

# Nalazi tkanine s lokaliteta Crkvari-crkva Sv. Lovre

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# Nalazi tkanine s lokaliteta Crkvari - crkva Sv. Lovre

## Textile finds from the site of Crkvari – St Lovro church

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*U članku su obrađeni nalazi tekstila iz grobova br. 43 i 112, pronađenih tijekom arheoloških istraživanja 2004. i 2005. godine na lokalitetu Crkvari – crkva Sv. Lovre. Oba groba nalazila su se uz sjeverni zid crkve, unutar arheološkim istraživanjima otkrivene sakristije. Grob 43 se fizički i stratigrafski nalazio iznad groba 112. U zapuni groba 43 pronađeno je nekoliko dijelova traka tkanine sa zlatnim nitima (N 118). U zapuni groba 112 također je pronađena traka tkanine sa zlatnim nitima (PN 33), te dislocirana lubanja mlade žene, omotana ostacima tkanine vezene zlatnim nitima (PN 27). Analizom tkanine ustanovljeno je da se radi o dijelovima dvaju odjevnih predmeta, najvjerojatnije ženske kape (PN 27) te trake (PN 33 i N 118) koja je obrubljivala neki odjevni predmet. Tekstil iz oba groba pripadao je skupocjenim odjevnim predmetima, čija je upotreba bila ograničena na izdvojene i bogatije slojeve stanovništva. Na temelju arheološke stratigrafije te apsolutnokronološke datacije <sup>14</sup>C metodom, pronađene tekstilne predmete možemo datirati oko sredine 16. st.*

*Cljučne riječi: Crkvari, crkva Svetog Lovre, groblje, sakristija, arheološki nalaz, tkanina, odjeća, srednji vijek, rani novi vijek, 16. stoljeće*

*The paper presents an analysis of textile finds from graves 43 and 112, discovered during archaeological excavations in 2004 and 2005 at the site of Crkvari – St Lawrence (Sv. Lovro) church. Both graves lay adjacent to the northern church wall, within the sacristy revealed by archaeological excavations. Grave 43 was superimposed in physical and stratigraphical terms over grave 112. The fill of grave 43 yielded several pieces of textile strips with golden threads (F 118). The fill of grave 112 likewise yielded a textile strip with golden threads (SF 33) as well as the dislocated skull of a young woman, wrapped with the remains of textile embroidered with golden fibers (SF 27). The analysis of the textile established that it belonged to two clothing items, most probably a woman's cap (SF 27) and a strip (SF 33 and F 118) that bordered a clothing item. The textile from both graves belonged to valuable clothing items, whose use was limited to distinct and richer social classes. Based on the archaeological stratigraphy and absolute dates obtained by the <sup>14</sup>C method, we can date the discovered textile objects around the mid-16th cent.*

*Key words: Crkvari, church of St Lovro, church, cemetery, sacristy, archaeological find, textile, clothing, Middle Ages, early Modern Age, 16th century*

Niz godina provode se sustavna arheološka istraživanja u orahovičkome kraju, na arheološki i povijesno izuzetno značajnome lokalitetu kod crkve Svetoga Lovre, podignute na osamljenome brežuljku ponad sela indikativnoga nazivlja Crkvari, u kontaktnoj zoni krajnjih sjeveroistočnih izdanaka Papuka i plodne podravske nizine. Istaknuti humak, na čijoj zaravni dominira crkva Sv. Lovre, okružen je dubokim

Systematic archaeological excavations in the area of Orahovica have been carried out for a number of years, on the site near St Lovro's church, exceptionally important archaeologically and historically. The church was built on a secluded hill above the village with an indicative name – Crkvari (Cro. *crkva* – church), in a contact zone of the extreme northeastern spurs of the Papuk mountain and the fertile

opkopom. S lokaliteta je moguća dobar nadzor sjevernoga nizinskog područja, kojeg zaravan brežuljka nadvisuje i za pedeset metara, ali i južnoga pošumljenoga brežuljkastoga kraja. U razdoblju srednjega i novog vijeka položaj je korišten u sakralne i grobljanske svrhe. Suvremeno groblje smješteno je podalje, na padini brijega. Položaj je korišten kao mjesto pokopa okolnog stanovništva i prije podizanja gotičke crkve. U pisanim povijesnim izvorima zarana se spominju posjedi i zemlje koje valja povezati s današnjim obližnjim selom Stara Jošava, pa se tako već od 1228. godine navodi *terra Jalsaua* ili *Jalsana*, zatim kasnije, 1258. godine *possessio Ilswa*, odnosno *Ilswa* te 1281. godine *Ylsua*. Nadalje, u 15. stoljeću se u dvije isprave iz 1407. godine spominje *Jwsafalwa*, odnosno *possessio Ywsafalwa* (Heller 1976, 81-82).

Crkva Sv. Lovre do danas je sačuvala izvorne osnove jednobrodne gotičke dvoranske crkve (*Saalkirche*) s prepoznatljivim baroknim intervencijama i dogradnjama. Apsida je trostrano zaključena s četiri potpornjaka, horizontalno podijeljenih u dva polja. Oko svetišta i do polovine južne strane lađe crkve teče podnožje. Na osnovi profilacije južnog portala okvirno je datirana u 15. st. (Vukičević-Samaržija 1986, 98).<sup>1</sup> Ispod postojeće crkve, pretpostavljeno je postojanje manje crkve, podignute u vremenu između romanike i gotike (Đurić, Feletar 2002, 86). Krajem 17. st. doznajemo za prve pisane spomene o crkvi iz povijesnih izvora. U prvome komorskom popisu poslije oslobođenja Slavonije od Turaka, nastalome 1698. godine, komorski popisivač je crkvu opisao derutnom, a iznio je i podatak da je navodno pripadala samostanu. Komorski je popisivač spomenuo kako se na udaljenosti od oko 400 koraka vide i ostaci kapele Sv. Duha. U drugom komorskim popisu iz 1702. godine iznova se spominje ruševna crkva Sv. Lovre na brdu iznad sela Jošave, a zasebno se spominje kapela Sv. Duha. Za crkvu Sv. Lovro se kaže da je okružena opkopom i građena kamenom, a nagađa se da je pripadala nekom samostanu ili opatiji (Tomičić et al. 2004, 157). Nakon oslobođenja Slavonije od Turaka ona je postala filijalnom crkvom župe Orahovice, koju su sve do 1816. vodili franjevci. Obnovljena je i posvećena 2. lipnja 1743, o čemu svjedoči i grb obitelji Pejačević, ugrađen iznad vrata na zapadnome pročelju. Godine 1816. crkva je postala filijalnom crkvom župe Feričanci kojoj pripada do danas (Papić 1998, 4-8).

Prva stručna arheološka istraživanja kod crkve Svetog Lovre proveo je Konzervatorski odjel u Osijeku 2001. godine, prigodom provođenja konzervacije i sanacije arhitekture crkve. Nakon tih početnih istraživanja koja su provedena u obliku sondažnih iskopavanja unutar lađe te prostora sjeverno i južno od crkve, godine 2003. započeta su sustavna arheološka istraživanja koja provodi Institut za arheologiju

Podravina plain. The prominent mound, whose plateau is dominated by the church of St Lovro, is surrounded by a deep ditch. The site offers a good overview of the northern lowland area, surmounted by the plateau of the hill by as much as fifty metres, but also of the southern forested hilly terrain. During the mediaeval and post-mediaeval period the position was used for sacral and cemetery purposes. The modern cemetery lies further away, on the slope of the hill. The position had been used as burial place of the local residents even before the Gothic church was erected. The written historical sources mention from early on the estates and lands that should be connected with the present-day nearby village of Stara Jošava. *Terra Jalsaua* or *Jalsana* is mentioned as early as 1228; later, in 1258 there is mention of *possessio Ilswa*, that is *Ilswa*, and in 1281 *Ylsua*. Further, in the 15<sup>th</sup> century, two documents from 1407 mention *Jwsafalwa*, i.e. *possessio Ywsafalwa* (Heller 1976, 81-82).

The church of St Lovro has preserved to this day the original layout of a single-nave Gothic hall church (*Saalkirche*) with recognizable Baroque interventions and annexes. Four buttresses, horizontally divided into two fields, delimit the three sides of the apse. The foot runs around the sanctuary and up to the half of the southern part of the church nave. Based on the profile of the southern portal it is approximately dated to the 15<sup>th</sup> cent. (Vukičević-Samaržija 1986, 98).<sup>1</sup> A smaller church, erected between the Romanesque and Gothic period, is surmised below the existing church (Đurić, Feletar 2002, 86). We learn about the first written accounts of the church from historical sources at the end of the 17<sup>th</sup> cent. In the first chamber list following the liberation of Slavonia from the Turks, created in 1698, the chamber cataloguer described the church as run-down, and he also mentioned that it allegedly belonged to the monastery. The chamber cataloguer mentioned that the remains of the chapel of the Holy Spirit are visible at a distance of around 400 steps. The second chamber list from 1702 again mentions the decrepit church of St Lovro on the hill above the Jošava village, and it separately mentions the chapel of the Holy Spirit. Regarding St Lovro's church, it is mentioned that it was surrounded by a ditch and built of stone, and it is believed that it belonged to a monastery or abbey (Tomičić et al. 2004, 157). After Slavonia was liberated from the Turks it became a filial church of the Orahovica parish, which was managed by the Franciscans up until 1816. It was reconstructed and consecrated on 2<sup>nd</sup> June 1743, as testified by the coat of arms of the Pejačević family, built into the wall above the door on the western façade. In 1816 it became a filial church of the Feričanci parish, to which it belongs to this day (Papić 1998, 4-8).

The first professional archaeological excavations at St Lovro's church were carried out by the Conservation Department in Osijek in 2001, during conservation and repair works on the church architecture. After these initial excavations, carried out in the form of test trenches within the

1 U knjizi autorice, kao i u drugoj stručnoj literaturi, crkva je navedena kao kapela Svetog Duha, međutim, izvorno se kapela toga naziva nalazila vjerojatno podno brijega u šumi južno od crkve Svetog Lovre, na mjestu gdje je u novije vrijeme iznova podignuto manje svetište pod nazivom Sveti Duh.

1 In the author's book, as well as in other scholarly literature, the church is referred to as the Chapel of the Holy Spirit. However, a chapel with that name originally probably stood below the hill in the woods south of St Lovro's church, at the place where a minor sanctuary called Holy Spirit was erected in recent times.

iz Zagreba.<sup>2</sup> Arheološka istraživanja su u razdoblju od 2003. do 2007. godine bila usmjerena na prostor sjeverno od same crkve te ispred zapadnog pročelja. Osobito vrijedne rezultate dalo je istraživanje sonde na istočnome dijelu lokaliteta kojom je obuhvaćen sam rubni dio padine središnjeg uzvišenja. Specifična stratigrafija i taloženje slojeva dali su podatke o vremenu iskopa obrambenog jarka i načinu gradnje, odnosno učvršćivanja ruba zaravni gradišta. Na osnovi nalaza iz slojeva može se ustvrditi da se ti graditeljski zahvati nisu dogodili prije 15. stoljeća, odnosno da prije toga vremena lokalitet nije bio korišten i u obrambene već isključivo u sakralne i grobljanske svrhe (Tkalčec 2007a, 23, sl. 2).

