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The Art of Defense. The Use, Craftsmanship, Decoration and Symbolism of Defensive Equipment from the Late Roman Age to the Early Post-Medieval Period. International Conference in Sanok, Poland

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After a 5-year break caused mainly by the COVID-19 pandemic, the 15th conference in the series of the Professor Andrzej Nadolski International Arms and Armour Colloquium was held on 4th–6th June 2024. As previously (see Skupniewicz 2020), the meeting took place in the underground rotunda of the Historical Museum in Sanok, the main organiser of the event, which also celebrated its 90th anniversary this year. The following institutions also participated in the organisation of the conference: the Institute of Archeology and Ethnology of the Polish Academy of Sciences, Department of Research on Ancient Technologies in Łódź; the Institute of Archeology of the Łódź University; the Archaeological Museum of the Middle Odra River in Świdnica near Zielona Góra; and the Museum of Folk Architecture in Sanok.

The main subject of this year's conference was defensive equipment – an attribute of a warrior that was supposed to protect him against attacks, thus increasing his effectiveness on the battlefield and often distinguishing him among other combatants. The organisers encouraged participants to discuss issues of the historical evolution of protective weapons, their practical use, techniques and centres of their production as well as the symbolism and decoration of armour, its role and availability in past societies and the realism of representations in iconography.

38 researchers responded to the organisers' invitation, mostly from Poland, but also from Bulgaria, the Czech Republic, Germany, Great Britain, Italy, Lithuania, Romania, Slovenia, and the United States (Fig. 1). Unfortunately six of them did not make it to the meeting and the conference program was reduced by several interesting papers¹. It should be noted here that, unlike the previous meeting (Skupniewicz 2020, 303),

almost all the papers were delivered in English, which supported the integration of conference participants and increased their involvement in the discussion. The only paper presented in Polish was accompanied by a multimedia presentation in English and an extensive abstract. The conference was also accompanied by a poster session, during which 5 posters were presented. The three-day proceedings began with an opening speech delivered by Jarosław Serafin, Director of the Historical Museum in Sanok. The subsequent speeches and presentations will be reported in thematic order.

The chronological scope of subjects presented at the conference dated back to ancient times. This period was discussed in three thematically similar presentations, concerning shields used in the territory of the Central European Barbaricum. Bartosz Kontny (University of Warsaw, Poland) presented the issue of shields during the Roman and Migration Periods, including their development reflected in the typology of shield bosses, methods of fighting, symbolic meaning and possibilities of reconstruction of the wooden elements thanks to grave and swamp finds, as well as miniature shields serving as amulets ("Barbarian shields in the Roman and Migration Period, their use, decoration and symbolism"). In the discussion that followed the speech, it was wondered whether spiked shield bosses may have been used to deliver blows, similarly to what is seen in late medieval fighting treatises.

This paper was perfectly complemented by two posters. In the first one, Juliusz Gręda (University of Warsaw, Poland) discussed imitations of Roman shields in Barbaricum. These imitations included hemispherical shield bosses similar to the fittings of scutum shields used by Imperial legions and decorations painted on the surface of the shields ("Imitations of the Roman

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¹ D. Breiding (Germany), "Arming Chains, ca. 1250 to ca. 1520"; K.A. Downen (Great Britain), "Marian Iconography on European Armor"; T. Grabarczyk, (Poland), "Protective armament of Polish cavalry in the war against Moldavia in 1538"; A. Ionita (Romania), "Military Equipment of the Late Turanic Nomads in the light of funeral discoveries between the Carpathians, the Lower Danube and the Dniester Area"; A. Nițoi (Romania), "Late medieval shields from the Arsenal of Sibiu (15th–16th centuries)"; J. Ościłowski (Poland), "The armour from Masovia and the Dobrzyń Land in the 11th–15th centuries".

Shields from the territory of Barbaricum”). A team composed of Anna Lasota-Kuś (Polish Academy of Sciences, Kraków Branch, Poland), Kalina Skóra (Polish Academy of Sciences, Łódź Branch, Poland) and Joanna Zagórska-Telega (Jagiellonian University, Poland) presented new finds of miniature shields, a phenomenon known only from Poland, found during excavations in Pomerania and Lesser Poland (“New findings of miniature shields from cemeteries of the Przeworsk and Wielbark cultures”).

