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13th century leather footwear from Vilnius Lower Castle

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Keywords

Medieval shoes, Vilnius Lower Castle, leather indoor shoes, reconstruction

Abstract

During the archaeological excavations in the territory of the Palace of the Grand Dukes in Vilnius, the remains of leather footwear dating back to the late 13th century was discovered. These were only the cut-off lower parts of the footwear, a pair inserted one into the other and stored in a box together with other exceptional artefacts of that time. The footwear was made of expensive dyed goat leather. The luxurious leather items of footwear were reconstructed on the basis of various conducted artefact tests and studies. Based on the construction properties, it can be assumed that they were intended for indoor wear. Artefacts of analogous construction are only rarely discovered. Known examples were discovered during the excavations in Velikii Novgorod, Tver, Hrodna and several other locations to the east of the Baltic Sea. The artefacts from these territories date back to the late 11th to early 14th centuries.

Introduction

The complex of the castles of Vilnius is one of the most prominent and valuable archaeological monuments in Lithuania, dating back to the medieval and the early modern periods. Periodic archaeological investigations, initiated in the 1980s, have continued to a varying extent to this day. Despite the fact that the scope of such investigations has decreased significantly following the restoration of the Palace of the Grand Dukes and the opening of the museum of the Palace of the Grand Dukes of Lithuania in 2013, they continue to delight researchers and amaze the general public with remarkable discoveries. A small-scale archaeological investigation carried out in the basements U, V and W[1] of the Palace of the Grand Dukes in 2014–2015 is no exception. The area of 35 sq m (Pukienė and Ožalas 2011, p. 153) was investigated in the northern wing of the eastern part of the palace constructed in the 1540s (Kuncevičius et al. 2015, pp. 201–207). In basement U, at a depth of 2–2.5 m (90.19–89.54 m.a.s.l.), the team of archaeologists succeeded in discovering the remains of a wooden outbuilding. The conducted dendrochronological study of the timber revealed that trees felled in 1281–1282 had been used for the construction of the outbuilding. The building had been taken down by the end of the 13th century and another construction – with wood dating back

[1] Three interconnecting cellars of the northern extension of the eastern wing of the palace.

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to 1297 or several years later – was erected on its remains (Baubaitė et al. 2016, p. 19).

A lot of valuable artefacts indicative of the diverse nature of the daily routine of the castle dwellers in the late 13th century were discovered inside the investigated two-room outbuilding, as well as its surroundings. Among the most interesting examples are a polychrome-painted wooden saddle containing elements of bone, horn and antler, and leather; richly-ornamented horse-riding gear; and a gold ring bearing floral decorations (Kuncevičius 2015, pp. 18–21). At the end of the archaeological investigation, the wooden outbuilding parts having been dismantled and transported to the conservation site, the cultural layer formed by the foundation construction of the northern wall underwent careful further study. In the peat layer formed at a depth of 89.00–88.45 m.a.s.l., above the sterile soil, a relatively large number of finds were discovered. It is also worth noting that fragments of coarse surface pottery were also found in this layer, together with traditional hand-modelled and wheel-thrown potsherds. A unique clubhead with floral ornaments can be singled out among the wooden artefacts of the layer, and also, a 2.5–3 mm glass bead and a copper-alloy ring with a flaring profile (Kuncevičius 2015, p. 5).

This article presents the finds of leather footwear discovered by archaeologists at the end of 2014. A number of other leather finds were also discovered, however, most of them were badly decayed. These are the remains of various straps, and bottom and outsides parts (Kuncevičius et. al. 2015, pp. 11–14, 16, 18). The purpose of some of the finds remains unclear. It is also worth mentioning that there were no leather scraps among the finds. Thus, in the late 13th century, leather was not processed at this site; only finished items were kept here. Among the finds handed over to restorers, a badly decayed, decoratively embroidered child's ankle shoe was identified and restored.

All the finds are stored at the Palace of the Grand Dukes of Lithuania. The leather finds from this find spot constitute only a small portion of the leather finds stored at the museum; they still have not been properly evaluated and await the attention of researchers. Currently, the most valuable finds that have been thoroughly studied and published are from the Renaissance period and come from the 1996 archaeological excavations of the western wing of the southern part of the Palace of the Grand Dukes of Vilnius Lower Castle (Puškorius and Kalėjienė 2005, pp. 56–67). The material from the earlier Middle Ages has only been published in a fragmented manner, i.e., the images of the best-preserved and restored finds have been published, often accompanied by scant scarce information about them (Dolinskas et al. 2010, pp. 148–151, 195, 200, 211; Urbanavičius 2010, pp. 232, 236, 332–333, 348; Puškorius 2011, pp. 14–16, 35–37, 39–44; Kalėjienė 2012, pp. 14–16, 35–37, 39–44).