Sjeverno od crkve otkriveni su temelji gotičke sakristije unutar koje se tijekom razdoblja kasnoga srednjeg vijeka (15. stoljeća) i ranoga novog vijeka (16. stoljeća) odvijalo učestalo pokapanje pokojnika (sl. 1). Istodobno, pa i kasnije u 17. i 18. stoljeću, odvijao se pokop pokojnika i okolo same crkve. Arheološka su istraživanja dala rezultate i o starijem sloju korištenja ovoga položaja u sakralne i grobljanske svrhe. Naime, iako povijesno-umjetničke analize pokazuju da je današnja crkva podignuta u gotičkome stilu, negdje tijekom 15. stoljeća, kojem vremenu bi na osnovi strukture građe zidova i kontrafora te na osnovi arheološke slojevitosti odgovarala i novootkrivena gotička sakristija sjeverno od crkve, iskopavanja su donijela potvrdu i starijeg sloja pokopa na lokalitetu.

Ukupno je u dosadašnjim istraživanjima Instituta za arheologiju istražen 201 grob (Tomičić, Tkalčec 2005a, 16-23; Tomičić, Tkalčec 2005b, 51; Tkalčec 2006a, 26-28; Tkalčec 2006b, 69; Tkalčec 2007a, 22-23, 25; Tkalčec 2007b, 95). Najstariji horizont pokopa datiran je u razdoblje 11. stoljeća. Grobovi iz tog horizonta uvelike su oštećeni kasnijim učestalim ukopom pokojnika. Sloj grobova iz 11. i 12. stoljeća pripada vremenu kada na lokalitetu nema zidanoga sakralnog objekta. U iskopavanjima je pronađen i horizont grobova iz 13. stoljeća, također uvelike oštećenih kasnijim pokopima. U 13. stoljeću se vjerojatno podiže i prva crkva, građena od kamena vezanog žbukom.<sup>3</sup> Pokapanje se na te-

nave and the areas north and south of the church, systematic archaeological excavations by the Institute of Archaeology in Zagreb started in 2003.<sup>2</sup> In the period from 2003 to 2007 archaeological excavations focused on the area north of the church itself and in front of the western façade. The excavation of a trench on the eastern part of the site, which comprised the peripheral part of the slope of the central elevation, yielded particularly valuable results. The specific stratigraphy and deposition of layers provided information on the time of excavation of the defensive ditch and the method of construction, i.e. reinforcement of the edge of the elevation of the earthen fortification. Based on the finds from the layers it can be ascertained that these construction works did not take place prior to the 15<sup>th</sup> century, i.e. that before that time the site had not been used for defense but exclusively for sacral and cemetery purposes (Tkalčec 2007a, 23, Fig. 2).

The foundations of a Gothic sacristy, which was frequently used for burials of the deceased during the late Middle Ages (15<sup>th</sup> cent.) and early Modern Age (16<sup>th</sup> cent.) were discovered north of the church (Fig. 1). The interments took place simultaneously, and even later in the 17<sup>th</sup> and 18<sup>th</sup> cent., around the church itself. The archaeological excavations yielded results of an earlier layer of use of this position for sacral and cemetery purposes. Even though historical-artistic analyses indicate that the church was erected in the Gothic style sometime in the course of the 15<sup>th</sup> century – the same time as, based on the construction of the walls and flying buttresses as well as the archaeological stratigraphy, the building of the newly-discovered Gothic sacristy north of the church took place – the excavations provided evidence of an earlier layer of burial at the site.

A total of 201 graves have been excavated in the excavations of the Institute of Archaeology so far (Tomičić, Tkalčec 2005a, 16-23; Tomičić, Tkalčec 2005b, 51; Tkalčec 2006a, 26-28; Tkalčec 2006b, 69; Tkalčec 2007a, 22-23, 25; Tkalčec 2007b, 95). The earliest horizon of burials is dated to the 11<sup>th</sup> century. The graves of that horizon have been by and large damaged by subsequent frequent interments of the deceased. The 11<sup>th</sup> and 12<sup>th</sup> cent. layer of graves belongs to the period when the site lacked a stone-built sacral structure. The excavations yielded also a horizon of graves from the 13<sup>th</sup> century, likewise largely damaged by subsequent burials. The 13<sup>th</sup> century probably saw the erection of the first

2 Sustavna arheološka istraživanja Instituta za arheologiju započeo je prof. dr. sc. Željko Tomičić 2003. godine, a od 2005. godine vodstvo je povjerio mr. sc. Tatjani Tkalčec. Projekt je financiralo Ministarstvo kulture Republike Hrvatske, a nositelj programa je Grad Orahovica, koji pruža i veliku logističku podršku provođenju programa. Svi radovi odvijaju se u uspješnoj suradnji i dogovoru s nadležnim Konzervatorskim odjelom u Požegi. Projekt arheološko-konzervatorskih istraživanja spomeničkoga kompleksa Crkvari – crkva Sv. Lovre odvijao se do 2007. godine u sklopu znanstvenog projekta *Srednjovjekovno arheološko nasljeđe Hrvatske (5-16. st.)*, čiji je voditelj prof. dr. sc. Željko Tomičić, a od 2007. godine projekt se odvijao u sklopu znanstvenog projekta pod nazivom *Srednjovjekovno naseljavanje sjeverne Hrvatske u svjetlu arheoloških izvora*, čija je voditeljica dr. sc. Tatjana Sekelj Ivančan. Istraživanja se svake godine redovito odvijaju u obliku dvotjednih do četverotjednih iskopavanja na samome terenu, te daljnje studijskoga i stručnoga posterenskog rada koji obuhvaća obradu i analizu ukupno istražene dokumentacije i arheoloških nalaza iz iskopavanja, kao i konzervacije arheološki iskopanih predmeta.

3 Na osnovi usporedbe dokumentacije Konzervatorskog odjela u Osijeku iz istraživanja unutar same crkve te dokumentacije Instituta za arheologiju na prostoru sjeverno od crkve, postoje velike naznake kako se najstariji romanički objekt nalazio ispod današnje gotičke crkve. Međutim, situacija još nije arheološki u potpunosti potvrđena i jasno definirana, odnosno potrebno je provesti daljnja istraživanja unutar korpusa crkve.

2 Systematic archaeological excavations of the Institute of Archaeology were started by Prof. Željko Tomičić in 2003, and since 2005 it has been the care of Tatjana Tkalčec, Msc. The project was financed by the Ministry of Culture of the Republic of Croatia, and the program is in the care of the town of Orahovica, which provides substantial logistical support to the project implementation. All the activities are carried out in successful cooperation and agreement with the responsible Conservation Department in Požega. The project of archaeological-conservation investigation of the monumental complex of Crkvari – St Lovro's church was carried out until 2007 as part of the scientific project *Mediaeval archaeological heritage of Croatia (5<sup>th</sup>-16<sup>th</sup> cent.)*, managed by Prof. Željko Tomičić, while since 2007 it forms part of the scientific project entitled *Mediaeval settlement of northern Croatia in the light of archaeological sources*, managed by Tatjana Sekelj Ivančan, PhD. The excavations take place on a regular basis each year in the form of two- to four-week-long fieldwork campaigns as well as further study and professional post-fieldwork activities involving processing and analysis of the entire excavation documentation and archaeological finds from the excavation, as well as conservation of the excavated objects.



Sl. 1. Crkvari-Sv. Lovro, situacijski plan 2007. g., s istaknutim grobovima unutar sakristije (arhitektonski crtež: Arheo plan d.o.o. 2007, M.Vojtić i K. Vujica 2005; grobne cjeline: T. Tkalčec)

Fig. 1. Crkvari-Sv. Lovro, situation plan 2007, with marked graves within the sacristy (architectural plan: Arheo plan d.o.o. 2007, M. Vojtić and K. Vujica 2005; grave units: T. Tkalčec)

renu učestalo nastavilo i u 14. stoljeću. U 15. stoljeću podiže se gotička crkva, koja je na sjeveru imala dograđenu sakristiju. Prvi pokopi pokojnika unutar arheološkim iskopavanjem otkrivene sakristije datiraju iza sredine 15. stoljeća, odnosno iz vremena vladavine kralja Matije Korvina (1458-1490), što potvrđuje i nalaz srebrnog denara kovanog vjerojatno 1489. godine, kao i nalaz groba br. 97 preslojenog istočnim (apsidalnim) zidom sakristije, a datiranim apsolutnodatacijskom analizom uzorka kostura u prvu polovinu 15. stoljeća (sl. 1). Pokopavanje se unutar sakristije intenzivno odvijalo još u razdoblju ranog novog vijeka, tj. u 16. stoljeću. Točno vrijeme rušenja sakristije još nije utvrđeno, no daljnja povijesna i arheološka istraživanja pružit će odgovor na to pitanje.<sup>4</sup> Arheološka stratigrafija potkrijepljena rezultatima radiokarbonskih analiza, te povijesnim istraživanjima, zasigurno će dati odgovor ne samo na pitanje gornje granice funkcioniranja arheološki otkrivene sjeverne sakristije, već i na brojna druga pitanja o ovome važnom arheološkom lokalitetu, vezana i uz legendu o postojanju samostanskog kompleksa na tom položaju. Provedene antropološke analize donijele su nove zanimljive rezultate prema kojima se lokalitet Crkvari ističe visokom učestalošću nalaza trauma glava i lica, izazvanih namjernim nasiljem (Šlaus 2006b, 181-182; Šlaus, Novak, 2006), što predstavlja velik doprinos rekonstrukciji slike o načinu života stanovnika ovog dijela kontinentalne Hrvatske ne samo u razdoblju kasnog srednjeg vijeka, nego i u razdoblju novog vijeka. Postojanje crkve i groblja na tom položaju ostavilo je trag i u samome nazivlju sela Crkvara, formiranog kasnije podno crkve Svetog Lovre.

Ovom prigodom izdvojene su i obrađene grobne cjeline u kojima su arheološkim iskopavanjem pronađeni očuvani ostaci tekstilnih predmeta. Radi se o grobu br. 43 (G 43) istraženom 2004. godine te grobu br. 112 (G 112), istraženom 2005. godine. Oba groba nalaze se uz sjeverni zid crkve, a unutar sjeverne sakristije, odnosno u kvadrantu D8d/D9b (sl. 1.). Grob 43 se stratigrafski i fizički nalazi iznad groba 112.

