

Medieval bindings: stiff board structures in Slovenian manuscript collection

Jedert Vodopivec, Jedert.Vodopivec@gov.si

Head of Book and Paper Conservation Centre, Archives of the Republic of Slovenia

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Summary

The paper presents the research of particular binding structures in extant Slovene medieval codices. The research is limited only to stiff-board bound medieval manuscript collections in Slovenian public archives and libraries. The research synthetically presents particular structures, binding techniques and materials on medieval manuscripts bound or rebound before 16th century. The basis of the research is a census of extant medieval bookbinding monuments, which includes all obtainable data, sketches, pencil rubbings, and photographs. The paper aims to present the methodology of work used in the research as well as the process of formulating description form related to conservation bookbinding. The paper closes with observations and conclusions drawn from the analysis of the Slovenian collection of medieval codices.

KEY WORDS: medieval, manuscripts, stiff-board, bindings, structures, Slovenia, book-conservation.

1. Introduction

Medieval manuscript codices are important historical documents, often also important art monuments. If not rebound they represent superior base for the understanding of the book structure as such and represent very important source for codicological and conservation studies of medieval as well as newer books.

The decision to do the research on the development of binding structures of medieval manuscripts in Slovenian archives and libraries was reached primarily because the field is completely untouched in Slovenia and further, because the knowledge of the construction and historical development of structures and materials of early books is one of the basic prerequisites for study to produce successful conservation work also in the field of newer bookbinding.

The basis of the present paper is a census of extant medieval bookbinding monuments, which includes all obtainable data, sketches, pencil rubbings, and photographs; in

addition, this research includes a glossary of specific professional terms referring to bookbinding, which is a segment of the book (Vodopivec 2000).

The majority of Slovene medieval manuscripts are codices belonging to Western European, that is, Latin culture, which either originated in Slovene territory or were part of Slovene medieval library and archive holdings. There are 361 codices registered, of which 179 are stiff-board bound, and 182 limp bound. In addition, our collection includes 5 Glagolitic and 8 Cyrillic codices which were transferred to Slovenia as a part of Kopitar's and Zois's legacy at the end of the 18th century.

Most medieval codices are now housed in the National and University Library in Ljubljana (NUK), the Maribor Diocesan Archive (ŠAM), the Koper Regional Archive - Piran Branch (PAK), and the Ljubljana Archdiocesan Archive (NŠAL). Besides in these institutions, some codices are kept in the Ljubljana and Novo mesto Franciscan Monastery, the Archive of the Republic of Slovenia (ARS), the Koper Cathedral Archive (ŠAK), the Ljubljana Seminary Library (SKL), the Maribor Regional Archive (PAM), and the Maribor University Library (UKM).

The majority of stiff-board bound codices (159) are included in the 1931 Kos-Stele census (Kos - Stele 1931). This census includes neither archival bound manuscripts (e. g. vicedom and notarial books, terriers and statutes) nor library and archive holdings of the Slovene Littoral, at that time (1931) under Italian occupation.¹

After having examined the medieval codices, it has been decided in compliance with the present conditions, objectives and available literature to limit the research to medieval volumes with extant stiff-board bindings.

The Cyrillic and Glagolitic manuscripts were omitted because they are not part of the medieval holdings historically and culturally connected with Slovene territory. They belong, especially the Cyrillic manuscripts, to the Byzantine group of bindings. Further were omitted all partial or complete rebindings originating from the beginning of the 16th century onwards.

Because of incomplete documentation and in most cases completely lost medieval structures, were disregarded also almost all conserved volumes. In the research are included only four, the structures of which are preserved to such an extent that it was possible to reconstruct the greatest part of the original condition, or if the complete documentation of conservation treatment existed.

Registered medieval codices include 96 examples of preserved medieval bindings, which is slightly more than a half (53%) of all extant stiff-board bound codices in our public collections. The number is small, if we take into consideration that only the Žiče monastery (one of the Slovenian medieval monasteries) had in 15th century more than 2000 volumes. From 96 codices with preserved medieval bindings, 4 from the

1 Records of the Koper Regional Archives.

Maribor Diocesan Archive from the 15th century were not available and consequently omitted from the research, but 4 conserved volumes are included, as mentioned above.

2. Experimental

The research is based on original material and described according to a uniform system comprising all basic and variant elements in the structure of stiff-board medieval bindings. The scheme for description was prepared considering the available descriptions and censuses published by codicologists and conservators. The principles of description are similar, but each of the methods is specific and adjusted to the particular research and research material.

At the very beginning, we found the Italian medieval manuscript census by C. Federici and his collaborators as a great help. Their scheme, however, is not suitable for the census of the Slovene codices, because it is too extensive and comprises numerous elements not found in our bindings. Moreover, the Italian research did not treat the bookbinding elements with regard to provenance and date. From this research I adopted primarily the basic principle of grouping structural elements, whereby I added descriptions of structural elements published by J. Vezin, C. Clarkson, C. Houllis, C. Federici and J. A. Szirmai.

On this basis and on the basis of the documentation scheme which had been drawn up for the preparation of conservation documentation previously, and which is currently in use in the conservation workshop of the Archive of the Republic of Slovenia, a form suitable for beginning the census was prepared. After carrying out one third of the census, a certain form crystallized which was adopted with minor changes as final. The form is conceived as a tool for the description of medieval bindings and designed in such a way that with an analysis of structural elements it can be developed into an improved form for conservation description. It is divided into two parts.

2.1. Methodology of description

The following data are stated first by the basic data (title, shelf mark, dating, provenience) on the volume, followed by:

- schematic description of binding structures
- condition
- peculiarities of the particular codex
- short description of the binding and its condition.

The second part includes a more detailed description of the main structures, that is of the:

- text-block
- end-leaves

- bands
- sewing system
- headbands
- band lacing paths
- boards
- coverings
- spine
- binding furniture (bosses, corner pieces)
- titling

The detailed descriptions of particular elements include measuring, sketches, pencil rubbings and photographs. The quoted measurements are especially in the cases of the well-preserved volumes more estimations than meticulous measurements. The exact description and measurements are as a rule feasible only during a conservation treatment. Such measurements and descriptions are, for instance, the thickness of boards and thread, covering, spine lining, boards, the width and shape of back cornering and the depth of sewing stations. The measurements of all such cases are therefore, though taken with a micrometer and square caliper, not exact enough, and should be regarded actually as approximations. The sketches are made freehand and serve as a supplement to the description or photograph. Whenever it was possible to provide an image information (e. g. a pencil rubbing), such information was enclosed.

In the census the codices are marked with a succession number of the census of bindings (e. g. 1/1), the acronym of the institution (e. g. NUK), the number of the codex as used in a particular institution (e. g. MS. 33), the succession number as used in the Kos-Steale census (e. g. 35), the title and paleographic date. The date of the binding is stated only if it deviates from that established by paleographers, or if it was possible to establish it (e. g. 1/1, NUK MS. 33, 35 Kos-Steale, *Summa de iure canonico*, 1300-1330, trimmed and rebound in the 15th century).