1. Physical studies of the finds, construction properties and restoration

The shoe finds in question were delivered to the restoration laboratory directly from the archaeological investigation site. They were wet, and heavily contaminated with soil, sand, and other impurities typical of an archaeological environment. Parts of the shoes were discovered inserted one into the other.

The finds were badly deformed. The leather was delaminated in places. All shoe parts contained holes, tears, scratches and other mechanical defects caused by wearing. The bottom of the footwear – especially the heel areas – was more severely damaged. Here, the leather was more worn, and certain small fragments were missing.

While washing the finds under running water, a cherry tint to the leather became temporarily visible, which prompted an investigation to detect the dyes.

Cleaned and washed shoe parts were disinfected with 10% water solution Asepas-3. Low molecular weight PEG solution was used to conserve the leather. The leather was impregnated with 10% PEG-400 solution in the water – 2-propanol (Fig. 1). Following the impregnation of the leather, restoration works were carried out. First, tears in the heel parts as well as lower parts of the boot front of both shoes were glued. The glued places of larger tears were additionally reinforced by adhering thin leather patches from the inside of a shoe. A intricate layer of archaeological leather scraps was used for patching. Moreover, more prominent areas of leather delamination were glued in order to protect fragments of the grain layer from tearing; they were glued to the lower layer of the leather. Acetone adhesive Lascaux 498HV (30%) was used for gluing. After gluing, the surviving shoe parts were sewn together through the old sewing holes with polyester thread.

After the leather conservation work, morphological studies of the surface were conducted, and the artefact construction was clarified. It was determined by comparison with current reference samples of hides that all the surviving parts were made of goat leather (Fig. 1). Cattle leather was only used for the medium binding inserted in the lower part of both shoes (Fig. 2). The thickness of the goat leather is around 1.3 mm, while the thickness of the cattle leather is around 3 mm. Therefore, the seam running along the middle of the sole had to be strong enough. It was determined that these were the remains of a somewhat unusual footwear construction. They are to an extent reminiscent of campagas worn in the early Middle Ages (Puškorius 2020, p. 10). Only the lower sections of both

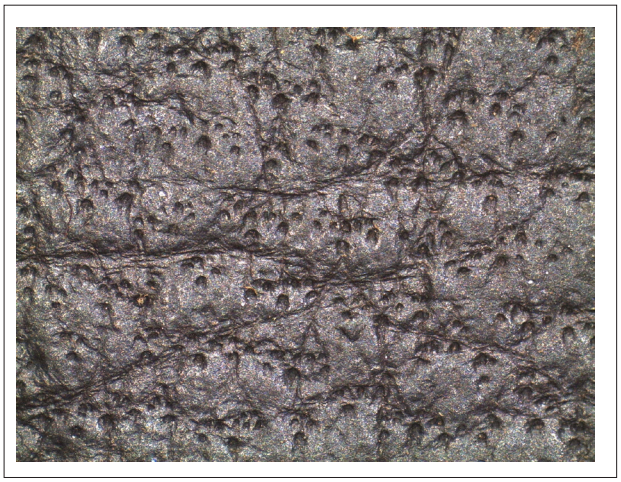

Fig. 1. A fragment of an upper detail made of goat leather. Photograph by Kalėjienė.

Fig. 2. A fragment of a medium part made of cattle leather. Photograph by Kalėjienė.

Fig. 3. Surviving footwear parts. Photograph by Kalėjienė.

shoes have survived, the upper parts were cut off. The fact that the upper parts were cut off is evident from the narrow leather strips from the front part of boot-legs that have survived at the top of insteps (Fig. 3). The shoes are not profiled for a left or a right foot. Functional deformations and abrasions, as well as other signs of wear, did not help to precisely identify a left or a right shoe. The footwear featured a pointed toe part (Fig. 4). Each shoe consists of an undivided vamp and an undivided back quarter.[2]

[2] It should be noted that there is no universally accepted detailed classification and terminology of early historical footwear. Usually, researchers use the terminology and classification that is adopted when speaking about contemporary standardized shoes. However, for obvious reasons, archaeological leather footwear of non-standard construction is of no priority for technologists of modern shoes. Therefore, the terminology designating a broader variety of old footwear is irrelevant; it is non-existent. Lithuanian archaeological literature suggests using the terms footwear and shoes (in the narrow sense) based on the construction features: items that do not have separate bottom sections and uppers are referred to as footwear, whereas those featuring a separate sole and an upper are called shoes (Puškorius 2007, pp. 229–256). Based on this principle, all of the finds could be regarded as footwear. Nevertheless, their complex shaping as well as the covered area of the leg would correspond to the term undivided shoe parts used by contemporary shoe technologists. When

Fig. 4. Restored leather artefacts. Photograph by Vytautas Abramauskas.

