of blade of this sword, production of which is dated to a narrower period, from the end of the 11<sup>th</sup> century to the middle of the 12<sup>th</sup>,<sup>38</sup> suggests the dating of this sword within this framework, keeping in mind that, according to the shape and size of the pommel, a dating to the late 11<sup>th</sup> century or early 12<sup>th</sup> could also be proposed.<sup>39</sup>

35 O toj je temi literatura opsežna, usp.: Oakeshott 1960, 204–205, 212–223; Geibig 1991, 112–133, kao i domaće autore Vinski 1983; Demo 1984; Bošković, Doračić 2009 s navodima ostale, starije literature.

36 Samo dva primjerka mačeva tipa  $\alpha$  iz Poljske imaju duže križnice, od kojih je jedan iz Rzeczkówa (11. ili 11./12. stoljeće), s dužinom križnice od 24 cm, te mač iz Wielkopolske (12. stoljeće), s dužinom od čak 27 cm (Nadolski 1954, 28, 152, br. 57, 156, br. 81).

37 Geibig 1991, 153, 188, 190, Liste 2–3.

38 Geibig 1991, 154.

39 Još jedan mač s nepoznatog nalazišta, a koji se čuva u Zavičajnome muzeju Travnik, datiran je u isti vremenski raspon. Sječivo mu također odgovara tipu 7, dok je glavica krupnija i polukružna te određena u Oakeshottov tip B, odnosno Geibigov kombinacijski tip 15/III (Sijarić 2014, 52–55).

40 Oakeshott 1960, 204. Dva su primjera iz Poljske koja imaju sličan oblik križnice, od kojih je jedan bio klasificiran kao prijelazni  $\alpha$ -Z tip, a datirani su u 12. stoljeće. Upravo zbog karakteristične povijene križnice postoji i mišljenje da ne mogu zato biti pripisani tipu  $\alpha$  (Marek 2005, 37, Pl. 22).

34 Sijarić 2014, 58–61.

35 The literature on the subject is extensive; cf.: Oakeshott 1960, 204–205, 212–223; Geibig 1991, 112–133, as well as domestic authors Vinski 1983; Demo 1984; Bošković, Doračić 2009 with citations from earlier literature.

36 Only two specimens of type- $\alpha$  swords from Poland have longer crosses, one of which is from Rzeczkow (11<sup>th</sup> century or 11<sup>th</sup>/12<sup>th</sup> century), with a crossguard length of 24 cm, and a sword from Wielkopolska (12<sup>th</sup> century), with a length as great as 27 cm (Nadolski 1954, 28, 152, no. 57, 156, no. 81).

37 Geibig 1991, 153, 188, 190, List 2–3.

38 Geibig 1991, 154.

39 Another sword from an unknown site, which is kept in the Travnik Homeland Museum, is dated to the same period. Its blade also corresponds to type 7, while the pommel is larger and semicircular in shape. It is defined as Oakeshott's type B, i.e. Geibig's combination type 15/III (Sijarić 2014, 52–55).

niji primjer ogleda se na maču iz Wormsa (falačko Porajnje), na čijoj se križnici također nazire neka vrsta linearnog ukrasa.<sup>41</sup>

Iako pokazuje određene sličnosti s Oakeshottovim tipom križnice 6, jer je lučno povijen prema sječivu i krajevi obično nisu ravni, taj je tip križnice karakterističan od kasnog 12. pa sve do kraja 15. stoljeća, a gornja i donja linija križnice obično nisu paralelne, već donji dio može imati izbočenja. Tako je, primjerice, kod mača iz Norfolk, koji ima sličnu, iako jače povijenu, križnicu i središnje trokutasto izduženje, no autor ju nije klasificirao ni u jedan tip.<sup>42</sup> No kraće i blago povijene križnice bile su uobičajenije na mačevima koji se klasificiraju u vikinški period, primjerice mač iz 11. stoljeća iz rijeke Temze,<sup>43</sup> i kod drugih, starijih tipova mačeva iz 10. stoljeća prema Petersenovoj klasifikaciji, koji su uz to mogli imati i neznatno proširene krajeve.<sup>44</sup>

Kada je riječ o konstrukcijskim tipovima glavica, oba mača imaju jednodijelne glavice i pripadaju Geibigovu konstrukcijskom tipu 3, što je i uobičajeno za kombinacijske tipove 15, odnosno 16, osim što je kod mača kat. br. 2 trn probijen kroz cijelu visinu glavice i zakucan na samome vrhu. Najsličnija je glavica na maču s nepoznatog nalazišta u ciriškom muzeju, koji je tipičan primjerak tipa X (ima 10 cm duže sječivo), a koji je datiran u početak 12. stoljeća ili moguće i nešto ranije.<sup>45</sup> S područja Slovačke mač iz okolice Nitre također ima slično oblikovanu glavicu, pa čak i povijenu križnicu, ali ipak dulju, kao i znatno dulje sječivo, a datiran je u 11. stoljeće, dok isto datirani mač s područja komarnske župe ima povijenu, ali kraću križnicu, sličniju kupskom maču.<sup>46</sup> Konačno, konkretne analogije ovom maču nisu poznate, što ga određuje kao, za sada, jedinstven primjerak u ovoj kombinaciji. Treba spomenuti i mač koji datacijom i geografskim položajem pronalaska može biti blizak s ovim kupskim mačem, a to je mač tipa X (prema Petersenu), također vođeni nalaz, pronađen u jarunskom šljunku u Zagrebu, odnosno vjerojatno je bio u (starom) koritu rijeke Save.<sup>47</sup> Zanimljivo ga je spomenuti kao starijeg predstavnika, i to zbog karakteristika sječiva koje je prilično široko kod nakrsnice (5,5 cm), kao i kupski mač (5,7), međutim, dužina mu je za centimetar veća od mača kat. br. 1.