Several presentations were devoted to mail armour. David Edge (The Wallace Collection, Great Britain) explained opportunities offered by traditional metallographic examinations and newer, non-invasive methods such as neutron diffraction, which do not require sampling and are also suitable for the analysis of completely mineralised artefacts (“Thoughts on the Construction of Mail Armour arising from its Analysis”). Examples include research on Celtic mail, in which phosphorus was discovered thanks to the use of neutron diffraction, as well as research on methods of production of solid mail rings, in which traditional metallography turned out to be much more useful. The latter method was also useful in identification of early modern mail hauberks of Indian origin sold to collectors in the West as artefacts from Eastern Europe.

Subsequent researchers presented then the results of their research on specific artefacts. A team composed of Ludwika Jończyk (University of Warsaw, Poland), Grzegorz Żabiński (Jan Długosz University in Częstochowa, Poland), Tomasz Goryczka and Krzysztof Aniołek (University of Silesia, Poland) presented the results of the metallographic analysis of one of the mail rings from the Yotvingian cemetery of Mosiężysko, belonging to the early medieval settlement complex in Szurpiły (“Mail armor from Szurpiły in Yotvingia and its metallurgy”). The analysis has demonstrated the use of iron with a very high phosphorus content. Such metal was usually avoided in weapons production because it was considered brittle. The authors suggest that the examined mail was made in the Yotvingian environment with local iron obtained from bog ores, perhaps because better quality materials were less available and were used to produce more demanding weapons.

Arkadiusz Michalak (Archaeological Museum of the Middle Odra River in Zielona Góra with the seat in Świdnica, Poland) and Jiří Hošek (Czech Academy of Sciences, Czech Republic) presented a mail discovered in 2021 during the regulation of the Odra riverbed in Krosno Odrzańskie. Its rings, partly riveted and partly forge-welded, were made of iron and of copper alloy (“A Medieval mail hauberk from Krosno Odrzańskie. Notes on construction and technology”). Traces that are visible on the mineralised surface of the lump suggest that the hauberk was transported in a leather bag. Metallographic analyses indicate that the mail was made in the 12th or 13th century, but other artefacts discovered in this place prove the existence of a ford used in the Late Middle Ages.

Sigita Mikšaitė (National Museum of Lithuania, Lithuania) introduced the audience to the discovery of



Fig. 1. Arms and armour conference in Sanok: 1 – conference participants; 2 – Tomasz Kurasiński speech; 3 – Marcin Engel speech; 4 – Adam Kubik, David Nicolle, Piotr Kotowicz and Valery Yotov. Photo D. Szuwalski

Ryc. 1. Konferencja bronioznawcza w Sanoku: 1 – uczestnicy konferencji; 2 – referat Tomasza Kurasińskiego; 3 – wystąpienie Marcina Engela; 4 – Adam Kubik, David Nicolle, Piotr Kotowicz i Valery Yotov. Fot. D. Szuwalski

mail from the Obeliai cemetery in 1980 (“Re-opening an old case: a medieval mail in Obeliai [Lithuania] cremation grave”). Considered to be the largest piece of armour ever discovered in Lithuania, it consists of only parts of the sleeve and chest and has not been thoroughly analysed yet. The mail was originally placed in a cremation grave, in a cemetery used in the 13th and 14th centuries, which was then destroyed during the construction of 15th century burial mounds.

There were also presentations of other kinds of armour, such as lamellar and scale armour and coats of plates. Piotr Kotowicz (Historical Museum in Sanok, Poland) introduced the conference participants to the issue of the use of scale and lamellar armour in south-eastern Rus’ (“Lamellar and Scale Armour in the Halych-Volodymyr Duchy”). Although they are mentioned quite often in written sources from this area, just over 100 artefacts are known so far, discovered mainly during excavations of strongholds. The highest numbers of such finds come from the strongholds in Sanok (Poland) and Urych (Ukraine). Individual finds date back to the 8th century, but most of them come from the 13th and 14th centuries. Therefore, the spread of this type of protective equipment should be associated with the Mongol presence in Eastern Europe in the 13th century.

Paulius Bugys (National Museum – Palace of the Grand Dukes of Lithuania, Lithuania) discussed parts of gilded lamellar armour discovered in Vilnius (“Gilded armour plates from Vilnius Lower Castle: origins and interpretations”). They come from cultural layers of the Lower Castle in Vilnius, which was part of the impressive residence of the Grand Dukes of Lithuania, dated back to the second half of the 14th and to the 15th centuries. Together with the armor made of copper alloy, which is too soft to be used in battle, they testify to the existence of lamellar armour made for the needs of elites, including the court of the Grand Dukes.