Fig. 5. Restored artefacts, view from the bottom. Photograph by Vytautas Abramauskas.

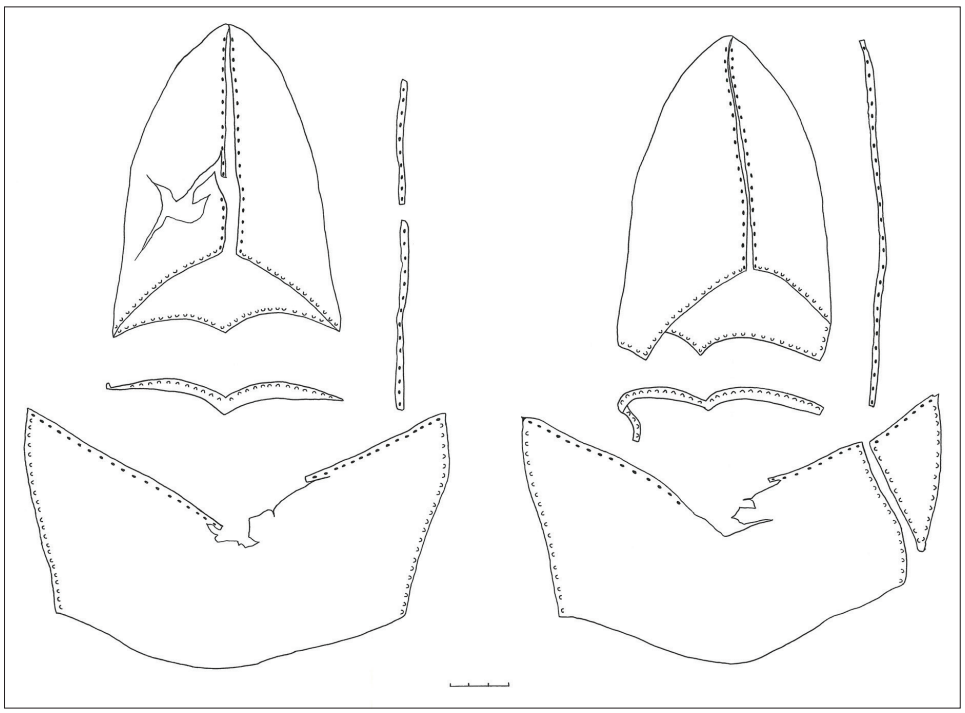

Fig. 6. Drawings of leather footwear parts. Drawing by Kalėjienė.

There is a triangular insert in the side of an undivided boot-leg of one of the shoes. Such a technological solution may have been adopted in order to use the available raw materials more economically. It cannot be ruled out that this may have been a predetermined feature as to which leg the shoe was intended for. Nevertheless, as the study revealed, it is not possible to determine on which foot the shoe was more often worn based on the signs of wea. The shoe parts were connected by various seams (Puškorius 2007, pp. 229–256). All the parts in the upper are affixed with butt seams, sewing them together on the inside of the leather (Fig. 5). Only the parts in the bottom sections are affixed with saddle seams, reinforcing the seams with medium parts of cattle leather. In this way, the boot front parts and the lower section of the back parts of boot-legs of both shoes were sewn together, thus forming the bottom of the shoes (Fig. 6).

describing the construction of the bottom parts of the finds, it is recommended to use the term undivided vamp, thus naming the entire part that covers the front part of foot to the top of an insole, and the term undivided back quarter (boot-leg), naming the part covering the heel area from the bottom and the sides. The word undivided simply refers to the integrity of a part at connection points, forming the maximum coverage of the foot (leg).

2. Laboratory tests of the finds

To analyse the finds better, before their conservation, the tests to determine a leather processing method, to identify pigments as well as the acidity of the leather finds before and after the conservation were carried out. A microchemical test revealed that vegetable tanned leather was used for the manufacturing of the finds.

The possibility of identifying leather dyes in archaeological material is much more complicated compared to the studies of historical finds. As has already been mentioned, when washing the leather, a cherry hue became temporarily visible on the leather surface but soon faded away. Following the restoration, only individual pools of the dye remained. The problem of the loss of colour of dyed archaeological objects (or even sudden deterioration of threads) due to a very rapid oxidation process has been recorded by archaeologists (Oiateva 1962, p. 81). Because of such a fast oxidation process of pigments, the true colour becomes visible to the naked eye only very briefly. Determining tanning materials or dyes in archaeological objects is not easy, especially when objects are found in a damp, humus or multi-component environment. No less complicated is the identification of mordants due to the contamination of the archaeological context (Vajanto 2016). This is possibly owing to the fact that the detected lighter elements – such as phosphorous, magnesium or calcium – can be accumulated from bones and the environment, while metals – such as iron or copper – came from decayed metal objects. As a result, a study of such objects often becomes a mixture of facts, assumptions, and theories.