Some difficulties in assigning the second sword (cat. no. 2) to the existing typologies have already been pointed out. It certainly has elements of the  $\alpha$  type, but it cannot completely fit into that type, i.e. it does not represent a typical example. Oakeshott states that blades of type X, from which type  $\alpha$  was subsequently derived, almost always have a long straight crossguard, but that there are also several examples with bent crossguards.<sup>40</sup> The shape of such crossguards is not common, and the most similar example is reflected in a sword from Worms (Rhineland-Palatinate), which also has a kind of linear ornament on the crossguard.<sup>41</sup>

Although it shows certain similarities to Oakeshott's type 6 of crossguards, since it arches towards the blade and the ends are usually not straight, this type of crossguard is characteristic of the late 12<sup>th</sup> century to the end of the 15<sup>th</sup>. The upper and lower crossguard lines are also usually not parallel, since the lower part may have protrusions. This is the case, for example, with the Norfolk sword, which has a similar, although more strongly bent, crossguard and central triangular elongation, but the author did not classify it into any type.<sup>42</sup> However, shorter and slightly bent crossguards were more common on Viking-period swords, such as the 11<sup>th</sup>-century sword from the River Thames<sup>43</sup> and some other, older types of 10<sup>th</sup>-century swords according to Petersen's classification, which may have had slightly extended ends.<sup>44</sup>

Regarding the construction types of the pommels, both swords have one-piece pommels and belong to Geibig's construction type 3. This is also common for combination types 15 and 16, except that the sword cat. no. 2 has a thorn that pierces the pommel through its entire height, and which is nailed at the very top. The most similar example is a pommel found on a sword from an unknown site in the Zurich Museum, which is a typical example of type X (it has a 10 cm longer blade), dated to the beginning of the 12<sup>th</sup> century or possibly a little earlier.<sup>45</sup> A sword from the area of Nitra (Slovakia) also has a similarly shaped pommel and even a bent, but longer, crossguard, as well as a much longer blade. It is dated to the 11<sup>th</sup> century, while a sword of the same

41 Geibig 1991, 291, Taf. 81. Nevjerojatno zvuči, ali upravo kataloški broj ova ga mača (kat. br. 121) izostavljen je iz tablice kombinacijskih tipova koji Geibig donosi u popisu svih primjeraka koji se vežu uz svaki kombinacijski tip, stoga ostaje nepoznato u koji ga je tip svrstao.

42 Oakeshott 1991, 81. Mač je datiran u drugu polovinu 11. stoljeća i opredijeljen u Oakeshottov tip VII, čuva se u British Museumu.

43 Oakeshott 1960, Pl. 6: a.

44 Primjerice tip O (Petersen 1919, 127–128, Figs 104–105), tip P (Petersen 1919, 135, Fig. 109), tip Q (Petersen 1919, 136–137, Figs 110–111) pa čak i tip X (Petersen 1919, 159–160, Figs 125–126). Iako tip Z ima izrazito povijenu križnicu, mač iz Kovina u Banatu, kojem je doduše oblik glavice glavni tipološki putokaz, ima blago povijenu križnicu, i to gotovo istih dimenzija (12 cm) kao i ovaj, kupski mač, opredijeljen je u tip Z i datiran u 11. stoljeće (Vinski 1983, 10, 12, T. 3: 3).

45 Oakeshott 1991, 32.

46 Ruttkay, 1978, 26, sl. 8: 2–3.

47 Radić 1991. Taj se mač također čuva u Arheološkome muzeju u Zagrebu (izložen u stalnom postavu i promijenjene datacije u prvu polovinu 10. stoljeća), a otkupljen je iz privatne zbirke 2015. godine (S-4141), iako je već dugi niz godina poznat u stručnoj literaturi.

40 Oakeshott 1960, 204. There are two examples from Poland that have a similar crossguard shape, one of which has been classified as a transitional  $\alpha$ -Z type and dated to the 12<sup>th</sup> century. But, because of the characteristic curved crossguard, there is also an opinion that they therefore cannot be attributed to type  $\alpha$  (Marek 2005, 37, Pl. 22).

41 Geibig 1991, 291, Taf. 81. Remarkably, the catalogue number of this sword (cat. no. 121) is omitted from the table of combination types in Geibig's list of all specimens associated with each combination type, so it remains unknown into which type he actually classified it.

42 Oakeshott 1991, 81. The sword is dated to the second half of the 11<sup>th</sup> century and attributed to Oakeshott type VII. It is kept in the British Museum.

43 Oakeshott 1960, Pl. 6: a.

44 For example type O (Petersen 1919, 127–128, Figs 104–105), type P (Petersen 1919, 135, Fig. 109), type Q (Petersen 1919, 136–137, Figs 110–111) and even type X (Petersen 1919, 159–160, Figs 125–126). Although type Z has a distinctly curved crossguard, the sword from Kovin in Banat, for which the shape of the pommel is the main typological sign, has a slightly curved crossguard of almost the same dimensions (12 cm) as this sword from the Kupa. It is classified as type Z and dated to the 11<sup>th</sup> century (Vinski 1983, 10, 12, T. 3: 3).

45 Oakeshott 1991, 32.

Budući da ovaj mač nije tako skladen primjer pojedinih tipova, i njegovo je datiranje nešto kompleksnije. Ako se promatra samo glavica, njezine dimenzije i međusobni omjeri ukazuju na prožimanje Geibigova kombinacijskog tipa 16/I uz karakteristike podtipa u okviru kombinacijskog tipa 15, a što je također opredjeljuje u tip  $\alpha$ . Kada se objedine te tipologije, krećemo u širokom rasponu od sredine 10. do posljednje četvrtine 12. stoljeća, s time da bi izduženi oblik glavice pripadao starijoj varijanti koja nije uobičajena u 12. stoljeću. Sječivo karakterizira široka i relativno kratka oštrica (76,5 cm), a slabo vidljivi žlijeb otežava detaljniju klasifikaciju.