The poster by Wojciech Kawka (Upper Silesian Museum in Bytom, Poland), Grzegorz Żabiński (Jan Długosz University in Częstochowa, Poland) and Krzysztof Aniołek (University of Silesia, Poland) presented a large, single plate from the knightly residence in Stare Tarnowice in Upper Silesia (“Coat of plates element from Stare Tarnowice”). The authors determined that it was forged of low-carbon steel and comes from armour similar to Type II coat of plates discovered on the battlefield near Visby. It represents early designs for the construction of this type of armour, characteristic for the first half of the 14th century and previously known in Silesia only from iconography. Unfortunately, the scarcity of other artefacts from the site and the paucity of written sources make it necessary to date the find widely to the 14th century.

Piotr Strzyż (University of Łódź, Poland) undertook a re-analysis of a backplate from the knightly residence in Borówek, so far a unique find in Poland, discovered together with 6 rectangular breastplate elements (“Remains of Armour from the Medieval Knight’s Manor House in Borówek near Łowicz [PL]”). This allowed to supplement previous observations regarding the number of rivets, the existence of additional elements and the method of attaching the backplate to the

suit of armour. The measurements of the thickness of metal were also made throughout the entire artefact. Microhardness tests of the used material are also planned in the near future.

Adam Lech Kubik (University of Siedlce, Poland) and Aleksander Piasecki (Podlaskie Museum in Białystok, Poland) presented the results of the conservation of a helmet and a brigandine (“Further analysis of a medieval helmet and brigandine plates from the collection of the Podlaskie Museum in Białystok”) confiscated with other military items at the Polish-Belarusian border crossing in Bobrowniki (cf. Kubik, Piasecki 2020). Rectangular armour pieces with rivets made of copper alloy were found inside the helmet, where they stuck due to corrosion. The helmet has a very interesting form of a conical bowl forged from a single piece of metal. Its edge is decorated with a band made of three pieces of metal sheet, cut into the shape of a crown. The edge of the helmet went deep onto the warrior’s face. The arched cutouts for the eyes with a short nasal placed at the front were additionally decorated with a metal element resembling eyebrows. Both the helmet and the brigandine date back to the 14th and early 15th centuries.

Daniel Gosk (Malbork Castle Museum, Poland) carried out a meticulous analysis of the pavise bearing the coat of arms of the Swiss town of Winterthur, kept in the collection of Malbork Castle (“Winterthur pavises in the Malbork Castle Museum and the Royal Armoury in Stockholm”). This shield and an identical one stored in Sweden stand out from other known pavises from Winterthur with an incorrectly painted coat of arms and a sharply shaped central ridge. A new analysis of the Malbork specimen revealed a number of further anachronisms and inaccuracies (for example, the use of numerous small nails to attach a leather covering) proving that the artefact is a replica made in the 19th century. The researcher thus raised a very important issue of the creation of replicas of artefacts for exhibition purposes. This phenomenon was popular at the turn of the 19th and 20th centuries. After the dispersion of numerous collections and the loss of documentation during the world wars, it poses now a problem for researchers. A correct identification of such replicas is essential in the work of museum specialists.

Marco Vignola (independent researcher, Italy) was the only one who based his study only on written sources and more precisely – the extensive municipal archives of Milan. Thousands of handwritten documents from the Middle Ages collected in the archive require titanic work and full commitment of researchers. On the other hand, these sources allow for a very detailed description of the life and activities of Italian arms manufacturers. Marco Vignola presented new discoveries about Tommaso Missaglia, complementing the already published biography of this Milanese armourer (“Tommaso Missaglia and his time: new documents on the history of Milanese armour”). Particularly interesting was the information regarding the takeover of another armourer’s workshop, making researchers aware of the scale of production of defensive equipment and the corporate nature of the activities of Italian

craftsmen. The value of archival sources is increased by the fact that large areas of medieval Milan were destroyed during modern and later construction projects, during which the archaeological layers were lost. Much space in the subsequent discussion was devoted to the medieval naming of individual types of body defences.