In the text, for the sake of clarity the codices are marked only with the acronym of the institution, manuscript number and succession number in the census of bindings (e. g. in the text NUK 33(1/1), in tables 1/1 NUK 33).

Even at first glance, the 96 codices proved to be a comparatively heterogeneous group which probably accidentally avoided destruction or alienation. As a result the arrangement into groups was rather difficult.

First, the codices were arranged according to institutions in the order adopted in their census by Kos-Steale. On finishing the census, when the data were completed, the codices were arranged into groups to facilitate further procedures, whereby the following basic criteria were chosen: kind of writing support, palaeographic or codicological date determination, similarity of particular structures.



Figs. 1a, 1b, 1c: NUK MS 33 (1/1), National and University Library in Ljubljana, Summa de iure canonico, text-block dated 1300 – 1330, Maastricht provenience; rebinding probably in the first half of the 15th century.

They were arranged into 10 groups:

- 0 manuscripts from Stična² monastery (late 12th century)
- 1 other early Gothic codices
- 2 parchment codices from the late 14th and early 15th centuries
- 3 parchment codices from the second half of the 15th century
- 4 peculiarities: large volumes and those with leather and cardboard boards
- 5 paper codices from the late 14th and early 15th centuries
- 6 paper codices until the mid-15th century
- 7 the mid-15th century paper codices
- 8 paper codices from the second half of the 15th century with sewing peculiarities
- 9 remaining codices from the second half of the 15th century

2.2 Example of description

1/1 NUK MS 33, SUMMA DE IURE CANONICO [Figs. 1a, 1b, 1c]

There is no specific reason why codex NUK MS 33 is chosen for the description, could be any binding from the discussed collection. It was chosen just on the basis of personal inclination because of its outstanding bindings showing its quality mainly when opened and handled.

35 KOS-STELE

text-block 1300-1330, Maastricht³

rebinding, probably first half 15th century

2.2.1 General description

- * dimensions, 200 x 144 mm, parchment, 324 folios, 27 sexternions
- * parchment: sheepskin, thin, uniformly treated,
- * boards = text-block
- * endleaves: independent bifolia
- * bands: 5 slit, alum-tawed
- * sewing system: A1
- * headbands: alum-tawed, pack sewn, alum-tawed leather, white braided
- * band lacing path pattern: G1, from corners - outer grooves - tunnels - inner grooves
- * headband lacing path pattern: G1, from corners - outer grooves - tunnels - inner grooves
- * boards: beech, cushioned

2 Stična - Sitticum, Cistercian monastery in Slovenia.

3 Dated and located by Nataša Golob.

- * covering: alum-tawed, probably sheepskin
- * fastenings: 2, upper board fore-edge
- * spine: slightly rounded
- * opening: restricted, concave (arch in the spine)

Other observations

- excellent bookbinding work showing its quality when opened and handled

Condition

- * in the upper joint broken bands 4 and 5 and the headbands, cracked covering
- * upper fastening strap missing

The codex is well-preserved and outstanding in terms of parchment quality, writing, and the binding technique. The parchment text-block consists of 27 sexternions sewn on 5 alum-tawed bands, carried into the board via the outer channels and tunnels into inner channels. The compound endbands are braided with white alum-tawed leather. The endleaves are independent bifolia sewn onto the text-block before the first and behind the last quire respectively. The boards are sound, of beech wood, cushioned, and covered in alum-tawed leather, which is cracked at the front joint. The codex is clasped with two fastenings at the fore-edge upper board. The spine is slightly rounded, the bands are not blind tooled. It opens to the spine, the spine becomes concave, but slight force is required for flat opening.

The text-block is in excellent condition, and the binding is a masterpiece. The choice of low quality covering, is probably the main reason for the broken upper joint and the partly broken bands.

2.2.2 Detailed description

TEXT-BLOCK. The parchment text-block (200 x 144 mm) consists of 324 folios combined into 27 sexternions. The folios are of thin uniformly treated sheepskin parchment; the hair and flesh sides are almost equal. The sewing stations were made with an awl. Back cornering is 2 mm wide and hardly discernible.

ENDLEAVES. The endleaves are not conjoint with the first and the last quire. They consist of a boardleaf and flyleaf, forming a bifolio, which is sewn before the first and behind the last quire respectively. The endleaves are made of thicker goatskin parchment, of which the flesh side is much lighter than the hair side. Their flesh side adheres to the cover.

BANDS, SEWING. The text-block was sewn on 5 slit, alum-tawed bands, 9 mm wide, 2 mm thick with medium weight (0.9 mm) flax thread, finished with a Z twist. The thread is carried along the centrefold between the sewing stations at the following spacing:

0	13	25	60	97	132	167	185	200	
H	c	1.B	2.B	3.B	4.B	5.B	c	T	Type A1
.....	----	----	----	----	----	----		

H - head, c - change over station, B - band, T - tail

HEADBANDS. The headbands are braided with white alum-tawed leather. The core is of alum-tawed leather of similar thickness to the bands, the first⁴ wound and sewn onto the text-block with equal weight to that of the primary sewing. The headband cores are broken at the front joint. The first sewing and braiding are undamaged.

SPINE LINERS. The spine liners consist of parchment strips, the overlays of which were adhered to the inner face of the board. The strips are rather long (70-105 mm) reaching over half the width of the board and discernible in oblique lighting.

BOARD ATTACHMENT. The alum-tawed slit bands are carried in a channel cut in the exterior face of the board and spine-edge, through tunnels to the inner face and then in inner channels. The alum-tawed core of the headbands are carried from each spine corners at an angle in a similar way to the bands except in grooves not channels.

BOARDS. The sound beech boards are slightly larger than the text-block (210 x 144 x 6 mm). Their outer faces are cushioned, the outer spine edge is rounded and all inner edges are square.

Short (9 mm) outer spine channels for board lacing were chiselled out, at the end of which tunnels were cut through the board to the inner face. Quite long (8 x 40 mm) channels were then cut into the inner face. Outer grooves (11 mm) for the headbands cores are cut from the corners, to tunnels drilled through to the inner face where further grooves (13-15 mm) were cut. Rectangular recesses (16 x 28 mm) are cut into the exterior of the upper board fore-edge for fixing the catch plates, while square recesses (16 x 16 mm) were cut to accommodate the accommodation of the fastening straps at the lower board fore-edge.

4 In 1980 B. Middleton was upset that in an article C. Clarkson had used 'primary' for the first sewing of a compound endband. He wanted to keep the term for the main sewing structural sewing, so Clarkson have since than always used 'first' instead of 'primary' when describing endbands.