U grobu br. 43 pokopan je muškarac u starosti od 40 do 45 godina (sl. 2). Obrisi rake i ukop uočeni su na ▼ 206.21 m, odnosno na relativnoj dubini od 0,90 m ispod današnje površine terena. Raka je pravokutnoga oblika, zaobljenih uglova. Ukupna dužina osi rake iznosi 1,90 m. Maksimalna širina (u predjelu kukova pokojnika) iznosi 0,55 m. Orijentacija kostura je zapad – istok, s odklonom od 19° prema jugu. Dužina očuvanoga kostura iznosila je 168 cm. Pokojnik je u grobnu raku bio položen u drvenome lijesu šire stranice kod glave, u ispruženom položaju, ruku prekrštenih na trbuhu (desna), odnosno zdjelici (lijeva). Zanimljiva je naknadna situacija koja se dogodila nakon ukopa. Kostur pokojnika je

church, built of mortar-bound stone.<sup>3</sup> The 14<sup>th</sup> century also witnessed frequent burials in the field. The Gothic church with an added sacristy on the northern part was erected in the 15<sup>th</sup> century. The first interments within the sacristy, which was discovered by archaeological excavation, date from the period following the mid-15<sup>th</sup> century, that is, from the time of the rule of King Matthias Corvinus (1458-1490), as corroborated by the find of a silver *denar* minted probably in 1489, as well as by the find of grave 97, overlain by the eastern (apsidal) wall of the sacristy, which was dated on the basis of a skeleton sample to the first half of the 15<sup>th</sup> century (Fig. 1). The sacristy was intensely used for burials as late as the early Modern Age, i.e. the 16<sup>th</sup> century. The exact time when the sacristy was destroyed has not been ascertained yet, but continuing historical and archaeological excavations will offer an answer to that question.<sup>4</sup> Archaeological stratigraphy backed by the results of radiocarbon analyses and historical research will certainly provide an answer not only to the question of the upper limit of functioning of the archaeologically discovered northern sacristy, but also to many other questions regarding this important archaeological site, pertaining also to the legend about the existence of a monastery complex at that position. The anthropological analyses brought new interesting results revealing that the site of Crkvari was characterized by frequent finds of heads and facial traumas, brought about by deliberate violence (Šlaus 2006b, 181-182; Šlaus, Novak, 2006), which is a significant contribution in reconstructing the picture of the way of life of the residents of this part of continental Croatia not only in the late mediaeval period, but also in the Modern Age. The existence of a church and a cemetery at that position left a mark also in the name of the village of Crkvari, established subsequently below St Lovro's church.

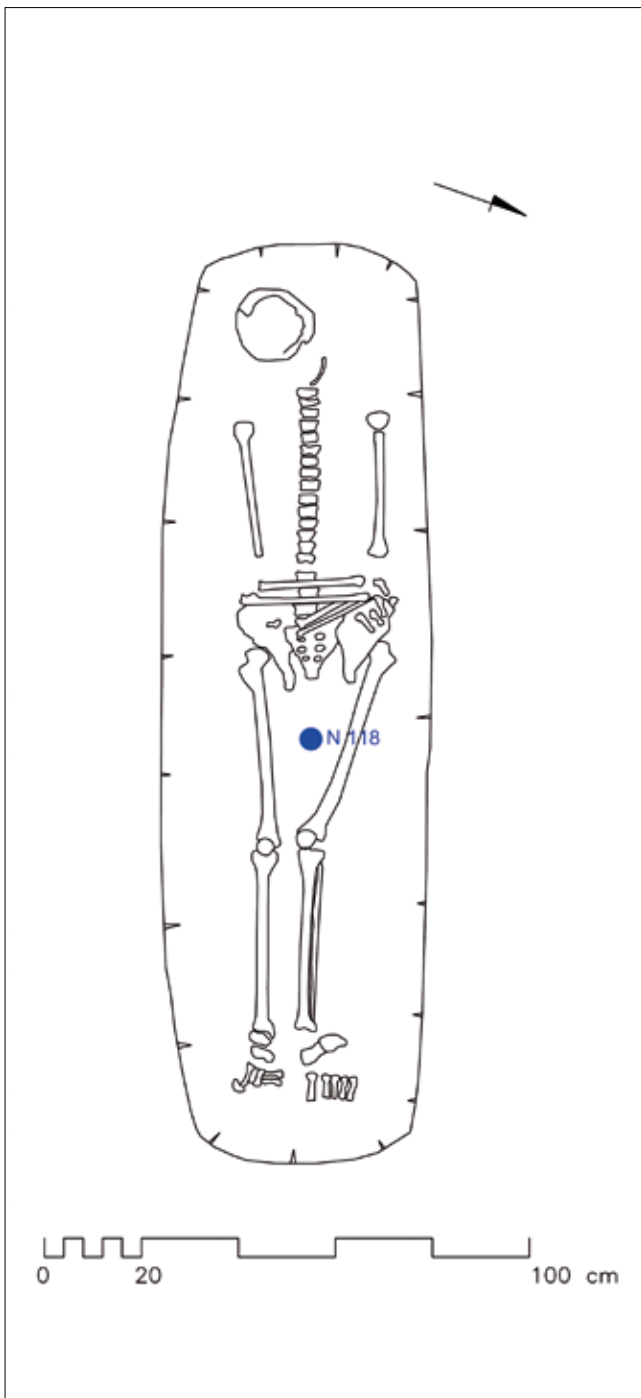
We have singled out and analyzed here those grave assemblages that yielded preserved remains of textile objects in archaeological excavations. These are graves No. 43 (G 43), excavated in 2004, and grave No. 112 (G 112), excavated in 2005. Both graves lie adjacent to the northern church wall, within the northern sacristy, in square D8d/D9b (Fig. 1). Grave 43 stratigraphically and physically overlies grave 112.

Grave 43 contains the burial of a man aged between 40 and 45 (Fig. 2). The outline of the grave and the interment

4 Povijesna istraživanja provodi vanjski suradnik projekta dr. sc. Stanko Andrić. Iskopavanja provedena na rubu istočne padine središnjeg uzvišenja 2006. godine dat će odgovor na to pitanje s arheološke strane, nakon što se provedu konačne analize nalaza. Naime, u istraživanjima tog prostora ustanovljena su urušenja kamenih zidova koja su preslojila donje grobove. Preslojeni grobovi potječu iz novog vijeka, a u nedostatku nalaza na osnovi kojih bi ih se preciznije moglo vremenski opredijeliti, pokrenut je postupak apsolutnodatacijske analize <sup>14</sup>C metodom.

3 A comparison of the documentation of the Conservation Department in Osijek about the investigation within the church itself, with the documentation of the Institute of Archaeology regarding the zone north of the church, points to considerable evidence regarding the fact that the earliest Romanesque structure lies below the present-day Gothic church. However, the situation has not been entirely confirmed and clearly defined archaeologically, and further investigation within the body of the church is required.

4 Historical study has been carried out by Stanko Andrić, PhD, an associate on the project. The excavations carried out on the edge of the eastern slope of the central elevation in 2006 will provide an answer to that question from the archaeological point of view, after the final analyses of the finds have been made. The collapsed stone walls that overlay the lower graves have been revealed in the excavations of that zone. The overlaid graves belong to the Modern Age and, lacking finds that could provide a more precise chronological attribution, we decided to date them by the <sup>14</sup>C method.

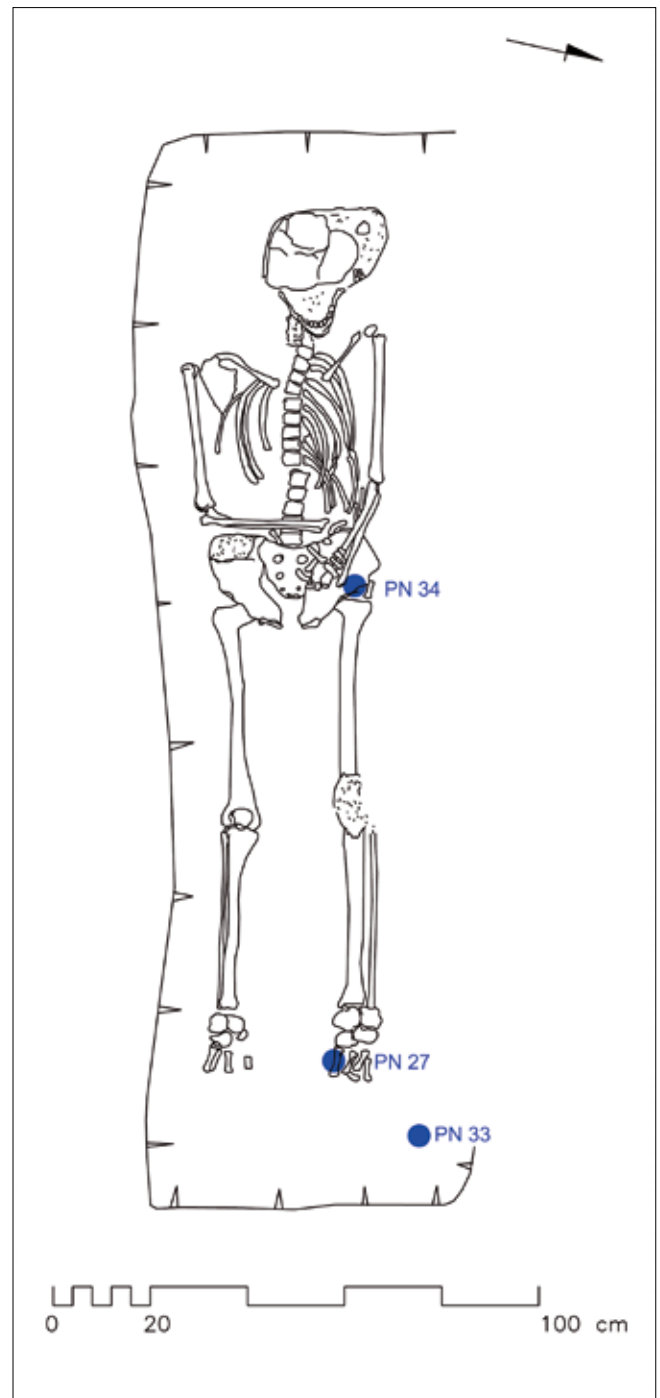


Sl. 2 Crkvari-Sv. Lovro, muškarac iz groba br. 43 (crtež: K. Turkalj, obrada S. Krznar)

Fig. 2 Crkvari-Sv. Lovro, the man from grave 43 (drawing: K. Turkalj, processing: S. Krznar)

stepeničasto "potonuo" u više razina.<sup>5</sup> Kasnijim se istraživanjem ispostavilo da je tu pojavu uzrokovala izrazito meka konzistencija slojeva, odnosno zapuna donjih grobnih cjelina, od kojih je jedna i grob 112. U zapuni groba br. 43, koja se sastojala od smeđe zemlje sa sitnom šutom, pronađeni su ulomci keramike te dva željezna kovana čavla i dislocirane ljudske kosti. Pronađeno je nekoliko traka tkanine sa zlatnim nitima, dokumentirane pod brojem nalaza N-118 (sl. 15, sl. 16). Tkanina sa zlatnim nitima je bila pronađena u

<sup>5</sup> Lubanja se nalazi na ▼ 206,02 m, sredina kralježnice na ▼ 205,87 m, zdjelica ▼ 205,78 m, femuri ▼ 205,60 m, a stopala ▼ 205,58.