The most commonly used method for identifying dyes or tanning materials is HPLC (high-performance liquid chromatography). However, the identification is not always possible if a sample size is very small and dye concentration is deficient, is not available. Moreover, there can be completely unknown colourants that do not correlate to any standards. Chemical degradation and changes, non-technological dyeing processes, poor preservation, and contamination can also cause errors in analyses (Evershed 2008, pp. 895–924; Elnaggar et al. 2017, pp. 133–147). Furthermore, HPLC does not have good sensitivity to condensed (red) tannins (Vajanto 2016). Thus even the most commonly employed method so far lacks accuracy.

As regards mordants or other inorganic materials used in leather processing, SEM-EDX (scanning electron microscopy with an energy-dispersive X-ray spectrometer) is the main method used for identification. For individual atoms, the emission of unique X-ray patterns is inherent. Furthermore, these characteristic X-rays are detected by the energy-dispersive spectrometer and identify as the sample's chemical elements (Moropoulou et al. 2019; Schreiner et al. 2007). In SEM images, mordant compounds usually appear as tiny particles on the object surface. However, archaeological finds are usually contaminated by the different archaeological contexts, making accurate detection particularly difficult (Püntener 2000, pp. 478–557).

In the case of the finds under discussion the leather that was delivered to the restorers aroused great interest because of its exceptional colour, which was not characteristic of the leather found in such an environment. The abnormal dark red leather colour called for more research (in addition to the identification of animal species and pH) in order to at least partially confirm or rule out the possibility that the leather might have been dyed or otherwise further treated more than any other leather generally found in dark brown or black colours. Such speculation was also prompted because the footwear model for which the leather was used is exceptional, comprised of very delicate, thin, and beautiful leather. 'This further supports the idea that dyed leather might have been used to make it.

From the very start, it can be partially ruled out that the leather may have been treated with tanning substances containing condensed tannins (it is known that condensed tannins used for leather tanning can result in red leather colour). However, regardless of their nature (hydrolysable condense), tannins tend to darken and turn black in contact with iron (or some other metal) compounds. So archaeological leather is usually treated with vegetable tanning. Regardless of what tannins are used, after some time in the ground, leather loses its original colour (turning dark brown or black). Nevertheless, in this case, the leather still had a distinctive red hue. For this reason, the possibility of dyeing was considered as another option.

The process of leather dyeing is probably as old as tanning, and the most common technique is mordant dyeing (Cardon 2007, p. 20) Usually, fibres and dyestuffs have a different charge, so, as a result, ion bonds are formed between a substance and dye compounds. Metal mordants added to the dyes increase the effect of dyeing by adding points to which dye compounds can attach. This could be omitted aluminium, iron, copper, tin, and chrome, and salts were/are used as typical mordants. To achieve the red colour, madder or dyer's madder (Rubia tinctorum L) is used. It contains organic anthraquinone compounds: ruberythic acid and pseudopurpurin. During fermentation, ruberythic acid converts to alizarin, and pseudopurpurin decomposes into purpurin. Such dyes are available in the roots of the Rubiaceae family of plants, and these were the most commonly used red dyes until 1868, when the first synthetic dyes were synthesised (Onem et al. 2011, pp. 81–87). Although less common than madder, another alternative for a red dye – Polish cochineal (Porphyrophora Polonica) – should be mentioned given its prevalence in Europe. This dye is obtained from small insects. Such

red pigments were common in central and eastern Europe, the Caucasus, and western Siberia and have been used since ancient times (Hofenk de Graaff 2004, p. 64). The first known mentions of this dye date back to the 9th century (Bagdzevičienė and Kruopaitė 2005, p. 272). It is also known to have been used for dyeing leather. Although both of these dyes belong to the class of anthraquinone dyeing agents, one of them is of animal origin and the other of plant origin, and in the presence of quality samples, their differentiation and identification is not difficult. However, in this case, the HPLC method, which would allow more accurate identification of dyeing or tanning agents, was not used due to the lack of technical possibilities and the poor quality of the sample. As a result, one can only guess at the organic aspect of the dyeing process.

The analysis of inorganic elements of the shoe leather using the SEM-EDX method, on the other hand, provided much more information. With the help of the SEM-EDX analysis, carbon, oxygen and sulphur were detected in the sample, and they are all typical elements of leather. Moreover, carbon and oxygen also came with sample preparation. Another detected element combination (Al+K+Si) can be linked with alum salts used as a dye mordant or for skin tawing. However, the high concentration of iron detected in the leather can also indicate that iron compounds may have been used as a mordant (Fig. 7). As can be seen from the analysis, the results can be interpreted in very different ways, and it is not possible to say precisely which elements exactly belong to which compounds and stages of leather processing.