COVERING. The codex is completely covered in alum-tawed sheepskin, cracked in the front joint and rather worn above the bands.

TURN-INS. The turn-ins are medium width (10–18 mm), evenly trimmed and mitred.

BOOK OPENING. The spine is slightly rounded, flexible and adequately concave on opening. The codex opens to the fold, though the opening is slightly restricted due to the thickness and the size of the folios. Slight force is required for flat opening.

FASTENINGS. The volume clasped with two fastenings at the fore-edge of the upper board. The lower one is intact. The plain, brass, rectangular (16 x 29 mm) catch plates are fixed with three brass rivets. The alum-tawed fastening strap consists of a strap (39 mm long, 16 mm wide, 2 mm thick) has a plain rectangular brass clasp (16 x 16 mm), by which the strap is accommodated and fixed with four brass rivets into the fore-edge of the lower board.

3. Discussion

After having finished the description of individual bindings and done the analysis of structural elements, was established that some bindings are outstanding in terms of binding quality, structural elements and/or materials used. The bindings differ very much and, judging by their structure, originate from different countries with long tradition and comparatively large production or they were the work of travelling book binders who had been trained in one of these centers. The majority of the stated bindings consist of parchment text-blocks. Among paper codices, numerous novelties, such as simplifications in the binding technique and the materials used, are noticeable. In the following text some of them are schematically presented.

3. 1. Outstanding bindings in terms of binding quality, structural elements and/or materials used.

Codex ŠAM 112 (1/2) which belongs to the manuscript collection of the Maribor Diocesan Archive and codicologically dates back to the Alzas area of the mid-14th century,⁵ is one of the most outstanding codices in Maribor collection. The binding of the codex is not photogenic and its exceptionality is possible to estimate only when examining the original. The binding is exceptional because all structural elements are special: number of bands, mode of sewing, thread, endleaves, back stiffeners, band and endband lacing onto boards, the shape of covers and the number of fastenings.

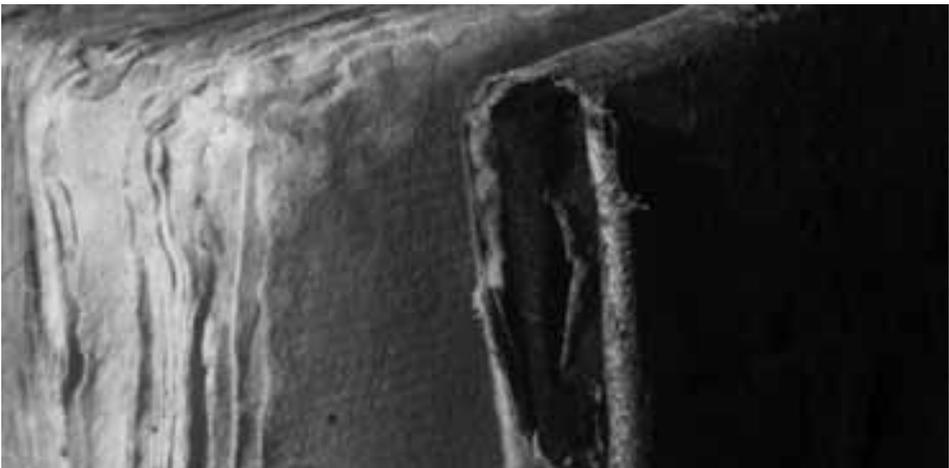
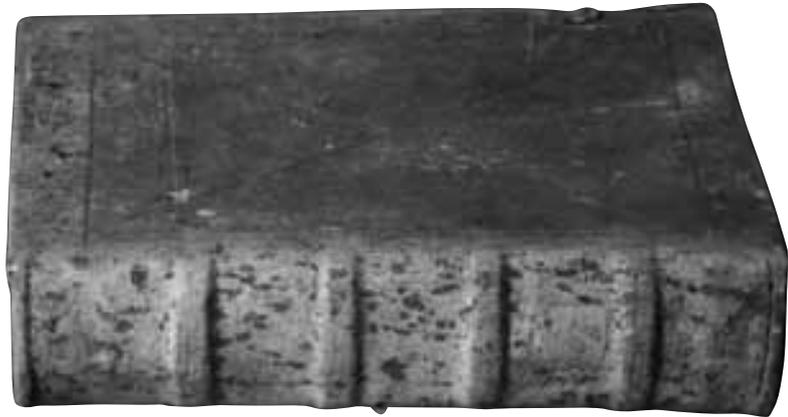
Codex NUK 12 (2/8) has a relatively well preserved good quality binding. Text block was created in Žiče monastery and is dated 1401 (Kos – Stele 1931: 78). Žiče monastery⁶

5 Codicological definition by Nataša Golob.

6 Žiče is one of the three Chartusian monasteries on the territory of Slovenia.

was at that time the seat of the general superior of the Chartusian order and had a rich library. On the base of these facts is possible to conclude that the manuscript was bounded in Žiže monastery or nearby.

An exceptional codex in terms of binding preservation is ŠAM 19 (4/U1) [Figs. 2a, 2b], which belongs to the Maribor Diocesan Archive holdings. Paleographically is dated to the late 14th or early 15th century (Kos - Stele 1931: 79 - 82). Judging by the structural elements, the binding could be contemporary to the text-block. This codex is outstanding primarily for its exceptional state of preservation as a result of the flexibility induced by the boards, which are made of quite thick leather. On opening, no points have acute angles, which would cause excessive strain and damage in the long run. Strains are distributed also over the covers, not only over the bands which is normal for wooden board bindings. Codex ŠAM 119 (4/U1) is established as one of the two Slovene specimens with leather supports, which is generally a rarity anyway.



Figs. 2a, 2b: ŠAM 119 (4/U1), Maribor Diocesan Archive, text-block dated in late 14th or early 15th century, probably contemporary binding

An outstanding work is also the terrier of NŠAL Gornji Grad of 1426 (2/11), dated 1426, being now preserved in the Ljubljana Archdiocesan Archive (Umek 1982: 311). Besides its structure, it is interesting because its binding was durable enough to withstand the numerous strokes it had to endure. Judging by the impressions on the lower cover, it was probably used for a longer time as a base during sealing. It is important also from the historical point of view, as it is supposed to be the only medieval terrier with extant original binding and one of the few preserved medieval terriers in Slovenia.

3.2. Bindings of undisputed foreign provenance

The majority of Slovene codices of indisputably foreign provenance belong to the Maribor Diocesan Archive (ŠAM). They originate from the broader Austrian territory.

Additional codicological research would be necessary for a precise determination of the bindings of the second half of the 15th century, and also a comparison with the incunabula holdings.