Four papers were devoted to the ritual and social function of weapons. Tomasz Kurasiński (Polish Academy of Sciences, Łódź Branch, Poland) presented the results of considerations on the scarce presence of parts of defensive armament in early medieval inhumation graves from Poland. These finds merely include fragments of mail, shield fittings and a single helmet from Silniczka (“In full armor to the afterlife? The problem of the occurrence of armour elements in early medieval burial grounds in Poland”). The few finds of shields can of course be explained by the decay of the wood from which they were made, and the sporadically used metal fittings may be difficult to identify due to corrosion. However, armour and helmets were considered too expensive, so they were placed only in the graves of the elite or in fragments as *pars pro toto*.

Marcin Engel (State Archaeological Museum in Warsaw, Poland) examined a similar issue for territories inhabited in the Early Middle Ages by the Yotvingians, also with regard to sacrificial offerings (“Elements of defensive equipment as grave and sacrificial offerings in the Yotvings territory”). As archaeological examinations of cemeteries have shown, elements of defensive equipment, as well as other elements of weapons, are much more frequently discovered in Yotvingian cremation graves, and therefore the warrior ethos was much more pronounced in this culture. However, as in the Piast state, the protective armament was deposited mainly in fragments, as *pars pro toto*. This is clearly seen in the example of the rosette-shaped applications of helmets from the cemetery in Szurpiły, which were deliberately torn off the helmets before being placed in the grave.

Lech Marek (University of Wrocław, Poland) addressed a question whether protective equipment could be perceived as an indicator of material status, assuming that the most common elements should be searched for in the available material. Such finds can be treated as a standard and reference point, and then used in comparative studies on the sociotopography of habitats (“Late medieval armour in Silesia. Elite apparel or functional object”). Among the cases discussed was Wrocław, where in the 15th century the prices of plate breastplates were much lower than those of mail hauberks. The production of the latter was much more time-consuming, which explains the widespread use of cuirasses in private armouries of burghers. A bascinet recently discovered in a latrine in Nysa can also be considered widely available in the Middle Ages. Observations regarding the armour discovered at Szczerba Castle, destroyed by the Hussites during the siege in 1428, also turned out to be interesting. As shown by the analysis of the distribution of the finds, the old-type coats of plates remained unused in the warehouse in the tower, while newer brigandines were more eagerly worn by the castle’s defenders during the final assault.

Alan Williams (University of Loughborough, Great Britain) argued that although the possession of armour improved the status of a warrior and this effect was enhanced by the use of various decorations, such as the presence of non-ferrous metal elements in the armor suit, protection of its user remained the most important function of defensive equipment (“When did decoration ever take precedence over functionality and efficiency?”). The speaker based his conclusions on metallographic analyses and measurements of metal microhardness of artefacts dating from Antiquity to early modern times. Particularly interesting was the presentation of analytical techniques that did not require sampling. However, at least a partial separation of the decorative and protective functions can only be observed since the Thirty Years’ War when the mass production of weapons for the fighting armies appeared.

Some of the presentations concerned the protective equipment more broadly in the area selected by the authors. Valery Yotov (Varna Museum of Archeology, Bulgaria) presented new finds of elements of early medieval lamellar armour from Bulgaria found in the last 20 years (“The early medieval defensive equipment of the Balkans [archaeological and artistic examples]”) as a supplement to the information contained in his doctoral thesis from 2004. In addition to armour lamellas made of metal and bone, other sources on this issue were also dealt with, including stone pillars erected in the former capitals of the Bulgarian kingdom. The inscriptions in Old Bulgarian covering these pillars inform about the military and diplomatic successes of the rulers of the First Bulgarian Kingdom, but also about the numbers and weaponry of their army.

This presentation was supplemented by Yoto Valeriev’s (independent researcher, Bulgaria) poster presenting finds of late antique and medieval helmets from Bulgaria, found in the sites of Voivoda, Yatrus, Asenovgrad and Novae, along with considerations on their chronology, as well as iconographic analogies (“Late Antique and Medieval Helmets from the Bulgarian Lands”).

Tomaž Lazar (National Museum of Slovenia, Slovenia) introduced the conference participants to the results of research on late medieval protective armament from the area of today’s Slovenia (“Armour in the Slovenian lands during the High and Late Middle Ages”). Due to scarcity of the original artefacts and archaeological finds from the epoch, research must be based mostly on written and iconographic sources. Their analysis leads to the conclusion that, despite the proximity and influence from Italy and Pannonia, the development of protective weapons was similar to that in southern Germany. This was due to the early incorporation of the lands of Slovenia into the Holy Roman Empire and the migration of German nobility to the south.