Sl. 3 Crkvari-Sv. Lovro, muškarac iz groba br. 112 (crtež: A. Paić, obrada S. Krznar)

Fig. 3 Crkvari-Sv. Lovro, the man from grave 112 (drawing: A. Paić, processing: S. Krznar)

were observed at ▼ 206.21 m, that is the relative depth of 0,90 m below the present-day terrain surface. The grave is rectangular with rounded corners. The total length of the grave axis is 1,90 m. The maximum width (in the zone of the deceased's hips) is 0,55 m. The skeleton is oriented west-east, with a tilt of 19° towards the south. The length of the preserved skeleton was 168 cm. The deceased was deposited in the grave in a wooden coffin tapering from the head towards the feet, in supine position, arms folded on the belly (the right arm) and the pelvis (left). Following the





Sl. 4 Crkvari-Sv. Lovro, Dvopetljaste kopčice s kukom i ušicom iz groba br. 112 (foto: D. Doračić)

Fig. 4 Crkvari-Sv. Lovro, double-loop hook-and-eye fasteners from grave 112 (photo: D. Doračić)

predjelu nogu pokojnika, a neki dijelovi i u predjelu pojasa, međutim, ne pri samim kostima već u zapuni oko 10-ak centimetara poviše njih. Antropološkom analizom je kod pokojnika iz G 43 ustanovljena prisutnost degenerativnog osteoartritisa na desnoj lopatici, gornjem dijelu lijeve goljenične kosti te na 3, 4. i 5. slabinskome kralješku. Pokojnik je imao i preboljenu, zaraslu frakturu lijeve lopatice (Šlaus 2005, 28).<sup>6</sup>

U grobu br. 112 pokopan je muškarac u starosti od 35 do 40 godina (sl. 3). Pokojnik je u grobnu raku položen na leđima, desne ruke prekrížene na truhu, a lijeve nisko na zdjelici. Orijentacija kostura je zapad - istok, s otklonom od 12° prema jugu. Rubovi grobne rake zamijećeni su duž njezine južne dulje te obje kraće strane, oko 25 cm više lubanje. Lubanja se nalazi na ▼ 205,33. Kostur groba 112 dobro je uščuvan, dužina mu iznosi 180 cm. Uočeni su tragovi lijesa, a pronađeni su *in situ* i željezni kovani čavli s ostacima drveta na njima. Dužina rake je 2,23 m, a širina oko 50-60 cm. Raka je ukopana duboko u samu zdravicu.<sup>7</sup> Kod kostiju zdjelice muškarca iz groba 112 pronađen je par dvopetljastih kopčica s kukom i ušicom (narodnog naziva „babe-dedek“) PN 34 (▼ 205,23 m). Kopčice su izrađene iz žice od slitine bakra, promjera 1 mm, s time da je vrh kopčice s kukicom raskucan. Dužina svake pojedinačne kopčice iznosi 14 mm (sl. 4).<sup>8</sup> Antropološkom analizom su kod pokojnika iz groba br. 112 ustanovljeni Schmorlovi defekti koji nastaju na tijelu kralješka prilikom oštećenja intervertebralnog diska, a u većini slučajeva mogu se povezati s teškim fizičkim radom. Kod muškarca iz groba 112 nalaze se na dvanaestom grudnom i četvrtom slabinskom kralješku. Dugotrajniji teži fizički rad, osim po nalazu Schmorlovih defekata, može se detektirati i prisutnošću umjerene romboidne fossae na ključnim ko-

interment an interesting situation occurred. The skeleton of the deceased “sank” step-like in several levels.<sup>5</sup> Subsequent excavations revealed that this was caused by the extreme softness of the layers, i.e. of the fills of lower graves, including grave 112. The fill of grave 43, which consisted of brown earth with small construction waste, yielded fragments of pottery, two iron nails and dislocated human bones. Several textile strips with golden fibers were found, documented as find number N-118 (Fig. 15, Fig. 16). Textile with golden fibers was found in the zone of the legs of the deceased, and some pieces also near the belt, not next to the bones but in the fill some 10 cm or so above them. Anthropological analysis of the deceased from G 43 ascertained the presence of degenerative osteoarthritis on the right shoulder-blade, the upper part of the left shin-bone and on the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> lumbar vertebrae. There is a cured and healed fracture on the left shoulder-blade of the deceased (Šlaus 2005, 28).<sup>6</sup>

A man between 35 and 40 years of age was buried in grave 112 (Fig. 3). The deceased was placed into the grave in a supine position, with his right arm folded on the belly and the left placed low on the pelvis. The skeleton is oriented west-east, with a tilt of 12° towards the south. The edges of the grave were noticed along its southern longer side and both shorter sides, around 25 cm above the skull. The skull lies at ▼ 205,33 m. The skeleton of grave 112 is well preserved, and it is 180 cm long. There were visible traces of a coffin, and wrought iron nails with traces of wood on them were found *in situ*. The grave is 2,23 m long and around 50-60 cm wide. The grave is dug deep into the virgin soil.<sup>7</sup> A pair of double-loop hook-and-eye fasteners (known among the folk as “babe-dedek“) SF 34 was found next to the pelvic bones of the man from grave 112 (▼ 205,23 m). The fasteners were made of a copper-alloy wire, 1 mm in diameter. The fastener top with the hook is beaten flat. Each individual fastener is 14 mm long (Fig. 4).<sup>8</sup> Anthropological analysis revealed Schmorl’s nodes in the deceased from grave 112. They occur in the vertebral body when the intervertebral disc is damaged, and in most cases are connected with hard physical labour. In the case of the man from grave 112 they were located on the twelfth thoracic and the fourth lumbar vertebrae. In addition to Schmorl’s nodes, prolonged hard physical labour can be detected by the presence of a moderate *fossa rhomboidea* on the clavicles of the deceased person under study (Šlaus 2006a, 44-45). The fill of grave G 112, which consisted of brown earth and sticky yellow clay with traces of construction waste, yielded a number of pottery shards, numerous dislocated human bones from previous burials, moved aside for the burial of the man from grave

5 The skull lies at ▼ 206,02 m, the middle of the spine at ▼ 205,87 m, the pelvis at ▼ 205,78 m, the femora lie at ▼ 205,60 m, while the feet lie at ▼ 205,58.

6 It was ascertained by anthropological analysis that the dislocated bones (U-168) in the fill of grave 43 included bones belonging to at least two additional persons. Prominent among those is the find of a burned mandible of an older child or a female (Šlaus 2005, 45).

7 The burial of grave G 112 damaged graves 98 and 108. The burial perhaps also damaged graves 54, 64 and 77.

8 The double-loop fasteners were conserved by Damir Doračić from the Archaeological Museum in Zagreb.

6 Među dislociranim kostima (U-168) u zapuni grobne cjeline groba br. 43 antropološkom analizom ustanovljena je prisutnost kostiju još najmanje dviju osoba. Među njima se ističe nalaz spaljene mandibule starijeg djeteta ili žene (Šlaus 2005, 45).

7 Ukopom grobne rake G 112 oštećeni su grobovi 98 i 108. Ukop je možda oštetio i grobove 54, 64 i 77.

8 Konzervaciju dvopetljastih kopčica obavio je Damir Doračić iz Arheološkog muzeja u Zagrebu.

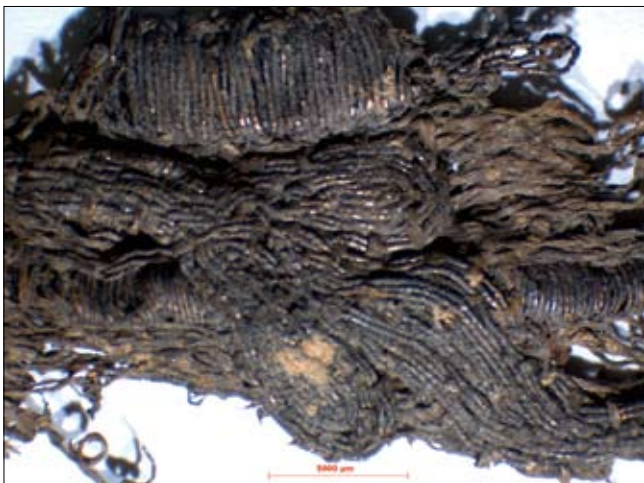




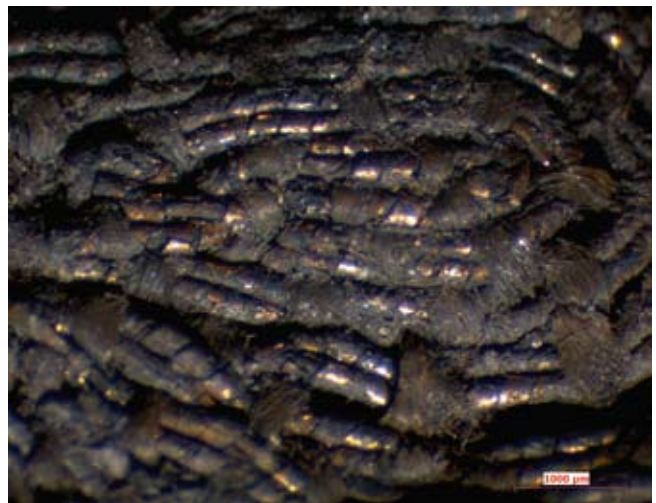
Sl. 5 Skupina A (PN 27) - prije konzervatorskih radova (foto: D. Kušan Špalj)  
Fig. 5 Group A (SF 27) – before conservation works (photo: D. Kušan Špalj)



Sl. 6 Skupina A (PN 27 e) – rub x (foto: D. Doračić)  
Fig. 6 Group A (SF 27 e) – border x (photo: D. Doračić)



Sl. 7 Skupina A (PN 27e)- rub y (foto: D. Doračić)  
Fig. 7 Group A (SF 27e) – border y (photo: D. Doračić)



Sl. 8 Skupina A (PN 27e) - rub y (foto: D. Doračić)  
Fig. 8 Group A (SF 27e) – border y (photo: D. Doračić)



Sl. 9 Skupina A (PN 27 b) – rub y (foto: D. Kušan Špalj)  
Fig. 9 Group A (SF 27 b) – border y (photo: D. Kušan Špalj)



Sl. 10 Skupina A (PN 27a) - detalj sa šavom (foto: D. Kušan Špalj)  
Fig. 10 Group A (SF 27a) – detail with a stitch (photo: D. Kušan Špalj)



Sl. 11 Shematski prikaz ruba y (skupina A) (crtež: D. Kušan Špalj)  
 Fig. 11 Schematic representation of border y (group A) (crtež: D. Kušan Špalj)

stima analiziranog pokojnika (Šlaus 2006a, 44-45). Unutar zapune rake G 112, koja se sastojala od štataste, masne žute gline i smeđe zemlje, pronađeno je više ulomaka keramičkih posuda, zatim brojne dislocirane ljudske kosti iz starijih pokopa, odmaknute u stranu pri pokopu muškarca iz groba 112.<sup>9</sup> Pod zaseban uzorak izdvojen je nalaz lubanje (U-112) omotane ostacima tkanine vezene zlatnim nitima, kojoj je dodijeljen broj posebnog nalaza – PN 27 (sl. 5 - 10). Lubanja omotana tkaninom pronađena je u donjem dijelu grobne cjeline br. 112, oko 10 cm iznad kostiju stopala (▼ 205,50 m). Lubanja pripada ženskoj osobi, starosti u trenutku smrti između 16 i 20 godina (Šlaus 2006a, 75). U zapuni groba G 112 pronađena je i traka tkanine sa zlatnim nitima PN 33 (▼ 205,34 m) (sl. 12 - 14), koja se nalazila nešto niže od položaja nalaza lubanje omotane tkaninom.

Na tekstilu pronađenom u zapunama grobova br. 43 i 112 bile su vidljive promjene u strukturi i izgledu vlakana zbog procesa propadanja.<sup>10</sup> Posebno su se isticale zlatne niti, koje su u većini slučajeva bile u prilično dobru stanju. Svi fragmenti izgubili su originalnu boju i postali jednolično smeđi, što je općenito karakteristično za tekstil pronađen kod arheoloških istraživanja, kao posljedica oksidacije.