Codex ŠAM 108 (2/12), palaeographically dated to the first half of the 14th century, definitely originates from the Salzburg Chapter Library. A codex of identical binding is preserved in the Austrian National Library (ÖNB 949). According to Dr. Otto Mazal's information, all codices of the Salzburg Chapter Library were rebound in 1433. The catalogue of bindings compiled by the binder Johannes Holreid quotes under No. 290 equal title design as written on ŠAM 108 codex.

Codex ŠAM 115 (1/5) [Fig. 3] is an excellent binding work, which, judging by its binding technique, originates from an important centre. According to the data stated in the census of Kos and Stele, it is related to Salzburg.

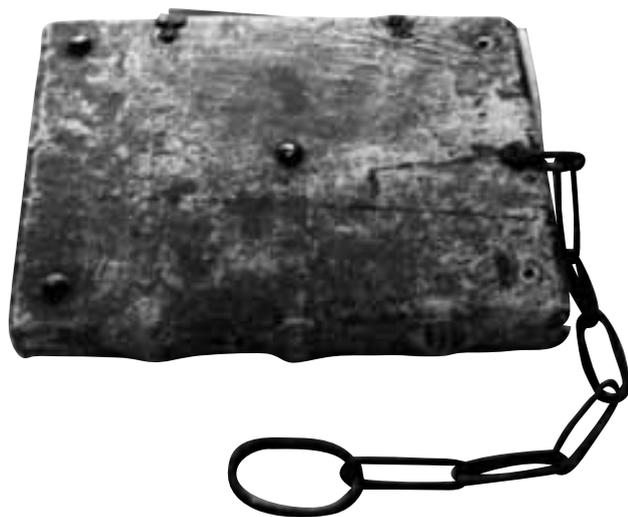


Fig. 3: ŠAM 115 (1/5),
Maribor Diocesan
Archive, text-block
dated middle or second
half of 14th century,
contemporary binding,
Salzburg diocesan
provenience.

The decoration of the covering would suggest that also ŠAM 143 (4/L3) is related to Salzburg. Blind tooling is similar to that of codices No. 41 that is cited in the O. Mazal catalogue "Europäische Einbandkunst aus Mittelalter und Neuzeit" (Otto 1990: 47). and No. 168 in the catalogue *The history of Bookbinding* (1957: 72).

Codex ŠAM 132 (7/9) [Fig. 4] originates according to the incipit from Padova dated 1441 (Kos - Stele 1931: 205). It has the characteristic Italian board attachment, square boards, trapezoid clasps at the lower fore-edge and specially worked headbands.

Codex SKL 4 (9/6) with a medical text in German, belonging to the Seminary Library in Ljubljana originating presumably from Udine from the second half of the 15th century (Kos - Stele 1931: 129), has a typical Italian board attachment, red stained leather bands, square board edges and a trapezoidal clasp. The woodcut illustration on the inner face of the upper board dates to the second half of the 15th century.

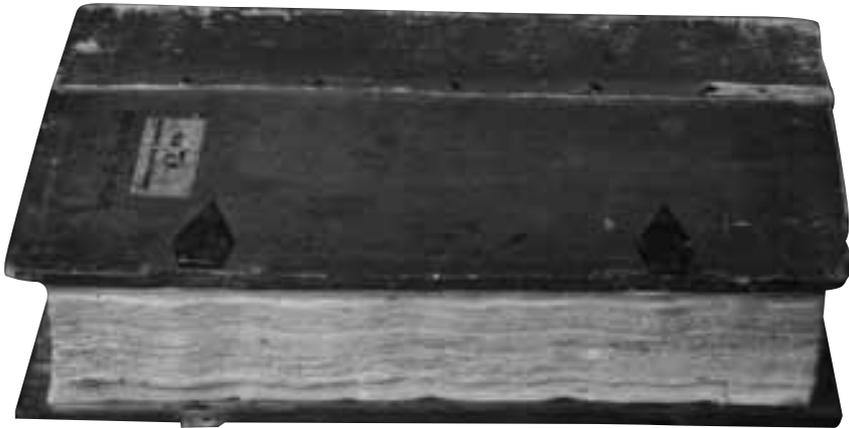


Fig. 4: ŠAM 132 (7/9), Maribor Diocesan Archive, paper text-block dated Padova 1441; contemporary binding, probably Padova.

3.3. Codices rebound until the 15th century

This study includes also codices rebound, though without their original bindings. All 14 volumes, rebound completely or partly before 1500, have parchment text-blocks and are of historical or artistic importance. Their structural elements suggest that all rebindings were executed in the 15th century. I have not traced any rebindings among codices with paper text-blocks, because in the 15th century paper as writing medium was used for less distinguished codices which were usually not rebound. It is evident from the medieval and modern history of the book that rebindings were done mostly for aesthetic reasons and not to replace the damaged and worn bindings. With this fate met mostly outsize and heavy codices. This practice was customary in all libraries

and the Slovene libraries were no exception. Almost all important Slovene codices were rebound, probably to modernise and unify the appearance of the library.

Probably only NUK 29 (0/2) [Fig. 5] and NUK 24 (0/3) codices from Stična, text-block dated ca. 1180 (Golob 1996: 189) were rebound solely because of their worn bindings.

On rebinding NUK 29 (0/2) codex, Gregory the Great: Dialogues, the original oak boards and band lacing were preserved. Judging by the width of the bands and the lower folded endleaf, being a discarded 13th century text (Golob 1996: 189), the text-block was resewn. The headbands are new as well; twisted headbands appeared namely only from the middle of the 14th century onwards. The use of glue suggests that the codex was covered with the present covering only sometime after the 16th century. We can surmise from these facts that the codex underwent two treatments: the first in the late 14th century or in the first half of the 15th century, when it was resewn, but the original boards were preserved, the second presumably in the 17th century, when it was covered with a parchment covering and the spine stiffeners, turn-ins and endleaves were glued on.

NUK 24 (0/3) manuscript, Aurelius Augustine: Explanation of Gradual Psalms, was presumably partly rebound probably in the 15th century, which can be inferred from the trimmed text-block and tanned covering, while all other elements show different



Fig. 5: NUK 29 (0/2), National and University Library in Ljubljana, Gregory the Great, parchment text-block ca. 1180. Stična Cistercian monastery – Slovenia, partly rebound probably in the 15th century, Slovenian territory.



Fig. 6: ŠAM 110 (1/4), Maribor Diocesan Archive; parchment text-block first half 14th century, Koln provenience; rebinding probably first half 15th century.

characteristics. The slit, comparatively wide and thick alum-tawed bands, not pack-sawn, may be contemporary with the text-block and so are the endleaves, being conjoint with the first and the last quire. The boards could be original in terms of their form, thickness and attachment. The headbands, typically Gothic, metal furniture and the fastening imply that the rebinding could date also from the 14th century, whereas the tanned covering suggests the second half of the 15th century.