Spomenuto je da sječivo pokazuje karakteristike koje djelomično odgovaraju tipovima 1, 3 i 4. S obzirom na to da je gornja granica proizvodnje tipa 1 800. godina, ova bi se varijanta trebala isključiti. Sječiva tipa 3 pojavljuju se krajem 8., a mogla su biti u upotrebi najkasnije do kraja 10. stoljeća budući da od sredine 10. do sredine 11. stoljeća dominiraju tipovi 4 i 5.<sup>48</sup> Naravno, tu je i ukrašena, kratka križnica za koju manjkaju analogije. Zbog svega navedenog, ovaj bi se mač mogao datirati u drugu polovinu ili pak u kasno 10. do sredine 11. stoljeća. Ne treba isključiti mogućnost da je sječivo izrađeno nešto ranije te da je jabučica naknadno dodana.<sup>49</sup>

date from the Komarno parish also has a bent, but shorter, crossguard, more like the Kupa sword.<sup>46</sup> Finally, exact analogies to this sword are not known, which leaves it for now as a unique specimen in this combination. A type X sword (according to Petersen) which has close chronological and geographical characteristics to this Kupa sword, also a water find, was found in the Jarun lake gravel in Zagreb, i.e. probably in the (old) Sava riverbed.<sup>47</sup> It is interesting to mention it as an earlier representative of the type, due to the characteristics of the blade, which is quite wide at the crossguard (5.5 cm), similar to the Kupa sword (5.7), but its length is longer by a whole centimetre than sword cat. no. 1.

The dating of this sword is more complex, since it is not a typical example of any type. If only the pommel is observed, its dimensions and mutual ratios indicate the permeation of the Geibig combination type 16/I with the characteristics of the subtype within the combination type 15, which also classifies it as type  $\alpha$ . When these typologies are combined, a wide time range from the middle of the 10<sup>th</sup> century to the last quarter of the 12<sup>th</sup> can be postulated, bearing in mind that the elongated shape of the pommel is an older variant that is not common in the 12<sup>th</sup> century. The blade is wide and relatively short (76.5 cm), and the poorly visible fuller complicates a more detailed classification.

As mentioned before, the blade shows characteristics that partially correspond to types 1, 3 and 4. Given that the upper limit of production of type 1 is the year 800 AD, this variant should be excluded. Type 3 blades appear at the end of the 8<sup>th</sup> century and could have been in use by the end of the 10<sup>th</sup> century at the latest, since types 4 and 5 dominated from the middle of the 10<sup>th</sup> century to the middle of the 11<sup>th</sup> century.<sup>48</sup> Of course, there is also a short, decorated crossguard for which analogies are lacking. Considering all these arguments, this sword could be dated to the second half of the 10<sup>th</sup> century, or between the late 10<sup>th</sup> and the mid-11<sup>th</sup> century. However, the possibility that the blade was made a bit earlier, and that the pommel was added later, should not be excluded.<sup>49</sup>

48 Geibig 1991, 153.

49 Sijarić također daje mogućnost za takve popravke, odnosno intervencije na mačevima gdje nisu svi konstrukcijski dijelovi izrađeni u istome razdoblju (Sijarić 2014, 46). S druge strane, iako tipološki i kronološki isto određeni (tip  $\alpha$ , 11. st.), mačevi s područja Poljske pokazuju međusobne razlike u dužini i širini sječiva (Nadolski 1954, 146–157).

46 Ruttkay, 1978, 26, sl. 8: 2–3.

47 Radić 1991. This sword is also kept in the Archaeological Museum in Zagreb (exhibited in the permanent exhibition and with its dating changed to the first half of the 10<sup>th</sup> century). It was purchased from a private collection in 2015 (S-4141), although it has been known for many years in the professional literature.

48 Geibig 1991, 153.

49 Sijarić also allows the possibility of such repairs or interventions on swords where not all structural parts were made in the same period (Sijarić 2014, 46). On the other hand, although typologically and chronologically the same (type  $\alpha$ , 11<sup>th</sup> century), swords from the area of Poland also show mutual differences in blade length and width (Nadolski 1954, 146–157).

## Zaključna razmatranja

Mačevi tipa  $\alpha$  u domaćoj su literaturi dobili prostor tek početkom 80-ih godina prošlog stoljeća, kada ih gotovo u isto vrijeme razmatraju dva različita autora. Već u podmakloj fazi svoga znanstvenog djelovanja, 1983. godine Z. Vinski objavljuje rad posvećen mačevima iz 10. i 11. stoljeća, odnosno postkarolinškim mačevima, kako ih također kronološki definira, na području tadašnje Jugoslavije.<sup>50</sup> Tada prvi put četiri mača klasificira u tip  $\alpha$ , koji je mnogo ranije, još 1954. godine A. Nadolski odredio na temelju oblika glavice, ali i drugih mjernih odrednica, kao razvoj iz mača tipa X prema Petersenovoj tipologiji premda je na njihovu specifičnost upozoreno još i ranije.<sup>51</sup> Dva su cjelovita mača pripisana ovome tipu, i to oba s područja Srbije (Vojvodina: Sombor i Zrenjanin)<sup>52</sup> te dva fragmentarna s područja Hrvatske – mač bez glavice pronađen kod Divosela na Velebitu južno od Gospića te glavica s položaja Crkvina u Biskupiji kod Knina.<sup>53</sup> Samo godinu dana kasnije, 1984. godine, na počecima svoje znanstvene karijere, Ž. Demo objavio je, ovdje već spomenut, još jedan mač ovoga tipa, nepoznate provenijencije iz fundusa Gradskog muzeja Karlovac.<sup>54</sup> Potom su 2002. godine objavljena dva mača iz rijeke Save kod Jasenovca pripisana tome tipu.<sup>55</sup> Time se područje rasprostranjenosti mačeva tipa  $\alpha$  na tlu Republike Hrvatske naglo povećalo te brojčano pokazalo u korist kontinentalnog dijela Hrvatske s isključivo vodenim, odnosno riječnim kontekstom nalaza. Važno je to napomenuti i zbog spoznaje da ih trenutno brojimo više od, do sada, poznatih spata Petersenovog tipa X.<sup>56</sup>

Pitanje provenijencije mačeva ovoga tipa argumentira se zastupljenošću mačeva kombinacijskog tipa 16/I na području Njemačke koja je najizraženija uz tok Rajne te u južnim i jugoistočnim njemačkim krajevima, sa samo par primjeraka na sjeveru,<sup>57</sup> pa je upravo to područje prihvaćeno u domaćoj literaturi kao izvorište za primjerke s područja Hrvatske.<sup>58</sup> S druge strane, ako bi se u obzir uzeo element ukrašavanja sječiva, analogije na mačevima