Tekstilne strukture propadaju u zemlji pod utjecajem fizičkih, kemijskih ili bioloških čimbenika, a brzina propadanja ovisi o svojstvima samih niti, vlazi, temperaturi, količini kisika te o kemijskom sastavu zemlje u kojoj se tekstilni predmet nalazi. Tako niti biljnog porijekla propadaju u kiselim uvjetima, a životinjskog porijekla u lužnatim. U Europi većina «arheološkog tekstila» potječe iz vlažnog terena, a u izuzetnim slučajevima očuvani su predmeti u suhim uvjetima, u nekom grobu ili kao otisak na nekom drugom materijalu. Veća je vjerojatnost da će se tkanina očuvati u zemlji u kojoj ima dovoljno vlage, jer se u tim situacijama proces propa-

112.<sup>9</sup> The find of a skull (S-112) wrapped in the remains of a textile embroidered with golden fibers received the designation of a special find – SF 27 (Fig. 5-10). The skull wrapped in textile was found in the lower part of grave assemblage No. 112, around 10 cm above the feet bones (▼ 205,50 m). The skull belongs to a woman aged between 16 and 20 at the moment of death (Šlaus 2006a, 75). The fill of grave G 112 yielded also a textile strip with golden fibers SF 33 (▼ 205,34 m) (Fig. 12 - 14), which lay a little lower than the skull wrapped in textile.

The textile found in the fills of graves 43 and 112 showed visible changes in the structure and appearance of fibers owing to decay.<sup>10</sup> The golden fibers were particularly prominent, and in most cases they were quite well preserved. All the fragments have lost their original colour, becoming uniformly brown, which is a general feature of the textile found in archaeological excavations, as a consequence of oxidation.

Textile fabrics decay in the soil owing to physical, chemical or biological factors, and the rate of decay depends on the properties of the fibers, humidity, temperature, the amount of oxygen and the chemical composition of the soil in which the textile lies. Fibers of vegetable origin decay in acidic conditions, while those of animal origin decay in an alkaline environment. Most “archaeological textile” in Europe comes from wet conditions, while in dry conditions objects are preserved only in exceptional cases, in a grave or as an impression in another material. It is more likely that textile would remain preserved in soil with enough moisture, as the process of decay in those situations unfolds parallel with the increase of the amount of water in the fibers, which replaces the decayed elements in the textile fabric, allowing the fiber to remain preserved in its shape and size. When the fibers dry up, the water evaporates and in most

9 U zapuni rake iz groba G 112 pronađeno je više kosti odrasle osobe te desni iver i desna bedrena kost djeteta (U 309). Pronađena su i dva fragmenta kosti spaljenih do crne boje (Šlaus 2006a, 78).

10 Restauraciju tkanine obavila je Dora Kušan Špalj.

9 The fill of grave G 112 yielded several bones of an adult as well as the right knee cap and the right thigh-bone of a child (U 309). Two fragments of bones burned to black were also found (Šlaus 2006a, 78).

10 The textile was restored by Dora Kušan Špalj.





Sl. 12 Skupina B (PN 33 b) - prije konzervatorskih radova (foto: D. Kušan Špalj)

Fig. 12 Group B (SF 33 b) – before conservation works (photo: D. Kušan Špalj)



Sl. 13 Skupina B (PN 33 b) – prednja strana, nakon konzervatorskih radova (foto: D. Kušan Špalj)

Fig. 13 Group B (SF 33 b) – the front side, after conservation works (photo: D. Kušan Špalj)

danja odvija paralelno s porastom količine vode u vlaknima, koja tako zamjenjuje propale elemente u tekstilnoj strukturi i vlakno se može očuvati u svom obliku i veličini. Kada se niti osuše, voda iz njih ishlapi i tada vrlo često one potpuno propadnu ili postanu tvrde i krhke. Brzo sušenje vrlo često izaziva potpuno propadanje niti pa je zbog toga izuzetno važno da se tijekom i nakon arheološkog istraživanja spriječi isušivanje pronađenog tekstila. Dosadašnja praksa je pokazala da ne postoji univerzalni recept po kojem bi se proveo konzervatorsko-restauratorski postupak na arheološkom tekstilu, već da se metoda i tretman primjenjuje ovisno o pojedinom tekstilnom predmetu i stanju očuvanosti. Zbog toga je sve više stručnjaka koji upozoravaju kako posebnu pozornost treba obratiti sušenju te konačnom čuvanju i rukovanju s predmetima, a ukoliko to stanje vlakana omogućava da se izbjegne tretiranje tekstila impregnacijskim sredstvima (Potthast 2003, 58-59).

Svi fragmenti tkanina nađeni u grobovima br. 43 i 112 na lokalitetu Crkvari prikupljeni su tijekom istraživanja za-



Sl. 14 Skupina B (PN 33 b) - prednja strana, detalj (foto: D. Doračić)

Fig. 14 Group B (SF 33 b) – the front side, a detail (photo: D. Doračić)

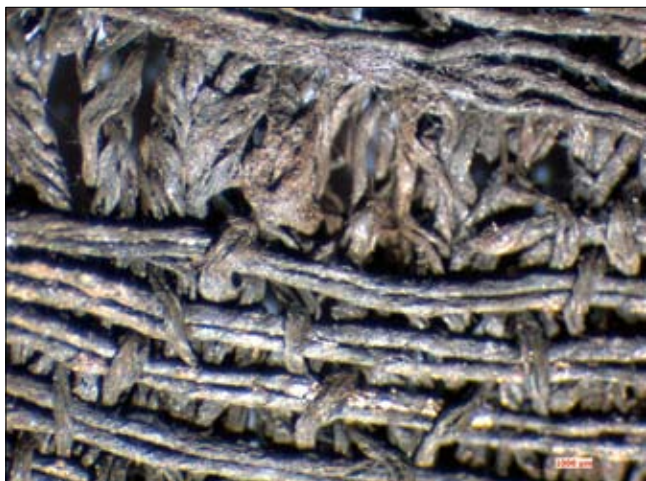
cases they decompose or become hard and brittle. Rapid drying very frequently causes the complete deterioration of the fibers, which makes it extremely important to prevent the textile from drying during and after the archaeological excavation. The practice so far has shown that there is no universal recipe for carrying out a conservation-restoration procedure on archaeological textile, but that the method and treatment are chosen depending on the individual textile object and the state of its preservation. This is why a growing number of experts recommend that special attention be given to the drying and subsequent keeping and handling of the objects, while avoiding the impregnation of textile, if the state of the fibers allows (Potthast 2003, 58-59).

All the textile fragments from Crkvari found in graves 43 and 112 were collected during the excavation together with the surrounding soil and put in plastic bags to keep them humid. The samples were promptly washed in order to avoid further drying and growth of mold.<sup>11</sup> It was shown by pH measurement prior to washing that the samples lay in an acidic atmosphere – pH 5,5, which is favourable for the preservation of fibers of animal origin (silk, wool). After washing and drying, all the fragments were deposited into acid-free cardboard boxes, on acid-free paper backing, and they will be kept in adequate conditions.

The detailed examination of all samples from the site of Crkvari revealed that the discovered fragments can be divided into two groups, i.e. that they belong to two types of textile. The first group of very brittle textile (SF 27), found within the fill of grave G 112, on the skull (S-112), was marked as group A. The second group (group B) consists of seven fragments, found in graves 43 (F-118) and 112 (SF 33), whose fabric and appearance allow us to attribute them to the

<sup>11</sup> After minute analyses and tests on smaller samples we decided to only wash all the fragments in order to remove all impurities. Samples were washed in demineralized water, the soil was carefully dissolved and the preserved textile was separated. After the fragments were released from the soil lumps, they were placed on a thin plastic net for easier handling, and each one was carefully washed separately. This way we managed to remove the impurities on individual fragments to the maximum. After washing, all the fragments were placed on a glass surface, with warp and weft threads lying at a right angle, and slowly dried.





Sl. 15. Skupina B (PN 118 d) - prednja strana, detalj (foto: D. Doračić)

Fig. 15. Group B (SF 118 d) – the front side, a detail (photo: D. Doračić)

jedno sa zemljom koja se na njima nalazila te su pohranjeni u plastične vrećice kako bi se očuvala vlažnost. Na uzorcima je hitno proveden postupak pranja kako bi se izbjeglo daljnje isušivanje i razvoj plijesni.<sup>11</sup> Mjerenje pH, prije pranja pokazalo je da su uzorci bili u kiseljoj atmosferi – pH 5,5, što pogoduje očuvanju niti životinjskog porijekla (svila, vuna). Nakon provedenog postupka pranja i sušenja, svi su fragmenti pohranjeni u kutije od beskišelnog kartona, na podlogama od beskišelnog papira, te se predviđa njihovo čuvanje u primjerenim uvjetima.

Nakon detaljnog pregleda svih uzoraka s lokaliteta Crkvari, ustanovljeno je da se pronađeni fragmenti mogu svrstati u dvije skupine, odnosno da pripadaju dvjema vrstama tkanina. Prva skupina vrlo krhkog tekstila (PN 27), koja je nađena unutar zapune rake G 112, na lubanji (U-112), nazvana je skupinom A. U drugu skupinu (skupina B) uvršteno je sedam fragmenata, koji su nađeni u grobu br. 43 (N-118) i br. 112 (PN 33), a koji se zbog iste strukture i izgleda mogu pripisati istom predmetu, tj. traci („borti“) sa zlatnim i svilenim nitima.<sup>12</sup>

Za skupinu tekstila (skupina A) nađenu na lubanji U-112, karakteristične su izuzetno dobro očuvane zlatne niti (zlatni lim omotan oko jezgre od svile), a koje su bile pričvršćene na svilenu podlogu (sl. 5). S prednje strane tkanine dominiraju zlatne niti, u smjeru potke, dok sa stražnje samo niti svile. Zbog izuzetno lošeg stanja svilene podloge vrlo je teško odrediti vrstu tkanja, a vjerojatno nedostaje i dio niti koje su

11 Nakon pomnih analiza i proba na manjim uzorcima odlučeno je da se na svim fragmentima provede samo postupak pranja kako bi se uklonile sve nečistoće. Pranje je izvedeno u demineraliziranoj vodi, pažljivim otapanjem zemlje i odvajanjem očuvanog tekstila. Nakon što su fragmenti odvojeni od grumenja zemlje, položeni su na tanku plastičnu mrežu radi lakše manipulacije, te je svaki zasebno pažljivo opran. Na taj se način uspjelo maksimalno ukloniti nečistoće na pojedinim fragmentima. Nakon pranja svi su fragmenti položeni na staklenu površinu, tako da su niti osnove i potke postavile pod pravim kutom te polagano osušeni.

12 Obrada i dokumentacija uzoraka provedena je po vrstama tkanina, odnosno skupinama (A i B) te prema podacima i oznakama koje su im dodijeljene tijekom arheoloških istraživanja. S obzirom da se tijekom konzervatorskih radova, odnosno nakon pranja i čišćenja, pojavio veći broj fragmenata (nakon odvajanja od zemlje) radi lakše identifikacije, pojedinom fragmentu dodane su nove oznake (npr., uz PN 33 (oznaka tijekom iskopavanja), dodane su oznake a, b).