Why NUK 33 (1/1) [Fig. 1a, 1b, 1c] and ŠAM 110 (1/4) [Fig. 6] codices were rebound is not known, but it is evident that this intervention did not impair them, their rebinding are namely skilful binding work, which is obvious from their structures and flexibility during handling.

The manuscript *Summa de iure canonico* NUK 33 (1/1), is a work from Maastricht dating to 1330s (Golob 1995: 358), with outstanding binding. The rebinding can be

inferred from the trimmed text-block and some characteristics of the late 14th and early 15th-century bindings, such as braided endbands, parchment spine stiffeners adhered to the inner side, partly raised bands and the fastening clasping in the plain catch plate at the fore-edge of the upper cover. The original primary sewing, boards and board lacing were retained.

According to the codicological definition of N. Golob, ŠAM 110 (1/4) manuscript was created somewhere around Köln, Germany, in the first half of the 14th century.⁷ The binding is an excellent work showing characteristics of the first half of the 15th century, such as twisted alum-tawed bands and endbands, discarded 14th-century endleaves, band lacing over the spine edge into outer channels, boards protruding over the text-block, blind tooled and raised bands, fastening at the fore-edge. Judging by the well-visible oak boards, being bigger than the text-block and thus contemporary with the rebinding, also this binding originates from Northern part of Central Europe.

A real counterpart to the two above codices is ŠAM 113 (3/1) codex, manuscript originating from the first half of the 14th century (Kos - Stele 1931: 186), which gives the impression of being completely compressed and caught into the late Gothic binding. The manuscript originating from the first half of the 14th century was completely rebound in the second half of the 15th century, which is inferred from hemp bands, the covering decoration, an ornamented clasp and traces of middle pieces and corner shoes. The codex was incorrectly sewn on rebinding, which results in restricted opening.

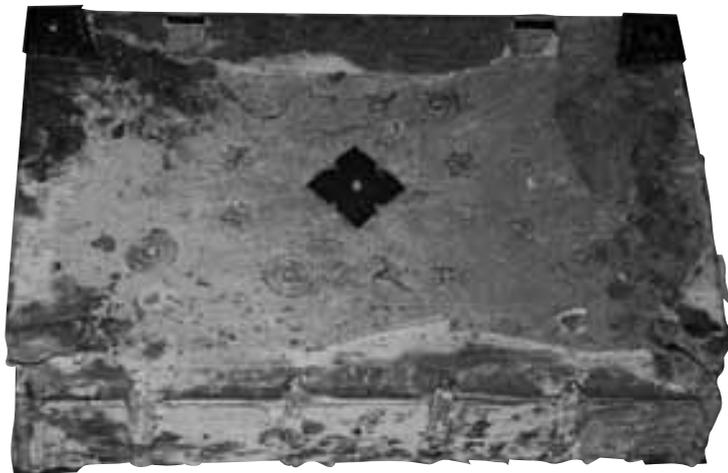


Fig. 7: UKM 136 (3/6), University Library Maribor, Pertus Lombardus, text-block 13th century; rebinding second half 15th century.

UKM 136 (3/6) [fig. 7] manuscript, of which text-block was dated to the 13th century by codicologists and art historians, is rebound showing all characteristics of the second half of the fifteenth-century bindings. The text-block was trimmed to folio format and again sewn through original sewing stations onto the twisted bands, which are laced onto the covers over the corners. The twisted endbands are pack sewn and embroidered, laced onto the boards over the corners, the covering is of alum-tawed sheepskin, blind tooled with heated stamps, clasps are decorated with late Gothic ornament.

3.4. Codices from the 15th century rebound in the 15th century

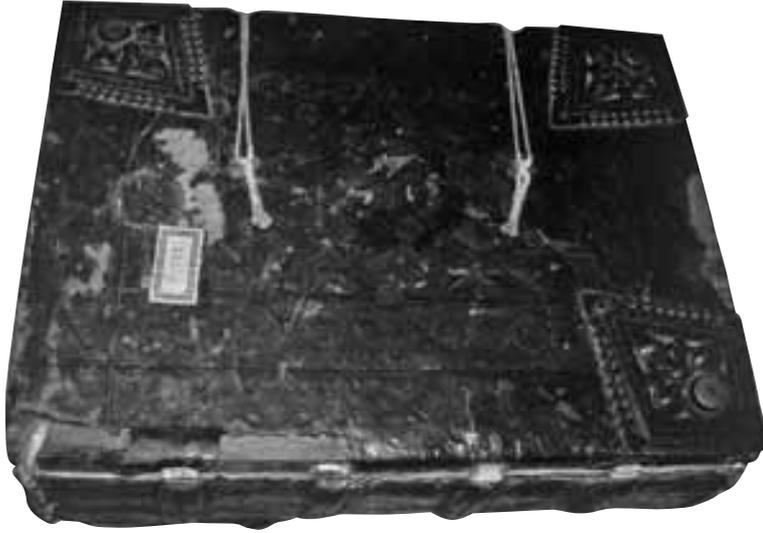
Pontifical book, ŠAM 149 (3/4) codex, belongs to Vienna, dated of approx. 1410⁸ and was partly rebound in the late 15th century. On rebinding the original textblock sewing was preserved, only the endbands, laced into the original grooves, are new. The wooden boards are original, but enlarged by adding approx. 6 mm wide laths at the edges, the tanned endbands were worked anew, laced into the original grooves of the boards, covered with tanned covering, decorated with blind tooling.

Both codices NŠAL 7 (3/5), *Moralia* and *Job*, and NŠAL 19 (3/2), the *Kranj Missal* [Fig. 8a and 8b] were commissioned by Koloman de Manswert, parish priest in Kranj,⁹ and donated to the Kranj parish in 1412 (Golob 1995: 367). They were created contemporarily and surely bound before the end of year 1412. The bindings have some common features suggesting that they are the work of the same bindery obviously under Italian influence,¹⁰ as both codices use the Italian fashion of band-lacing paths, passing through spine tunnels into outer channels, where the bands are fixed with wooden wedges at the end, and equal endband lacing. NŠAL 7 is fixed with 3 trenails in the middle of the band lacing path. Italian influence is traced also in case of the bands and endbands on the *Missal*, which are of red stained alum-tawed skin, while the *Moralia* has one of the alum-tawed spine supports of red stained skin. Judging by the covering and decoration of the late 15th century, both codices were furnished with metal furniture and probably re-covered on this occasion. The partial rebinding was executed separately if judging by the covering and decoration of the late gothic metal furniture. The metal furniture on the binding of *Moralia* is disturbing, or better surprising, because of the choice of inferior quality leather. Two layers of spine supports prove that the present covering was not contemporary with the binding. The lower layer consists of alum-tawed skin strips, while the upper layer is of parchment strips. The choice of covering skin for the *Missal* is more logical, as blind tooled tanned leather was generally used in the late 15th century, although the leather quality required for this codex format was inadequate, which now resulting in spine damage.