## Concluding remarks

Swords of the  $\alpha$  type appeared in the Croatian literature only in the early 1980s, when they were discussed almost simultaneously by two different authors. In 1983, when Z. Vinski was already in an advanced stage of his scientific activity, he published a paper on swords of the 10<sup>th</sup> and 11<sup>th</sup> centuries from the territory of the then Yugoslavia, i.e. the post-Carolingian swords, as he also defined them chronologically.<sup>50</sup> For the first time, he classified four swords as type  $\alpha$  which, much earlier, back in 1954, had been established by A. Nadolski, on the basis of the shape of the pommel and some other measuring determinants, as a development from swords of type X according to Petersen's typology, although their specificity has been pointed out even earlier.<sup>51</sup> Two complete swords have been attributed to this type, both from Serbia (Vojvodina: Sombor and Zrenjanin),<sup>52</sup> and two fragmentary from Croatia: a sword without pommel found near Divosel, on Velebit south of Gospić, and a pommel from Crkvina, in Biskupija, near Knin.<sup>53</sup> Only a year later, in 1984, at the beginning of his scientific career, Ž. Demo published another sword of this type, of unknown provenance, from the holdings of the Karlovac City Museum.<sup>54</sup> Then, in 2002, two swords from the River Sava near Jasenovac were published and attributed to that type.<sup>55</sup> Thus, the area of distribution of  $\alpha$ -type swords on the territory of the Republic of Croatia increased sharply, with most finds from the continental part of Croatia recovered from a riverine context. This is important to mention, because they are currently more numerous than the famous Petersen type-X swords.<sup>56</sup>

The provenance of swords of this type is argued from the presence of combination type 16/I swords in Germany. They are most widespread along the Rhine and in the southern and southeastern German regions, with only a few specimens in the north.<sup>57</sup> Therefore, this area is accepted in the Croatian literature as a source for specimens from the territory of Croatia.<sup>58</sup> On the other

50 Vinski 1983. Valorizirajući znanstveni doprinos Z. Vinskog vezan uz teme srednjovjekovnih mačeva, Bilogrivić je izdvojio tri faze njegova rada na tom području te je radove koji su nastali 80-ih godina prošlog stoljeća, a u koje se ubraja i spomenuti rad, svrstao u drugo razdoblje (Bilogrivić 2020, 246–247).

51 Nadolski 1954, 26–36.

52 Mačevi iz Sombora i Zrenjanina međusobno su vrlo slični, a s kupskim mačevima također imaju velike sličnosti. Glavice su, primjerice, vrlo slične maču kat. br. 2, kojemu je donja, bazna linija ravnija u odnosu na mač. kat. br. 1. Križnice vojvodanskih mačeva također su vrlo duge. Na maču iz Zrenjanina dužina iznosi 20, a na maču iz Sombora 21 (Vinski 1983, 13, 44, T. 4), dok mač iz Kupe (kat. br. 1) ima križnicu dužine 22 cm.

53 Vinski 1983, 13–14, 28, 44, T. 4–5.

54 Demo 1984, 215, 220, 223, sl. 2, bilj. 42, T. 5. Taj je rad dopunjeno izlaganje sa znanstvenog skupa iz 1982. godine, a predan je u tisak 1983. godine (Demo 1984, 211, bilj. \*), vjerojatno kada još nije bio objavljen svezak *Starohrvatska prosvjeta* za tu godinu u kojoj Vinski predstavlja mačeve tipa  $\alpha$  jer ga Demo ne citira u svome radu.

55 Tomičić 2002; Borošak-Marijanović et al. 2002, 164–165.

56 Ovdje se referiram na tvrdnju iz 1983. godine, kada je Vinski pisao da spate tipa  $\alpha$  nisu u Europi toliko česte kao tip X (Vinski 1983, 27), a koja se od tada promijenila, barem za područje Hrvatske. Osim toga, za mač iz Koljana, koji je poznat u literaturi pod tipom X (Vinski 1983, 10, 12, T. 3: 1), ustanovljeno je nedavno da se ipak ne radi o tome tipu (Bilogrivić 2020, 248–250).

57 Geibig 1991, 171, Abb. 50.

58 Vinski 1983, 27; Demo 1984, 221; Bošković, Doračić 2009, 55.

50 Vinski 1983. Valorizing the scientific contribution of Z. Vinski to the study of medieval swords, Bilogrivić distinguished three phases of his work in this area. The works written in the 1980s, when the cited paper was published, were classified in the second period (Bilogrivić 2020, 246–247).

51 Nadolski 1954, 26–36.

52 The swords from Sombor and Zrenjanin are very similar to each other, and they also have great similarities with the swords from the Kupa. The pommels, for example, are very similar to sword cat. no. 2, whose lower, base line is flatter than that of sword cat. no. 1. The crossguards of the swords from Vojvodina are also very long. On the Zrenjanin sword the length is 20 cm, and on the sword from Sombor 21 cm (Vinski 1983, 13, 44, T. 4), while the sword from the Kupa (cat. no. 1) has a 22 cm long crossguard.

53 Vinski 1983, 13–14, 28, 44, T. 4–5.

54 Demo 1984, 215, 220, 223, sl. 2, n. 42, T. 5. This paper represents a supplemented work from a 1982 scientific conference presentation and was published in 1983 (Demo 1984, 211, note \*). Probably the volume of *Starohrvatska prosvjeta* for that year where Vinski presented swords of type  $\alpha$  had not yet been published, since Demo does not quote him in his work.

55 Tomičić 2002; Borošak-Marijanović et al. 2002, 164–165.

56 Here I refer to a statement from 1983, when Vinski wrote that type- $\alpha$  swords are not as common in Europe as type X (Vinski 1983, 27). This is no longer valid, at least for the territory of Croatia. In addition, the sword from Koljana, which was known in the literature as of type X (Vinski 1983, 10, 12, T. 3: 1), actually cannot be classified as such (Bilogrivić 2020, 248–250).