Sl. 16. Skupina B (PN 118 a) - stražnja strana (foto: D. Kušan Špalj)

Fig. 16. Group B (SF 118 a) – the back side (photo: D. Kušan Špalj)

same object, i.e. a strip („borta“) with golden and silk fibers.<sup>12</sup>

The textile group (group A) found on skull U-112 is characterized by exceptionally well preserved golden yarns (golden foil wrapped around a silk core), which were attached to a silk background (Fig. 5). Golden threads dominate on the front of the textile, in the direction of the weft, while only silk threads are on the back. The type of weaving is very difficult to ascertain due to the exceptionally poor state of the silk background. Moreover, a part of threads that were probably made of other material (perhaps linen that decayed in acidic soil) is probably also missing. It is visible on the front that the golden threads, in pairs, were attached to the background with silk fibers, and they were most likely embroidered. Parts of the border were preserved (1,2 cm wide – marked as border x), as well as a decorative border with embroidered vegetable motifs between thicker „strips“ of golden fibers (wrapped cardboard with golden fibers – marked as border y) (Fig. 6-9). These motifs were likewise attached to the background with silk fibers.<sup>13</sup> Two fragments have preserved stitches showing that the object was made by combining at least two fragments of textile (Fig. 10). In the zone with embroidered vegetable motifs the silk background was also visible, which certainly helped to

12 The samples were processed and documented by textile types, that is groups (A and B) and by the information and marks attributed to them during archaeological excavations. Considering that the number of fragments increased during the conservation works, that is, after washing and cleaning (when they were separated from the soil), individual fragments received additional marks to make their identification easier (e.g. fragment SF 33 – designation during the excavation – received marks a, b).

13 Technique: probably embroidery on a silk background. The background (poorly preserved): probably silk. Embroidery: pairs of two golden fibers (in the weft direction – 26 fibers/cm) attached to the background by silk fibers (consisting of two fibers with an S twist). The same golden threads (golden foil wrapped (S direction) around a silk core with an S twist) were used for the embroidery of the borders (around the cardboard) and the vegetable motifs.

vjerojatno bile od nekoga drugog materijala (možda lan koji je propao u kiselom terenu). S prednje strane vidljivo je da su zlatne niti, po dvije, bile povezane sa svilenim nitima za podlogu te se vjerojatno radi o vezu (*embroidery*). Očuvani su dijelovi ruba (širine 1,2 cm - označen kao rub x), te ukrasni rub s izvezenim biljnim motivima između debljih «traka» od zlatnih niti (omotan karton sa zlatnim nitima-označen kao rub y) (sl. 6 - 9). Ovi motivi su također svilenim nitima bili pričvršćeni na podlogu.<sup>13</sup> Na dva fragmenta očuvani su šavovi, po kojima je vidljivo da je predmet izrađen od spoja barem dva fragmenta tkanine (sl. 10). U dijelu gdje su izvezeni biljni motivi, bila je vidljiva i svilena podloga, što je svakako vizualno jače isticalo izvezene zlatne motive, premda bez kemijskih analiza nije moguće odrediti o kojoj se boji svile radilo (sl. 11).

Skupina B obuhvaća trake, tj. borte koje su vjerojatno obrubljivale neki predmet od tekstila. Očuvano je sedam fragmenata iste vrste borte (širina 3.5 cm, ukupna dužina 164,5 cm)<sup>14</sup> koje potječu iz dva groba, te su bile označene kao PN 33 i N-118 (sl. 12).

Prema načinu tkanja može se zaključiti da su borte izrađene tehnikom tkalačkih daščica (*Brettchengewebe*, *tablet weaving*) koja se upotrebljava za izradu užih tekstilnih traka, pojaseva ili čvrstih rubnih dijelova (Emery 1994, 199-200). Predmeti tkani ovom tehnikom nađeni su u raznim krajevima svijeta, a najstariji dokazi o ovoj vrsti tkanja potječu iz Egipta (12. st. pr. Kr.). U Europi se pojavljuju od 8. st. pr. Kr. (nekropola Sasso di Furbara, Italija) te u kneževskim grobovima starijega željeznog doba Srednje Europe. Brojni nalazi pribora i tkanja govore o korištenju ove tehnike tijekom više od 3000 godina, sve do danas (Banck-Burgess 1999, 65-68). Kao što i sam naziv govori, za izradu tkanja tehnikom tkalačkih daščica koriste se male kvadratne pločice, najčešće drvene (mogu biti i ravni komadi kosti, kartona, pergamene i sl.), a koje imaju najmanje 2 rupice kroz koje se provlače niti osnove. Okretanjem pločica, koje se nalaze u sredini napete osnove, izmjenjuje se zijev i ulaže potka (Březinová 1997, 133, Obr. 18, 138). Na taj se način mogu izraditi vrlo jednostavna, ali i složenija tkanja s različitim uzorcima. Ova vrsta tkanja podrazumijeva da se niti osnove uvijaju, na način da se nit sastoji od dvije niti koje, zapravo, čine dva elementa osnove, budući da se ponašaju i odvojeno kad povezuju nit potke.

U slučaju borta iz Crkvara, radi se o uvijanju niti naizmjenice u S i u Z smjeru, čime se dobiva izgled pletenice. Ta je struktura vidljiva sa stražnje strane borte, gdje su niti potke potpuno nevidljive (sl. 16). Tkanjem tehnikom tkalačkih daščica postigla se različita struktura tkanja na gornjoj i donjoj strani, te se radi o tzv. tkanju s dva lica (*double-faced weave*). S prednje strane vidljive su niti potke (po tri zlatne niti) koje su povezane nitima osnove u vezu kepera na način da se tvore pravilni geometrijski motivi (sl. 13 - 15). Valja pretpostaviti da su ti motivi bili jače vidljivi u izvornom obliku, budući da su niti potke bile zlatne, a samo rubovi motiva

highlight the embroidered golden motifs, even though it is impossible to ascertain the colour of silk without chemical analyses (Fig. 11).

Group B consists of strips that in all likelihood bordered a textile object. Seven fragments of the same type of strip were preserved (3,5 cm wide, in total length of 164,5 cm),<sup>14</sup> which come from two graves, and they were marked as SF 33 and F-118 (Fig. 12).

The method of weaving allows the conclusion that the strips were made by tablet weaving (Germ. *Brettchengewebe*), used for the production of narrower textile strips, belts or solid bordering parts (Emery 1994, 199-200). The objects woven by this technique have been found in various parts of the world, and the earliest evidence of this type of weaving comes from Egypt (12<sup>th</sup> cent. B.C.). They start appearing in Europe from the 8<sup>th</sup> cent. B.C. (the Sasso di Furbara necropolis, Italy) and in the early Iron Age princely burials in Central Europe. The many finds of weaving utensils and weave speak of the use of this technique during more than 3000 years, up until the present (Banck-Burgess 1999, 65-68). As revealed by its name, the tablet weaving technique makes use of small square tablets, generally wooden (straight pieces of bone, cardboard, parchment etc. can also be used), which have at least 2 perforations through which the warp yarns run. By twisting the tablets, positioned in the middle of a taut warp, the shed is changed and weft is inserted (Březinová 1997, 133, Obr. 18, 138). That way simple weaves can be created but also complex ones with various designs. This type of weaving entails twisting the warp fibers in such a way that a yarn consists of two fibers that, in fact, constitute two elements of the warp, considering that they behave separately when they connect the weft yarn.

In the case of the strips from Crkvari, the yarn is twisted alternately in the S and Z direction, which produces a braid-shape. This arrangement is visible on the back of the strip, where the weft yarns are entirely invisible (Fig. 16). The use of the tablet weaving technique produced a different arrangement of weave on the upper and lower side, forming a so-called double-faced weave. Visible on the front are weft threads (golden threads in threes) connected with the warp threads in twill weave forming regular geometric motifs (Fig. 13-15). It can be supposed that those motifs were more readily visible in their original form, considering that the weft fibers were golden while only the edges of the motifs (the warp threads binding the weft threads) were of a different colour. The manner of weaving changes on the strip borders, which produces a different structure along the edges.<sup>15</sup>

The specific conditions of the soil from which the analyzed textile was extracted, influenced the preservation of cloth fibers. Microscopic analyses have shown that the fibers were of animal origin, the point indicated also by the acidic ground in which the cloth lay. Even though the quantity of preserved fragments is large, it is impossible to reconstruct

13 Tehnika: vjerojatno vez (*embroidery*) na svilenoj podlozi. Podloga (slabo očuvana) vjerojatno svila. Vez: po dvije zlatne niti (u smjeru potke- 26 niti /cm) pričvršćene na podlogu svilenim nitima (koje se sastoje od dvije niti frkane u S smjeru). Istim zlatnim nitima (zlatni lim omotan (S smjer) oko jezgre od svile frkane u S smjeru) izvezeni su i rubovi (oko kartona) te biljni motivi.

14 PN-33,a – 66 cm (sačuvan šav na kraju), PN-33 b- 27 cm, N-118 a- 21 cm, N-118 b- 29 cm, N-118 c1- 9 cm, N-118 c2- 5 cm, N-118 d- 7,5 cm

14 SF-33,a – 66 cm (preserved stitch on the end), SF-33 b- 27 cm, F-118 a- 21 cm, F-118 b- 29 cm, F-118 c1- 9 cm, F-118 c2- 5 cm, F-118 d- 7,5 cm.

15 Borta: 3,5 cm wide, made by tablet weaving.

Warp: 60 tablets (with four holes), two yarns, with alternating S and Z twists, each yarn consists of two fibers spun in S direction, the thread of animal origin (probably silk), 18 yarns/cm.

Weft: three golden yarns (golden foil spun in S direction around a silk core with an S twist), 32 yarns/cm.

(niti osnove kojima su povezane niti potke) u drugoj boji. Na samim rubovima borte mijenja se način veza tkanja, pa se time dobiva drukčija struktura uza sam rub.<sup>15</sup>

Specifični uvjeti tla u kojem se ovdje obrađeni tekstil nalazio, uvjetovali su očuvanje tekstilnih niti. Mikroskopske analize pokazale su da se radi o vlaknima životinjskog porijekla, na što ukazuje i kiseli teren u kojem se ovaj tekstil nalazio. Premda se radi o većoj količini očuvanih fragmenata, nije moguće načiniti rekonstrukciju samih predmeta, odnosno točno odrediti što je bilo izrađeno od tekstila čiji su fragmenti očuvani. Obje skupine tekstila ukazuju na luksuzne predmete, sa zlatnim nitima, ukrašene bogatim vezom (skupina A), odnosno da su bile našivene kao ukras (borte, trake) na neki predmet od tekstila (skupina B).

Tijekom povijesti tkanja sa zlatnim nitima uvijek su bila vrlo cijenjena i skupocjena te je njihova upotreba bila ograničena na bogatije slojeve. Većina nalaza tkanja sa zlatnim nitima potječe iz grobova jer se istrošena odjeća spaljivala kako bi se zlato moglo ponovno upotrijebiti. Proizvodnja tkanja sa zlatnim nitima potječe iz današnje Kine, odakle se proširila na područje Irana i Egipta, a od 11. st. može se pratiti upotreba zlatnih niti u svilenim tkanjima na prostoru Španjolske te od 13. st. u Italiji. Krajem 16. st. zlatne niti gotovo nestaju iz upotrebe i zamjenjuju ih mnogo jeftinije i jednostavne metalne niti, koje su bile samo pozlaćene ili posrebrene (König 2006, 5-6). Već najraniji nalazi iz središnje Kine pokazuju da se u tkanju vrlo rijetko koristila zlatna žica,<sup>16</sup> jer ne samo da bi bilo preskupo već bi i takva tkanina bila preteška. Kako bi se proizvelo elastičnu nit od tvrdog metala, koristila se nit svile ili lana kao jezgra, koja bi se prekrila tankim limom od zlata. Zlatni lim proizvodio se dugotrajnim iskucavanjem zlata, koje se nalazilo između dvije životinjske kože. Tako proizvedeni metalni listići, tanji od ljudske kose, rezani su u tanke trake i omotavani oko niti svile ili lana (König 2006, 4). Takav je postupak proveden i na zlatnim nitima tkanja iz Crkvara.