8 Golob N.: personal communication.

9 Kranj, a town in Slovenia, north from Ljubljana.

10 Kranj was at that time under the Aquileian patriarchat.



Figs. 8a, 8b: NŠAL 19 (3/2), Ljubljana Archdiocesan Archive; Missal, text-block before 1412, partly rebinding second half of the 15th century.

3.5. Extensively damaged codices

About one third of Slovene codices with extant medieval stiff-board bindings are damaged. Much of this damage affects the spine, especially the joints, endbands, endband parts of the covering and damage due to rotten wood. The bands are damaged in 8 cases.

The text-blocks are generally well-preserved. Damage due to excessive humidity is visible on three codices. Frequent use caused damage to the leaves of some codices. Three codices require consolidation of leaf edges, which are decayed due to excessive humidity.

Of all the codices only three are seriously damaged and needed conservation, about 25% need minimal interventions, all others require box protection, careful handling and more adequate storage conditions.

The two volume codex NŠAL 17 (4/1) [Fig. 9] and NŠAL 18 (4/2) [Figs. 10a, 10b] the so-called Antifonary from Kranj dated 1491 (Kos - Stele 1931: 149), copied by Johannes von Werd de Augusta, is illuminated parchment manuscript, owned by the Archdiocesan Archives in Ljubljana. Conservation treatment was carried out in the years 1992/93. Whenever a codex appears in a restoration workshop, there is always a unique opportunity to establish how individual elements of the book were positioned in the whole system. Such documentation as can be gathered is important for the history of binding structure. On the basis of the analysis we can conclude that both volumes were frequently used, the first volume, more than the second, because the area partly rebound had already been completely destroyed. The codices were restored on the basis of the data found in the second volume.¹¹



Fig. 9: NŠAL 17 (4/1), Ljubljana Archdiocesan Archive; Antiphonary, text-block dated 1491, copied by Johannes von Werd de Augusta, Augsburg provenience; partly rebounded.



Figs. 10a, 10b: NŠAL 18 (4/2), Ljubljana Archdiocesan Archive; Antiphony, text-block dated 1491, copied by Johannes von Werd de Augusta, Augsburg provenience; contemporary binding.

3.6. Partly restored codices

A parallel can be drawn between rebindings and conservation treatments. Those damaged codices which were historically and artistically more important, as was the case with rebinding, were restored first. The majority of the so-called restored bindings are actually rebindings typical for hand-binding of the 19th and 20th centuries, though we can find also some exceptions.

The Stična manuscript NUK 141 (5/5) [Figs. 11a, 11b], was created in Stična monastery in the first half of the 15th century (Kos - Stele 1931: 43). Its binding was partly restored in the National and University Library in 1949.

The extant bands are nicely discernible under the lifted board leaf suggesting that the treatment was limited only to the reinforcement of the spine, the substitution of headbands, which are not sewn onto the text-block, but only added and covered with new leather. Unfortunately, no documentation is available on the condition of the codex before and during the intervention. Only the date of the treatment is documented and could be seen on a piece of paper on the inner face of the lower cover.

The conservation treatment, however, suggests that the conservator was conscious of the importance to preserve as many as possible of the original elements. He treated only the damaged part, the remaining parts, for instance endleaves, were left free and so enabling the inspection of the binding structure and the writing on the inner side of the endleaves.

A school example of minimal intervention carried out around 1950 on NUK 27 (2/9) codex [Fig. 12], dated in the first half of 15th century and located in Jurklošter or Žiče monastery,¹² on which the loose covering and stiffeners of the spine were only reinforced, but not adhered to the spine. The volume is in this way protected against further deterioration, but the inspection of the spine is nevertheless possible. The documentation on the treatment has unfortunately not survived.

12 As examined by Kos-Stele the parchment endleaves in this codex and the ones in the codex NUK 27 (2/9), are coming from the same older manuscript - an 14th century manuscript. As obvious from NUK 12 and NUK 27 bindings are different in structure, the only evident connection among them are the endleaves which are by detailed examination coming from the same manuscript.



Figs. 11a, 11b: NUK 141 (5/5), National and University Library in Ljubljana, paper text-block dated 1428–1460 - Stična Monastery, Slovenia; contemporary binding probably in Stična, partly rebound in 1949 in Ljubljana.

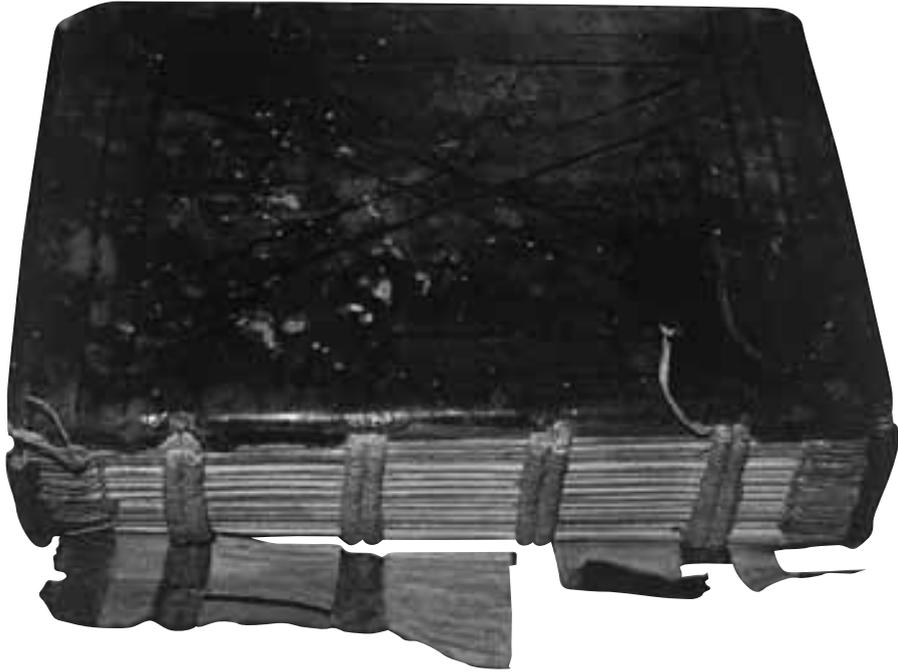


Fig. 12: NUK 27 (2/9): National and University Library in Ljubljana, parchment text-block late 14th or early 15th century - Jurklošter or Žiče monastery - Slovenia; contemporary binding probably in Žiče monastery, the spine covering partly reinforced around 1950.