David Nicolle (Royal Asiatic Society, Great Britain) discussed the problem of protective equipment in distant lands of the Indian subcontinent in the Middle Ages (“The Representation of Armour in Medieval India”). Researching this issue is difficult due to the scarcity of iconographic sources presenting armed men. This may be due to religious and cultural aspects of the Hindu,

Jain and Buddhist civilizations, and from the 8th century onward also to religious rules imposed by Islamic conquerors of India. However, the analysis of the few preserved sculptures, mainly figurines and reliefs on the so-called “hero stones”, shows influences coming first from the Hellenistic and Roman cultures and later from Sassanian Iran, Central Asia and China. An interesting observation is the visible effect of the hot climate on the shape of the armour, which was usually limited to protecting the torso while the arms were left exposed.

There were also three presentations regarding the early modern period. In the first of them, Jonathan Tavares (The Art Institute of Chicago, USA) presented the turbulent history of the Renaissance suit of plate armour from the former armoury of the castle in Nesvizh (“An Augsburg Armour Suit for A Radziwiłł Prince: A Reconstructive Analysis”). The elements of the suit of armour made in Augsburg in 1573, as indicated by the date engraved on the greave, were dispersed at the beginning of the 20th century and some of them are now kept in museums in Chicago, New York and Rome. The armour is richly decorated with etched plant ornaments, allegorical figures and portraits of rulers based on iconography from the period. The decoration was made by several craftsmen, as evidenced by the varying level of workmanship on individual plates. The modular structure of the set is interesting, allowing it to be adapted to combat on foot, on horseback and for jousting.

Andrzej Janowski (Polish Academy of Sciences, Szczecin Branch, Poland) presented the stone relief named “The Conversion of Saul” made by Hans Schneck (1500–1566) and originally built into the façade of Loitz’s house in Szczecin. This relief has not been analyzed from the perspective of weapons studies so far (“The Conversion of Saul from the Loitz townhouse in Szczecin. An overlooked source from the mid-16th century for the history of defensive weapons”). In the depicted Biblical scene two grotesque shields in the shape of faces or masks can be identified, which may be the earliest representations of this type of shields known from the territory of Poland (cf. Michalak 2020, 24–29).

Paweł Zaręba (independent researcher, Poland) presented the history of Renaissance codpieces and their presence in Upper Silesian sepulchral sculpture (“Codpiece as an element of Renaissance plate armour. Examples from figural tombstones from Upper Silesia”). As the analysis showed, on a small number of 33

sculptures from the studied area, all known types of this important part of body protection were presented, that is mail, scale and plate one. This has not been demonstrated for neighbouring Lesser Poland. However, as the author emphasised, among the people shown on the tombstones, only Jan Kochcicki could afford to have a full plate armour, while the remaining nobles were too poor for it and their armour should be considered a costume that was used to increase the splendour of the deceased in the eyes of subsequent generations.

The summary of the entire conference was offered by Arkadiusz Michalak, who emphasised the fruitfulness of this meeting and the wide range of subjects discussed, as well as the need to conduct further research, especially on the issues of production of protective arms, their practical use as well as social and ritual functions. He also announced the return of the Andrzej Nadolski International Arms and Armour Colloquium to the form of regular, cyclical meetings as the next conference should take place in Łódź in two years. Moreover, all presentations will be submitted by the authors in the form of articles and published in relevant journals as soon as possible.

Of course, in addition to the lectures, the conference program also included other activities integrating the participants. The finale of the first day of the meeting was a banquet preceded by a visit to the exhibitions of the Historical Museum in Sanok, during which the director of the institution, Jarosław Serafin, acted as a guide, delighting the audience with his extensive knowledge of the presented exhibits. The conference participants, of course, focused on the collection of weaponry dating from the Early Middle Ages to the Second World War. Unfortunately, this trip was too short to fully enjoy the wealth of archaeological artefacts, orthodox icons and the works of Zdzisław Beksiński presented at exhibitions, as well as the architecture of the former royal castle in Sanok. The conference hosts also prepared an adventurous pontoon trip on the picturesque San River, surrounded by the Stonne Mountains, ending with a bonfire. The conference and the accompanying activities were an excellent opportunity to integrate the international community of historical arms and armour specialists, exchange ideas and opinions, as well as to present and discuss the results of own research with other scholars. This will undoubtedly result in future in increased research on the subject of historical defensive equipment.

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