The biggest surprise, raising the most questions, was the chromium identified in the leather. Thus it is difficult to say whether these chromium compounds may have been specifically used in leather tanning/dyeing or whether they resulted as impurities in other leather tanning materials. As previously mentioned, archaeological objects are often contaminated by the environment. It is difficult to ensure that no other objects cause contamination at the find site. The site of the leather finds was also checked. However, no potential sources of contamination were identified.

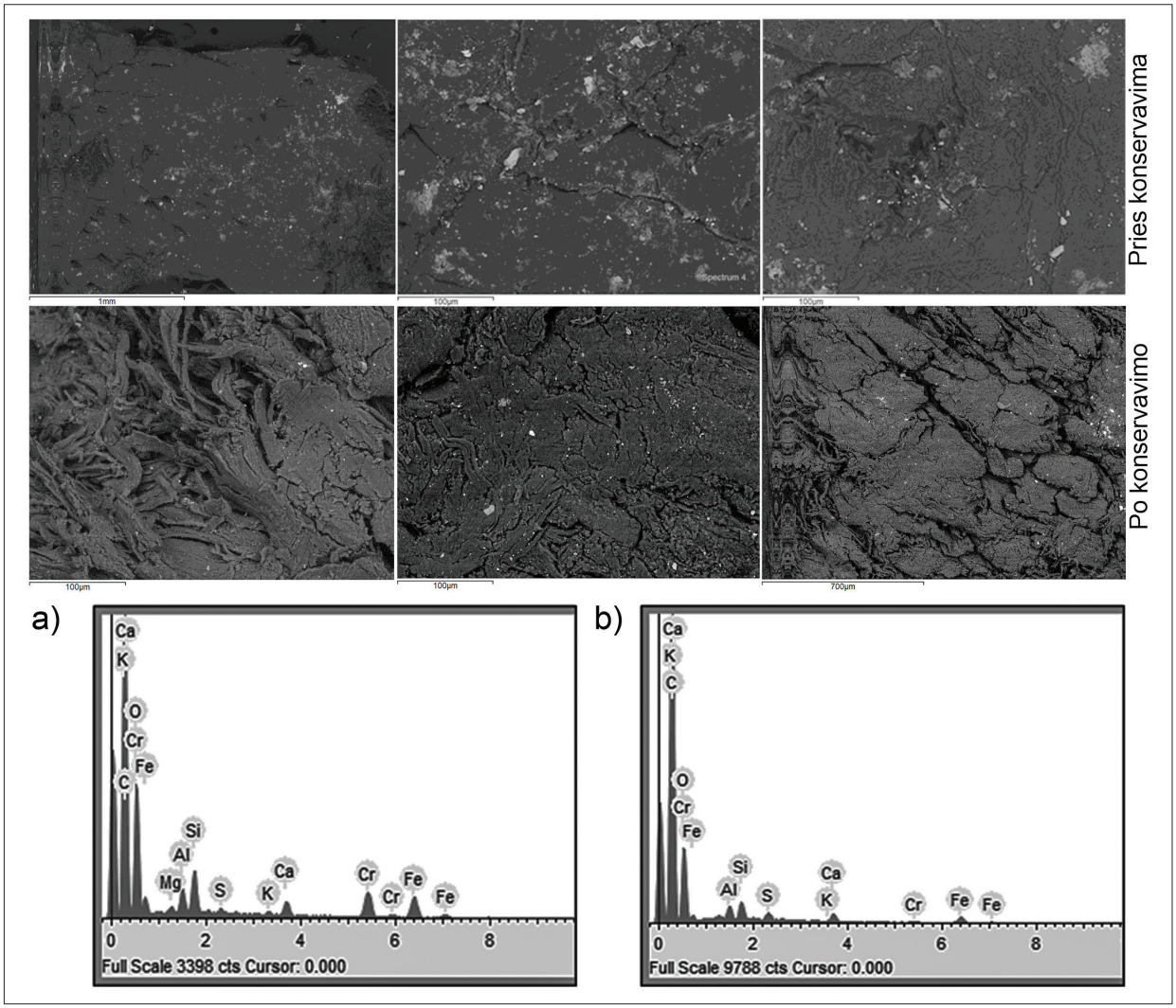

Fig. 7. The analysis results of the leather. Photograph by Steponavičiūtė.