4. Results

From all registered (179) volumes approximately one half (96) retained their original bindings, which is a comparatively large number in relation to the size of our holdings. The richest collection with 49 preserved medieval bindings is housed in the Maribor Diocesan Archive. In our collections, there are 44 codices with parchment text-block and 51 with paper text-block and one text-block consists of parchment folios and paper leaves. The majority of paper codices were bound in the 15th century, none of them was rebound. Rebindings are traced solely in parchment codices, including almost all important illuminated manuscripts. The provenance of bindings cannot be established with certainty on the basis of structural elements alone, therefore additional codicological research and comparisons would be necessary. Observed codices have no extensive damage due to the environmental conditions. Nevertheless, mechanical damage is visible on 29 volumes, in most cases being rather extensive in the spine, especially at the endbands and folds. Damage of beech boards is comparatively frequent; the boards are in most cases at least slightly worm-eaten, 5 of them are also broken. All over-size volumes have extensive mechanical damage, bands, lining

and folds especially are in a bad condition. The text-blocks of the majority of volumes are well-preserved; the exceptions being just 3 codices, of which text-blocks due to humidity are rather extensively damaged, having decayed folios or leaves respectively, while 5 volumes have damage caused by overuse. Except the three large antiphonaries, damaged codices require only minor conservation procedures to stabilize them. It is, however, imperative to store them in protective boxes in a horizontal position, to handle them correctly and in most cases ensure better environmental storing conditions. It is exceptionally important that they should not be stored in centrally heated premises, i.e. drier atmosphere than that which they are used to.

5. Conclusion

The research of medieval binding structures is limited to stiff-board bound medieval manuscript collections in Slovenian public archives and libraries. The codices have almost all Gothic bindings from the 14th and 15th centuries. The majority of them showing structures and binding techniques characteristic of German bindings. The majority of all volumes show structures and binding techniques characteristic of German bindings, only 10 codices show Italian characteristics. Until the mid-15th century, there were no noticeable differences in the binding structures of parchment and paper codices. While analysing the bindings it was found that the most important structural elements for the determination of bindings are types of endleaves, sewing systems, their lacing paths, types of endbands, endband working. The provenance of the bindings cannot be established with certainty on the basis of structural elements alone.

The results show that until the mid-15th century, there were no noticeable differences in the bindings of parchment and paper codices. Deviations from the medieval binding tradition are to be noted in the second half of the 15th century and more frequently in paper volumes. Parchment codices remain true to the medieval tradition to end of the middle ages. The discussed findings and suppositions are a result of research on bindings conducted on stiff-board volumes, taking into consideration the existing palaeographic, codicological and conservation analyses. For the clarification of unexplained questions it will be necessary to support these analyses with additional research in the field of medieval manuscript bindings.

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Captions

- Figs. 1a, 1b, 1c: NUK MS 33 (1/1), National and University Library in Ljubljana, *Summa de iure canonico*, text-block dated 1300 – 1330, Maastricht provenience; rebinding probably in the first half of the 15th century.
- Figs. 2a, 2b: ŠAM 119 (4/U1), Maribor Diocesan Archive, text-block dated in late 14th or early 15th century, probably contemporary binding.
- Fig. 3: ŠAM 115 (1/5), Maribor Diocesan Archive, text-block dated middle or second half of 14th century, contemporary binding, Salzburg diocesan provenience.
- Fig. 4: ŠAM 132 (7/9), Maribor Diocesan Archive, paper text-block dated Padova 1441; contemporary binding, probably Padova.
- Fig. 5: NUK 29 (0/2), National and University Library in Ljubljana, Gregory the Great, parchment text-block ca. 1180. Stična Cistercian monastery – Slovenia, partly rebound probably in the 15th century, Slovenian territory.
- Fig. 6: ŠAM 110 (1/4), Maribor Diocesan Archive; parchment text-block first half 14th century, Köln provenience; rebinding probably first half 15th century.
- Fig. 7: UKM 136 (3/6), University Library Maribor, Pertus Lombardus, text-block 13th century; rebinding second half 15th century.
- Figs. 8a, 8b: NŠAL 19 (3/2), Ljubljana Archdiocesan Archive; Missal, text-block before 1412, partly rebinding second half of the 15th century.
- Fig. 9: NŠAL 17 (4/1), Ljubljana Archdiocesan Archive; Antiphony, text-block dated 1491, copied by Johannes von Werd de Augusta, Augsburg provenience; partly rebounded.
- Figs. 10a, 10b: NŠAL 18 (4/2), Ljubljana Archdiocesan Archive; Antiphony, text-block dated 1491, copied by Johannes von Werd de Augusta, Augsburg provenience; contemporary binding.
- Figs. 11a, 11b: NUK 141 (5/5), National and University Library in Ljubljana, paper text-block dated 1428–1460 – Stična Monastery, Slovenia; contemporary binding probably in Stična, partly rebounded in 1949 in Ljubljana.
- Fig. 12: NUK 27 (2/9), National and University Library in Ljubljana, parchment text-block late 14th or early 15th century – Jurklošter or Žiče monastery – Slovenia; contemporary binding probably in Žiče monastery, the spine covering partly reinforced around 1950.

References

- Alexandre, J. L. – Maitre, C. 1997. *Autun, Catalogue des Reliures Médiévales conservées á la Bibliothèque Municipale d'Autun*. Turnhout: Brepols.
- Bibliotheca Palatina*. 1986. Palatina Catalogue, Heidelberg.
- Clarkson, C. 1978. "The Conservation of early Books in Codex Form: A personal Approach: Part 1", *The Paper Conservator* 3(1978): 277 – 283.
- Clarkson, C. 1993. "English monastic bookbinding in the twelfth century". In *Ancient and Medieval Book Materials and Techniques*, eds. Maniaci M. and Munafo, P. F., 181 – 200. Vatican: Biblioteca apostolica vaticana.
- Clarkson, C. 1995. "Thoughts on sewing frame design for the book conservator", *The Paper Conservator* 19(1995): 41 – 54.
- Clarkson, C. 1997. "The Safe Handling and Display of Medieval Manuscripts and Early Printed Books". In *Post-print of Ljubljana Book and Paper Conservation Conference*, eds. Vodopivec, J. and Golob N., 141 – 188. Ljubljana: Arhiv Republike Slovenije.
- Federici, C. – Houlis K. 1988. *Legature Bizantine Vaticane*. Roma: Istituto centrale per la patologia del libro.
- Federici, C. 1993. *La legatura medievale*. Milano: Istituto centrale per la patologia del libro.
- Federici, C. – Pascalicchio F. 1993. "A census of medieval bookbindings: early examples". In *Ancient and Medieval Book Materials and Techniques*, eds. Maniaci M. and Munafo, P. F., 201 – 237. Vatican: Biblioteca apostolica vaticana.
- Franck, P. 1941. *A lost link in the Technique of Bookbinding and how I Found it*. Gaylordsville: The Hawthorne House.
- Goldschmidt, E. Ph. – Cantab, M. A. 1967. *Gothic and Renaissance Bookbindings*. Amsterdam: De Graaf.
- Golob, N. 1995. „Die Buchmalerei in Zentralslowenien“. In *Gotika v Sloveniji*, ed. Höfler J, 358. Ljubljana: Narodna galerija.
- Golob, N. 1996. *Twelfth-Century Cistercian Manuscripts The Sitticum Collection*. Ljubljana: Slovenska knjiga - London: Harvey Miller Publishers.
- Gnirrep, W. K. – Gumbert, J. P. – Szirmai, J. A. 1997. *Kneep en Binding*. Den Haag: Koninklijke Bibliotheek.
- Greenfield, J. – Hille, J. 1990. *Headbands*. New Castle: Oak Knoll Books.
- Gspan, A. – Badalić, J. 1957. *Inkunabule v Sloveniji*. Ljubljana: Slovenska akademija znanosti.