Preostaje nam pokušati odrediti funkciju i dataciju pronađenih tekstilnih predmeta iz zapuna grobova br. 43 i 112. Arheološka stratigrafija ukazuje na sljedeći scenarij: pri iskopu rake za pokojnika iz groba 112 oštećeni su neki stariji grobovi, među kojima i grob mlade žene odjevene u bogato ruho. Svi fragmenti tkanine PN 27 nađeni su omotani oko dislocirane lubanje mlade žene (U-112), što upućuje da se radi o nekoj vrsti ženskog pokrivala za glavu. Prema količini nađene tkanine (12 fragmenata, među kojima je najširi očuvani fragment širine 10 cm), može se pretpostaviti kako se radilo o nekoj vrsti kape površine najmanje 55 x 15 cm. S obzirom na prilično loše stanje očuvanosti, teško je odrediti o kojoj se vrsti pokrivala za glavu radilo, no može se pretpostaviti da je riječ o obliku kape vrlo često prikazane na portretima iz razdoblja 16. stoljeća, karakteristične po valovito savijenoj bočnoj strani, odmaknutoj od lica, dok se prednji dio spušta prema čelu (Kybalova et al. 1989, 363).<sup>17</sup> Pokrivala za glavu izrađena od zlatnih niti bila su vrlo često sastavni

15 Borta: širina 3,5 cm, tehnika tkalačkih daščica (*Bretchengewebe, tablet weaving*).

*Osnova:* 60 daščica (s 4 rupe), po dvije niti, naizmjenice se mijenja S i Z uvijanje, svaka nit sastoji se od dvije niti frkane u S smjeru, vlakno životinjskog porijekla (vjerojatno svila), 18 niti /cm.

*Potka:* po tri zlatne niti, (zlatni lim omotan u S smjeru oko jezgre od svile frkane u S smjeru), 32 niti /cm.

16 Zlatne žice korištene su samo u ukrašavanju tkanina vezom, dok su se vrlo rijetko upotrebljavale za tkanje.

17 Jedan oblik ove kape dobio je naziv po škotskoj kraljici Mariji Stuart (1542-1587).

the objects themselves, i.e. to ascertain what exactly was made of the cloth whose fragments have been preserved. Both cloth groups point to luxurious objects, with golden fibers, lavishly decorated with embroidery (group A), or sewn as decorative items (*borte, strips*) onto an object made of cloth (group B).

Throughout history the golden thread weave was always highly valued and costly and its use was limited to the richer classes. Most finds of golden-thread weave come from graves, considering that worn-out clothes were burned in order to reuse the gold. The production of golden-thread weave originated in present-day China, from where it spread to the territory of Iran and Egypt. From the 11<sup>th</sup> cent. the use of golden fibers in silk weaves can be followed in Spain and from the 13<sup>th</sup> cent. in Italy. At the end of the 16<sup>th</sup> cent. the use of golden threads all but disappears and they are replaced by much cheaper and simpler metal threads, which were merely gilded or silvered (König 2006, 5-6). Already the earliest finds from central China show that golden wire was very rarely used in weaving,<sup>16</sup> as this would not only be too expensive but would also render such cloth too heavy. In order to produce an elastic yarn of solid metal, a silk or linen thread would be used as the core and covered with a thin golden foil. Golden foil was created by the lengthy hammering of gold, placed between two animal hides. Thin metal leaves produced that way, thinner than a human hair, were cut into thin strips and wrapped around silk or linen threads (König 2006, 4). This was exactly the procedure that was carried out on the golden yarns of the weave from Crkvari.

We are left only with the task of determining the function and date of the discovered textile objects from the fills of graves 43 and 112. Archaeological stratigraphy points to the following scenario: certain earlier graves were damaged during the excavation of the grave for the deceased man from grave 112, including the grave of a richly-dressed young woman. All the fragments of cloth SF 27 were found wrapped around the dislocated skull of the young woman (U-112), suggesting that the object must have represented a female head covering of sorts. Judging by the quantity of the discovered cloth (12 fragments, of which the widest preserved fragment was 10 cm wide), it can be assumed that the object was a kind of a cap covering at least 55 x 15 cm in surface. Due to the fairly poor state of preservation it is difficult to ascertain the type of the head covering, but it can be assumed that it was a cap form frequently depicted in the 16<sup>th</sup> century portraits, with a characteristic lateral side bent in the form of a wave, removed from the face, while the front descends towards the forehead (Kybalova et al. 1989, 363).<sup>17</sup> Head coverings made of golden threads very often formed part of rich female clothes in the 16<sup>th</sup> cent. (Laver 1996, 81).

It is almost certain that the pieces of strips found in graves 43 and 112 belong to the same textile object,<sup>18</sup> considering that the type of weave and fibers are the same. If the strips

16 Golden wire was used only for the decorative embroidery of the textiles, and only rarely for weaving.

17 One form of this cap was named after the Scottish Queen Mary Stuart (1542-1587).

18 Traces of stitches, that is the thread that attached the *borta* to the background were found on fragment SF-33 a.

dio bogate ženske odjeće 16. st. (Laver 1996, 81).

Za dijelove borti koji su nađeni u grobovima 43 i 112 može se s velikom vjerojatnošću ustvrditi da pripadaju istom tekstilnom predmetu,<sup>18</sup> budući da se radi o potpuno istoj vrsti tkanja i vlakana. Ukoliko trake tkanine N 118 i PN 33 nisu predstavljale dijelove odjeće upravo žene s kapom bogato vezenom zlatnim nitima, što treba ostaviti kao otvorenu mogućnost, ukopom groba 112 možda je oštećen i grob u kojem je mogao biti pokopan svećenik odjeven u misno ruho, čiji sastavni dio čine trake tkanine, tzv. „borte“. Ukopom gornjega groba br. 43 zahvaćen je dio zapune groba 112. Na taj način valja tumačiti nalaz identične trake, dislocirane u zapunama dviju različitih grobnih cjelina. O tome jesu li ove borte bile sastavni dio nekoga misnog ruha ili luksuzne svjetovne odjeće, zbog specifične situacije nalaza ipak možemo samo nagađati. Što se tiče pojave sličnih tekstilnih traka rađenih tehnikom tkalačkih daščica sa zlatnim nitima u smjeru potke, njih se može pratiti od 5. st., a posebno je zanimljiv primjer jedne misnice iz Salzburga (Flury Lemberg 1988, 158-167), datirane u 11. st., na kojoj je, na jednoj od borta, izveden isti ukras kao na fragmentima borti iz Crkvara, postignut kontrastom zlatnih niti potke i niti osnove.

Kod muškarca iz groba br. 112 pronađen je par dvopetljastih kopči s kukom i ušicom koje su služile za kopčanje odjeće (sl. 4). Takve se kopčice pronalaze u grobovima već u kasnom srednjem vijeku, a učestalije u razdoblju novoga vijeka. Danas se tek sporadično koriste, međutim, još su u drugoj polovini 20. stoljeća bile u širokoj upotrebi. Arheološki nalazi tih predmeta iz razdoblja srednjeg vijeka potječu sa širokog prostora Hrvatske (Jelovina, Vrsalović 1981, T. XXXV, 94). Na groblju na Opatovini u Zagrebu, pred crkvom Svetog Franje, pronađene su u grobu muškarca već s kraja 14. ili početka 15. stoljeća, a učestalije se javljaju u grobovima žena i muškaraca pokopanih tijekom posljednje trećine 15. i druge trećine 16. stoljeća (Demo 2007, 39). Na groblju Cirkvišće u Torčecu (koprivnička Podravina) u grobu žene stare između 35 i 40 godina, čiji pokop je datiran u razdoblje između 1649. i 1733. godine, uza svaku nogu pokojnice nađeno je po pet pari željeznih kopčica raspoređenih duž potkoljениčnih kostiju, s time da su dva para bila smještena izdvojeno, bliže stopalima (Sekelj Ivančan, Tkalčec 2003, str. 14-15, slika 16, str. 31-32, slike 29a-d). Slične dvopetljaste kopče s kukicom i ušicom, pronađene u grobovima muškaraca br. 4, 42 i 50 iz svetišta i predvorja crkve Sv. Martina na Prozorju, datiraju se na temelju stratigrafije i ostalih nalaza u početak 18. stoljeća (Belaj 2006, 293, slika 42, 294, slike 43 - 44). U razdoblje novog vijeka, odnosno preciznije u doba od polovine 17. do polovine 18. stoljeća, datiraju se i kopčice pronađene u grobovima muškaraca i žena u crkvi Sv. Marije Magdalene u Čazmi (Azinović-Bebek 2007).

Kako sami nalazi tekstilnih predmeta te spomenutih dvopetljastih kopčica iz groba 112 ne pružaju dovoljno elemenata za užu vremensku opredijeljenost grobnih cjelina, odnosno nalaza tkanine iz grobova, provedene su apsolutnodatacijske analize uzoraka kostiju, metodom radioaktivnog ugljika, a ostvarene su na Sveučilištu u Kielu u Leibniz-laboratoriju za radiometrijska datiranja i istraživanja stabilnih izotopa (KIA - Leibniz Labor für Altersbestimmung und Isotopenforschung, Christian-Albrechts-Universität, Kiel).

<sup>18</sup> Tragovi šava odnosno konca kojim je borta bila prišivena na podlogu nađeni su na fragmentu PN-33 a.

of cloth F 118 and SF 33 did not form part of the clothes of the woman with a cap with rich golden-thread embroidery, which is an open possibility, the digging of grave 112 may have damaged also the grave of a priest dressed in mass vestments, of which cloth strips – the so-called *borte* – form an integral part. The digging of upper grave 43 disturbed part of the fill of grave 112. This is how one should interpret the find of an identical strip, dislocated in the fills of two different grave assemblages. As to whether these strips formed part of mass vestments or luxurious secular dress, we can only conjecture, due to the specific circumstances of the finds. As regards the appearance of similar textile strips made by tablet weaving with golden threads in the weft direction, they can be tracked from the 5<sup>th</sup> cent. An example that deserves special mention is a chasuble from Salzburg (Flury Lemberg 1988, 158-167), dated to the 11<sup>th</sup> cent., on which one of the strips carries the same decoration as those on the fragments of strips from Crkvari, executed by contrasting the golden yarns of the weft with the yarns of the warp.