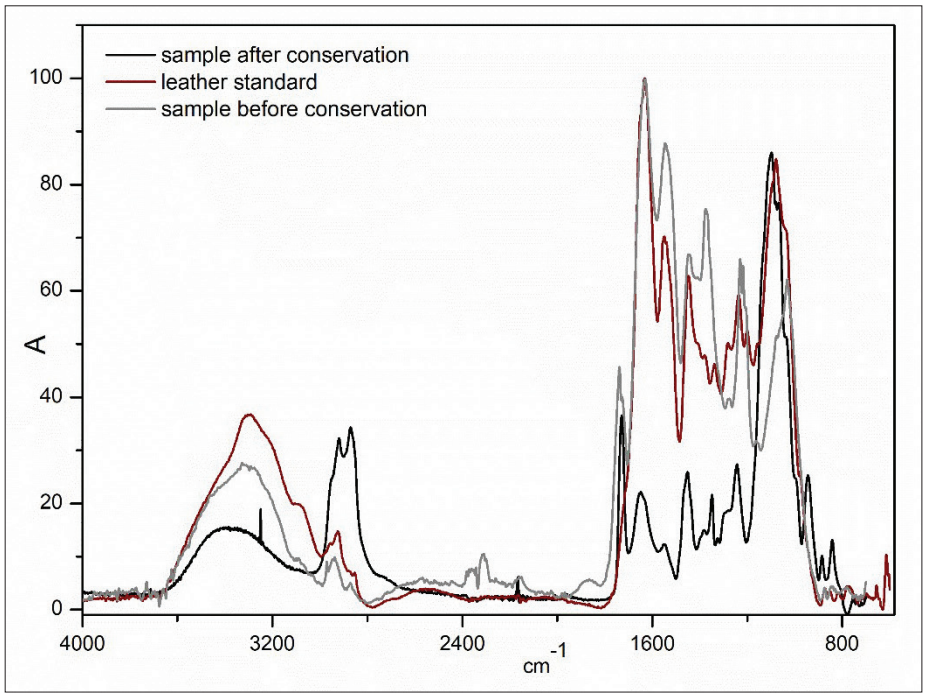

Fig. 8. Leather surface image with SEM before and after conservation, EDX spectrum of the leather samples (a) before and (b) after conservation. Spectrogram by Steponavičiūtė.

Extraneous surface contamination also helps to deny that iron, chromium (albeit in slightly lower amounts), and other compounds were detected after repeating the SEM-EDX analysis following the restoration and preservation processes. This indicates that these substances were not just surface contamination and are not easily removed or washed off during the leather conservation process.

In addition, leather ATR-FTIR spectroscopy (attenuated total reflectance – Fourier transform infrared spectroscopy) was performed. The obtained spectra before and after restoration were compared to the leather standard spectrum (Fig. 8). Slight deviations from the leather standards were observed. Unfortunately, they do not provide more information about the dye material. Additionally, pH measurements were performed before and after the restoration process. Before the restoration, the leather pH was 5.9, and after conservation, the pH increased slightly – to 6.3. Although at present there is no clear evidence – apart from the SEM-EDX analysis – suggesting that the leather may have been dyed, the non-standard leather colour and elemental analysis already show that the leather used for this footwear is definitely different from other typical leather samples found in the surroundings.

3. The problem of the purpose of the finds

Archaeological finds of identically constructed artefacts have been made further east of the Baltic Sea, in the cultural layers of the old cities of Russia and Belarus, much more often than in the cities of Lithuania. Such artefacts are not often found among other archaeological finds of leather footwear; however, they are not particularly rare either. This footwear is of somewhat unusual construction, and debates regarding its functional purpose have been continuing for a while. Kurbatov was among the first researchers to have paid attention to such finds (Kurbatov 2004, pp. 218–225). When discussing this type of leather finds from the territories of Tver Kremlin and Rurikovo Gorodische, he mentioned the thickness of the leather used for their manufacture (0.8–1.0 mm) and indicated that the shoes were made of the leather of sheep and goats. Fragmentally surviving finds were identified by the researcher as the remains of indoor shoes dating back to the end of the 13th to the first half of the 14th century (Kurbatov 2004, pp. 221–222). After other researchers became more interested in such footwear, it was determined that items of this type could already be found in the cultural layers of the old cities of the second half of the 11th century (Osipov 2011, p. 51). It was observed that such artefacts did not have any decoration in contrast to the shoes embellished with embroidery or openwork ornament which were highly popular at that time. Moreover, the author offered another interpretation of the footwear based on an experiment. When reconstructions of such footwear were made, it turned out that it was highly uncomfortable to wear. Neither felt nor leather pads added any further comfort. Based on the archaeological material of the archaeological excavations in Velikii Novgorod, as well as on the historical context, the author attributed a