- Historical Survey of Ancient Chinese Books*. 1998. Beijing: National Library of China.
- The history of Bookbinding 525-1950 A.D.* 1957. Baltimore: The Walters Art Gallery.
- Hobson, A. 1992. *Fine and Historic Bookbindings from the Folger Shakespeare Library*, introduction, 7 – 12. Washington, D. C: Abrams.
- Houlis, K. 1993. "A Research on Structural Elements of Byzantine Bookbindings." In *Ancient and Medieval Book Materials and Techniques*, eds. Maniaci M. and Munafo, P. F., 239 – 268. Vatican: Biblioteca apostolica vaticana.
- Houlis, K. 1997. "Medieval Bookbinding Structures". In *Post-print of Ljubljana Book and Paper Conservation Conference*, eds. Vodopivec, J. and Golob N., 129 – 140. Ljubljana: Arhiv Republike Slovenije.
- Irigoin, J. 1978. "La reliure byzantine". In *La reliure medievale Trois Conférenced d'initiation*, eds. Baras, E., Irigoin, J. and Vezin, J, 23 – 35. Paris.
- Kebabian, J. S. 1967. *The binding of the Glazier Manuscript of the Acts of the Apostles (IVth or IV/Vth century)*. Berlin.
- Kos, M. – Stele, F. 1931. *Srednjeveški rokopisi v Sloveniji*. Ljubljana.
- Maniaci, M. – Muzerelle, D. 1996. *Terminologia del libro manoscritto*. Roma – Milano: Istituto centrale per la patologia del libro.
- Mazal, O. 1990. *Europäische Einbandkunst aus Mittelalter und Neuzeit*. Graz.
- Needham, P. 1979. *Twelve Centuries of Bookbindings*. New York: The Pierpont Morgan Library.
- Reed, R. 1972. *Ancient Skins Parchments and Leathers*. London: Seminar press.
- van Regemorter, B. 1948. "Évolution de la technique de la reliure du VIII au XII siècle", *Scriptorium* 2(1948): 275 – 285.
- van Regemorter, B. 1953. "Povjest jugoslovenskih cirilskih rukopisa", *Bibliotekar* 1 – 2(1953): 34 – 36.
- van Regemorter, B. 1958. "Le codex relié a l'époque Néo-Hittite", *Scriptorium* 12 (1958): 177 – 181.
- Sharpe, J. L., ed. 1996. *Roger Powell The Compleat Binder*. Turnhout: Brepols.
- Sheppard, J. M. 1995. "Some Twelfth-Century Monastic Bindings and the Question of Localizazion". In *Making the Medieval Book: Techniques of Production*, ed. Brownringg, L. L., 181 – 198. Los Altos Hills: Anderson – Lovelace.
- Szirmai, J. A. 1992. "Evolution of the Structure of the Medieval Codex: Consequences for Conservation and Restoration". In *Papers of the conference on book and paper conservation*, ed. Kastaly, B., 20 – 32. Budapest.
- Szirmai, J. A. 1999. *The archaeology of Medieval Bookbinding*. Aldershot: Ashgate.

- Umek, E. 1982. „Reformirani urbarji deželno knezjih gospostev za Kranjsko“, *Zgodovinski časopis* 36(1982): 311 - 321.
- Veziin, J. 1978. “La réalisation matérielle des manuscrits latins pendant le haut *Moyen Âge*”, *Codicologica* 2(1978): 15 - 51.
- Veziin, J. 1978. “La reliure occidentale au Moyen *Âge*”. In *La reliure medievale Trois Conférences d’initiation*, eds. Baras, E., Irigoien, J. and Veziin, J., 37 - 50.
- Vodopivec, J. 1999. “Restoration of the binding of the antiphonary from Kranj”, In *International Conference on Conservation and Restoration of Archive and Library Materials*, Erice 1996, 417 - 425. Roma.
- Vodopivec, J. 2000. *Vezave srednjeveških rokopisov - strukturne prvine in njihov razvoj = Medieval bindings in Slovenia : binding structures on stiff-board manuscripts*. Ljubljana: Arhiv Republike Slovenije.
- Vodopivec, J. 2008. “Select Medieval bindings from public archives and libraries in Slovenia”, In *La reliure médiévale: pour une description normalisée: actes du colloque international (Paris, 22-24 mai 2003)*, (Reliures médiévales des bibliothèques de France, Hors série), eds. Lanoë, G. and Geneviève, G., 75 - 103. Turnhout: Brepols.
- Zaluska, Y. 1989. *L’enluminure et le scriptorium de Cîteaux au XII siècle*. Brecht: Cîteaux.

Sažetak

Srednjovekovni uvezi: struktura tvrdih uveza u slovenskim zbirkama rukopisa

Cilj je radnje predstaviti istraživanje odabranih knjižnih uveza i njihove strukture na odabranim primjerima sačuvanih slovenskih srednjovekovnih kodeksa. Opis i analiza istraživanja ograničeni su na tvrde uveze rukopisa pohranjenih u zbirkama slovenskih javnih knjižnica i arhiva. Sintetski su predstavljene odabrane strukture uveza, tehnike uvezivanja i materijali koji su korišteni za uvezivanje ili preuvezivanje srednjovekovnih rukopisa do 16. stoljeća. Polazište istraživanja bio je popis sačuvanih spomenika knjigoveštva, koji obuhvaća sve raspoložive podatke uključujući primjerice i skice, šrafure (sjenčanja) olovkom i fotografije.

Doprinos je radnje predstavljanje metodologije korištene u istraživanju kao i opis procesa koji je rezultirao izradom obrazaca za opis koji se odnose na konzerviranje knjižnih uveza. Radnja je zaključena završnim opservacijama proizašlim iz analize slovenskih zbirki rukopisnih kodeksa.

KLJUČNE RIJEČI: srednjovekovlje, rukopisi, tvrdi uvez, uvezivanje, struktura, Slovenija, konzervacija knjiga.