A pair of double-loop hook-and-eye fasteners, used for fastening clothes (Fig. 4) was found with the man from grave 112. Such fasteners are found in graves already during the late Middle Ages, and with greater frequency in the Modern Age. At present, their use is sporadic only, but they were in widespread use as late as the second half of the 20<sup>th</sup> century. The archaeological finds of those objects from the mediaeval period come from various parts of Croatia (Jelovina, Vrsalović 1981, T. XXXV, 94). Such fasteners were found at the Opatovina cemetery in Zagreb, in front of St Francis church, in the grave of a man from the end of the 14<sup>th</sup> or the beginning of the 15<sup>th</sup> century, and they appear with greater frequency in the graves of women and men buried during the last third of the 15<sup>th</sup> and the second third of the 16<sup>th</sup> century (Demo 2007, 39). At the Cirkvišće cemetery in Torčec (in the Podravina region near Koprivnica), in the grave of a woman between 35 and 40 years of age, whose burial is dated to the period between 1649 and 1733, five pairs of iron fasteners were found arranged along the lower leg bones of each leg of the deceased woman. Of those, two pairs were positioned separately, closer to the feet (Sekelj Ivančan, Tkalčec 2003, p. 14-15, Fig. 16, p. 31-32, Fig. 29a-d). Similar double-loop hook-and-eye fasteners, discovered in male graves 4, 42 and 50 from the sanctuary and the lobby of St Martin's church at Prozorje, are dated on the basis of stratigraphy and associated finds to the beginning of the 18<sup>th</sup> century (Belaj 2006, 293, Fig. 42, 294, Fig. 43 - 44). The fasteners found in male and female graves in the church of St Mary Magdalene in Čazma are dated to the Modern Age, more precisely, from the mid-17<sup>th</sup> cent. to mid-18<sup>th</sup> century (Azinović-Bebek 2007).

As the finds of textile objects and the mentioned double-loop fasteners from grave 112 offered too few elements for a narrower chronological attribution of the grave assemblages and textile finds from the graves, we carried out radiocarbon analyses on bone samples. This was done at Kiel University in the Leibniz-Laboratory for Radiometric Dating and Stable Isotope Research (KIA - Leibniz Labor für Altersbestimmung und Isotopenforschung, Christian-Albrechts-Universität, Kiel).



Analiza uzorka kosti lubanje žene (U-283) omotane tkaninom (KIA28657) dala je radiokarbonsku starost  $301 \pm 22$  BP. Kalibrirana starost iznosi prema rasponu spektra jedne sigme<sup>19</sup> (ukupna vjerojatnost 68,3%):

AD 1523 - 1565 (vjerojatnost 49,9%)  
1628 - 1644 (vjerojatnost 18,4%),

a prema rasponu spektra dvije sigme (ukupna vjerojatnost 95,4%):

AD 1493 - 1498 (vjerojatnost 1,0%)  
1516 - 1598 (vjerojatnost 69,6%)  
1617 - 1651 (vjerojatnost 24,8%).

Prema apsolutnodatacijskim analizama nalaz lubanje mlade žene s kapom, pronađen u zapuni rake groba br. 112, možemo datirati od početka 16. stoljeća pa do sredine 17. stoljeća. Ipak, najveće vjerojatnosti kalibrirane starosti, kako prema mjerenjima jedne tako i dvije sigme, ukazuju na razdoblje 16. stoljeća.

Valja ovdje spomenuti još jedan važan stratigrafski odnos koji pruža daljnje mogućnosti oko promišljanja preciznije datacije groba br. 112, a s time u vezi i gornje granice datacije nalaza tkanine. Naime, grob 112 u svojem je donjem dijelu fizički bio preslojen sa stratigrafski višim i mlađim grobom br. 40 (sl. 1). Lubanja pokojnice iz groba 40 nalazila se na  $\nabla$  206,16 m, dakle, više od pola metra iznad donjeg dijela groba 112, a na razini ukopa groba br. 43.<sup>20</sup> U grobu 40 pokopana je žena stara između 41 i 45 godina, na čijem kosturu su prisutne patološke promjene koje su karakteristične za venerični sifilis (Šlaus, Novak 2007). Taj podatak je zanimljiv kao potvrda datacije jer se sifilis na području geografski bliske Mađarske pojavljuje s prisutnošću španjolskih plaćenika cara Karla V. Habsburga, početkom 16. st. Prisutnost oko 1500 španjolskih plaćenika zabilježeno je i na području Slavonije, gdje se 20-ih godina 16. st. bore na strani Ferdinanda Habsburškog u ratu s Ivanom Zapoljom (Budak et al. 2003, 46). Na temelju tih podataka Šlaus i Novak (2007) pretpostavljaju da je sifilis u Slavoniju mogao doći ili posredno iz relativno nedaleke Mađarske ili, pak, da ga izravno unose španjolski plaćenici. Iako se ne može sa sigurnošću utvrditi koji je od dva moguća tijeka događaja točan, oba se mogu datirati u 16. stoljeće. To se slaže i s datacijom pokojnice iz groba 40 iz Crkvara, koju nam pruža <sup>14</sup>C metoda. Apsolutnodatacijske analize uzorka kosti pokojnice iz tog groba (U-173) dale su radiokarbonsku starost  $345 \pm 23$  BP (KIA28655). Kalibrirane vrijednosti daju raspon od 1478. do 1636. godine (ukupna vjerojatnost 95,4%), međutim, najveće vrijednosti se poklapaju za razdoblje 16. stoljeća, pa tako grob valja datirati u raspon između 1566. do 1604. godine prema jednoj sigmi (s vjerojatnošću od 28,3%), odnosno raspon između 1541. do 1636. godine prema dvije sigme (s vjerojatnošću 61,1%).

S obzirom na blisku dataciju <sup>14</sup>C metodom oba uzorka, čini se da se radilo o kontinuiranim pokopima koji su slijedili jedan iza drugoga, ne u velikom vremenskom razmaku i to slijedom: prvo je pokopana mlada žena čija je lubanja

<sup>19</sup>  $\sigma$  = standardna devijacija.

<sup>20</sup> Iako je grob 40 istraživao godinu prije nego grob 112, i pronađen je više od pola metra iznad groba br. 112, ovako precizna lokacija svih pojednosti vezanih uz općenito stratigrafski vrlo složene odnose grobnih cjelina na lokalitetu omogućilo je snimanje totalnom geodetskom stanicom i iscrtavanje svih grobova u AutoCAD računalnom programu.

The sample analysis of the skull of the woman (U-283) wrapped in cloth (KIA28657) indicated the radiocarbon age of  $301 \pm 22$  BP. One-sigma<sup>19</sup> calibrated age range (overall probability of 68,3%) is:

AD 1523 - 1565 (probability 49,9%)  
1628 - 1644 (probability 18,4%),

while two-sigma calibration (overall probability 95,4%) gives the following results:

AD 1493 - 1498 (probability 1,0%)  
1516 - 1598 (probability 69,6%)  
1617 - 1651 (probability 24,8%).

The analyses of absolute-dating allow us to date the find of the skull of a young woman with a cap, discovered in the fill of grave 112, from the beginning of the 16<sup>th</sup> century until the middle of the 17<sup>th</sup> century. However, the greatest probability of calibrated age, both regarding one and two standard deviations, points to the 16<sup>th</sup> century.

Another important stratigraphic relationship should be mentioned here, which offers further options regarding the precise dating of grave 112, and in relation with this also the upper limit for dating the textile finds. In its lower part, grave 112 was physically overlain by the stratigraphically higher and younger grave 40 (Fig. 1). The skull of the deceased woman from grave 40 lay at  $\nabla$  206,16 m, i.e. more than half a metre above the lower part of grave 112, at the level of grave 43.<sup>20</sup> Grave 40 contained the burial of a woman between 41 and 45 years of age, whose skeleton showed pathological changes characteristic for venereal syphilis (Šlaus, Novak 2007). This piece of information is interesting as a confirmation of dating, because syphilis appeared in the territory of nearby Hungary with the presence of the Spanish mercenaries of Emperor Charles V Habsburg at the beginning of the 16<sup>th</sup> cent. The presence of around 1500 Spanish mercenaries was noted also in the area of Slavonia, where in the 1520s they fought on the side of Ferdinand I Habsburg in the war with John I Zápolya (Cro. *Ivan Zapolja*; Hung. *Zápolya János*) (Budak et al. 2003, 46). Based on those data Šlaus and Novak (2007) supposed that syphilis arrived in Slavonia either indirectly from the relatively nearby Hungary or, on the other hand, that it was directly introduced by the Spanish mercenaries. Even though it cannot be established with certainty which of the two courses of events is accurate, both can be dated to the 16<sup>th</sup> century. This tallies with the dating of the deceased woman from grave 40 at Crkvari, provided by <sup>14</sup>C analysis. Absolute dating of a bone sample of the deceased woman from that grave (U-173) indicated the radiocarbon age of  $345 \pm 23$  BP (KIA28655). Calibrated values give a range between 1478 to 1636 (overall probability 95,4%), but correlation is greatest for the period of the 16<sup>th</sup> century, so that the grave should be dated in the time span between 1566 and 1604 (one-sigma range, with a 28,3% probability), that is, in the time span between 1541 and 1636 (two-sigma range, with a 61,1% probability).

In view of the close dates of the two samples obtained by the <sup>14</sup>C method, it appears that several interments took place in a short sequence one after the other, in the following order: first a young woman whose skull was found in the

<sup>19</sup>  $\sigma$  = standard deviation.

<sup>20</sup> Even though grave 40 was excavated a year prior to grave 112 and discovered more than half a metre above grave 112, such a precise position of all the details connected with the generally stratigraphically quite complex relationships of grave units on the site was made possible by surveying with a total geodetic station and by the drawing of all graves in the AutoCAD computer program.

pronađena u zapuni groba br. 112, potom je izvršen ukop u grob 112, a nakon toga su nastali grobovi br. 40 i 43. Budući da se radi o kraćem vremenu ukopavanja, kada se zasigurno pamtilo i poštivalo mjesto ukopa starijega groba (što se jasno očituje u odnosu dublje ukopanoga groba br. 112 i pliće ukopanih grobova br. 40 i 43), začuđuje činjenica kako se ukopom u grob 112 oštetio stariji grob bogatije mlade žene, pa čak možda i svećenika. Za pretpostaviti je da se pri ukopu muškarca iz groba br. 112 nije više jasno pamtilo mjesto starijih grobova, tj. da je proteklo vrijeme od dviju generacija, odnosno barem pedeset godina. Vrijeme između pokopa u grob 112 i u grob br. 40 (te br. 43) može biti i kraće, s obzirom na poštivanje mjesta starijeg pokopa. Time bismo mogli uništiti grob mlade žene (eventualno i muškarca-svećenika) datirati u razdoblje 16. stoljeća, dok bismo grob žene koja je bolovala od veneričnog sifilisa, grob br. 40, mogli datirati u drugu polovinu 16. ili početak 17. st. S obzirom na to možemo zaključiti da pronađeni nalazi tkanine iz Crkvara potječu iz razdoblja oko sredine 16. st., što potkrjepljuju i rezultati radiokarbonskih analiza.

fill of grave 112 was buried; then a body was placed in grave 112, and after that graves 40 and 43 were created. Considering that the burials occurred over a brief period, when the positions of earlier graves were still certainly remembered and respected (as clearly manifest with regard to the more deeply buried grave 112 and shallower graves 40 and 43), it is surprising that the burial in grave 112 should damage an earlier grave belonging to a rich young woman, perhaps even a priest. It can be assumed that when the man from grave 112 was being buried the position of earlier graves was no longer known, i.e. that more than two generations – at least fifty years – had elapsed. The time span between the burial in grave 112 and that in grave 40 (and 43) was perhaps shorter, in view of the regard for the position of earlier graves. This would allow us to date the destroyed grave of the young woman (and perhaps also of a man – priest) to the 16<sup>th</sup> century, while the grave of the woman suffering from venereal syphilis – grave 40 – would be dated to the second half of the 16<sup>th</sup> or the beginning of the 17<sup>th</sup> cent. With all this in mind, we can conclude that the discovered textile finds from Crkvari belong to the period around the mid-16<sup>th</sup> cent., as corroborated by the results of radiocarbon analyses.

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