57 Geibig 1991, 171, Abb. 50.

58 Vinski 1983, 27; Demo 1984, 221; Bošković, Doračić 2009, 55.

tipa  $\alpha$  s područja Poljske istovjetna su kao i kupski, odnosno lišeni su natpisa i ukrasa na sječivima,<sup>59</sup> što bi ukazivalo na moguće porijeklo mačeva iz Kupe iz tog smjera.

Povijesni kontekst nalaza oružja 11. i ranog 12. stoljeća, na prijelazu ranoga u razvijeni srednji vijek, i to na ovome važnome komunikacijskom pravcu, mogao bi se vezati, kako je interpretirala D. Bošković, uz vojsku ugarskog kralja Kolomana (1095. – 1116.) koja se kretala u smjeru juga prema Jadranu i koja je na svome putu morala, između ostalih, prijeći i rijeku Kupu.<sup>60</sup>

Razdoblje 10. do 12. stoljeća na ovom području Pokuplja, kao i međuriječja Save i Kupe, slabo je arheološki istraženo. Ipak, s desne obale Kupe, na području Banije, nameće se Kirin-grad kao potencijalni lokalitet uz koji bi se mogli povezati nalazi ovog oružja. Kirin-grad je od Kupe udaljen manje od deset kilometara i nalazi se na dominantnom položaju koji je korišten od pretpovijesti sve do kasnoga srednjeg, odnosno ranoga novog vijeka, a iako nije dovoljno istražen, sve je više dokaza da je gradina bila intenzivno korištena tijekom srednjeg vijeka.<sup>61</sup>

Zanimljivost je što je na uskom prostoru riječnih tokova Kupe i Save pronađeno nekoliko primjeraka ovih tipova mačeva,<sup>62</sup> a ovi novi nalazi idu u prilog činjenici koju je već M. Sijarić primijetio, a ta je da većina mačeva ovoga ili sličnoga tipa pripada vodenim nalazima.<sup>63</sup> I ne samo ovoga tipa, već i drugih tipova mačeva razvijenog i kasnog srednjeg vijeka.<sup>64</sup> Vrijeme je to kada se mačevi vrlo rijetko nalaze u grobovima pa se zbog velikog udjela vodenih nalaza na europskom tlu, procjenjuje se čak oko 80 %, <sup>65</sup> razlozi za taj fenomen tumače na različite načine, od raznih slučajnih mogućnosti gubitka mača poput borbe, nesreće i sl., do namjernog odbacivanja, koja također mogu biti praktične prirode, ali i ritualne ili votivne.<sup>66</sup> Brojni nalazi srednjovjekovnih mačeva u

hand, if we consider blade decoration, the analogies on  $\alpha$ -type swords from Poland are the same as on these two swords from the Kupa, since they lack inscriptions and decorations on the blades.<sup>59</sup> That also could indicate a possible direction for the origin of the Kupa swords.

According to D. Bošković, the historical context of the findings of weapons from the 11<sup>th</sup> century and early 12<sup>th</sup>, at the transition from the Early to the High Middle Ages, on this important communication line, could be linked to the army of the Hungarian King Koloman (1095 – 1116). The army was moving in a southerly direction towards the Adriatic and, on its way, had to cross, among others, the River Kupa.<sup>60</sup>

In this area of Pokuplje, as well as the Sava and Kupa interfluvium, the period of the 10<sup>th</sup> to 12<sup>th</sup> centuries is quite poorly archaeologically researched. However, from the right bank of the Kupa, in the area of Banija, Kirin-grad appears as a potential site with which this weapon could be connected. Kirin-grad is less than ten kilometres away from the Kupa, and it stands in a dominant position that was used from prehistory until the Late Middle Ages and early modern times. Although the site is not sufficiently researched, there is enough evidence that the hillfort was used extensively during the Middle Ages.<sup>61</sup>

Interestingly, several specimens of these types of swords have been found in the narrow area of the Kupa and Sava rivers.<sup>62</sup> These new findings reinforce the fact that M. Sijarić has already noticed, that most swords of this or similar type belong to water finds.<sup>63</sup> And not only of this type, but also of other types of swords of the High and Late Middle Ages.<sup>64</sup> Since swords are very rarely found in graves of that period, and due to the large proportion of water finds in Europe (estimated to be as much as 80 %),<sup>65</sup> the

59 Nadolski 1954, 146–156 (A. Miecze); Vinski 1983, 28.

60 Borošak-Marijanović *et al.* 2002, 160–162.

61 Istraživanja su započela 2006. te nastavljena 2008. godine. Iz kratkog izvještaja saznaje se da je pronađeno više starohrvatskih grobova koji su bili već oštećeni pa saznanja o prilozima nema. Datacija nije iznesena, ali prema pojedinačnim nalazima možemo računati s razdobljem ranoga srednjeg vijeka te kontinuitetom sve do vremena Vojne krajine (Čučković 1986, 16; 2006; 2008; Kruhek, Horvat 1986, 169–170). U Zbirci nalaza srednjovjekovnog doba Arheološkog muzeja u Zagrebu čuva se 28 predmeta s lokaliteta Kirin-grad, sve slučajni nalazi pristigli u muzej kao darovi, među kojima ima nalaza nakita bjelobrdске kulture 10. i 11. stoljeća (Ercegović 1958, 181), ali i nakita razvijenoga srednjeg vijeka (Ercegović 1960, 250, T. 9: 44) te kasnosrednjovjekovnih strelica, dijelova nožnje i upotrebnih predmeta (neobjavljeni).

62 Primjerice, na području Savezne Republike Njemačke, udio vodenih nalaza posebno je izražen na području južne Bavarske i na jugozapadu Njemačke (Geibig 1991, 177).

63 Sijarić 2014, 60–61. Referira se na mačeve s glavicama tipa A, tj. s balčaci-kombinacijskog tipa 16/l.

64 U fundusu Hrvatskoga povijesnog muzeja čuva se 27 mačeva razvijenog i kasnoga srednjeg vijeka, od kojih 16 pripada vodenim nalazima s područja kontinentalne Hrvatske (Bošković, Doračić 2009, 11).