specific purpose to this type of footwear, i.e., that it was intended to be worn in repentance for sins (Osipov 2011, pp. 51–53). A similar footwear construction with a seam running along the middle of the sole was also discovered in a wider region. This is known not only from the regionally close excavations carried out in Novgorod Castle, but also from the burial of the 8th–9th century in Karachayevo-Cherkesiya cemetery (Caucasus), as well as from funerary monuments in Hungary (9th–11th centuries) (Kurbatov 2007, p. 98). Usually, this type of footwear is only discovered in fragments in the archaeological layers of cities. During the archaeological excavations in Staraya Russa, a lot of remains of such footwear were found, most of which – just like in other find spots in the old cities – consisted of narrow tread sole cuts and medium parts, i.e. elements that were no longer necessary after the remaining leather had been cut off to be used for the manufacturing of other artefacts. Nevertheless, eventually, remains containing upper parts were also discovered. It was determined that the footwear covered the leg up to the mid-calf or the knee (Toporova et al. 2021, pp. 113, 115).

The footwear finds from the territory of Vilnius Lower Castle are the only known artefacts of that type to have been dyed. It would now be difficult to decide who the owner of these exceptional and luxurious objects placed in the box might have been. The remains of the footwear with cut-off boot-legs were found inserted one into the other so that they would not get lost. That basically means that even after the upper parts were removed, the footwear might have still been worn for a while; it was not intended to simply be disposed of. Based on archaeological finds from various epochs, only the boot-legs of ankle shoes and higher boots were cut off for secondary use of the leather. The quarter of ankle shoes usually covered only the lower part of the calf, thus the amount of leather was insufficient to be cut off for secondary use. For this reason, found ankle shoes usually have their upper parts intact. As a result, it is highly probable that this footwear must have covered the leg slightly higher than ankle shoes – at least up to the mid-calf or the knee. Based on this, having cut off the upper parts for secondary use, the heel and the front parts were visually modelled according to the shoe style prevailing in Vilnius in the 14th century, i.e. with pointed edges at the top of the insole and the heel part (Puškorius 2020, p. 14). The two narrow strips from the cut-off boot-legs left right near the seams also pose questions. It cannot be ruled out that the footwear might have been manufactured from leather of different colours. This way, the narrow strips could have imitated the edge bindings of a contrasting colour often used in shoes of the 12th–14th centuries.

In the 12th–14th centuries, the shoes worn by the aristocracy in our region were highly ornate. Owing to the influence of Byzantine culture, the tradition of decorating shoes with coloured embroidery, seed beads, or even pearls has been also observed in northern regions of Europe, especially in the iconographic material of the old Orthodox churches and monasteries situated in the area of Kyivan Rus'. The drawings produced in 1940 depicting the fragments of the frescoes from the cult objects in Velikii Novgorod – destroyed during the Second World War – reveal the shapes and splendour of the footwear. The frescoes feature one-piece sock-like footwear of soft construction, worn by both Christian saints and wealthy laymen (Yakunina 1947, p. 43). This type of footwear was multicoloured. In the 11th–14th centuries, along with black or brown footwear, red, violet, blue, yellow and green footwear was also known (Guzevičiūtė 2001, p. 37; Artsikhovskiĭ 1948, p. 248). For example, the 1252 Hypatian Letopis (Codex) mentioned that Daniel of Galicia wore the following luxurious footwear: boots of green leather, embroidered with gold (PSRL 1962, p. 814).

Based on the laboratory tests conducted during the restoration of the finds, as well as on the historical and archaeological context, a reconstructive drawing of these finds was produced (Fig. 9). It is very likely that this footwear was made of leather of a colour other than the shades of black or brown typical of that time. Depending on the raw material employed during the tanning process, the leath-

Fig. 9. Footwear reconstruction. Reconstruction by Puškorius, drawing by Mantvidas Mieliauskas.

er would naturally acquire such hues. All other colours, however, had to be achieved by employing various dyes (Kalėjienė 2014, p. 218). Shoes of unusual colour were more expensive and more exceptional. It was the colour that actually highlighted the status of the owner. Even though the leather pigment could not be clearly identified during the laboratory tests, the red colour of the footwear emphasises the uniqueness of the artefact and is historically plausible. Both organic and mineral dyes had been used to obtain this colour since ancient times (Bagdzevičienė and Kruopaitė 2005, pp. 72–88). The possibility should not be excluded, though, that the entire item of footwear, or its upper part – bearing in mind the narrow leather strips left at the top – could also have been of a different colour, e.g. yellow, blue or green. It must be noted that in the absolute majority of cases, no changes in the colour of leather occur when washing archaeological leather finds; the leather remains of black or slightly brownish colour. The value of the present finds is further emphasised by the fact that even with cut-off boot-legs they were stored in such a way so as not to get lost. It is only logical to assume that this was done for a reason – the footwear was exceptional, unlike any other footwear of that time.