65 Oakeshott 1991, 3. I nalazi mačeva s područja Hrvatske uklapaju se u taj prosjek (Borošak-Marijanović *et al.* 2002, 155).

66 O datiranju i uzrocima vodenih nalaza, vidi Geibig 1991, 177–179, potom sintezu teorija o toj temi, kao i katalog nalaza u koji ne ulaze samo mačevi već i druge vrste oružja i konjaničke opreme, vidi u Bošković 2009; Bošković, Doračić 2009, 18–22, s izvornom literaturom.

59 Nadolski 1954, 146–156 (A. Miecze); Vinski 1983, 28.

60 Borošak-Marijanović *et al.* 2002, 160–162.

61 The excavations began in 2006 and continued in 2008. A short report shows that several already damaged “old Croatian” graves were found, so there is no information about the potential finds in them. The dating was not stated, but, according to individual findings, we can consider the period from the Early Middle Ages continuing until the time of the Military Frontier (Čučković 1986, 16; 2006; 2008; Kruhek, Horvat 1986, 169–170). The Collection of Medieval Finds of the Archaeological Museum in Zagreb keeps 28 objects from the Kirin-grad site. All of them are stray finds that arrived at the museum as gifts. They include jewellery from the Bijelo Brdo culture of the 10<sup>th</sup> and 11<sup>th</sup> centuries (Ercegović 1958, 181), jewellery of the High Middle Ages (Ercegović 1960, 250, T. 9: 44), and late-medieval arrows, costume parts and utility items (unpublished).

62 For example, in the territory of the Federal Republic of Germany, the proportion of water finds is particularly high in the area of southern Bavaria and southwestern Germany (Geibig 1991, 177).

63 Sijarić 2014, 60–61. He refers to swords with type-A pommels, i.e. with a hilt of combination type 16/l.

64 The Croatian History Museum holds 27 swords of the High and Late Middle Ages, 16 of which are water finds from the area of continental Croatia (Bošković, Doračić 2009, 11).

65 Oakeshott 1991, 3. The finds of swords from the territory of Croatia also fit into that average (Borošak-Marijanović *et al.* 2002, 155).



riječ Ljubljanici u Sloveniji potaknuli su i tamošnje kolege da se podrobnije posvete tome fenomenu.<sup>67</sup> Posljednji rad koji daje sveobuhvatan pregled tih nalaza objavio je A. Gaspari te se usmjerio na razloge zbog kojih se na određenim punktovima oni pojavljuju u većem broju, i to posebno mačevi datirani u razdoblje 12. do 14. stoljeća. Autor je stajališta da su oni deponirani svjesno i s određenom namjerom.<sup>68</sup>

Ipak, za neke od navedenih paralela, odnosno mačeve iz 10. i 11., pa čak i 12. stoljeća, zna se ili se smatra da potječu iz grobova<sup>69</sup> pa su, hipotetski, i ova dva mača mogla biti grobni prilozii koji su kao posljedica plavljenja Kupe u konačnici završili u riječnom šljunku.

Ovdje predstavljenim mačevima pripada značajno mjesto na području proučavanja srednjovjekovnog oružja, kartiranju ovog tipa mačeva te svakako i lokalno, u smislu doprinosa srednjovjekovnih nalaza i potencijalnih novih nalaza te otkrića na području Pokuplja. S obzirom na to da je riječ o dvama mačevima bliskoga tipološkog i datacijskog okvira, pronađenih na istoj lokaciji, može se reći da ovi nalazi pripadaju jednom od važnijih otkrića srednjovjekovnog oružja u posljednje vrijeme (u Hrvatskoj), kada je riječ o slučajnim nalazima, dakako.

Arheološki potencijal rijeke Kupe sasvim sigurno je velik pa je u budućnosti moguće očekivati neke nove nalaze. U tom je smislu neophodno spomenuti još jedan važan nalaz pronađen desetak godina ranije od ovdje predstavljenih mačeva i par kilometara nizvodno (između mosta preko Kupe kod Jamnice i sela Gradec Pokupski) od Donje Kupčine, također u šljunku izvađenome iz Kupe. Riječ je o ranosrednjovjekovnom koplju s krilcima, datiranome u 8. – 9. stoljeće.<sup>70</sup>

reasons for this phenomenon are interpreted in different ways. Interpretations include various accidental possibilities of sword loss, such as fighting or accidents, but also deliberate rejection, which could have been practical, but also ritual or votive.<sup>66</sup>

Numerous finds of medieval swords in the River Ljubljanica, in Slovenia, have encouraged researchers to take a more in-depth approach to this phenomenon.<sup>67</sup> The last study that provides a comprehensive overview of these findings was published by A. Gaspari, who focused on the reasons why they appear in large numbers at certain points, especially swords dating from the period from the 12<sup>th</sup> century to the 14<sup>th</sup>. He believes that they were deposited consciously and with a certain intention.<sup>68</sup>

However, some of the already noted parallels, namely the swords of the 10<sup>th</sup> and 11<sup>th</sup> centuries, and even the 12<sup>th</sup>, are known or believed to originate from graves,<sup>69</sup> so, hypothetically, these two swords could also have been initially deposited as grave goods that ended up in river gravel as the result of flooding.

The swords presented here have a significant place in the study of medieval weapons, and they also contribute to our understanding of the distribution of this type of swords. At the same time, they also have certain local significance, in terms of the contribution of medieval finds and potential new finds and discoveries in the Pokuplje area.

Given that these two swords both belong to a close typological and dating framework and were found at the same location, it can be claimed that these finds belong to one of the most important discoveries of medieval weapons in recent times in Croatia, naturally, with respect to accidental finds.

67 Knific, Nabergoj 2016, 131.

68 Gaspari 2017. Nije na odmet spomenuti kako je nekoliko mačeva, različitih datacija, pronađeno na lokacijama kao što su stari riječni prijelazi, poput Save kod Gradiške ili Save kod Jasenovca, što bi možda ipak išlo u prilog nekom profanome razlogu odbacivanja mača. Iako se ovom temom bavila D. Bošković, s novim nalazima, kao i suvremenijom literaturom u Hrvatskoj susjednim zemljama (npr. Aleksić 2007; Sijarić 2014; Gaspari 2017 itd.), još uvijek ima prostora za detaljniju studiju o tome.