Based on the preserved parts, it is impossible to determine the height of the footwear. It can be stated that the cut-off parts were large enough to justify their removal in order to use the leather for the manufacturing or repairing of other artefacts. Therefore, it can be assumed that the footwear covered at least half or, perhaps, the entire calf. In the Middle Ages, leather processing was highly time-consuming and required a lot of materials. Before selling, processed leather had to be additionally softened with the help of mechanical means and rubbed with fat and oils (Kalėjienė 2014, pp. 213–218). As a result, leather was soft and pliable. For this reason, the upper parts of the footwear were folded down during the reconstruction. Such folding-down of the upper parts of boot-legs is often depicted in the iconographic material of both eastern and western Europe (Drążkowska 2011, p. 112; Osipov 2006, p. 115). In medieval iconography, the individuals wearing boots or ankle shoes were almost always categorised as the elite.

Conclusions

The finds discovered by archaeologists in the late 13th-century cultural layer in the territory of Vilnius Lower Castle are rare examples of indoor leather footwear from the Middle Ages, which offer a lot of new information. Even though the finds were not discovered in their entirety, the context of their discovery, as well as the information revealed during the restoration, enables the classification of the finds as luxurious artefacts. The presented final reconstruction is one of the most likely construction variants of such footwear. Even though there is no data regarding the likely height of the footwear, it is highly possible that it covered the leg at least up to the mid-calf. The find circumstances prove that the artefact was preserved rather than thrown away, meaning that it had a certain value. The features of the pigments observed during the washing of the finds were not recorded during the detailed examination and washing of other leather finds discovered in the vicinity. The recorded fact of the pigment is directly related to these finds. Analogous data on the observed pigments have not been found in the published archaeological literature. Although goat leather is strong and stretchy, it is too thin to be worn outdoors comfortably, even with inserted pads. There is no archaeological data for goat leather being used for the manufacturing of regular shoes. The discovered finds contained no pads and indeed it would seem that no pads had been used, otherwise the edges of any more rigid pad would have undoubtedly left an imprint on the edges of the footwear itself. The fact of the natural wear of the footwear confirms that it was worn for a long time, and its construction did not interfere with walking normally and feeling comfortable. According to the wear of the tread sole, it is obvious that the footwear was worn as per socks, i.e. without differentiation of the left from the right.

The restored medieval leather footwear finds are of great significance for the overall understanding of the fashion of our epoch. Based on all the data, such footwear was intended for representatives of high social status in the society. It is regarded as an artefact meant for the elite and was worn, possibly, during various representative events.

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XIII amžiaus odinis apavas iš Vilniaus Žemutinės pilies

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Santrauka

2014–2015 m. archeologinių kasinėjimų metu Valdovų rūmų teritorijoje Vilniuje buvo rasta XIII a. pabaiga datuojamų odinio apavo poros liekanų (1–3 pav.). Tai buvo apavo apatinės dalies nuopjovos. Jos rastos įmautos viena į kitą. Kartu buvo rasta ir kitų išskirtinių to laiko dirbinių: polichromine tapyba ir kaulo bei rago detalėmis puoštas medinis balnas, mediniai drožinėti kamantai, augaliniais ornamentais dekoruota ąžuolinė buožės galva, auksinis žiedas ir siuvinėtas auliukinis. Odinis apavas buvo pasiūtas iš brangios dažytos ožkos odos (4–6 pav.). Valant žemes nuo radinių, vizualiai buvo užfiksuotas tamsiai raudonos spalvos pigmentas. Sureagavęs su šviesa, jis tuojau pat negrįžtamai suiro. Ant odos paviršiaus išliko tik nedaug jo likučių. Atlikus tyrimus, nepavyko nustatyti pigmento spalvos ir tikslios sudėties, nes jis buvo labai suiręs (7, 8 pav.). Dirbinyje nebuvo pado, tad jis priskir-

tas odiniam apavui. Analogiškos konstrukcijos dirbinių aptinkama retai. Jų žinoma iš Didžiojo Naugardo, Tverės, Gardino ir dar kelių kitų vietų į rytus nuo Baltijos jūros. Šioje teritorijoje radiniai datuojami XI a. antrąja puse – XIV a. pirmąja puse. Mokslininkai iškėlė kelias tokios konstrukcijos apavo paskirties versijas – nuo skirto avėti tik patalpose iki vienuolių atgailai pritaikytos priemonės (išvada padaryta pamėginus vaikščioti avint šių dirbinių rekonstrukcijas). Remiantis atliktais kompleksiniais radinių tyrimais, buvo rekonstruotas prabangus odinis apavas (9 pav.). Laikomasi nuomonės, kad jis buvo pritaikytas avėti tik patalpose ir atliko reprezentacinę funkciją.