69 Nadolski 1954, 146–156 (A. Mieczel); Vinski 1983, 28, 42.

70 Bekić 2003. Koplje se nalazi u fundusu Arheološkog muzeja u Zagrebu (S-3814) te je (bilo) izloženo u stalnom postavu (*Rani srednji vijek u kontinentalnoj Hrvatskoj*). Nekoliko je godina kasnije Demo iznio stariju dataciju tog koplja, u prvu polovinu do sredine 8. stoljeća (Demo 2010, 72, tab. 3, kat. H2).

66 On the dating and causes of water finds, see Geibig 1991, 177–179. For the synthesis of theories on the subject, as well as a catalogue of finds that include not only swords but also other types of weapon and cavalry equipment, see Bošković 2009; Bošković, Doračić 2009, 18–22, with earlier literature.

67 Knific, Nabergoj 2016, 131.

68 Gaspari 2017. It is worth pointing out that several swords, of different dates, have been found at locations that represent old river crossings, such as the Sava near Gradiška, or the Sava near Jasenovac. That might support some profane reason for depositing or discarding the swords. Although D. Bošković has studied this topic, with new findings, as well as with the latest publications appearing in countries neighbouring Croatia (e.g. Aleksić 2007; Sijarić 2014; Gaspari 2017, etc.), there is still room for a more detailed study.

69 Nadolski 1954, 146–156 (A. Mieczel); Vinski 1983, 28, 42.

Na početku je spomenuta već postojeća datacija koju je, za ovdje predstavljene mačeve, iznio Ž. Demo, a koju, jasno, nije bilo potrebe korigirati iako je na temelju provedene detaljnije analize ponuđena donekle uža datacija. No valja još jednom naglasiti da okolnost koja, dakako, ne pomaže preciznijoj dataciji jest ta da je riječ o slučajnim i pojedinačnim nalazima. Zaključno, uz predstavljene određene morfološke, metričke i datacijske razlike koje ih odlikuju, ipak se ne treba u potpunosti isključiti pretpostavka da su ova dva mača mogla biti korištena te eventualno i odbačena ili deponirana u isto vrijeme, u drugoj polovini, odnosno krajem 11. ili početkom 12. stoljeća, bez obzira na to je li jedan od njih ranije izrađen i možda duže služio svrsi.

The archaeological potential of the River Kupa is certainly great, and it is possible to expect some new findings in the future. Consequently, it is necessary to mention an early-medieval winged spearhead dated to the 8<sup>th</sup> – 9<sup>th</sup> century.<sup>70</sup> This is another important find from the Kupa gravel, found ten years earlier than the swords presented here and a few kilometres downstream of Donja Kupčina (between the village of Gradec Pokupski and the bridge over the Kupa near Jamnica).

As noted at the beginning, it was Ž. Demo who initially proposed the dating for the swords presented here. Naturally, the date already postulated needed no correction, although a somewhat narrower dating based on a more detailed analysis has been offered here. However, it should be emphasized once again that a circumstance that certainly does not help a more precise dating is the fact that these are stray and individual findings. In conclusion, although they have certain morphological, metric and dating differences, it should not be completely excluded that these two swords could have been used and possibly discarded or deposited at the same time, in the second half, or at the end, of the 11<sup>th</sup> or in the early 12<sup>th</sup> century, whether or not one of them was made earlier and perhaps served its purpose for a longer time.

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70 Bekić 2003. The spearhead is kept in the holdings of the Archaeological Museum in Zagreb (S-3814) and is (was) exhibited in a permanent exhibition (*Early Middle Ages in continental Croatia*). A few years later Demo proposed an older dating of that spearhead: to the first half or middle of the 8<sup>th</sup> century (Demo 2011, 72, tab. 3, cat. H2).

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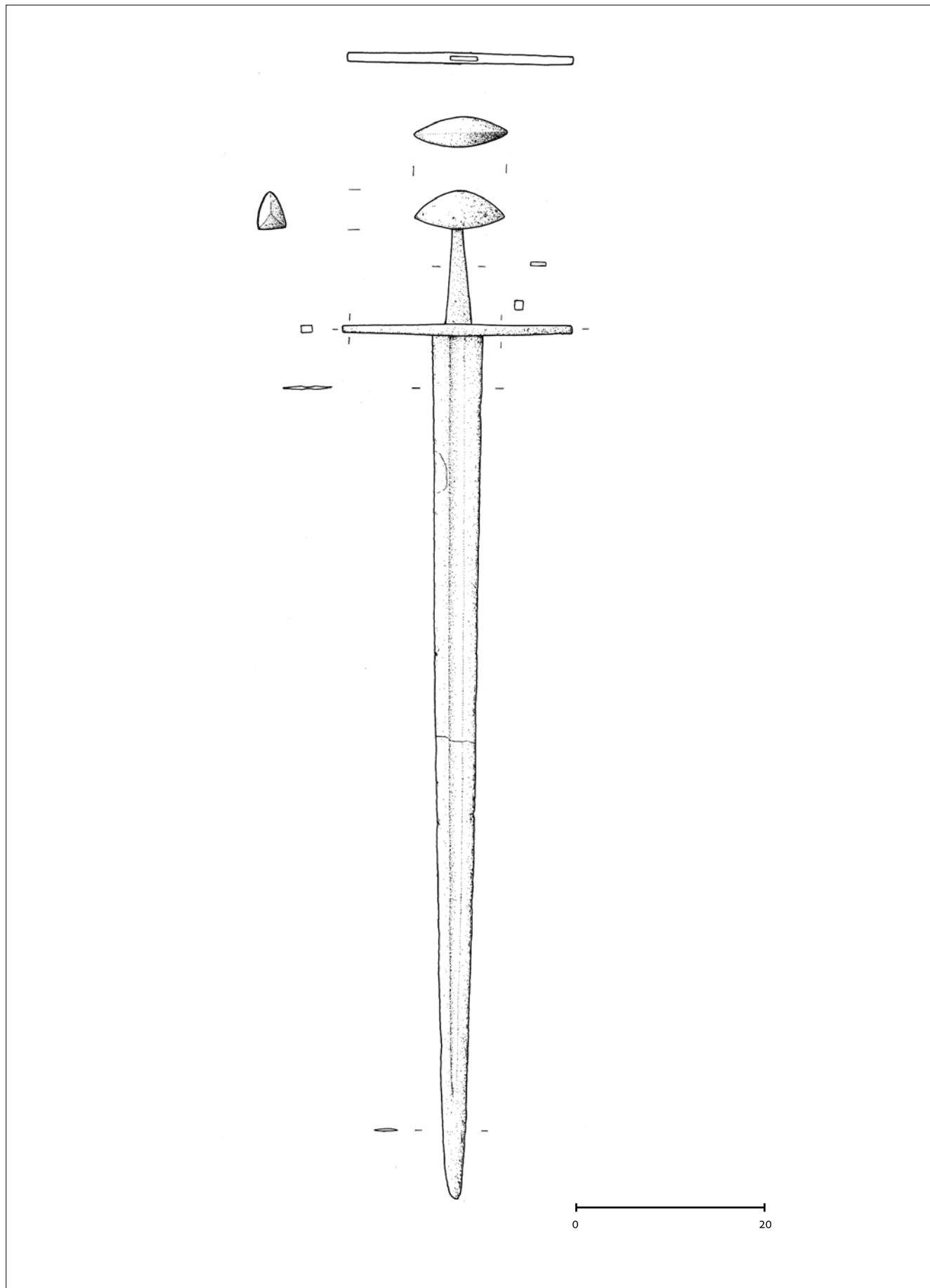


TABLA 1. Mač, Donja Kupčina; kat. br. 1 (izradila M. Galić).

TABLE 1. Sword, Donja Kupčina; cat. no. 1 (made by M. Galić).

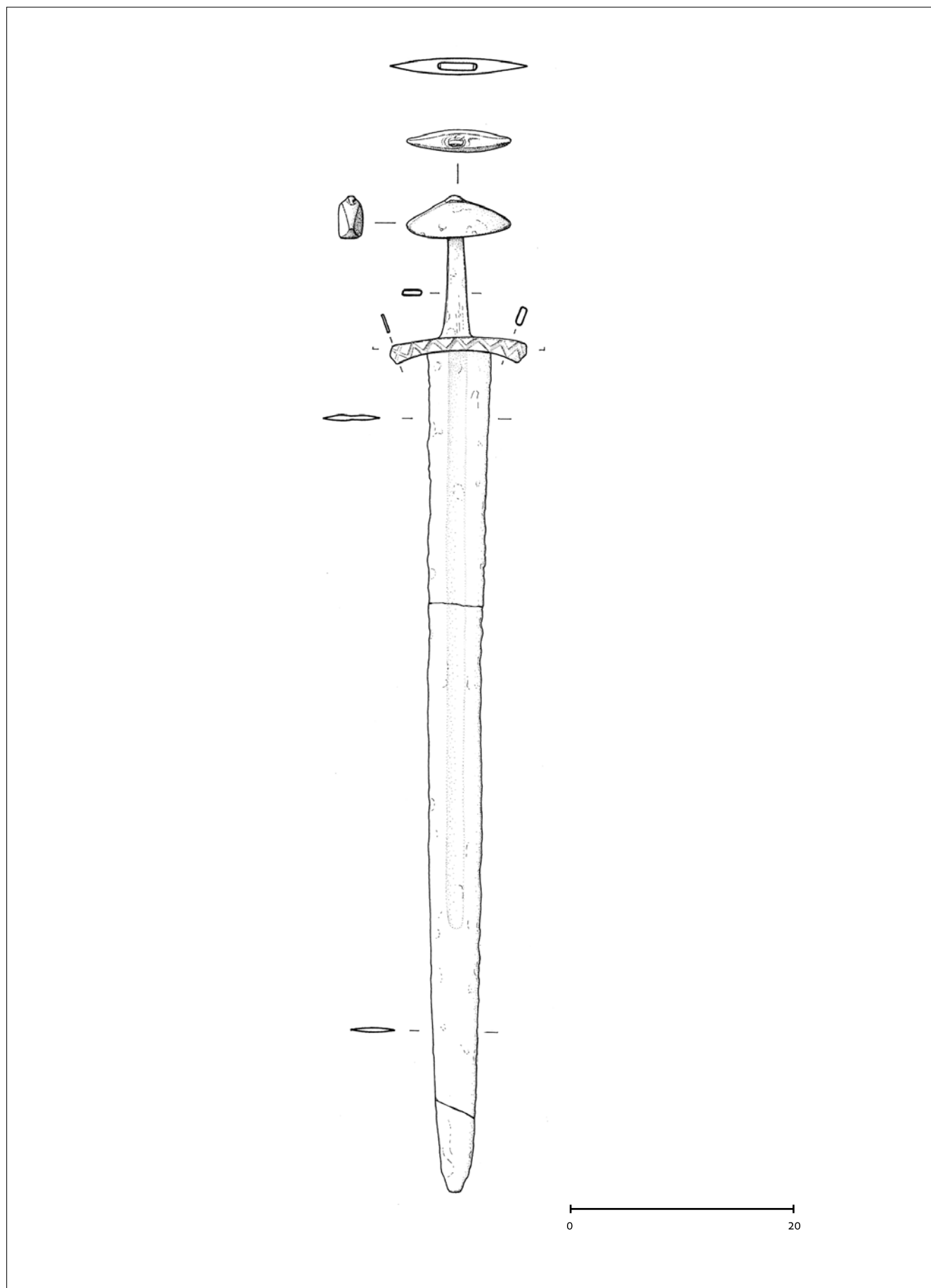


TABLA 2. Mač, Donja Kupčina, kat. br. 2 (izradila A. Dugonjić).

TABLE 2. Sword, Donja Kupčina, cat. no. 2 (made by A. Dugonjić).